Project Information Document/ Integrated Safeguards Data Sheet (PID/ISDS)

Concept Stage | Date Prepared/Updated: 03-Apr-2018 | Report No: PIDISDSC23380

BASIC INFORMATION

A. Basic Project Data

Country	Project ID	Parent Project ID (if any)	Project Name
Uganda	P163836		Uganda irrigation development and climate resilience project (P163836)
Region	**Estimated Appraisal Date**	**Estimated Board Date**	**Practice Area (Lead)**
AFRICA	Jan 15, 2019	May 30, 2019	Water
Financing Instrument	**Borrower(s)**	**Implementing Agency**	
Investment Project Financing	Ministry of Finance, Planning and Economic Development	Ministry of Water and Environment	

Proposed Development Objective(s)

To provide irrigation and drainage services, and develop institutional capacity for irrigated agriculture production in the project areas.

PROJECT FINANCING DATA (US$, Millions)

SUMMARY

Total Project Cost	200.00
Total Financing	200.00
of which IBRD/IDA	195.00
Financing Gap	0.00

DETAILS

World Bank Group Financing

International Development Association (IDA)	195.00
IDA Credit	195.00

Non-World Bank Group Financing

Counterpart Funding	5.00
Borrower	5.00

Environmental Assessment Category	Concept Review Decision
A-Full Assessment	Track II-The review did authorize the preparation to continue

Other Decision (as needed)

B. Introduction and Context

Country Context

1. ***Uganda has made significant progress in economic growth and poverty reduction over the last 30 years, rural poverty remains a major challenge.*** Following policy reforms that allowed market liberalization and led to political stability, Uganda registered high economic growth between 1987 and 2010, with Gross Domestic Product (GDP) averaging 5.1 percent[1] in the last five years. The structure of the Ugandan economy has also undergone a major transformation during the same period, with a notable shift from a primarily agriculture-based economy to one dominated by services and industry. In 2015[2], the service sector became the largest contributor to GDP (52.8 percent), followed by agriculture (25.8 percent) and industry (21.4 percent), respectively. In line with its economic growth, the country achieved remarkable results in poverty reduction, cutting extreme poverty by half, between 1993 and 2006[3]. The recent National Household Survey has however showed an increase in poverty from 19.7% in 2012/13 to 27% in 2016/17. The main poverty challenges are food insecurity, low agricultural productivity, a degrading natural resource base, inadequate planning for the rapid urbanization and low access to basic infrastructure and services.

2. ***Agriculture has been a key driver of economic growth and poverty reduction in Uganda, irrigation development is essential for food security and agriculture transformation.*** As Uganda's largest single economic sector, generating about one quarter of GDP and employing 70 percent of the labor force, agriculture plays a critical role for income generation, employment and livelihoods, particularly for the bottom 40% of the population, as well as overall economic development. In spite of the gradual decline in its GDP contribution, typical of transforming economies, agriculture remains the key source of exports contributing 80% of total exports. The agriculture sector supports over 80% of the poorest of the population, the rural areas account for 94% of the poor, and 85% of the population. This demonstrates the high potential multiplier effect of agricultural growth on the socio-economic development of the country. Irrigation development which is now very limited in the Uganda is essential to increase agricultural productivity, manage the increasing climate risks and enable

[1] World Bank Data: Uganda Economic Overview (2017)
[2] World Development Indicators (2015)
[3] Uganda Poverty Assessment Report (2013): Ugandan poverty line USD 0.94 and 1.07 per day depending on the region and area).

commercial cultivation in the country. In recognizing the critical roles of irrigation, the government in the Vision 2040 and NDP II (2016-2020) lists irrigation investment as a high priority along with agricultural value-chain development. The goal is to transform the small-holder subsistence cultivation into modern commercial farming to increase production, productivity and farm income.

Sectoral and Institutional Context

3. ***The regulatory framework for irrigation in Uganda is generally aligned with international good practice although detailed implementation regulations and management institutions require strengthening.*** The Water Act (1995) provides the institutional framework and legislation for water resources management, irrigation, water supply and sanitation. The National Water Policy defines the responsibilities of different entities in water resource development, promotes water resource assessment and planning for irrigation, and calls for increasing the capacity of the farmers to access and use water for crop, fishery and livestock production. The Water Resources Management Reform Strategy (2005) provides for decentralized water resources management at the zone and basin levels. On the agricultural side, the 2010 National Agricultural Policy (NAP) stipulates the sectoral approach to the National Development Plan, emphasizes the need for rehabilitating government irrigation schemes, transferring the management responsibility of irrigation schemes to lowest appropriate levels, establishing new irrigation schemes, and increasing water storage for livestock and wildlife. The Agriculture Sector Strategic Plan (2015/16-2019/20) includes strategic interventions to increase access to water for agricultural production. The National Irrigation Policy (2017) lays out the guiding principles and general institutional arrangement for irrigation development and management, including coordinated planning, implementation, and service delivery, as well as cost recovery and beneficiary participation through water user associations (WUAs). The policy recognizes the role of farmers managing small-scale schemes, and encourages a community-based irrigation management approach. The National Irrigation Master plan (MWE 2011-2035) stipulates the priority irrigation development areas and schemes over short, medium and long terms.

