



Concept Environmental and Social Review Summary

Concept Stage

(ESRS Concept Stage)

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BASIC INFORMATION

A. Basic Project Data

Country	Region	Project ID	Parent Project ID (if any)
Uganda	AFRICA	P171305	
Project Name	Uganda Digital Acceleration Program		
Practice Area (Lead)	Financing Instrument	Estimated Appraisal Date	Estimated Board Date
Digital Development	Investment Project Financing	2/11/2019	5/15/2020
Borrower(s)	Implementing Agency(ies)		
Ministry of Finance	National Information Technology Authority		

Proposed Development Objective(s)

The Project Development Objectives are to expand access to high-speed internet, improve efficiency of digital government services, and strengthen the enabling environment for digital technology adoption.

Financing (in USD Million)	Amount
Total Project Cost	200.00

B. Is the project being prepared in a Situation of Urgent Need of Assistance or Capacity Constraints, as per Bank IPF Policy, para. 12?

No

C. Summary Description of Proposed Project [including overview of Country, Sectoral & Institutional Contexts and Relationship to CPF]

The proposed project aims to accelerate digital transformation of Uganda by developing the core foundations of the digital economy. The project will expand access to affordable high-speed internet through a combination of regulatory reforms and investments. It will strengthen public sector data infrastructure and digital platforms for improved service delivery, enabling coordinated roll-out of digital services at scale across key ministries and agencies. It aims to ensure a digitally capable and inclusive Uganda, by enhancing ICT research and innovation, improving digital skills and promoting digital inclusion. Special attention will be placed on connecting refugee host communities and



settlements to the opportunities created by the digital economy. The project is aligned with the Single Digital Market initiative in East Africa, promoting an integrated and dynamic region for digital investment, innovation and trade.

D. Environmental and Social Overview

D.1. Project location(s) and salient characteristics relevant to the ES assessment [geographic, environmental, social]

The project will be implemented nationwide and will be focusing on network expansion and strengthening of the national digital backbone. The main implementing agency, NITA will expand the geographical coverage of the NBI/EGI Network across the Country. Under the Digital Connectivity outreach Component 1, the project will continue to focus on improving government connectivity, expanding the National Backbone Infrastructure and connecting government facilities (MDAs, municipal councils, schools, health centers, hospitals) across the country.

Currently, the National Backbone Infrastructure (NBI) extends to 36 districts (out of 127 in total). The Government of Uganda has developed a comprehensive investment plan for the digital sector called “IT Shared Platform (GOVNET)” requiring around US\$300 million over 5 years. This plan includes building 3711 additional kilometers of fiber-optic cable to expand the NBI and connecting 5082 additional sites to the NBI. The proposed Uganda Digital Acceleration program will be contributing to the Uganda digital investment plan.

On a positive environmental note, the project intends to undertake an e-waste assessment and to contribute to the set-up/strengthening of regional e-waste collection centers and treatment facility in the country, in partnership with the private sector. An e-waste baseline survey will be carried out prior to appraisal to inform the scale of the investment. While aiming to improve eservices in the country, the project will contribute towards climate change mitigation by reducing greenhouse gas emissions that would have arisen from transportation. Some likely negative environmental, health and safety risks and impacts may arise during construction and operational phases may include: Habitat alteration from the civil work activities of trenching to lay fiber optics cables and site clearances for erection of poles/masts for antennae, hazardous waste generation from mainly end-of-life backup power batteries, E-waste generation from institutions that will be connected; Noise pollution from backup generators, Emission to air from vehicle fleet and backup generators, risks of exposure to electromagnetic fields from proximity to transmitting antennas emitting radio waves and microwaves and other occupational health and safety risks from working at elevation for overhead cables and antennae installation, confined space entry when trenching and motor vehicle safety aspects. There are also occupational risks specific to optical fiber cables such as permanent eye damage due to exposure to laser light during cable connection and inspection activities, likely exposure of workers to microscopic glass fiber shards/glasses that can penetrate human skin, eye and can be inhaled and associated hazards like fire risks due to presence of flammable materials in high-powered laser installation areas. There are concerns that if not well managed, disposal of e-waste would lead to: unintentional releases of toxic emissions (dioxins and furans) as by products of plastic incineration at low temperatures; exposure of workers to highly hazardous chemicals if acids are used for recovery of precious metals from circuit boards; risks of exposure of environment and humans to heavy metals (Pb, Cr, Cd, Hg) and other toxic materials like flame retardants and toxic materials seeping into ground water at landfills/dump sites.

