African Union | AUDA-NEPAD AFRICAN UNION DEVELOPMENT AGENCY | GOVERNO DE ANGOLA

III LUANDA FINANCING SUMMIT FOR AFRICA'S INFRASTRUCTURE DEVELOPMENT

Project Investment Prospectus – Angololo Multipurpose Water Resources Development Project

PROJECT SUMMARY	
Project Name	Angololo Multipurpose Water Resources Development Project
Location	Africa, Kenya and Uganda, trans-boundary Malaba River between Kenya and Uganda | Located within the Sio-Malaba-Malakisi River Basin within the Lake Victoria sub-basin enabling cross-border water resources development
Sector	Water and Energy
Sub-Sector	Multi-purpose Dam and Power Generation | Integrated water resources infrastructure combining irrigation, water supply, hydropower generation and flood management
Development Stage	S3B: Transaction Support & Financial Close | Advanced development stage with project preparation finalized and resource mobilization for implementation ongoing
Project Sponsor	AfDB (NEPAD-IPPF), Governments of Kenya and Uganda, NBI / NELSAP-CU. | Multi-institutional sponsorship through African Development Bank NEPAD Infrastructure Project Preparation Facility, bilateral government support, and Nile Basin Initiative coordination
Project Cost	Construction cost: 132 million USD | Total investment cost USD 132.15 million with comprehensive multipurpose infrastructure development
Funding Requirement	132 million USD | Full construction financing requirement for multipurpose dam and associated infrastructure
Project Preparation Cost	2,650,000 USD (1,650,000 USD + 1,000,000 USD) | Comprehensive preparation phase funding for feasibility

	studies and development activities
Preparation Funding Gap	For Pre-Construction phase: 1 million USD The project requirements include funding for capacity building, sensitization and awareness campaigns; funds to ensure the bankability of projects; and project structuring for mobilizing of financial resources. In general, funds are required for further stakeholder engagements and capacity building; resource mobilization activities and project implementation once the Bilateral Agreement is finalized. | Remaining preparation funding needs for bankability enhancement and stakeholder engagement pending bilateral agreement finalization
Financing Structure	For Project Preparation: Grant from AfDB For Project Implementation: PPP, Loans and Grants for the Countries | Mixed financing approach with AfDB grant support for preparation and public-private partnership with concessional financing for implementation

FINANCIAL OVERVIEW	
Total Project Cost	From the detailed design reports, Total Investment cost: USD 132.15 million 40% of it (which is 52.5 M) is for the Dam structure, the irrigation scheme represents 33% of the cost with a tally of 43.9 M. The Water supply component costs 8.4 million which is 11% of the total cost. The remaining 16% is distributed among the Hydropower component, the Environmental and Social Safeguards, the on-farm investments and the Supervision and management of the project. | Comprehensive cost breakdown: Dam $52.5M (40%), Irrigation $43.9M (33%), Water $8.4M (11%), Hydro $2.1M, Safeguards $3.25M, On-farm $7.8M, Supervision $14.2M (16%)
Capital Structure	For Project Implementation: PPP, Loans and Grants for the Countries | Public-private partnership structure with concessional loans and grant financing from development partners
Financial Metrics	In economic terms: The Economic Internal Rate of Return (EIRR) >14% compared to the prevailing Economic Opportunity Cost of Capital (EOCK) for both Uganda (11%) and Kenya (11.5%). In financial terms: The Financial Internal Rate of Return (FIRR) is in the range of 8.1 – 8.6% for the discount rates of 8% to 15%. If the project is funded with concessionary financing at an interest rate of 8% or less, then the project is financially viable. At a discount rate of 8%, there is a positive Net Present Value (NPV) of USD 7.74 million; and both the Benefit Cost Ratio (BCR) and Net benefit to investment ratio (N/K) ratio are greater than 1,

	which indicates that the project is financially viable. | Strong financial viability with EIRR exceeding both countries' EOCK and positive NPV with BCR and N/K ratios above 1.0 confirming economic feasibility
Revenue Model	The project will generate revenue from the Irrigation and Hydropower generation via users' fees | User fee-based revenue generation from irrigation water supply and electricity sales