4. Irrigation, also called water for agricultural production (WfAP), is a shared responsibility between the Ministry of Water and Environment (MWE) and the Ministry of Agriculture, Animal Industry and Fisheries (MAAIF). MWE takes overall responsibility for irrigation and off-farm irrigation development while MAAIF for water use and management of on-farm agricultural water facilities. Horizontal and vertical coordination is often lacking. Overall policy guidance to the water subsector is provided by the Water Policy Committee, comprising members from relevant sectors. Technical guidance to the sector is provided by the cross-sectoral Water and Environment Sector Working Group (WESWG), which includes recommendations of budget and programs, and sector performance assessment.

5. ***Agriculture and irrigation are performing well below their potentials.*** Uganda has a diverse agricultural production system primarily based on small-scale manual subsistence farming, and comprising a system of mixed agriculture with perennial and annual crops in most of the seven agro-ecological zones. The main crops are cereals (maize, sorghum, millet, rice) on some 1.7 million ha for the two cropping cycles out of the total 14.4 million ha agricultural area: root crops (25%), banana (17%), as well as pulses, oil seeds, coffee, vegetables and fruits. Export crops include coffee, tea, tobacco, cotton, cut flowers, and cocoa. Food crop production dominates the agriculture sector, contributing over 55% of the agricultural GDP, while cash crops contribute 17% and livestock 15%. Despite the dominance of food crop production, one third is marketed with export being less than 7%. The sector is seeing a trend of moving towards higher-value crops (perennial and seasonal) such as Tea, Cocoa, fruits etc.,

with more clear commercial and export orientation.

6. Agriculture is mainly rain-fed with only 1.3% of total cultivated land under irrigation over a potential of 1.1million ha (AICD/IFPRI, 2010) and 3.0 million ha (NBI 2012). Therefore, the sector is very vulnerable to climate change and variability. According to the 2017 National Food Security Assessment and IPC, around 31 percent of the population was food insecure (in January 2017) and this deterioration was partly due to the drought conditions caused by the 2016/17 El Niño and La Niña climatic events. This highlights the inadequate climate resilience of agricultural production and farming communities. The crop yield and productivity in the country are well below their potentials, for example, the yield of maize in the country is around 2.4 tons/ha while in some parts of world farmers could easily produce with irrigation, 10-15 ton/ha of maize. The main contributing factors found by different studies are lack of reliable water supply (irrigation), quality of production inputs, poor extension services and little value-chain development. As a result, food insecurity and malnutrition as well as very low agricultural income are still major challenges for the country. Many households suffer from food insecurity and high levels of malnutrition, with 34% of children under 5 years being stunted. The most food-insecure region is the North, followed by the East, in terms of dietary energy consumption. In the North, 59% of households consume only one meal per day. The number of food-insecure people in Uganda is projected to rise from 7 million in 2015 to 30 million by 2025.

7. Irrigation development is still at preliminary stage in the country. To date, a total of some 15,000 ha of public small scale irrigation schemes (largest 600-800 ha) has been developed, mostly in the form of valley tanks and river diversion schemes. The government ministries are responsible for scheme construction, and once the schemes are completed farmers operate the schemes. There is no dedicated irrigation management authority and the irrigation service concept is not fully developed. Irrigation water charge is being exercised in some places. Operation and maintenance of irrigation schemes have been essentially informal until in the past few years when farmer-based irrigation management through WUAs and farmer cooperative societies were piloted under AfDB funded irrigation rehabilitation project, which has mixed results. Negligence and deferred maintenance are common phenomena, management capacity at national, district and scheme levels is rather limited, sustainability of the existing schemes are questionable.

