Project Information Document (PID)

Appraisal Stage | Date Prepared/Updated: 22-Apr-2022 | Report No: PIDA33264

BASIC INFORMATION

A. Basic Project Data

Country	Project ID	Project Name	Parent Project ID (if any)
Angola	P177305	Angola Smallholder Agricultural Transformation Project	
Region	**Estimated Appraisal Date**	**Estimated Board Date**	**Practice Area (Lead)**
AFRICA EAST	20-Apr-2022	15-Jun-2022	Agriculture and Food
Financing Instrument	**Borrower(s)**	**Implementing Agency**	
Investment Project Financing	Ministry of Finance	Ministry of Agriculture and Fisheries	

Proposed Development Objective(s)

To increase agricultural productivity and to promote climate resilience for smallholder farmers in the selected areas.

Components

Component 1: Capacity Building and Institutional Development
Component 2: Agriculture and Livestock Resilience, Intensification and Market Linkages
Component 3: Project Management and Monitoring and Evaluation
Component 4: Contingent Emergency Response Component

PROJECT FINANCING DATA (US$, Millions)

SUMMARY

Total Project Cost	306.00
Total Financing	306.00
of which IBRD/IDA	300.00
Financing Gap	0.00

DETAILS

World Bank Group Financing

International Bank for Reconstruction and Development (IBRD)	300.00

Non-World Bank Group Financing	
Counterpart Funding	6.00
Borrower/Recipient	6.00

Environmental and Social Risk Classification

Substantial

Decision

The review did authorize the team to appraise and negotiate

A. Country Context

1. **Angola is a lower middle-income country that has been suffering from an economic recession since 2016, with half of its nearly 32 million people living on less than $1.90 (2011 PPP) per day in 2018.** It is one of the largest countries in Sub-Saharan Africa and one of the largest African oil producers. After its independence from Portugal in 1975, the country suffered a civil conflict that lasted 27 years, ending only in 2002. Propelled by the end of the conflict and high oil prices, its economy grew at an average rate of 12.5 percent between 2004 and 2008, with slower growth after the 2008-2009 global crisis. It is, however, highly dependent on oil exploration, which accounted for 94 percent of its exports in 2020 even after a 30 percent decline in oil production since 2015. Falling oil prices and oil production, exacerbated recently by the COVID-19 pandemic, have fueled five years of recession that have resulted in Angola's GDP shrinking by 10.8 percent from its peak in 2015. Consequently, the poverty rate has increased given the reduced incomes and job opportunities, and the increased cost of living as a result of the high food inflation.

2. **Though its economy has been significantly impacted by the COVID-19 pandemic, Angola has been able to avoid high infection rates of COVID-19 so far.** Angola's COVID-19 vaccination rollout started in March 2021 and has progressing slowly as vaccine deliveries have faced delays. However, the country has so far administered a total of 2.7 million vaccines. Around 1.1 million people (3.5% of the population) have received at least one dose of the vaccine, and about 730,000 people (2.3% of the population) are fully vaccinated.

3. **The collapse of oil prices since 2014 has resulted in fiscal stress and high debt ratios forcing large expenditure cuts.** The falling price of oil and subsequent drop-off in investments has resulted in a steep decline in production. This has placed strain on fiscal revenues, 60 percent of which consisted of oil revenues. In 2020, fiscal revenues dropped to 21 percent from 30 percent of GDP in 2014. Correspondingly, government spending fell from 36.5 percent of GDP to less than 23 percent, which was mostly led by public investment cuts. Public debt, much of it in foreign currency, reached 135 percent of GDP in 2020 due to the depreciation of the Kwanza. Higher oil prices in 2021 are generating higher fiscal and export revenues, even with falling production. At the same time, tax measures introduced since 2019, including a value-added tax, have resulted in

increased non-oil revenues which grew by 45 percent year-on-year in the second quarter of 2021. Even so, the decline in public revenues has forced big spending cuts.

4. **Angola's shrinking economy is unable to generate sufficient job opportunities for its rapidly growing population with women and youth particularly disadvantaged, representing a critical challenge for Angola's growth.** Over 46 percent of Angolans are under the age of 15 and fertility rate remains high at 6.2 births per woman. There are significant gender gaps in Angola in endowments, agency, and economic opportunities. Lower levels of education among the adult population (56 percent of women in the labor force have less than primary education), lower rates of enrollment in schooling among the youth (secondary school enrolment rates are 37 percent for girls vs. 43 percent for boys), one of the highest fertility rates in general and particularly for adolescents (148 births per 1,000 girls aged 15 to 19), and high prevalence of violence against women (32 percent of women have been victims of violence) leave women behind when looking for opportunities. As a result, women's employment outcomes are significantly worse than men's when considering median earnings, informal and vulnerable employment. Informality is widespread but more predominant for women (88.5 percent of women work in informal jobs vs. 70.8 percent of men). Similarly, despite having more education than earlier generations, 95.3 percent of employed youth are informal (compared to 75.6 percent for the 25-64 population), including high rates of unpaid work and subsistence self-employment. The unemployment rate for young people aged 15-24 years is more than twice the unemployment rate for the overall adult population (57.7 percent vs. 27.9 percent).[1] Young women (aged 15-34) face an even more disadvantaged situation being far less likely to have paid jobs and more likely to be unpaid or subsistence workers than young men.[2]

5. **Angola also faces growing risks from climate change as it is already experiencing its impacts - especially through severe droughts in the South and increased floods.**[3] There is a measurable increasing trend in the frequency and the severity of droughts in several parts of the country, with the number of people affected by these expected to increase in the coming years. While the Southern region has been suffering directly from severe droughts since 2012, food insecurity effects have reverberated nationally. At the same time, Angola suffers an estimated US $94 million (about 0.8 percent of GDP) in economic losses per year due to flooding. Vulnerability to climate shocks is further exacerbated by high internal migration to urban centers stemming from the civil war but persisting into recent years, especially to the capital region. This has concentrated the population and infrastructure on the coast, increasing vulnerability to sea level rise, erosion, and storm surges. Climate variability and change are also expected to increase the potential for water conflict across the country's river basins by 2040. Finally, since it is an economy highly dependent on oil production, global trends towards decarbonization to address climate change generate additional urgency for the Angolan economy to diversify. However, promising alternative sectors – notably agriculture and fisheries - are highly climate dependent and already under stress from climate change.

[1] Statistics reported in these paragraphs refer to the second quarter of 2021. Source: INE. "Indicadores de Emprego e Desemprego. Inquérito ao emprego em Angola. 1ª Edição." Agosto 2021. Folha informação rápida - II Trimestre de 2021.
[2] Source: World Bank estimates based on the Inquérito ao emprego em Angola (IEA) 2019.
[3] Source: World Bank Angola Climate Change and Development Report (P176917) concept note.