The project will particularly focus on underserved areas, including refugee settlements and refugee host communities, as well as the West Nile Region and part of the Karamoja region. Some of the project's activities might therefore be carried out in districts hosting Vulnerable and Marginalized persons (Batwas and Iks) and will required the elaboration



of a framework to guide their inclusion into project benefits. Depending on final project designs, some PAPs might be economically and physically displaced due to pole planting, trenching, and other associated activities.

D. 2. Borrower’s Institutional Capacity

Given its experience in satisfactorily implementing previous phases of the RCIP project and the ongoing RCIP-5, which involve similar physical activities (laying out aerial and underground fiber optic networks) NITA-U has acquired additional human (skills and number of staff) and operational (training on Bank policies and requirements, including GRM and stakeholder engagement) resources to boost its capacity that the proposed project will be able to benefit from. The Proponent of the e-waste facility will identified in consultation with the Government and its capacity assessed during next step project preparation.

The Bank E&S team will however, carry out due diligence prior to appraisal to establish E&S capacity gaps in light of the ESSs requirements. The environmental and social capacity assessment will inform subsequent capacity building activities – such as training sessions on the ESF – for all relevant specialists to ensure implementation preparedness once PIUs in all implementations agencies (NITA-U and others such as the Uganda Communications Commission and line ministries associated) have been formed and specifically, E&S specialists have been recruited on a full time basis.

In addition, human and operational resources may be low in the relevant Governmental offices of under served remote areas (e.g. refugee host communities) where the projects activities will be executed. To mitigate this risk, the project will explore alternative delivery models involving partnerships with non-state actors (the private sector operators and other UN organizations), which are designed to bring in expertise from the private sector.

Moreover, Component 4 (Project Management) will finance project management and coordination, including procurement, financial management, monitoring & evaluation and environmental and social safeguards management. This will include funding consultancy support for the implementation of the project, institutional strengthening of the implementing agencies Ministry of ICT and National Guidance and NITA-U. If necessary, this component will also fund technical assistance (TA) to support monitoring and evaluation (M&E) and accounting. Finally, the Government will fund the implementation of the Resettlement Action Plans under this component.

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II. SCREENING OF POTENTIAL ENVIRONMENTAL AND SOCIAL (ES) RISKS AND IMPACTS

A. Environmental and Social Risk Classification (ESRC) Substantial

Environmental Risk Rating Substantial

The project will cover significantly a wide geographically area that spreads across the country with focus on North-eastern part of the country. There are likely Environmental risks that will arise from: habitat alteration from the civil work activities of trenching to lay fiber optics cables, site clearances for erection of poles/masts for antennae, hazardous waste generation from mainly end-of-life backup power batteries, E-waste generation (mainly old computers) from institutions that will be connected to internet and digital platforms; the construction and operation of E-waste collection and treatment facilities considered for financing under the project; Noise pollution from back generators, Emission to air from vehicle fleet and backup generators, risks of exposure to electromagnetic fields from proximity to transmitting antennas emitting radio waves and microwaves and other occupational health and safety risks from working at elevation for overhead cables and antennae installation, confined space entry when trenching



and motor vehicle safety aspects. There are also occupational risks specific to optical fiber cables such as permanent eye damage due to exposure to laser light during cable connection and inspection activities, likely exposure of workers to microscopic glass fiber shards/glasses that can penetrate human skin, eye and can be inhaled and associated hazards like fire risks due to presence of flammable materials in high-powered laser installation areas. All these risks cumulatively coupled with wide geographical scope and weakness in national environmental system performance related to enforcement of laws, staffing level, budget allocation for environmental management contributes to substantial EHS risk rating.