8. ***The Government has developed a strategy for irrigation development and management.*** The NDP II (2016-2020) and the Country Partnership Framework (CPF) both recognize investment in irrigation as one of the keys to the country's transformation. The NDP II Objectives related to irrigation include: increasing production and productivity along the value chain; addressing challenges in selected thematic technical areas including critical farm inputs, mechanization and irrigation; improving agricultural markets and institutional strengthening for agricultural development. Institutional strengthening is crucial, alongside investments in rural infrastructure and markets, farmer aggregation in producer associations and agricultural extension systems, to support the shift to higher-value agricultural production. The government has committed itself to increasing agricultural growth to 6 percent per year and allocate at least 10 percent of the budget to the agricultural sector. In order to address the irrigation development and management challenges, the government has formulated an *irrigation development strategy*. The strategy includes the following key elements: (a) boosting irrigation infrastructure development investment through difference sources; (b) promoting integrated planning and coordinated implementation among irrigation, agriculture and related sectors; (c) rolling out the National Irrigation Policy and detailed implementation regulations; (d) developing irrigation management institutions and farmer water user groups (WUAs) as well as service charge based cost recovery mechanisms for sustainable irrigation service delivery; and (e) strengthening agricultural support services through different pathways, including public service delivery,

farmer-based cooperatives/enterprises and partnership with the private sector. *The 2017 National Irrigation Policy sets an ambitious target of total irrigated area of 400,000 ha by 2040, with the objectives of achieving national food security, transforming the agriculture sector and significantly increasing agricultural income, through increasing production and productivity, improving drought-resilience of farming communities, and investing in agricultural value-chain development.* To implement the above strategy, the government requested the World Bank to support its irrigation development agenda with focus on irrigation infrastructure development, irrigation management institution development and value-chain development.

Relationship to CPF

9. The CPF of the World Bank Group for the Republic of Uganda for the period of FY16-21 responds to the Government of Uganda vision of a transformed society from a peasant economy to a modern and prosperous country by 2040, and its interim goal to attain middle income status by 2020 as described in the second National Development Plan (NDP II). The CPF is designed to contribute directly to achieving the Sustainable Development Goals, focusing on three strategic areas: (a) strengthening governance, accountability and service delivery; (b) Raising incomes in rural areas; and (c) boosting inclusive growth in urban areas.

10. The proposed project, marked as an FY19 lending operation, directly supports the Strategic Focus Area B of the CPF: Raising incomes in rural areas, by increasing agricultural productivity, improving the climate resilience of the poor and vulnerable farming communities. The project aims to modernize both the physical infrastructure system (including technology) and management and service institutions, required for sustainable irrigation services and agricultural transformation. This is well aligned with the GoU's Vision 2040 and agricultural development strategy.

C. Proposed Development Objective(s)

11. **Program Development Objective:** The proposed program development objectives are to improve financially sustainable irrigation and drainage services, and increase farmers' agricultural revenue in the project areas. The objective will be achieved through a phased investment program to be implemented over 10−12 years, with each phase focusing on one or two priority region(s).

12. **Proposed (Phase 1) Project Development Objectives:** The development objectives of the project are to develop irrigation and drainage infrastructure and services, and institutional capacity for irrigated agricultural production in the project areas. The schemes under Phase 1 will focus in one or two regions such as southwestern and northern regions.

Key Results (From PCN)

13. The key results (PDO) indicators for Phase 1 Project would likely include the following: (a) Farmers/Area provided with new/improved irrigation and drainage infrastructure services (no./ha); (b) Operational WUAs established or strengthened (number); (c) farmer cooperatives or organizations established or strengthened (number); (d) Change in crop intensity; and (e) Irrigation service fee established.

D. Concept Description

14. **Project concept and overall approach:** The proposed project will adopt a programmatic approach, based on the *strategic vision that sustainable irrigation infrastructure operation and services depend upon helping farmers turn agriculture into a profitable business*. The overall thinking is that reliable and affordable irrigation infrastructure and services enable high agricultural production and productivity leading to increase in farmer household income, that will enable farmers to pay for the irrigation and associated support services, and invest in high-value cultivation including value-chain development; and such investments demand high quality services to achieve the expected returns and foster a virtuous cycle of irrigated agriculture development. In view of the time required to complete the above development cycle, a three bite-sized program through a series of projects (SOP) is conceived for the proposed operation.

15. The Program would be implemented over a period of 10-12 years. It targets a total irrigated area of some 25,000-35,000 ha at a cost of US$400-500 million directly benefiting some 200,000 small and medium sized farmers (tentative, assuming an average 1 ha landholding for a household of six) in the water stressed areas with high development potential and/or where there is significant food insecurity issues. Phase 1 project will lay the foundation for the subsequent phases. Each phase will have different focus on infrastructure, institutions and productivity/income. Each phase prepares follow-up investments for the next phase, while every phase aims to bring the project objectives of the previous phase to a new level. Funding sources of the Program beyond Phase 1 would be more diverse including possible private sector investments. The program focus, phasing, and coverage are shown in the *Annex*.