6. **Wheat prices have soared following the Russian invasion of Ukraine.** Angola is dependent on food imports and the wheat price shock is expected to be fully transmitted in the economy – approximately 50 percent of its wheat is imported. As of 2020, Angola's most important wheat importer is France (53 percent) followed by Russia (35 percent), and Latvia (7 percent). Imports from Russia may have to be (temporarily) substituted, possibly leading to supply disruptions and/or further price increases. Nonetheless, demand is somewhat elastic, so vulnerable households will substitute wheat-based products with other foods. While the impact on growth will be negligible, further pressure on food prices is anticipated with potential negative consequences for poverty. Food inflation is a major source of concern in Angola, attaining a record high of 34.3 percent y/y in January 2022. According to the IDR 2018 (Inquérito de Despesas e Receitas), wheat and bread account for around 18 percent of average real consumption. Angola's wheat industry has some capacity to increase production, but it may not be enough to avoid the impact of the hikes of international prices. Assuming full pass through and inelastic demand, the price shock is expected to increase average inflation by 1.6 percentage points, pushing it from 25.7 percent in 2021 to 27.2 percent in 2022 (ceteris paribus), increasing pressure on vulnerable households.

B. Sectoral and Institutional Context

7. **Agriculture was the motor of the colonial economy yet lingering conflict eroded the sector's technical capacity, destroyed infrastructure, and isolated production areas from markets, which remain largely unaddressed.** Agriculture had a dual structure, with a commercial sector of about 6,400 farms (800,000 ha) managed by Portuguese settlers using modern technologies and a traditional sector composed of smallholder family farms cultivating about 3.4 million ha. After independence, most Portuguese settlers left the country and many former commercial farms and plantations were converted into state farms, which have since been privatized. The civil war resulted in a virtual collapse of commercial production as large numbers of rural inhabitants either fled or reverted to subsistence agricultural production. In fact, Angola's once thriving export of coffee, cotton, tobacco, and sugarcane all ceased by the 1990s. Although the situation has improved with the rehabilitation of main roads and bridges and clearance of mines, the agriculture sector has not yet fully recovered from the destruction and decapitalization of the conflict period.

8. **In recent years, however, agriculture's share of Angola's economy has grown rapidly, averaging 4.9 percent[4], which provides an opportunity for economic diversification and improved food and nutrition security.** Ranking in the 86th percentile globally, this rapid growth rate led to agriculture's share of GDP increasing from 5.8 to 10 percent of Angola's GDP during the 2011–2017 period. The cultivation of main food crops has expanded rapidly, with maize, beans and peanuts, and cassava production growing by 47, 42, and 14 percent respectively between 2012 and 2016. Fruits and vegetables grew at 12 and 4 percent respectively, with banana and sweet potatoes growing the fastest. Livestock products grew at the slowest rate, except chicken meat, which started from a low base.[5] The broad-based sector growth can be linked to the 2018-2020 currency devaluation (natural incentive for domestic producers), cultivated area expansion by returning land to agriculture after the

[4] During the 2015-2019 period.
[5] World Bank. "Creating Markets in Angola: Country Private Sector Diagnostic" (2019).

civil war, and the Government's investments in public infrastructure, cooperatives, and fisheries.[6]

9. **However, agricultural productivity remains low due to climate variability and low access to water, improved technologies, and services by smallholder farmers[7] who account for 80 percent of production and 90 percent of agricultural land, with community holdings and commercial farms making up 5.8 percent of land.** National agricultural output is well below demand, and Angola imports more than half of its food. The average yields for cereals (0.9 mt/ ha) and vegetables (3.6 mt / ha) have been low and stagnant, currently at 1/4th and 1/5th of global averages respectively. Maize yields are 1/4th of regional leader South Africa and wheat yields are 1/6th of its neighbor Namibia. Yields for beans and soybeans are low relative to SSA comparators like Kenya, Ghana, and Zambia. Almost one-third of agricultural households are headed by women, who are responsible for 70 percent of traditional subsistence agriculture and for 24 percent of commercial agriculture. Productivity growth is constrained using poor agronomic practices and low access to improved technologies like climate-smart seeds, agro-chemicals, irrigation technologies and mechanization. The domestic markets for seeds, fertilizers, tools, irrigation equipment and services, machinery, and other agricultural inputs are poorly developed, and they are largely imported and unaffordable, especially those imported and affected by the evolving currency exchange rate. Farmers have poor access to extension services and limited information related to production and marketing. Furthermore, only 2 percent of farmers report access to credit and consequently, investments with high upfront costs are limited. Producer organizations could aggregate demand and enhance access to inputs and services, but they remain weak and collective decision-making is uncommon. Despite their large number, a small fraction is registered, active, and commercially oriented, thus contributing to low access to input and output markets.

10. **Angola has an abundance of arable land and diversity of climatic conditions which are suitable to producing a variety of agricultural products; however, its agriculture potential remains untapped.** The main crops in Angola include cassava, maize, beans, potatoes, sweet potatoes, soy, and bananas, with other agricultural products being livestock, coffee, manioc, rice, vegetables, and fruits. Agricultural land accounts for 57 million ha – 45.6 percent of total land – and the arable area is estimated to be 35 million ha. Both crop and livestock production have significant potential given that only 16 percent of arable area is cultivated and nearly half of it is unused.

11. **Irrigation, as a pathway to climate adaptation, currently plays a modest role in the country, but offers great potential for supporting resilience of the agricultural sector against water related risks.** The predominant water source used in irrigation is surface water (80 percent) which is diverted gravitationally to sugar cane, banana, maize and vegetables. With an estimated irrigation potential of 3.7 million ha, enhancing smallholder access to water for productive uses can also enhance climate resilience of agro-pastoralist systems in the Southern part of Angola – the country's driest region. Despite the large potential, however, only a small part is assumed to be currently irrigated, although recent information on irrigated areas is lacking. It is known that about 340,000 ha were equipped for

[6] The World Bank's "Angola Agriculture Sector Policy Review" (2021) finds that the macroeconomic policies led to increased prices for domestic agricultural produce leading to significant food inflation. It also notes the low effectiveness of subsidies, prioritization of few staple crops, and policies discouraging private sector investment in agriculture.
[7] Averaging 2.3 ha in size. 4/8*9+.

irrigation in 2005 but large parts of this area are currently not in operation and the actual area used for irrigation is estimated at 80,000 ha.[8] Furthermore, although water resource management frameworks are being developed as part of the ongoing water sector reform, institutional capacity to implement water resources management at local and national level remains weak. Especially, poor water resources planning and management at provincial and municipal levels and the lack of water user associations (WUA) reduce the sustainability of rehabilitated or newly constructed small and medium irrigation schemes.

12. **Agriculture is the largest source of jobs and livelihoods, but agricultural incomes remain low. The agriculture and fisheries sector provides the main source of income to 90 percent of the 10.7 million Angolans living in rural areas and employs 45 percent of the workforce.** Further, more than half of Angola's poor are in rural areas and depend almost exclusively on agriculture for their livelihood. However, agricultural labor productivity, measured in terms of value added per worker, is just US$1,216 (compared to a global average of US$20,916)[9], which drives the low returns to labor in farming. Among economic sectors, agriculture offers the lowest median income at around 8,000 kz[10] per month and is even lower for women (~6,000 kz per month), which indicating the existence of gender gaps in this area. Additionally, the concentration of low-skilled labor contributes to low incomes, with approximately 77 percent of the labor in the agriculture sector having less than primary education. Under its strategic objective of "Increasing the contribution of the agrarian sector to economic growth and social development" in the medium-term sector development plan, MINAGRIP has targeted raising the per capita income of agricultural households from US$1.2 per day to more than US$2.2 per day. Given the rural population's heavy reliance on the sector, increasing both agricultural production and productivity is critical for improving livelihoods for the rural poor. Moreover, when accompanied with complementary investments improving market connectivity, productivity gains would contribute to food and nutrition security, poverty reduction, and help to diversify the economy.