Social Risk Rating

Substantial

Social impacts associated with project activities will generally result from the construction of both fiber optic networks and standalone facilities at a substantial and nationwide scope. Potential risks include i) the large geographic scope (cumulative impact on livelihoods/physical displacement on the potential 3700km route), ii) lack of designs at this stage, iii) impact on IPs (IKs and Batwas) and other vulnerable persons such as refugees in targeted settlements, iv) weak legislation of livelihood restoration, and v) enforcement of regulation that is not always strong and consistent – They also include influx of labor into targeted areas, lack of adequate consultation of affected persons and access to functioning grievance redress mechanisms, and social exclusion of women, youth, persons with disabilities and other members of vulnerable groups - Rating might be downgraded once additional information is available. Overall, the Borrower will prepare framework instruments (ESMF, RPF, and VMGF) to guide to elaboration of site specific plans to address these risks as sub-projects are identified.

B. Environment and Social Standards (ESSs) that Apply to the Activities Being Considered

B.1. General Assessment

ESS1 Assessment and Management of Environmental and Social Risks and Impacts

Overview of the relevance of the Standard for the Project:

Project activities under component 1 - Digital Connectivity outreach - will involve civil works with potential environmental and social risks and impacts to habitats, workers and surrounding communities. From Environmental, health and Safety perspective, the project may result into: habitat alteration, hazardous waste generation, Noise pollution from power back up generators, Emission to air from vehicle fleet and backup generators, risks of exposure to electromagnetic fields from proximity to transmitting antennas, occupational risks from optical fiber cables such as permanent eye damage due to exposure to laser light during cable connection and inspection activities, likely exposure of workers to microscopic glass fiber shards/glasses and associated hazards like fire risks due to presence of flammable materials in high-powered laser installation areas, other occupational health and safety risks from working at elevation/overheads, confined space entry when trenching and motor vehicle safety aspects. There are likely social impacts such as damage to assets, influx of labor, inadequate stakeholder engagement, impacts on/inclusion of project benefits for vulnerable groups. In terms of risks from climate and natural disasters, the wide geographical scope of the project may expose to erratic precipitation, flush floods and temperature variations. The project will include measures to mitigate these risks and impacts on vulnerable populations such as strengthening adaptive capacity by facilitating access to digital information on weather variation and shocks to enable planning. In addition the digital infrastructure will be designed and built to cater for likely climatic risks. The project will apply, among others, the requirements of the Environmental Health and Safety Guidelines (EHSGs) for telecommunication and general ESH guidelines. The environmental and social assessments will include e-waste assessment with the aim of contributing to the establishment of e-waste collection centers and at least one treatment facility in the country.

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These investment options will build on existing E-waste management policy and guidelines and the proposed activities identified in the Strategic workplan for Electronic waste management of the National Steering Committee which include: establishing National E-waste collection centers, supporting the set-ups of modern dismantling and recovery facilities, facilities for disposal of hazardous E-waste components among others. The Environmental and Social assessments will also identify hazardous waste that will be generated or managed by the project, specifically hazardous analysis be carried out for E-waste storage and treatment facilities for systematic identification of systems, procedures that could result in accidental release of hazardous materials and associated risks. The storage, treatment or disposal facilities will be designed and managed in an environmentally sound and safe manner consistent with Good International Industrial Practice (GIIP), national laws and with EHSGs. The project will contribute towards climate change mitigation by reducing greenhouse gas emissions that would have arisen from transportation since the availability and use of eservices will limit the need for frequent physical travel for service delivery.