16. ***Project Design Guiding Principles and Scheme Selection Criteria:*** The project design will follow the guiding principles below: (a) integrated investment planning and joint preparation; (b) complementarity and synergy with related (agricultural) investment programs; (c) institutional design to ensure sustainability of project facilities and service delivery, with adequate arrangements, capacity building for cost recovery and user/private sector involvement; and (d) simple project design with adequate implementation readiness before approval.

17. **Project Composition:** The proposed Phase 1 Project at an initially estimated cost of US$150-200 million, will have three components, i.e. irrigation infrastructure development, essential support services for agricultural production and value-chain development, and institutional strengthening including implementation support. At this stage, the project is estimated to develop some 10,000 ha of new irrigated area, directly benefiting around 60,000 poor small to medium farmers. The component description and indicative costs are as follows:

Component 1. Irrigation infrastructure development (US$175 million): The objective of this component is to develop the irrigation and drainage infrastructure primarily for supplemental gravity irrigation services. It will finance construction and equipment for the water source works (storage reservoirs, river diversion weirs and pumping stations), related catchment management interventions, and three to five irrigation systems (including main canal and drainage system, cross structures, on-farm works, and operation and maintenance (O&M) facilities), associated resettlement and environmental management costs. It will also finance consultancies for scheme feasibility studies, designs and safeguards assessments including for the follow-up investments. The schemes are likely to concentrate on southwestern and northern regions. This is in view of the promising commercial production prospect (southwestern) and high drought-vulnerability and severe food insecurity (northern), and very importantly implementation readiness for a successful first phase. Scheme selection will be guided by the GoU irrigation master plan and groundwater option considered where adequate studies exist.

Component 2. Essential support services for agricultural production and value-chain development (US$15 million): This component aims at filling critical gaps in provision of essential support services for crop production and value-chain development. It will include strengthening farmer groups/cooperatives for better access to quality inputs and appropriate technologies or practices with the aim of improving production and productivity. It will also support value chain development and market linkages to increase the value of traded items for better economic gains to the target population. The interventions will largely involve retaining experts for diagnostic assessments and for imparting knowledge and skills to the beneficiary communities; and provide financial support in form of credit or matching grants towards investment in produce storage facilities and value addition technologies. Interventions under this component will be complementary to the ongoing agricultural development operations by the government and other development partners, such as the Bank-financed Agricultural Cluster Development Project (ACDP), the Millennium Village Project (MVP), and the EU-funded Common Market for East and Southern Africa (COMESA) initiative. The approach to be adopted for this component would be consistent with that followed by the ACDP for improving farmer access to quality agricultural inputs and post-harvest handling.

Component 3. Institutional Strengthening and Implementation Support (US$8 million): This component is intended to strengthen irrigation management institutions through technical assistance and capacity building and implementation support. The institutional strengthening will finance: (a) consultancies for irrigation regulations and guidelines development, and necessary supporting studies (e.g. irrigation water tariff) for implementing the national irrigation policy; (b) consultancies and training for formulation and capacity building of irrigation management organizations for irrigation service delivery and system O&M , including management entities and farmer irrigation water users associations (WUAs); and (c) training and consultancies for skills development for staff at national, district and scheme levels including beneficiary communities and farmers, in irrigation policy and regulations, irrigation technology and management, and agricultural water management. Implementation support will include technical and project management consultancies, necessary facilities (goods) and incremental operating costs for project implementation management.

18. ***Lessons learned and considered in the project design***: The lessons learned from irrigation and irrigated agriculture operations supported by the Bank and other development partners in Uganda and elsewhere, which will be incorporated in the project design include the following:

(a) Sustainable irrigation investments require development at adequate scale and support over a sufficiently long period to break the vicious cycle of irrigation (or irrigated agriculture) development;
(b) Project design (complexity) should be compatible with the client capacity and development stage in the sector. The general implementation performance of Bank-financed agricultural operations in Uganda has been significantly below expectation, and therefore warranting a simple and realistic project design;
(c) Integrated irrigation and agricultural investment planning, preparation, implementation and operational management are crucial prerequisite to successful irrigation projects;
(d) Institutional design for irrigation operations should cover the entire project cycle. Participation of beneficiary communities through water user groups in irrigation system O&M and service delivery is essential for sustainable operation. Private sector involvements in irrigation and agricultural supporting services can enhance service delivery efficiency and performance;
(e) Farmer-based irrigation scheme management arrangements have limitations particularly for larger schemes as reflected under the Uganda's irrigation rehabilitation projects and other management models (options) need to be explored for managing the project schemes;

(f) The project related social and environmental risks are adequately assessed and used to inform and influence the project design, and a robust institutional mechanism put in place for resettlement and safeguards risk management during implementation; and
(g) Project implementation readiness at appraisal is critical for smooth implementation and timely completion