13. **Angolan agriculture has long been affected by extreme climate events with considerable adverse impact on key development indicators.** Floods have made up 57.5 percent of average annual hazards occurring in the country, and droughts have made up 12 percent. However, droughts tend to have far reaching impacts. The country is currently facing the most severe drought of the last 40 years with 6 million people not having enough food and 15 million people are using crisis or emergency livelihood-base coping strategies, such as spending savings or reducing non-food expenses.[11] In 2019, a severe drought in the southern part of Angola resulted in food and nutrition insecurity for 2.3 million people due to impacts of crop yields and livestock loss, including close to half a million children under the age of five. Climate shocks led to the increase in the cost of basic commodities – such as maize and maize flour, beans, and sugar – by 25 percent. Nearly 35 percent of the livestock died, a severe shock with both immediate and long-term impacts on rural households' livelihoods. Furthermore, the movement of people in search of water for human and animal consumption as well as greener pasture for their cattle contributed to an increased number of school dropouts. More specifically, 614 out of 887

[8] FAO (2005), AQUASTAT, Country profile Angola.

[9] World Bank, Food System Dashboard.
[10] 1USD = 438KZ (January 17, 2022).
[11] Amnesty International – Press Release June 2021. Available at: https://www.amnesty.org/en/latest/press-release/2021/07/angola-millions-facing-hunger-as-thousands-flee-their-homes-as-drought-ravages-the-south-of-angola/

primary schools in the Cunene province were affected by drought, leaving approximately 150,000 children without access to education — almost 70 percent of the total students in the province[12]. Previous droughts had similar devastating impacts (See Annex 3 for more details).

14. **The area affected by drought is characterized by pastoral and agropastoral systems which are vulnerable to climate shocks.** Initial information indicates that households and communities in the three southern provinces have suffered substantial losses of their livestock assets. It is estimated that over 2 million people are also in a situation of food and nutrition insecurity.[13] With regards to agriculture-based farm households (livestock included), the response will need to involve both short-term measures such as improved animal nutrition, water provision, provision of seeds and fertilizers, ensuring animal feed supply, restocking and veterinary services, as well as a transition to medium-term structural interventions to increase the resilience of affected communities. These interventions could include sensitization and establishment of agropastoral associations, small-scale and climate responsive irrigation, pastoral landscape restoration including tree planting, water points and storages, sustainable feed supplies, veterinary services, restocking, and preparedness for future shocks.

15. **Climate change will exacerbate the vulnerabilities of agro-pastoral systems through increased exposure to extreme events like droughts and erratic rainfalls.** Angola is 160th on the Notre Dame Global Adaptation Initiative (ND-GAIN) country index rank, denoting a high vulnerability and low readiness to deal with the impacts of climate change. Yet, climate change is projected to impose severe stresses on the country, especially the agriculture sector leading to a decrease in productivity. For instance, bean yields could decrease by up to 60 percent. Projections show that average temperatures in Angola could increase by up to 3.2°C by 2060. While precipitation projections are more uncertain, rainfall will likely decrease, with the southern regions experiencing the steepest decline. Under a changing climate, there is a greater probability of extreme events, with a particular increase in heat waves, droughts, and intense rainfall events. Frequency and intensity of flooding is projected to increase, especially along the coastal zone. Drought incidence, which is concentrated in the southern regions, will likely expand to the central and eastern regions, increasing the number people living in drought prone areas from 30.8 percent of the population presently to more than half of the country's population. Those directly impacted by drought conditions annually will increase to 13 percent of the population, up from 7.5 percent by the 2050s. Average crop production loss due to drought is estimated to range from 3.7 to 30 percent across common crops (cassava, maize, groundnut, millet, sorghum, potato, banana, etc.) between 2051 and 2100. The dynamics between drought, increased population pressure and increased agricultural development of lands will combine to lead to a decline in quality and quantity of soils. The number of affected livestock will reach up to 68 percent of total livestock populations, with major losses mostly in the southern regions. The livelihoods and incomes of smallholder crops and livestock farmers in marginal areas will be the ultimate victim of climatic changes. The direct economic impacts to agriculture could rise seven-fold, affecting the agriculture sector's potential contribution to the country's economic growth and poverty reduction (See Annex 3 for more details).

16. **Agriculture and land-use change are important contributors to environmental damage, including**

[12] Provincial Education Directorate.
[13] FAO, 2021 Regional Overview of Food Security and Nutrition.

growing GHG emissions in the country. Although Angola is a low emitter of greenhouse gases, at a global scale (less than 1 percent), the country has experienced exponential increase in GHG emissions over the past few decades. Emission increase has been driven by the energy sector. However, emissions from land-use change and forestry, and agriculture are estimated at 37 percent and 12 percent respectively, a meaningful contribution. Direct GHG emissions from agriculture emanate from livestock systems and crop residue burning. Furthermore, burning to clear land for farming has been a key driver of deforestation, and GHG emissions. Unabated, the trend of increasing GHG emissions in the terrestrial systems is projected to continue (see Annex 3 for more details). Yet, if well managed, the agriculture sector could also act as an important sequester of carbon in soils.

17. **Angola's agriculture sector will need to transform to meet the needs of its people (especially vulnerable farmers, including women farmers), the economy and the environment.** To achieve this, efforts are needed to re-orient the agriculture sector in such a way that boosts production and productivity, addresses the threat posed by climate change, and opens opportunities for farmers to boost their incomes. All these will need to be done sustainably, minimizing harm to the land, environment, and biodiversity, and taking advantage of opportunities to increase efficiencies in the sector that can bring important environmental benefits and mitigation opportunities.

C. Proposed Development Objective(s)

Development Objective(s) (From PAD)

18. To increase agricultural productivity and to promote climate resilience for smallholder farmers in the selected areas.

Key Results

19. The proposed outcome indicators to measure achievement of the PDO are as follows:
    a. Average percentage increase in smallholder farmers' crops yield per hectare (disaggregated by gender).
    b. Number of smallholder farmers adopting climate smart agriculture and livestock technologies (% of which are women).
    c. Number of smallholder farmers supported by the matching grant mechanism (% of which are women).

D. Project Description

20. To achieve its PDO and in line with the sectoral needs, the proposed project will be structured as follows (components):

21. **Component 1: Capacity Building and Institutional Development (US$ 70 million):** The objective of this component is to strengthen institutions involved in the development of smallholder agriculture and livestock, focusing on smallholder farmers' organizations (including women's organizations), farmers' cooperatives and associations, non-governmental organizations (NGOs), government

agencies, service providers (such as extension services), and the private sector. It is expected that a total of 150,000 smallholder farmers will benefit from this component (of which 30 percent will be women14)

22. **Subcomponent 1.1. Strengthening Capacity of Smallholder Farmers (US$ 50 million)**: The objective of this subcomponent is to strengthen the technical, institutional, managerial, and marketing skills of direct beneficiaries through the Farmer Field School (FFS) approach – which builds on the successful experience of MOSAP1 and 2.[15] Through the FFS approach, this subcomponent will finance:

    a. The strengthening of farmers' knowledge and skills in areas such as productivity, climate-responsive agricultural practices and technologies and nutrition, marketing strategies and skills, agricultural finance and risk management products, post-harvest management and value addition, value chains, nutritional awareness and practices, applying a gender lens through agricultural systems.

    b. The strengthening of men and women farmers' functional literacy and numeracy skills, as well as the ability of families to adopt climate and nutritious smart food production through biofortified crops, vegetable gardens and beekeeping, landless production technologies, small community water stocks for irrigation, water collection, irrigation technologies, wells, etc. and small-scale domestic processing infrastructure (food preservation, processing, drying, storage – solar/wind based).