The Environmental and Social Commitment Plan (ESCP), the Resettlement Policy Framework (RPF) and Environmental and Social Management Framework (ESMF), elaborated and agreed upon with the Borrower and disclosed before Project Appraisal, will underpin different measures and actions that will be required for the project to meet ESS requirements. An ESMF will include a differentiated approach for the preparation of different project Components activities proportionate to their respective likely risks and impacts. The ESMF will also cover aspects of labour and working condition in line with ESS2, pollution prevention and management as provided in ESS3, Community Health and Safety in ESS 4, biodiversity aspects in ESS 6 and chance find procedures to respond to ESS 8. During implementation stage, site specific ESIA's and ESMPs will be developed based on the screening guidance and risk level of each specific activity. These measures will be implemented, and their status of implementation will be reviewed as part of project monitoring and evaluation. In addition, the task team will ensure that the Borrower is also familiar with the World Bank's incident reporting and management should they occur. Because of the nature of the planned civil works (pole planting and stringing, construction of off grid facilities) the establishment of workers camps will not be necessary. Contracts for all workers will include a code of conduct, which will be signed when hired.

Areas where “Use of Borrower Framework” is being considered:

The project will not rely on the Borrower’s E&S Framework in the assessment, development and implementation of sub projects. However, the project will also comply with Uganda's E&S legal and regulatory requirements.

ESS10 Stakeholder Engagement and Information Disclosure

Due to the limited details available on planned physical activities and project level stakeholders this stage, the Borrower - in collaboration with the Bank - will prepare by project's appraisal and implement an inclusive Stakeholder Engagement Framework (SEF) proportional to the nature and scale of the project and associated risks and impacts identified. Stakeholder engagement will be an integral part of the preparation and overall project design process and will continue throughout preparation. Subsequent Stakeholder Engagement Plans (SEPs) to be developed and implemented during the project will include refugee population and host communities – other stakeholders will be identified early on in the engagement process (SEF level). These will include the IKs and Batwas for whom a culturally appropriate process will be required. The SEPs will include differentiated measures to allow the effective participation of and communication with of those identified as disadvantaged or vulnerable (refugees, the elderly, persons with disabilities, female headed households, child headed households, orphans and vulnerable children). The Borrower will seek stakeholder feedback and opportunities for proposed future engagement, ensuring that all



consultations are accessible, inclusive and through suitable channels in the local context. The project will include appropriate institutional arrangements to carry out the stakeholder engagement process. Given the anticipated scale of the project activities, and despite the institutions experiences in carrying out stakeholder engagement, specific liaison officers will need to be identified or recruited at the PIU and the field level to coordinate and implement the SEP. The project will also include a grievance redress mechanism (GRM) to handle complaints by project-affected people regarding adverse temporary or permanent project impacts. The GRM will be responsive to the risk of GBV, and the need to be accessible to a wide diversity of stakeholder groups. It will also serve as a platform for continuous feedback from project-affected communities, other interested stakeholders and implementing structures (Interim for preparation and implementation PIUs).

It is also worth noting that under sub component 1.3, the project will finance the development and deployment of innovative digital solutions to ease communication, interaction, and access to and sharing of information for persons with disabilities.

B.2. Specific Risks and Impacts

A brief description of the potential environmental and social risks and impacts relevant to the Project.

ESS2 Labor and Working Conditions

The project will involve direct workers, contracted workers, primary supply workers and possibly community workers. All labor will be locally hired, except for skilled workers who cannot be found in the project locations. The project will adhere to Uganda's Labor Laws and the Bank's standards concerning labor conditions and Occupational Health and Safety (OHS), including child labor - Requirements will be noted in the LMP. The project presents occupational health and safety risks that may arise from installation, inspection or repair of optical fiber cables such as permanent eye damage due to exposure to laser light during cable connection and inspection activities, likely exposure of workers to microscopic glass fiber shards/glasses that can penetrate human skin, eye and can be inhaled and associated hazards like fire risks due to presence of flammable materials in high-powered laser installation areas. There are also occupational risks and safety from working at elevation/ overheads, confined space entry when trenching and motor vehicle safety aspects. To ensure health and safety of workers during the construction and operational phases of the project, the Borrower will develop a Health, Safety and Environmental (HSE) plan as part of the ESMF, in line with World Bank Group Environment, Health and Safety (EHS) Guidelines (general guidelines and telecommunication guidelines). The risks of exposure of workers to toxic emissions and hazardous chemicals when e-waste is poorly disposed such as incineration at low temperatures, use of acids for recovery of previous metals from circuit boards amongst others will be avoided and/or minimized through adopting best available technologies and best environmental practices in line with GIIP and EHSsGs. A risk hazard analysis and an OSH plan, proportionate to the risks identified, will be developed and included in the ESIA/ESMP. The project ESMF will also outline a workers' GRM as part of the Labor Management Plan (LMP). The standards explained in the ESMF will also be included in work-specific ESMPs. These plans will include procedures on investigation and reporting of incidences and non-conformances, emergency preparedness and response procedures and continuous training and awareness to workers.