SUSTAINABILITY AND IMPACT	
Social Impact	The project will support irrigation development of about 4000 hectares of irrigation land, water supply to over 270,000 people, livestock water supply, generate more than 1.3 MW of hydropower, control floods, and restore 30% of the 447 Km2 of degraded upstream watershed, among other benefits. The project when implemented is expected to benefit at least 300,000 people from Eastern Uganda and Western Kenya directly or indirectly through creation of employment opportunities, agricultural production (irrigation), and livestock and fisheries production. Besides the tangible economic benefits captured in project cash-flows, there are several other important economic benefits, some of which are listed below. Employment creation – jobs will be created on large-scale farms and both upstream and downstream of the value-chains of crop production. Food security – the significant increase in productivity in the project area will increase both local and national food security. Address poverty and lack of social development, which constrain agricultural intensification, through a labour-intensive approach coupled with training and support. Regulation of flow in the Malaba River, reducing floods downstream and benefitting the operation of future dams downstream of the Angololo dam. Improvement in health, hygiene, nutrition, and sanitation due to access to clean drinking water and an improved production of a variety of crops. Improved livestock production due to better access livestock clean water supplies. Opportunities for fishing and fish-farming in the reservoir. There is also the potential to integrate small fishponds with rice growing in the areas where soils are suitable for rice. Increase hydropower generation and household connectivity to national power grids to boost regional trade at local level and create an enabling environment for industrialization and agro processing (value addition). Mitigate environmental degradation through the implementation of sustainable land management and productivity, and afforestation in the upstream catchments.ie. Green growth. Strengthening trans-boundary cooperation between Uganda and Kenya in water resources

	development and management. | Comprehensive social development through agricultural transformation, water security, energy access and cross-border cooperation strengthening regional integration
Environmental Impact	The Environmental and Social Impact Assessment (ESIA) for the Angololo Water Resources Development Project—approved by both Kenya's and Uganda's National Environment Management Authorities (NEMA)—was conducted to evaluate environmental impacts and develop mitigation strategies for potential negative effects. This assessment complied with the African Development Bank's Integrated Safeguards Systems, relevant policies, and environmental legislation from Kenya and Uganda, including Kenya's EMCA Cap 387, the 2010 Constitution, Uganda's National Environment Act of 2019, and the 1995 Constitution. The ESIA identified positive impacts such as enhanced food security, job creation, increased revenue and income, improved infrastructure, reduced food costs, and lifestyle improvements. Negative impacts include air, noise, water, and soil pollution, biodiversity loss, loss of cross-border river access, increased accidents, and cultural shifts. To mitigate these, the ESIA proposes interventions valued at approximately USD 3.2 million, covering community capacity building, waste disposal management, cross-border access enhancements (bridges and boats), and agroforestry initiatives. | Comprehensive environmental compliance through NEMA-approved ESIA with USD 3.2 million mitigation measures addressing identified negative impacts while maximizing positive development outcomes
SDG and Agenda 2063 Alignment	contributes to Kenya Vision 2030 aims to increase irrigated land from 4% to 10% by 2030. It contributes to the Uganda Vision 2040 of having "a transformed Ugandan society from a peasant to a modern and prosperous country within 30 years". It aligns to the EAC Vision 2050 which seeks to "widen and deepen economic, political, social and cultural integration in order to improve the quality of life of its people". In line with aspiration of the African Union Agenda 2063: on Modern Agriculture for increased productivity and production as well Environmentally sustainable and climate resilient economies and communities. The project aligns directly with 9 of the United Nations (UN) Sustainable Development Goals (SDGs) (Goal 1, Goal 2, Goal 3, Goal 5, Goal 6, Goal 7, Goal 8, Goal 11, and Goal 13) and indirectly to the remaining 8. | Strong alignment with national development visions and continental frameworks supporting Kenya Vision 2030 irrigation targets, Uganda Vision 2040 transformation agenda, EAC Vision 2050 integration objectives, AU Agenda 2063 agriculture modernization and direct contribution to 9 UN SDG targets