23. Some 150,000 beneficiaries are expected to be trained in at least 5,000 local FFSs (between 20-30 participants per School). Each school will be established in selected municipalities where MINAGRIP can ensure the availability of at least three operational agricultural extension specialists either from IDA/ISV local staff or from qualified implementation partners, with the support of a specialised Technical Service Provider (TSP). Additional selection criteria include levels of food insecurity, climate vulnerability, water access for small irrigation, and number of households in agriculture and livestock activity by municipality and commune. In line with MINAGRIP's FFS expansion strategy, MOSAP3 expects to cover 17 provinces by the end of the project, covering a total of 78 municipalities (See "Prioritization Criteria").

24. Overall, the subcomponent will support MINAGRIP in consolidating and expanding its results and experience attained to date with the Farmers' Field Schools in Angola and in institutionalizing the FFS approach for the long-term as the bedrock from which climate smart technologies and climate information are transferred to farmers and ensuring the direct implementation by MINAGRIP. This transition from the FFS approach adopted in MOSAP2 (with FAO as the implementing agency) towards the FFS approach to be established in MOSAP3 (with MINAGRIP as the implementing agency) envisages close handholding in the establishment of a national institutional capacity for FFS training

14 In line with the Goverment of Angola's goal of reaching 30 percent of women in all projects, as part of the African Union commitment

[15] MOSAP2 benefited a total of 150,126 beneficiaries, of which 72,774 women.

and implementation, quality control and coordination of FFS activities in all Provinces, and support the emerging apex organizations, FFS networks, and associations in their efforts to supply services to their members. Improving knowledge and skills on leadership, fund management (including funds for climate smart technology procurement), savings, and credit systems will also be important for the sustainability and future development of the Angola FFS National Programme beyond the Project.

25. The sound management of the intended nationwide FFS long term programme will be ensured through the creation of the FFS Management Unit (UNIGECA) within IDA at MINAGRIP. This Unit will count with FFS specialists (assessing the baseline and targeting and increase in the number of females FFS specialist), who will supervise the implementation of the FFS Programme and its geographical expansion. - In coordination with the Agrarian Development Institute (IDA) and the National Veterinary Service (ISV), they will manage the production of training material, the organization of training sessions, and backstop the FFS Facilitators. Due to the large distances and road conditions prevailing in the country, Information Technology (IT) tools for remote technical assistance will be developed and implemented.

26. The FFS Technical Facilitators will raise awareness within local producers' communities, especially among women and youth, organise interested producers in a structured group – consisting of a Management Committee, Group Internal Rules, and a FFS Fund – and assist in selecting the field school. They will finalise the groups' registration in the RNPA. According to the experience gained to-date in Africa, most groups will remain together beyond the FFS, with the opportunity to evolve if needed into a legal entity, such as an association or a cooperative. *E-vouchers* will be made available as a contribution to the School Fund established according to the FFS methodology adopted to-date, which includes a farmers' monthly contribution. Farmer groups managing directly the FFS Fund, in particular the procurement of climate smart inputs and services such as improved climate resilient seeds, and digital climate information and extension services will encourage suppliers, including facilitators, to provide quality service. Hence, it will promote a demand-driven extension system in which farmers are empowered to choose the extension activities that are most relevant for them and their communities. The RNPA approach and the use of *e-vouchers* also represent a vehicle for strengthening the digital inclusion of FFS participants. The project will mobilise the existing MOSAP2 trained Masters, Technicians, and skilled Facilitators to launch the Programme quickly and will also train new staff in relation to the FFS programme needs. Women will be explicitly encouraged to apply for training as FFS Facilitators. Given the logistics and human resources constraints, IT tools for remote agro-climate information and extension and support will be made available to field staff and FFSs, in addition to the traditional on-the-spot visits.

27. Particular attention will be placed on women and the youth through the promotion of their effective participation in the FFSs, benefiting from specifically targeted information and training from technical partners, such as functional literacy and numeracy, climate smart agricultural practices (such as use of improved climate resilient seeds varieties and crops, water conservation and saving technologies, and integrated soil fertility management to improve soil health and carbon sequestration, see component 2), nutrition, health, etc. In the context of the institutionalization of the FFS approach, the monitoring and evaluation frame used under MOSAP2 would be adjusted as necessary prior to the start of implementation – with responsibilities for data collection and analysis clearly defined. Independent institutions, such as local Non-Governmental Organizations (NGOs), universities, and

research institutes would be contracted for evaluation of the FFS programme, entailing responsibility for the analysis of social, economic, and household level impacts.

28. Implementation approach. Considering that institutional capacities will be gradually increased, and that the RNPA is a rather new concept in Angola, the Project will initiate its activities with conservative targets in a pre-identified reduced geographic area during the first year, giving time to all actors to become familiar with the process and allowing for testing the strength of the process. After the first year, a rapid evaluation will allow for finetuning and for bringing the Project to scale in the following years. Specific Project targets and roll-out for components 1 and 2 will be identified during project preparation, based on minimum targeted beneficiaries of 150,000.

29. **Subcomponent 1.2. Institutional Capacity Strengthening of Local, Provincial and National Units of MINAGRIP and Capacity Building of Non-Governmental Organizations (US$ 20 million):** The objective of this subcomponent is to strengthen the institutional capacity of MINAGRIP at the national and decentralized levels to provide the complementary services needed for the investments implemented under the project. This subcomponent will finance technical assistance in the areas of:

    c. Training of MINAGRIP professionals and field technicians through (i) training and certification of extension technicians in the areas of agriculture and livestock, during the duration of the project, (ii) training of provincial seed officers, (iii) training of technicians and partners in innovative climate smart tools, (iv) training of improved and climate resilient seed multipliers. The training of female technicians will be prioritized throughout all technical areas.

    d. Rehabilitation of MINAGRIP infrastructure and necessary equipment, including Training Centers and Agricultural and Veterinary Extension Centers, and other selected infrastructures, essential for the functioning of the IDA, the ISV, the Forest Development Institute (*Instituto de Desenvolvimento Florestal – IDF*) and the National Seed Service (*Serviço Nacional de Sementes – SENSE)* for the implementation of the project activities. The selected infrastructures to be rehabilitated must be restricted to those relevant to the project activities and have the minimum conditions for their sustainability guaranteed by the government budget (prioritization criteria include infrastructure with access to clean and renewable energy and water, and road accessibility).

    e. Promote the coordination and partnerships between MINAGRIP and other relevant national, regional, and international agencies and institutions (e.g. statistics, geographic-cartographic, land registry, climate and hydrological, and civil protection agencies) as well as academia, civil society, and private sector, and strengthen MINAGRIP's abilities to support and develop social and agricultural data production, data collection, analysis, processing, and mapping.

    f. Technical assistance to MINAGRIP to develop smart subsidy programs. For example: (i) the National Farmers' Registry (*RNPA*) , (ii) programs to collect and disseminate data on agricultural production, prices and market information - also adapted to agropastoral communities and specific women needs, (iii) programs to support the climate-friendly

smallholder farmers to, for example, support the diversification of maize and beans into other nutritious, climate-resilient and high-value tradable crops, such as sweet potato, and tree crops like banana, (iv) the adoption of climate-smart technologies and practices; (v) public goods that promote the development of effective early warning and agroclimatic information services.

g. Technical assistance and capacity building activities in (i) agricultural practices for NGOs and service providers (including the private sector) involved in relevant activities in support of family farming development and (ii) strengthening the capacity of the Rural Workshops to solve small operational problems (e.g. machinery breakdown) with a focus on the training of young people.

h. Promotion of research and development in the agricultural sector for the development of innovative climate smart technological packages adapted to the agroecological and socioeconomic conditions and needs of the beneficiaries (climate resilient crops/varieties, and livestock, high nutritional value, soil fertility management practices, sustainable water management, landscape management, processing production, integration of crop-livestock-forestry systems, among others).