ESS3 Resource Efficiency and Pollution Prevention and Management



The project activities during construction phases may result into air emission vehicle fleet, dust emissions, noise pollution and some solid waste generation. The implementation of mitigation measures such as dust suppression and vehicle and truck maintenance shall be applied to minimize the impact of air emissions during construction/rehabilitation, and residual impacts are expected to be limited in scope and duration. The noise generated from the use of construction machinery and truck movements is expected to be relatively short-term and may not cause long-term nuisance to workers. During the operational phase, E-waste from institutions, end-of-life power back-up batteries will be generated. The client will be responsible for maintenance and collecting of depleted batteries to be disposed-off at approved sites in accordance with national laws and regulations. The project design has incorporated E-waste management, thus, the storage, treatment or disposal facilities for E-waste will be designed and managed in an environmentally sound and safe manner consistent with Good International Industrial Practice (GIIP), national laws and with EHSGs. The mitigation measures will include control of emissions and residues resulting from handling and processing of hazardous materials contained in Electrical and Electronic Equipment (EEE). The project will contribute towards climate change mitigation by reducing greenhouse gas emissions that would have arisen from transportation since the availability and use of e-services will limit the need for frequent physical travel for service delivery. The Environmental and Social Management Plan to be prepared shall include mitigation measures to minimize and manage the pollution risks identified.

ESS4 Community Health and Safety

The laying of fiber optic cables will be performed using trenching in addition overhead cables and the construction works will transverse public infrastructures such as schools, health centers, District facilities, and across various settings (trading centers, roadsides farms, amongst others). During the construction phase, the communities may be exposed to construction vehicles and transport, dust emissions, noise and potential construction site and material handling related accidents. The communities may also be exposed to structural safety issues in event of structural failure for antennae towers/poles or cases where unauthorized persons are interested in climbing the structures. There are concerns over community health and safety risks associated with poor management and disposal of e-waste including: unintentional releases of toxic emissions (dioxins and furans) as by products of plastic incineration at low temperatures; exposure of community to highly hazardous chemicals if acids are used for recovery of precious metals from circuit boards; risks of exposure of environment and humans to heavy metals (Pb, Cr, Cd, Hg) and other toxic materials like flame retardants which are known to be persistent organic pollutants (POPs); when poorly disposed of at landfills/dump sites, toxic materials can seep into ground water. The risks are expected to be avoided and/or mitigated through adopting best available technologies and best environmental practices in line with GIIP and EHSGs. A risk hazard analysis and mitigation plan, proportionate to the risks identified, will be developed and included in the ESIA/ESMP. Adverse social impacts such as gender-based violence (GBV), sexual exploitation and the transmission of communicable diseases such as HIV/AIDS on affected communities may also occur because of project activities, including labor influx. The client will be required to comply with the community health and safety requirements as stipulated in WBG EHS telecommunication guidelines. The potential risks and mitigation measures for impacts on beneficiaries will be analyzed in the ESMF and will be detailed in work specific ESMPs.