TECHNICAL DETAILS	
Technology & Design	The Angololo Water Resources Development Project leverages several innovative technologies to enhance agricultural productivity, water management, and energy generation for sustainable regional development. Key technological aspects include: Composite Dam Structure: The dam is designed with a rock-fill and concrete gravity structure, providing 31.6 million cubic meters of water storage capacity. This innovation supports flood management and ensures a stable water supply for irrigation and hydropower generation. Mini Hydropower Plant: Integrating a 1.3 MW mini hydropower facility, the project provides renewable energy to meet local demands, fostering economic growth and supporting energy access improvements across the region. Floating Solar Power Potential: The project includes provisions for a floating solar power system over the dam reservoir, creating a dual-use infrastructure that reduces water evaporation, optimizes land usage, and enhances energy production, particularly valuable during dry spells. Advanced Irrigation Systems: Covering approximately 4,000 hectares, the irrigation infrastructure employs modernized systems, such as main and branch canals, that improve water distribution efficiency, allowing for high-value crop production and increased agricultural yield. Watershed Restoration and Management: To prevent soil erosion and reservoir sedimentation, the project incorporates sustainable land management practices, including riverbank protection, afforestation, and silt traps, enhancing environmental conservation and ensuring the longevity of water resources. These innovations position the Angololo Project as a model of integrated resource management, promoting agricultural commercialization, clean energy, and sustainable water use to meet the developmental visions of both Kenya and Uganda | Integrated multipurpose design combining composite dam structure, mini hydro, floating solar potential, advanced irrigation systems and watershed restoration for comprehensive resource management
Capacity/Size	Composite (Rock-fill/concrete gravity) dam with 31.6 MCM storage capacity, 40 m high, Mini Hydropower plant of capacity 1.3 MW, Irrigation Command Area development of about 4,000 hectares of land, domestic water supply to over about 270,000 people, including livestock water supply, | Comprehensive infrastructure capacity: 31.6 million cubic meters water storage, 1.3 MW power generation, 4,000 hectares irrigation coverage, 270,000 people water supply serving multiple development objectives

Construction/Preparation Timeline	Project Preparation (S0 to S3A): 2016 - 2023 Resource Mobilization Phase: 2023 (ongoing) – 2025 Tendering Phase (S4A): 2025 – 2026 Construction Phase (S4B): 2026 – 2029 Operation (S4C): 2030 - 2080 | Comprehensive development timeline with 7-year preparation phase completed, 2-year resource mobilization, 1-year tendering, 3-year construction and 50-year operational lifespan
Offtake Agreements	A Bilateral Agreement between the two countries is being finalized for the joint implementation of the Project. | Bilateral framework agreement between Kenya and Uganda establishing joint implementation arrangements for cross-border project coordination

RISK MANAGEMENT	
Risk Assessment	Technical Risks: Denied access to project site: Mitigation strategy: A proper communication plan will be prepared at the beginning of the project to ensure the communities/all stakeholders are fully sensitised and own the project. Social Risk: Low levels of community participation Mitigation strategy: The project will be designed in such a way that stakeholders at community level are fully engaged to support preparatory studies to be conducted by the consultants. Priority will be given to dam site resident community members when it comes to sources of skilled and unskilled work force. Procurement and Implementation Delay risks: One of the major potential risks to the project is the timely completion and delivery of outputs that could arise from procurement and implementation delays. This risk could derail the implementation schedule due to lengthy conclusion of procurement activities leading to award of contract to the successful firm. Delays could also be experienced during implementation of studies, potentially due to delays in access to sites, approval or data. Often times in regional project such as this one, validation of reports and issuance of approval of outputs can also be a source of delays as consensus will be required from both countries and other stakeholders. Mitigation strategy: Through procurement planning, close supervision and adherence to strict review and approval timelines can reduce the potential negative impact of such risks. | Comprehensive risk mitigation through community engagement strategies, stakeholder participation frameworks and procurement planning with strict timeline adherence for cross-border project coordination
Regulatory Risks	Political risk: Both Kenya and Uganda have relatively stable political environments. However, potential policy and regulatory changes may occur due to an increased political effort to expand government programs and manage debt