19. The proposed project will be implemented by the Ministry of Water and Environment (MWE). The Ministry of Agriculture, Animal Industry and Fishery (MAAIF) will be involved in implementation of Component 2. The district local governments (DLGs) and local communities at the locations of the project schemes will participate in implementation of different components. A project steering committee (PSC) chaired by the permanent secretary for water, and comprising senior officials from MAAIF and related ministries and districts, will be established to provide strategic directions, policy guidance, and high-level coordination. The existing project management unit (PMU) of MWE with experienced project management, procurement and safeguards staff, will function as the PMU for overall project management and coordination, and the secretariat to the PSC. An integrated implementation team comprising technical, agricultural and institutional staff from national and local government will be established at each location for execution of scheme-specific activities.

SAFEGUARDS

A. Project location and salient physical characteristics relevant to the safeguard analysis (if known)

The schemes are likely to concentrate on southwestern and northern regions. This is in view of the promising commercial production prospect (southwestern) and high drought-vulnerability and severe food insecurity (northern), and very importantly implementation readiness for a successful first phase. Scheme selection will be guided by the Government of Uganda (GoU) irrigation master plan and agreed selection criteria and process. Groundwater option shall be considered where adequate studies exist. As described in the project concept note, the project will finance construction of 20-30 m high storage dams on rivers and other water source works, several large scale new irrigation and drainage canal systems each with 1,000-4,000 ha of command area, as well as catchment management and agricultural water management and essential supporting services. Significant resettlement and labor influx are anticipated at some project schemes although land redistribution is not required. The project is expected to boost agricultural productivity through crop intensification and diversifications as well as value chain development.

B. Borrower's Institutional Capacity for Safeguard Policies

Although the ministry of water and environment (MWE) as the implementing agency for the project has substantial experience in implementing World Bank funded projects and have overall social and environmental safeguards capacity, the envisaged project implementation unit (Directorate of Water Development, DWD) may require capacity enhancement. As such, a project management unit (PMU) will be established in the ministry's liaison department which has long years of experiences in managing water infrastructure projects financed by the Bank, to augment DWD's capacity to manage the project. At District/Local Government level, there are District and Community Development Officers whose Safeguards Capacity will be enhanced as appropriate. A comprehensive safeguards capacity assessment of the project implementers will be carried out as part of the formulation of safeguards instruments and where necessary, enhancement measures will be proposed and implemented before project activities start.

C. Environmental and Social Safeguards Specialists on the Team

Herbert Oule, Environmental Safeguards Specialist

Boyenge Isasi Dieng, Social Safeguards Specialist

D. Policies that might apply

Safeguard Policies	Triggered?	Explanation (Optional)
Environmental Assessment OP/BP 4.01	Yes	The project involves a number of interventions and investments such as large-scale irrigation infrastructure. Typically the irrigation infrastructure works will occur over a large area of some 10,000 hectares in Phase 1 (25,000 – 35,000 hectares over 3 phases) and may lead to large scale environmental and social impacts, affecting a wider area, and resulting in significant health and safety impacts, including labor influx and associated socio-economic aspects. Because of this, the project has been assigned EA Category A. This Category A project is preparing two independent Environmental and Social Impact Assessments (ESIAs) for the planned Nyimur (North East) and Kabuyanda (South West) schemes, which will respectively cover approximately 2,741 and 3,663 hectares, under Phase 1 project. Civil works will include construction of dams 20-30 meters high and associated reservoirs, and establishement of irrigation systems in the command areas. The studies will also include Environmental and Social Management Plans (ESMP), Pest Management Plans (PMP) for the priority schemes. During preparation of ESIAs for the individual sub-projects sites, Cumulative Impact Assessment will be part of the assessment and appropriate mitigation measures captured in the ESMPs for implementation. The ESIAs' preparation has included extensive stakeholder consultations, which will continue after the ESIA reports are publicly disclosed and during project implementation. Since these two ESIAs are deliberative, their findings (including impacts) shall be included in the Appraisal ISDS after clearance by the RSA and disclosure by both the Bank and GoU. Since at this stage only two irrigation schemes shall be subjected to ESIAs and RAPs, Environmental and Social Management Frameworks (ESMFs) will be drafted to guide the mitigation of impacts for schemes whose detailed designs are to be completed during implementation stage. They will include an annex with an Environmental and Social Screening form for sub-project activities under component 1.. The Frameworks will also cover auxiliary facilities which