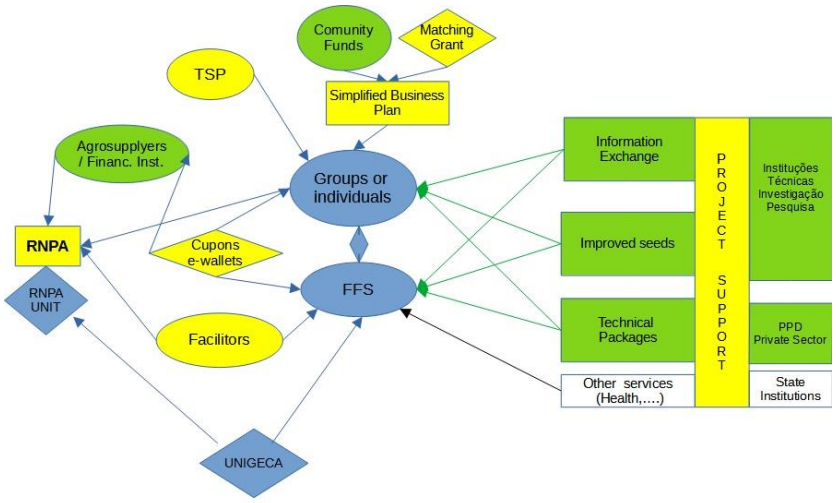
30. Overall, the subcomponent will provide financial support to eligible beneficiaries in driving the boosting of their production processes through the implementation of validated and locally suited Climate-Smart Agriculture (CSA) and Nutrition-Smart Agriculture (NSA) Technology Packages (*Pacotes Tecnológicos – PaTecs*) aimed at increasing climate resilience and nutritional value. PaTecs will cover cropping, livestock, and irrigation and will include access to improved practices, technologies, and inputs such as climate resilient seeds, seedlings, and animal breeds, advisory and extension services, irrigation, and productivity-enhancing inputs and management practices. Furthermore, the project will aim at reducing bottlenecks along the agri-food value chain, particularly for post-harvest value addition/management and market linkages, by promoting the adoption of innovative climate smart technologies such as energy efficient and renewable energy powered post-harvest technologies.

31. Project subsidies will consist of *e-vouchers* and Matching Grants (MGs). The *e-vouchers* are meant to secure for a given PaTec the purchase of inputs which would normally be difficult to access or to secure cash for the required workforce, thus supporting the adoption of PaTecs either in the context of the FFS or in the farmers' own land. The *e-vouchers* represent a one-shot subsidy covering 100% of incremental costs in applying a PaTec (initial operation costs). The Matching Grant approach will be similar to the PDAC model, yet simplified, aiming at co-financing investments in agricultural production and value adding activities. MGs will be granted upon approval of a simplified Business Plan (BP) to verify the viability of the investment and will complement a personal resource of the investors. Such resources can either be private or supported by a loan from local financial institutions. Community Funds, called *Caixas Comunitárias*, may play a leading role in providing such loans as well. *Ad-hoc* training will also be imparted to actors involved throughout the MG process, from elaboration to approval. While *e-vouchers* for PaTecs will be set according to inputs and costs of implementation of a given package, the approach to defining the criteria attached to the MG will be similar to PDAC's, though plans would be simplified, and values would be adjusted during project preparation to address the socioeconomic conditions and the potential activities of the targeted smallholders. The criteria

will include climate-smart technologies, diversification towards high-value climate smart and nutrition smart crops, marketability, energy efficiency of post-harvest practices and technologies, skills for business plans' preparation, etc.; ceiling; personal contribution. MGs will be limited to 90% of the Business Plan with producers participating with a 10% contribution of own resources).

32. To ensure efficient management, sustainability of interventions over the long term, and strengthen MINAGRIP's management capacities, while facilitating the integration with other World Bank financed projects in the country, the Project components will be implemented through an overarching tool: the National Farmers' *(RNPA)* (see Figure 1) based on data intelligence and big data, using the latest digital technology, including biometrics and/or digital IDs. The RNPA will be supported by a Farmer Incentive Management Information System (*SEGI: Sistema Electrónico de Gestão dos Incentivos dos Produtores*) to identify, target, deliver services and support, authorise transactions, and monitor and evaluate smallholder beneficiaries. In rural areas with unreliable or non-existent Internet access, climate information services, agriculture extension officers and/or contracted technical specialists would have access to offline solutions that allow them to access essential data on the various climate smart technology packages for farmers, local geographical data (toponyms, farmer records, pictures, etc.), climate information and areas (with offline maps technologies). The PDAC Project will finance the initial development of the online and offline versions both web-based and Android (App) of the RNPA and the SEGI, which will be submitted to a *dry-run* at the Project start.

Figure 1. National Farmers' Registry
(Registo Nacional de Produtores Agropecuários – RNPA)



33. The registration process will be open to all farmers participating in an FFS (component 1.1.) and to those farmers participating in component 2 (including MOSAP2 graduates). It will be carried out on a single, individual, and voluntary base, but will be mandatory to benefit from the incentives of the Project, and possibly other projects and programs managed by national and provincial governments. FFS Facilitators and IDA/ISV Technical staff, supported by Technical Service Providers (TSPs), will assist in the registration process. Beneficiaries will be issued an individual card (laminated, professional, NFC

contactless smart card) with the holder's photo and a unique identification number. It will also be open to potential partners, such as suppliers of agricultural inputs and suppliers of technical and financial services willing to participate if they comply with a few criteria. The suppliers will receive specific training and electronic devices to scan the Contactless Farmers Smart Cards. This system can also work off-line with limited risk of fraud. In case of conditional cash transfers, beneficiaries will be allowed to withdraw money with their smart card at points of sales of the participating financial institutions. The use of digital financial services in the framework of the RNPA/SEGI will stimulate the digital transformation of financial institutions servicing the rural communities, catalysing on digital payments, promoting the improvement of digital and financial literacy, and strengthening MINAGRIP's and partners' ability to overcome transactions constraints.