ESS5 Land Acquisition, Restrictions on Land Use and Involuntary Resettlement

No land acquisition is expected under the project since the establishment of on-grid networks will consist of planting and stringing of poles, which do not require land acquisition but might cause damage to existing trees and crops, thus



causing economic and physical displacement - the Borrower will be required to develop an RPF to address any impacts on assets and affected persons livelihoods. It is worth noting that the off-grid access networks are expected to be established within the footprint of existing facilities and thus not require land.

ESS6 Biodiversity Conservation and Sustainable Management of Living Natural Resources

The project will cover a wide geographically area that spreads across the country with focus on North-eastern part of the country. Uganda is endowed with natural resources and ecological sensitive ecosystem like wetlands, forests and national parks. The project may transverse Kidepo national park in the North east priority area for project intervention and various wetlands wide spread in proposed area for intervention. The project will endeavor to utilize mainly road reserve roads for fiber optics cables and construction of antennae masts will avoid ecological sensitive ecosystem. The ESMP will provide mitigation measures to ensure that project activities at these protected areas if any does not cause any harm or alter habitat. The ESMF will provide a screening mechanism to avoid any high risk ecological areas and it will provide guidance to sub-project ESMPs.

ESS7 Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities

Batwa and Ik communities, which meet the conditions of SSHUTLC under ESS7, are present in the country and might be affected by project activities. - They are considered vulnerable and disadvantaged in Uganda and as such, a Vulnerable and Marginalized Group Framework (VMGF) will be prepared by project's appraisal to provide guidelines on how to avoid adverse impacts of the project on Batwa/Ik communities and ensure their access to services and potentially participation in high labor intensity works and other project benefits. Project activities are not anticipated to cause relocation or impact resources or cultural heritage of Batwa/Ik groups. The SEF will include provisions for consultation with Batwa and Ik communities (see ESS10).

ESS8 Cultural Heritage

At this stage in project preparation the presence of culturally significant sites associated with the project cannot be determined. However due to the likelihood of excavation during erection of masts for antennae / pole planting and trenching, Chance find procedures will be included in the ESMF and subsequent ESMPs

ESS9 Financial Intermediaries

The use of Financial intermediaries is currently not envisaged under the project.

C. Legal Operational Policies that Apply

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

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III. WORLD BANK ENVIRONMENTAL AND SOCIAL DUE DILIGENCE

A. Is a common approach being considered?

No

Financing Partners

N/A

B. Proposed Measures, Actions and Timing (Borrower’s commitments)

Actions to be completed prior to Bank Board Approval:

- Preparation, consultation and disclosure of the Stakeholder Engagement Framework (SEF)
- Preparation, consultation and disclosure of a Resettlement Policy Framework (RPF)
- Preparation, consultation and disclosure of an Environmental and Social Management Framework (ESMF)
- Preparation, consultation and disclosure of a Vulnerable and Marginalized Group Framework (VMGF)
- Preparation of a Labor Management Procedures (LMP)

Possible issues to be addressed in the Borrower Environmental and Social Commitment Plan (ESCP):

- Labor Management Procedures;
- Development and implementation of a proportional Health, Safety and Environmental (HSE) plan in line with World Bank Group Environment, Health and Safety (EHS) Guidelines (for construction & rehabilitation activities);
- Development of relevant ESIA/ ESMPs for subprojects
- Capacity building of implementing institutions in ESF

C. Timing

Tentative target date for preparing the Appraisal Stage ESRS

29-Nov-2019

IV. CONTACT POINTS

World Bank

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Borrower/Client/Recipient

Borrower: Ministry of Finance

Implementing Agency(ies)

Implementing Agency: National Information Technology Authority

V. FOR MORE INFORMATION CONTACT

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VI. APPROVAL

Task Team Leader(s):	Charles Pierre Marie Hurpy
Practice Manager (ENR/Social)	Robin Mearns Recommended on 09-Oct-2019 at 10:16:26 EDT
Safeguards Advisor ESSA	Nathalie S. Munzberg (SAESSA) Cleared on 09-Oct-2019 at 11:22:26 EDT