Concept Environmental and Social Review Summary

Concept Stage

(ESRS Concept Stage)

Date Prepared/Updated: 12/10/2019 | Report No: ESRSC00634
BASIS INFORMATION

A. Basic Project Data

<table>
<thead>
<tr>
<th>Country</th>
<th>Region</th>
<th>Project ID</th>
<th>Parent Project ID (if any)</th>
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<tbody>
<tr>
<td>Tanzania</td>
<td>AFRICA</td>
<td>P168238</td>
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<table>
<thead>
<tr>
<th>Project Name</th>
<th>Tanzania Water Security for Growth</th>
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<td>Practice Area (Lead)</td>
<td>Water</td>
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<tr>
<td>Financing Instrument</td>
<td>Investment Project Financing</td>
</tr>
<tr>
<td>Estimated Appraisal Date</td>
<td>3/9/2020</td>
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<td>Estimated Board Date</td>
<td>7/31/2020</td>
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| Borrower(s)                | Ministry of Finance and Planning    |
| Implementing Agency(ies)   | Ministry of Water                   |

Proposed Development Objective(s)
The proposed development objective of the project is to strengthen bulk water security of prioritized urban areas and bring critical water-source areas under sustainable watershed management.

Financing (in USD Million)

<table>
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<tr>
<th>Total Project Cost</th>
<th>Amount</th>
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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]
Support for water security in Tanzania is envisioned as part of a larger country-water platform where water resource considerations are integrated into projects focused on energy, environment, agriculture, urban and rural resilience. Water-specific support is framed with the vision of a long-term program of support, where a focus on initial hotspots will be scaled up in future while maintaining the program objective: Water security for cities, people, and the environment through sustainably managed water and land that harness climate resilient water management structures. This objective can be met by channeling cross-sectoral support through two main channels:

- Secure bulk-water supply for growth-poles by investing in climate-resilient storage such as reservoirs and/or groundwater
Resilient landscapes and watershed management upstream of growth-poles to increase water availability and improve water quality and improve climate-resilient livelihoods for the poorest to reduce their need for unsustainable resource use

Proposed investments include:
Component 1: Infrastructure for bulk water security for Dodoma and Arusha
Component 2: Protect water sources for Dodoma and Arusha and transform livelihoods in the surrounding watersheds
Component 3: Enhanced capacity to sustainably manage water and deliver water-related services

These main areas of support are deliberately approaching water management challenges using a systems approach, tackling urban infrastructure, rural watershed and agricultural water management and institutional systems to ensure sustainable implementation of both of those connected systems. Sustained support for the following enabling factors will be key to program and project success: innovate and bring in advanced technologies; focus on skills building; strengthen basin and local institutions for sustainability; work within political economy and local context; engage regionally where challenges are transboundary.

D. Environmental and Social Overview

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

PROJECT LOCATION. The project plans to support interventions to improve water supply (bulk), wastewater treatment and watershed conservation and demand management in the following locations: i) water supply (bulk, no distribution): source aquifer of Dodoma *
ii) wastewater treatment, sewerage and sanitation systems: Dodoma and Arusha*
iii) water supply distribution system leakage reduction and demand management activities: Dodoma*
iv) watershed management, source protection, agricultural water management and climate smart agriculture: Dodoma (Wami-Ruvu Basin) and Arusha (Pangani Basin).
* Priority investments in Arusha will be confirmed during preparation.

ENVIRONMENT. The selected river basins are located in semi-arid areas with the lowest average rainfall in Tanzania and are affected by environmental degradation, deep poverty, soil erosion from livestock, etc. Also, these areas are affected by droughts, declining water flow, and water pollution. Environmental degradation of land, water resources is a common problem affecting the country (CEA, 2019). Also, there is limited enforcement of regulations to protect water resources, forest land and there is a very limited waste water treatment in the country. Measures to reduce water supply distribution system leakage and control water-user demand are not yet common place in Tanzania, but these could serve to reduce potential increase in abstractions from surface and groundwater.