34. Technical operators, such as FFS Training Masters/Facilitators, and TSPs involved in the Project implementation will also be registered in the system and will also receive an individual contactless card to facilitate cash transfers. The registration in the RNPA and the implementation of the Incentive Management Information System (namely, SEGI) are the first steps before the delivery of incentive and support under Components 1.1. and 2. The management and maintenance of the RNPA would be the responsibility of MINAGRP, where a RNTA Unit would be created. The support and participation in this Unit of other Governmental institutions, such as the National Institute of Statistics (INE), still must be defined. A technical team attached to the RNPA Unit at the national level would be established and would be responsible for the storage, management, development of the RNPA and the SEGI and of local data collection agencies. The RNPA will benefit from the recent IT investment at MINAGRIP financed through the PDAC Project. The collected information will also connect to the National Agricultural Statistical System (*Sistema Nacional Integrado de Estatísticas Agrárias – SNIEA) and the Agro-livestock and Fisheries Census (RAPP) led by INE, the National Statistics Institute.*

35. Identification and promotion of ICT4Ag innovations. Digital solutions for African agriculture have been spreading over the continent in the last decade aiming at addressing the challenges faced by agricultural value chains. Building the Transformation of Agriculture in Angola by using innovative IT technologies goes beyond the RNPA and should promote further innovations for the agriculture sector (also known as ICT4Ag) to boost services to smallholder farmers with regard, for example, to climate information and advisory services, and services and platforms that link farmers to research, production inputs (such as climate resilient seeds and fertilizers) and to markets (such as the Escoamento 4.0 initiative). Together with the support of Matching Grants, when applicable, these open opportunities for farmers cooperatives or associations to obtain solutions and enter market business. In addition, a national Erasmus-like Programme for Innovation, modelled along the European Union's Erasmus for Young Entrepreneurs Programme, would be established aiming at encouraging cross-learning between young entrepreneurs and experienced entrepreneurs running small businesses throughout Angola. The programme would finance mainly travel related costs. (See Annex 4).

36. Institutional Strengthening. Research institutions, such as the Agronomic Research Institute (IIA), the Veterinary Research Institute (IIV), and the National Institute for Coffee (INCA) and National Universities Research, will play a leading role in identifying Climate Smart and Nutrition Smart *PaTec*s in the MOSAP3 context and will be supported by the project in close coordination with the PDAC project, which already finances similar research on selected value chains for commercial agriculture.

This will also include monitoring of the sanitary situation (agricultural pest outbreaks, and epizooties, which are expected to increase under climate change), and monitoring of soil health using field reporting networks and digital tools, including an Animal Identification Registry to be established. Such support will be based on an on-going analysis of the needs of these institutions, including their HQs, laboratories, and field offices down to municipal level, and on the Government capacity to guarantee a sustainability strategy with respect to human resources and operational costs. The use of TSPs will be considered during project preparation to meet specific needs such as training, epidemic control system, development of digital solutions, and design of financial sustainability strategies compatible with the Angolan regulations.

37. **Component 2: Agriculture and Livestock Resilience, Intensification, and Market Linkages (US$ 206 million):** This component will benefit some 200,000 smallholder farmers (of which 30 percent will be women). Most targeted smallholder farmers have access to about 0.25 – 2.5 ha of crop land, involved mainly in annual crops and some livestock activities, with exception of Southern Provinces where livestock can be the main activity.

38. **Subcomponent 2.1. Improved Access to Climate and Nutrition Smart Technologies and Practices (US$ 174 million)**: The objective of this subcomponent is to provide investment support to eligible beneficiaries in increasing their productivity (crops and animal products) through improved access to CSA and NSA technologies and practices, which include irrigation technologies, inputs (climate resilient seeds, seedlings, and animal breeds, advisory and extension services, and financial services), resilient infrastructure, and markets, and strengthening of synergies and integration between crop and animal farming (e.g. through manure management and animal traction).

39. The intake process will use the RNPA registry to structure and strengthen the agriculture ecosystem servicing the target beneficiaries. Building on the MOSAP2 experience, this component will finance technical assistance and investment support, including the identification of market-driven small business investment projects at the level of individual farmers or smallholder farmer groups for increasing production, building climate resilience of production systems, adding-value activities, and marketing infrastructures. In coordination with the PDAC project, the component will also support, when feasible, the development of commercial partnerships between off-takers and project beneficiaries, for those that have achieved certain level of organization. To assure reach and scale, the delivery instruments of the direct farmer support include one-time smart subsidies in form of *e-vouchers* for targeted inputs or conditional cash transfers, which have proven to work in World Bank-financed projects in Africa, Sub-Saharan Africa and South Asia. They also include Matching Grants for investments in production or transformation activities along the model implemented by PDAC. However, diversely to PDAC, MOSAP3 will target small producers, and because the viability of the intended investments has still to be ensured, simplified Business Plans (BPs) will be required.

40. To ensure adoption, subsidies will be tailored to specific Technical Packages (PaTec) and will cover 100 percent of the incremental costs required for the implementation of the chosen PaTec, while the beneficiaries will bear the costs equivalent to their Business-As-Usual practices. The Project will promote only financial sustainable PaTecs, i.e., generating enough financial benefits for their

continued implementation over the years.

41. Likewise, in Component 1.1. (FFS) supported technologies and practices (or Technological Packages - *PaTecs*) will vary by region and by agriculture technology/practice and will begin in most promising areas and will be brought to scale upon validation of packages. The *PaTec*s include validated Climate Smart Agriculture (CSA) approaches in Angola aimed at building resilience against climate-related hazards such as droughts, floods and erratic rainfalls, and reducing the carbon footprint of production systems through, among others, promotion of climate resilient crop varieties, crop types, soil fertility and moisture improvement (soil health), irrigation access and on-farm water management, improved soil conservation management, agroforestry, green manure, sustainable livestock and grassland management, and better agriculture management practices. PaTecs will consider regional agroecological differences as well as socioeconomic contexts, respond to demands raised by farmers, including women, using drought and water-stress tolerant crops, short cycle species, nutritious varieties, with focus on most common crops, and climate resilient crop types such as cereals (sorghum, millet), legumes, root tubers (cassava), and tree crops, such as banana, as well as vegetables. Improved or innovative practices would include low or zero tillage, alley cropping, crop rotation and fallow management, and landscape management. While in the North and Center of the country family livestock activity is always linked to agricultural production, in the South the livestock activity is in many cases the most important source of income and livelihood (through self-consumption) of the communities. PaTecs will promote, to the extent possible, agrosilvopastoralism to control or even reverse desertification and soil degradation, and integration with agricultural activities. The use of small-scale farm tools and machinery would be promoted through either investment or services. Uptake of agroforestry is expected to be slow due to land tenure and technical constraints that dis-incentivize medium- to long-term on-farm investments. Small irrigation equipment (buckets, watering cans) will also be included in relevant PaTecs. In coordination with the municipal water plans supported by RECLIMA, special attention will be given to producers in the 5-drought affected Southern provinces.

42. PaTecs also include Nutrition Smart Agriculture (NSA) technologies and practices that increase the availability of nutrient rich foods and profitability of the farm, boosting incomes and food security. Examples of CSA and NSA PaTecs that could be available for adoption by smallholder farmers in the targeted provinces during the initial rollout of the direct smallholder farmer support include biofortified seeds, drought resistant seeds, short cycle varieties, and pest and disease resistant varieties, cultivation of climate resilient and biofortified crops like cassava, and sweet potato as well as fruit trees (including grafting techniques), irrigation, improved fallow management, livestock breeds, improved rangeland management technologies, water and animal feed supply, provision of veterinary services and products. During implementation, the Project with its government partners' support (IIA, IIV, INCA, IDA, IDF, ISV) will broaden the range of supported packages possibly introducing other climate resilient crops valued by markets.