	are normally not covered under the first set of ESIAs/RAPs, and these shall include guidance on acquisition, operation and management of facilities such as workers' camps, equipment storage areas, material sites, waste management sites, etc. The ESMPs will include environmental rules for contractors that cover site-specific technical specifications, Labor Influx Management Plans, Labor Camp Management Plans, Code of Conducts for all construction personnel, and recommended penalties for non-compliance. These ESIAs and ESMPs will demonstrate how the project would comply with all applicable rules and guidelines, including: (i) all triggered World Bank Safeguard Policies; (ii) relevant World Bank Group Environmental, Health and Safety Guidelines; (iii) World Bank guidance on Managing the Risks of Adverse Impacts on Communities from Temporary Project Induced Labor Influx; (iv) Guidelines on the establishment of a functioning Grievance Redress Mechanism (GRM); (v) World Bank Africa Region's Interim Guidelines for Safeguards Application in Agricultural Water Management Projects; and (vi) Uganda National Environment Management Authority's (NEMA) Guidelines for Environmental Impact Assessment and Environmental Auditing for Irrigation and Drainage Operations. In addition, a Stakeholder Engagement/Communication Plan will be drafted during project preparation to ensure that two levels of consultations are carried out with adequate involvement of all stakeholders, including women and members of vulnerable groups. These Plans will serve as a tool for having an open and continuous communication with the affected communities. The communications strategy will be updated to include measures to address specific issues related to labor influx that will be explored by the social assessments, such as child labor, harassment of any sort, safety and security, gender-based violence (GBV), Sexual Exploitation and Abuse (SEA), HIV/AIDS and so on. The ESIAs and RAPs, including ESMPs and PMPs for the priority schemes and the framework instruments (ESMF and RPF) will be cleared and disclosed in-country and on the World Bank's external website by project's appraisal.

Performance Standards for Private Sector Activities OP/BP 4.03		
Natural Habitats OP/BP 4.04	Yes	The project is designed to minimize any adverse impacts on natural habitats as a result of irrigation development, while strengthening the management of vulnerable catchment areas. This policy is triggered because irrigation development will take place in wetlands and river areas and may have an impact on the remnants of natural habitats, both downstream of the command area, and in the catchments where deforestation and land clearing activities may be carried out. It is, however, expected that no environmentally sensitive habitats will be significantly converted under this project, rather environmental conservation will be encouraged at the project sites.
Forests OP/BP 4.36	Yes	The policy is triggered because of envisaged potential impacts on forest habitats as a result of dam construction and water collection/harvesting and delivery systems. Detailed information on site specific impacts on forests will be provided in the ESIAs to be prepared for the different project sites and appropriate mitigation actions included in the respective ESMPs.
Pest Management OP 4.09	Yes	The policy is triggered due to potential expansion, intensification of agricultural activities, and diversification into new crops that often require more frequent usage of combinations of agro-chemicals. A generic Pest Management Plan (PMP) will be prepared as part of the ESMF and disclosed by appraisal. Where use of pesticides will be anticipated, site specific PMPs will be included in the respective ESIAs. The PMPs will be adopted and included in the project implementation manual to address pest management issues that may arise in project sites due to both area expansion under irrigation and expected increase in pesticide use associated with productivity improvement.
Physical Cultural Resources OP/BP 4.11	Yes	The policy is triggered as construction activities may lead to opportunistic finds of archaeological artifacts and/or may have an impact on graves and other cultural sites. Chance find provisions will therefore, be included in construction contracts while potential impacts on other identified physical cultural resources will be addressed by site-specific environmental management plans (EMPs).

Indigenous Peoples OP/BP 4.10	No	This policy is not triggered because none of the people within the planned project area meet the specific criteria under which indigenous peoples are defined in OP 4.10.
Involuntary Resettlement OP/BP 4.12	Yes	This policy is triggered because of anticipated impacts under component 1, which objective is to develop the irrigation and drainage infrastructure (primarily for supplemental gravity irrigation services) and finance construction and equipment for the water source works (storage reservoirs, river diversion weirs and pumping stations), related catchment management interventions, and three to five irrigation systems (including main canal and drainage system, cross structures, on-farm works, and operation and maintenance (O&M) facilities), associated resettlement and environmental management costs. These activities may trigger land acquisition and involuntary resettlement as land requirements for purposes of construction of any of these facilities may permanently or temporarily limit access to both public or private land and other assets by local communities. The areas envisaged to be used as reservoirs for both priority schemes are currently used by a few PAPs for residence and farming while the rest is utilized by community members for growing perennial crops, hunting, gathering, apiary and fishing. Resettlement Action Plans (RAPs) are being prepared for the two priority schemes and will be disclosed by project appraisal. For those where the scope and other details of works, including the exact locations of the infrastructure within each project site are not yet determined, a Resettlement Policy Framework (RPF) will be prepared and disclosed both in country and on the World Bank's external website before project appraisal. In addition, some land consolidation might be required for some of the irrigation schemes and particular attention will be given to the process through extensive and inclusive consultations with affected communities to ensure that potential changes in ownership and land tenure are adequately addressed; All RAPs will be required to explicitly describe the modalities of these processes.