	sustainability, which could potentially affect implementation of the project. Mitigation strategy: Mitigating factors are that both Governments benefit from close cooperation with development partners, such the Bank, World Bank, EU, DFID and others. Both Governments have additionally been taking steps to ensure greater transparency and willingness to partner with international organizations to ensure the best outlook for the country. | Political risk mitigation through established development partner relationships and government transparency commitments ensuring continued international cooperation support
Environmental and Social Safeguards	The Environmental and Social Impact Assessment (ESIA) for the Angololo Water Resources Development Project, approved by NEMA in both Kenya and Uganda, aimed to evaluate the project's environmental impacts and propose mitigation measures for any adverse effects. Conducted under the African Development Bank's Safeguards Policies and respective national environmental legislation, the ESIA identified several positive impacts, including enhanced food security, job creation, income growth, improved infrastructure, and reduced food costs. However, it also noted potential negative impacts, such as pollution, biodiversity loss, river access issues, increased accident risks, and cultural shifts. To mitigate these, a comprehensive plan with an estimated cost of USD 3.2 million was developed, covering measures like environmental conservation, community training, waste management, improved cross-border access, and agroforestry. Detailed findings are available in multiple ESIA reports, including the inception, scoping, interim, and final reports. | Robust safeguards framework through dual NEMA approval process with comprehensive USD 3.2 million mitigation plan addressing environmental conservation, community training and cross-border access improvements

KEY STAKEHOLDERS	
Sponsors	AfDB (NEPAD-IPPF), Government of Kenya, Government of Uganda, The Nile Basin Initiative | Multi-institutional sponsorship through AfDB NEPAD Infrastructure Project Preparation Facility, bilateral government support and Nile Basin Initiative regional coordination
Investors	AfDB, The World Bank, The African Union, China International Water & Electric Corp (CWE) group | Development finance institutions and international partners providing financing expertise for multipurpose water infrastructure development

Contractors & Operators	TBD | Contractor selection to be determined through competitive procurement process
Legal and Financial Advisors	AUDA-NEPAD, IUCN | Advisory support through African Union Development Agency-NEPAD for continental framework alignment and IUCN for environmental sustainability guidance

WAY FORWARD	
Investment Ask	132M USD: Dam (52.5M), Irrigation (43.9M), Hydro (2.1M), Water (8.4M), Safeguards & Capacity Building (3.25M), On-farm (7.8M), Supervision (14.2M) | Total investment requirement USD 132 million with detailed component breakdown for comprehensive multipurpose infrastructure development
Next Steps	The project requirements include funding for capacity building, sensitization and awareness campaigns; funds to ensure bankability of projects; and project structuring for mobilizing of financial resources. In general, funds are required for further stakeholder engagements and capacity building; and project resource mobilization once the Bilateral Agreement is signed. 2) For implementation stage: 132 million USD: Project Budget Breakdown is as follows: a. Dam = 52.5 million USD Irrigation Scheme = 43.9 million USD Hydro Electric Power = 2.1 million USD Water Supply = 8.4 million USD Environmental and Social management safeguards, watershed management, and farmer capacity building trainings = 3.25 million USD On-farm Investment = 7.8 million USD Supervision and Management = 14.2 million USD | Implementation readiness through bilateral agreement finalization, stakeholder capacity building and resource mobilization completion enabling construction phase initiation
Contact Information	alukwe@nilebasin.org | Project coordination through Nile Basin Initiative institutional framework