43. Wherever feasible and needed, the component will support irrigation investment by individual or small group of smallholder farmers, focusing on beneficiaries from FFSs. This includes lifting technologies such as treadle pumps, motorized pumps, solar/wind power technologies to support water supply for irrigation (e.g., kitchen gardens), domestic and livestock purposes (e.g., irrigated

fodder), as well as water efficient irrigation technologies such as drip and sprinkler when relevant. Financial support will also include the acquisition of small irrigation equipment linked to the World Bank-financed RECLIMA project-supporting the rehabilitation of multi-use sources with the vision of securing water for livestock and family farming, especially for the most vulnerable producers. The irrigation equipment can be simple (buckets, watering cans, benefiting from e-vouchers) or more sophisticated (pumps driven by solar and/or wind energy, benefiting from Matching Grants). Technologies options provided to individual farmers will include the suitability of the technology to meet multiple use needs and women preferences within the household to save time.

e-Vouchers	Matching Grants
E-vouchers finance incremental variable costs to implement climate resilient technologies and practices (inputs such as improved seeds, small equipment, additional labor needed, etc.) for crops and livestock production, including the improvement of irrigation. This type of financing mechanism is intended for farmers participating in FFS. The maximum initial investment caps and co-financing required by beneficiaries will be detailed in the Project Operation Manual.	MGs finance climate smart infrastructure, machinery, equipment and even part of incremental operational costs (if justified), aiming at value addition and improved marketing (dryers, mills, silos, warehouses, etc.), based on a Business Plan prepared by eligible individual producers or groups. This MGs are smaller in scale that the ones promoted by the small-scale window of PDAC. The maximum initial investment caps and co-financing required by beneficiaries will be detailed in the Project Operation Manual.

44. Producers having achieved a certain level of organization (e.g., association or cooperative) will be encouraged to initiate or develop adding-value activities, such as conservation and processing of their production according to market demands. They will also be encouraged to develop Productive Alliances to strengthen their trading capacity within the relevant value chains, and to facilitate market access to other individual producers. The project will thus also invest in improving access to climate smart storage capacity, post-harvest (solar dryers), processing (use of solar for renewable energy generation for processing equipment and facilities), and other value-adding activities and renewable energy powered marketing infrastructures. The project will adopt a framework for climate-smart post-harvest infrastructure mainstreaming. Guidelines and criteria will include providing climate-proofed and low-carbon infrastructure. To benefit from Project support, a Business Plan detailing investment and working capital requirements (and registration in the RNPA if not done yet) will have to be submitted to ensure the financial sustainability of the proposed investment.

45. From the smallholder perspective, the producer will need to first register in the RNPA, which will be open to all and will be voluntary, though priority will be put on graduated FFS farmers in the information campaign. The registration process (as well as the rest of the process of applying for direct farmer supports and receiving technical assistance) will be facilitated by the local technical operator and FFS Facilitators. The on-the-spot registration will capture information from the individual farmer (not the household), such as name, basic demographic information (gender and age), location of the plot(s), size and biometric information. Once registered, the farmer will receive a “Contactless Farmers Smart Card” with his/her personal data and a unique identification number.

This individual card will work as a NFC card with electronic data. With this smart card, farmers will be entitled to *e-vouchers* tailored to the PaTec they select. The *e-vouchers* can be exchanged for pre-defined inputs at registered agro-suppliers. If labour costs need to be financed, cash can be also obtained at registered cashing points. Suppliers and financial institutions will receive a specific training and if need be electronic devices to scan the Contactless Farmers Smart Cards. This system also works off-line with limited risk of fraud.

46. Local long-term sustainability will be reinforced by seeking to crowd-in private agriculture input suppliers, financial and technical assistance providers in delivering inputs and services directly to farmers. Upon the transaction information registered in the SEGI, the Project would provide projections on supply demands to support agrodealers' activities, and facilitate, to the extent possible, access to commercial loans from partner financial institutions for agro-dealers registered in the RNTA willing to expand their activities in response to the Project beneficiaries' demands.

47. One of the challenges of this component is ensuring adequate seed supply responding to the needs of implementation of the PaTecs. The current seeds value-chain will need to be reinforced through SENSE (National Seed Service) and research partners. The Project will promote specific *PaTec* targeting improved seeds producers located in key Project areas to mitigate any break risks in supply, to reduce coordination risks and costs and to strengthen local capacities. Identification and support to seed producers will be made in relation with the geographical expansion of the Project.

48. **Subcomponent 2.2. Irrigation Rehabilitation (US$ 31 million)**: The objective of this subcomponent is to take advantage of existing water resources in the selected Municipalities so to increase crop resilience and production throughout the two agricultural campaigns through:

49. Rehabilitation of small gravity irrigation schemes in farmer communities in the mountainous areas of Huila, Cuanza Sul, Bié and Huambo Provinces. FFSs can propose rehabilitation of gravity irrigation systems in their areas. For the Huila province, the municipal water plans supported by RECLIMA will indicate eligible schemes. Some 40 schemes with an irrigated area of 20 to 50 ha with a total area of about 1440 ha and 4200 beneficiaries would thus be rehabilitated. The estimated average investment cost (including construction supervision) is 6000 USD/ha. Schemes will be selected according to eligibility criteria (requirements and technical conditions). Own farmer contributions will be determined after an agro-economic viability study. The identification (resource potential), studies, detailed design and bidding documents will be carried out by the to be contracted engineering company (TSP Irrigation).

50. Promotion and support investment in irrigation equipment and irrigation technologies by individual farmers or small groups of farmers through matching grants according to the Farmer Led Irrigation Development (FLID) approach. This includes the construction of groundwater extraction structures such as shallow lined wells and tube wells, lifting technologies such as treadle pumps, motorized pumps, solar/wind power technologies, efficient water transport and application means such as hoses and tubes as well as water efficient irrigation technologies such as drip and sprinkler. Irrigation equipment will serve individual plots or a set of plots (in case that the equipment serves a small group of farmers) nearby water sources, along rivers and streams and groundwater extraction points. These

interventions will ensure to address gendered preferences in technology and will provides equal access for different water uses. Activities under this subcomponent will start up in the 5-drought affected Southern provinces and will extend after three years to other provinces. The TSP Irrigation can be used for identifying suitable technologies based on water resources, farming systems, women specific needs. After 2 or 3 years, the municipal water plans supported by RECLIMA will also indicate availability of water resources to support producers in developing or expanding their irrigated area based on eligibility. It is foreseen to support about 15,600 farmers working on an irrigated area of about 6,240 ha. Matching grants require the approval of a simplified business plan (technical and financial viability) by a Project registered technical field operator. The TSP will also train and support (backstopping) these operators in resource analysis (water, land), selection of irrigation technologies and equipment, preparation of simplified business plans and RNPA procedures. Farmers will receive a matching grant that it is only valid for the purchase of the selected technology/equipment after analysis and acceptance of the offer/quotation of the equipment supplier.