Safety of Dams OP/BP 4.37	Yes	The policy is triggered because of the project will finance construction of dams. In compliance with the triggered OP 4.37, a Dam safety panel is being constituted to provide the necessary oversight. The irrigation dams will be designed by qualified engineers, and dam safety measures will be incorporated in dam operations. Dam Safety plans for the proposed large dams (including an Emergency Preparedness Plan (EPP)) will be drafted, reviewed, endorsed and disclosed. For small dam construction, rehabilitation, and maintenance relevant oversight procedures will be included in the Project Implementation Manual. Kabuyanda scheme will iinclude construction of a 25m high dam, while the total number of dams to be constructed under each phase of the Program is not yet known at this stage.
Projects on International Waterways OP/BP 7.50	Yes	This policy is triggered by the Project as it will contribute to building infrastructure and enhancing the environment for irrigated agriculture in selected high potential sites across the country during project implementation that may have an impact on riparian water sources. Irrigation schemes under the proposed project may be located on rivers which are tributaries to international waterways such as the River Nile. The relevant notifications per the requirements will be sent to Riparian countries before appraisal.
Projects in Disputed Areas OP/BP 7.60	No	All of the territory within the program undisputedly falls within Ugandan territory. Therefore this policy is not triggered.

E. Safeguard Preparation Plan

Tentative target date for preparing the Appraisal Stage PID/ISDS

Jan 31, 2019

Time frame for launching and completing the safeguard-related studies that may be needed. The specific studies and their timing should be specified in the Appraisal Stage PID/ISDS

Safeguards related studies (ESIAs, RAPs, and PMPs) for two priority schemes (Kabuyanda and Possibly Nyimur schemes) and the safeguards policy framework (ESMF and RPF) will be completed by Project Appraisal in August, 2018; Other scheme-specific ESIAs, RAPs, PMPs and the Cumulative Impact Assesment will be completed during early stage of project implementation.

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Environmental and Social Safeguards

20. The project is expected to trigger the following safeguard policies: OP 4.01 Environmental Assessment, OP 4.04 Natural Habitats, OP 4.09 Pest Management, OP 4.36 Forests, OP 4.37 Safety of Dams, OP 4.11 Physical Cultural Resources (TBD), OP 4.12 Involuntary Resettlement, and OP 7.50 Projects on International Waterways.

21. The project shall be required to prepare two sets of Safeguard Instruments – Policy Frameworks and Specific Instruments which include: Safeguard instruments for the project include (a) environmental and social impact assessments (ESIAs); and (b) environmental and social management framework (ESMF), (c) resettlement action plan (RAP), and (d) resettlement policy framework (RPF). The implementation agencies for the proposed Project is the Ministry of Water and Environment (MWE) responsible for overall implementation and Components 1, 3 and 4. The implementation agency has long experiences in preparation and implementation of safeguards policies and instruments under Bank funded projects in the water sector.

Citizen Engagement and Gender Mainstreaming

22. Community involvement and stakeholder consultation are essential for the success of the Project, and will be sought throughout the project cycle from conception to operation. In the course of scheme selection and design, the local communities and stakeholders will be engaged to ensure that the project investment benefit the poor and vulnerable of the population. They will also be involved in defining the irrigation services and identifying critical gaps in essential support services for crop cultivation and value-chain development, and engaged in discussions on resettlement action planning and implementation, irrigation service fee and scheme operation. Detailed consultation and mapping will be carried out with different community groups, particularly with the vulnerable groups including women and minority groups, on project intervention section, and value-chain development through matching grant (or credit), and so on.

23. Gender analysis will be undertaken as part of the scheme-specific environmental and social impact assessment, and grievance redress mechanism included in the environmental and social management plan. During implementation, the farming communities will be required to take lead and organize themselves into farmer producer cooperatives for agricultural production and business development. The communities will also organize themselves into farmer water user associations (WUAs). The WUAs will be empowered to manage irrigation water distributions and participate in the system operation and maintenance. NGOs and/or consulting firms will be contracted to facilitate the process, and make sure that women and vulnerable groups are adequately represented in the cooperatives, enterprises and WUAs. Appropriate citizen engagement and gender mainstreaming indicators will be included in the project results framework for monitoring purpose.