51. Investment caps for MG are set at 1 ha of irrigated land and 6000 USD for individuals. The farmer counterpart to MG will depend on the type of equipment, cost-benefit analysis of the technical packages for irrigated crops/fodder and farmer's financial ability and determined upon an agro-economic study. The TSP will support the establishment of user organizations and training in management, operation and maintenance (gravity systems in #2), surveys (types of available irrigation equipment, prices, capacity of suppliers, quality standards) and studies (water resources, cost-benefit analysis irrigated crop production), communication (material), awareness and demonstration activities, training activities, preparation of manuals and quality standards of irrigation equipment and others.

52. Support to simple irrigation equipment (buckets, watering cans - about 10US$) mainly in very small farming (e.g., horticulture) as part of the technological packages. These would be mainly small vegetable plots/kitchen gardens (about 100-200 m2) to improve food security and petty marketing. Priority will be given to the 5-drought affected Southern provinces and women and will extend after three years to other provinces.

53. Component 3: Project Management and Monitoring and Evaluation (M&E) (US$ 20 million): The component will finance will finance: (a) PIU operational costs and multisector coordination—technical, fiduciary (procurement and financial management FM), and social and environmental frameworks—at the central and decentralized levels; (b) institutional and technical capacity building for project implementation at all levels to ensure an efficient project management; (c) M&E and information systems; (d) project website design, implementation, and maintenance; (e) baseline, midterm, and final project evaluations, including impact evaluation; (f) communications strategy and information dissemination; (g) diverse knowledge exchanges; and (h) project results dissemination. A robust project M&E system for project implementation will be a top priority.

54. **Component 4: Contingent Emergency Response Component (CERC) (US$ 4.5 million):** This component will provide immediate response to eligible emergencies. As such, in the event of such an

eligible emergency, as defined in the Contingency Emergency Response (CER) operational manual prepared and adopted by the GoA, this component will finance emergency activities and expenditures through the reallocation of funds from the Project. This component may be triggered via a formal emergency declaration or upon a formal request issued by the Borrower following a natural disaster. When triggered, the budget allocated to this component will be available to rapidly finance works, goods, services and operational costs emergency response and recovery related, through simplified procurement and disbursement procedures. Activities eligible for financing under this component may include, among others: emergency works to rehabilitate infrastructure financed by the Project (such as irrigation infrastructure, warehouses, training centers, others) and other infrastructure enabling the activities of the agriculture, fisheries forestry sectors (such as transportation, water supply and sanitation, energy generation and supply, among others); replacement of agriculture equipment destroyed; compensation for harvest losses due to natural disasters and pests (cash transfers); livestock replacement of animals killed by natural disasters or disease outbreaks; mitigate or avoid potential effects of imminent or future emergencies or crises; capacity building for long-term reconstruction, disaster management and risk reduction. The CERC implementing agency will be the same as the Project's one.

Legal Operational Policies

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

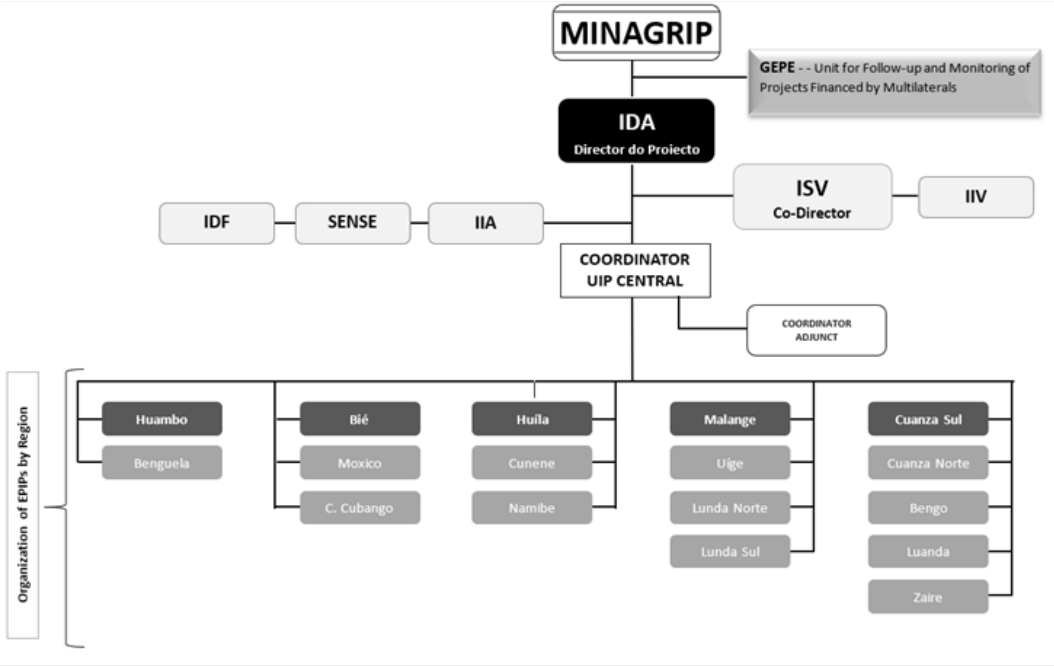
Summary of Assessment of Environmental and Social Risks and Impacts

E. Implementation

Institutional and Implementation Arrangements

55. **Implementing Agency.** The project will be implemented by MINAGRIP, which will coordinate the project through the direction of IDA and in direct consultation with GEPE to ensure that project activities are aligned with national policies and the requirements of the World Bank. The project implementation arrangement and institutional organizational chart are shown in the figure below.

Figure 4. MOSAP3 Institutional Arrangement



56. **Project Steering Committee (CDP).** A high-level CDP will be established and will be responsible for the strategic direction of the project, including overseeing the implementation progress and overall good governance of the project. CDP will: (i) provide policy and strategic guidance and facilitate cross-sectoral coordination of project activities; (ii) propose the project's action plan and budget to the UIP; and (iii) review the project's annual reports and assist in problem resolution. The CDP will be composed of representatives of the main stakeholders in the project, including relevant ministries, the private sector, and civil society. The final decision-making authority will rest with MINAGRIP.

57. **Project Implementation Unit (PIU).** MINAGRIP will establish a PIU in the Agrarian Development Institute (IDA) headed by a project director with the necessary management systems and procedures, including a project coordinator assisted by a team to: (i) coordinate the management, implementation and project oversight, fiduciary management, and environmental and social safeguards and gender, and M&E, in accordance with World Bank standards and requirements; and (ii) manage the project based on the legal documents, e.g. PAD, Project Operations Manual, Financial Agreement, etc.

58. **Provincial Project Implementation Teams (EPIPs).** The EPIPs, representing the PIU in the target provinces and reporting to the PIU, will oversee project implementation and ensure coordination with the provincial government and local stakeholders. EPIPs will be hosted by the respective Provincial Directorate of Agriculture (DPA) and grouped by regions, and will include a PIU representative and additional consultants hired as needed during implementation. EPIPs will be responsible for: (i) keeping the DPA involved in project implementation in the provinces, ensuring overall alignment with provincial government programs, (ii) overseeing the implementation of project activities in the provinces, providing information to the PIU, and (iii) establish specialized irrigation teams to monitor irrigation activities.

59. **Technical Service Providers (TSPs).** The project will hire nationally or internationally recruited and specialized companies, resident in Angola, with respective Terms of Reference (ToRs) and with specific experience in capacity building and specific implementation needs. The PIU will receive capacity building assistance, including from the TSPs, to support the technical, operational, and administrative implementation of the project, and to strengthen the M&E capacity of the PIU.

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