Climate Risk Screening

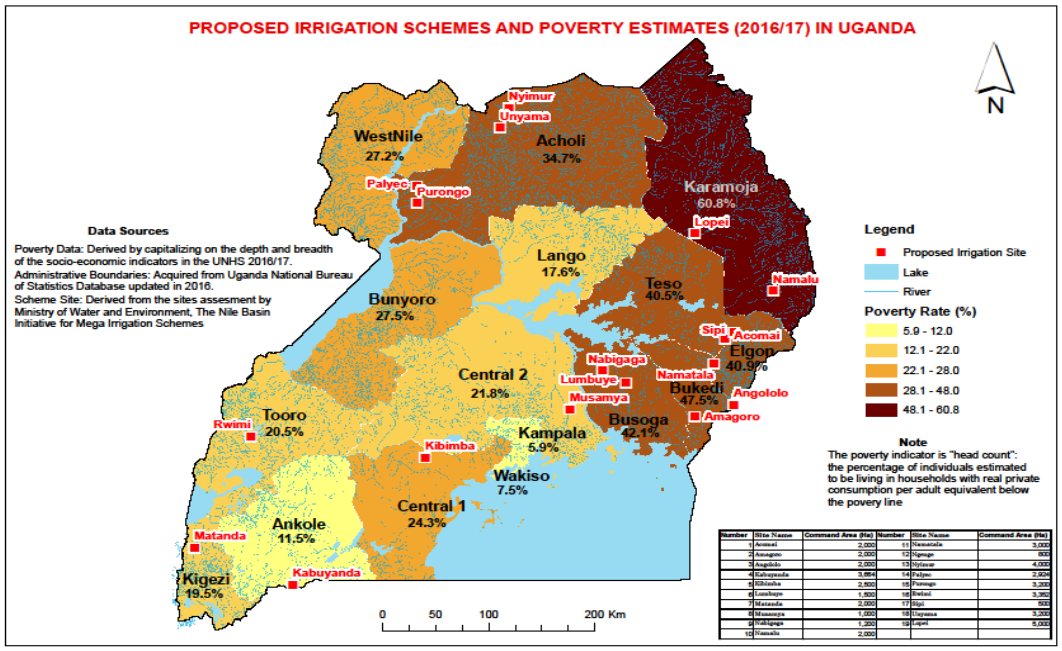
24. In general, Uganda is well endowed with water resources with per capita annual renewable water resources of over 2,000m3. However, the aggregate figures mask bot temporal (seasonal) and spatial variability, which translate into significant geographical differences in water availability. According to a study of MWE in 2009, by 2035, 3 out 4 districts will be under high water stress. The main climate risks in the country are droughts and floods. Flood prone areas are generally located along rivers and major water bodies, wetlands and low lying areas. Floods in the past decades have caused severe infrastructure and property damages, community displacement and crop losses in different parts of the country.

25. In contrast to floods, droughts are more pervasive, frequent and widespread in the country. In the recent

past, droughts have led to chronic food shortages and livestock deaths in various parts of the country, affecting a significant percentage of the population, particularly in the north, northeast, and the 'cattle corridor', where the rainfall tends to be highly variable from year to year. Drought impacts have been exacerbated by the lack of adequate water management planning and water infrastructure (e.g. water storage and irrigation/water supply facilities) to manage climate variability and risks.

26. Building on earlier climate change vulnerability assessment and adaptation strategy studies for Uganda's water sector, a further study was carried out in 2011 as part of the Bank's country water assistance strategy for Uganda, to analyze the historical climate trends and future climate scenarios. All the models project increased warming and more 'hot' days in the future. There is very strong model agreement that mean annual precipitation, runoff, preparation during extreme storm events, and precipitation intensity will increase in Uganda. These results are consistent with other related studies such as the climate change impacts on Africa crop production under CGIAR's program on climate change, agriculture and food security (Remirez-Villegas, J., Thornton PK, 2015). Both studies point to likely increase in temperature and evapotranspiration, and rainfall leading to potentially more frequent extreme weather events.

27. In the process of project conception, an initial climate screen was undertaken using the dedicated climate resilience screening tool. To adapt to such projected climate change and variability, the Project will include as part of the design the following interventions: (a) water storage for schemes in areas where the water availability in the water sources are highly variable, this will be accompanied by necessary catchment management activities to ensure long term sustainable operation; (b) cost-effective soil and water conservation, and climate-resilience measures, particularly water-saving technologies and on-farm water management practices will be included to reduce crop water demand, evapotranspiration and GHG emission; (c) water balancing and supply reliability assessment will be undertaken during project feasibility study in the basin/aquifer context to ensure sufficient and reliable irrigation water supply; and (d) all the project infrastructure will be designed with sufficient flood protection, taking into consideration the climate change and variability factor.



Projected changes in temperature and precipitation in Uganda 2050