Project interventions might increase overuse of aquifers or may inadvertently contaminate aquifers used for drinking water or irrigation. The project plans to also support (component 2) agricultural water management and climate-smart agriculture for small and medium-scale farmers to improve production and water-use efficiency. Thus, the project could indirectly lead to increase overuse or expansion of agricultural land. On the positive side, the project will invest in improving wastewater treatment and land and water management which will be beneficial to people and
nature. Detailed technical studies and modelling will be performed to selected the best measures to improve water resources management which will lead to positive actions for the environment.

SOCIAL. The project will implement activities in the city of Dodoma and its surrounding watershed (the Wami River basin) and the city of Arusha and its surrounding watershed, the Pangani basin. The Themi sub-catchment which is part of the Pangani Basin is mainly inhabited by the Arusha people (agro-pastoralists related to the Maasai), Meru (mainly agriculturalists related to the Chagga of Kilimanjaro) and Maasai. These areas may have some vulnerable groups and / or communities. Some of the social risks include HIV/AIDS prevalence which varies across regions in Tanzania ranging from 11.4% in Njombe and 11.3% in Iringa. In the regions targeted by the project, the prevalence rates are: Kilimanjaro 2.6%; Dodoma 5%; and Dar es Salaam 4.7% (Tanzania HIV Impact Survey, 2019). In addition, the proportion of people living below the national poverty line in Tanzania is estimated to be 28.2% and the bulk of these live in the rural areas. Significant part of the water basins targeted under the project are located in the rural areas. Poverty and low absorption rate of the rural communities may exacerbate negative impacts of the project. In addition, there is gender inequality in access, use and control of assets, resources, and services as well as access to employment in the rural areas. According to the national disability survey in 2008, 3.2 million Tanzanians (7.8%) of the population aged 7 years and above have some form of disability and up to 5.4 million (13.2%) are affected by disability. Tanzania mainland has slightly higher prevalence of disability (13.3%) than Zanzibar (9.3%). The prevalence is also somewhat higher in the rural areas (8.3%) than in urban areas (6.36%), (SIDA, 2014).

D. 2. Borrower’s Institutional Capacity
Implementation of the project will be divided among different institutions at the national, regional, river basin and local levels. All river basin boards, regional and local agencies responsible of project implementation will be responsible in the application of the Environmental and Management Framework (ESMF), the ESCP, and the rest of ESF documents required for project implementation.

The Main central units proposed for project implementation are:
1. The Ministry of Water (MOW) will be the lead agency with urban water utilities such as DUWASA and AUWASA leading with individual components or sub-components.
2. The National Irrigation Commission (NIC) may be responsible for implementing agricultural water management activities.
3. Project management unit (PMU) within the MOW which will coordinate with the national, regional and water basins teams to support and accelerate project implementation. The PMU will have full time staff for Environmental and Social support for overall project supervision. Staff requirements will be assessed during project preparation;
4. The Basin Water Board Offices (BWBs), MOW entities, of the river basins targeted in the project (Wami-Ruvu and Pangani) will lead activities in relevant watersheds;
5. NEMC is the national institution responsible for ensuring compliance with the National Environmental Act, the EIA process and approval of environmental licenses (certificates) for infrastructure development. Some of the infrastructure to be financed will require the preparation of an EIA and ESMP; consultations and the issuance of an environmental certificates (ESS1).
6. Ministry of Natural Resources and Tourism is responsible for management of protected areas, wildlife, cultural resources (ESS6). The Division of Antiquities is responsible for the protection of cultural heritage in the country and project excavations will need to comply with ESS8.
7. Ministry of Health leads activities related to sanitation and may need to be involved in water quality related actions.
The MOW and NIC have experience with the World Bank Safeguards policies through the implementation of the REGROW project and the WSSP-1 and WSSP2 projects in Tanzania. The PIU of the WSSP2 project does not have the capacity to assume tasks for this new project, therefore, a dedicated full time Environmental and Social team will be needed to be responsible for this new project. The ESF is a new approach for the government thus, the project will need to provide extra support to the government team to increase borrower capacity to develop and implement the environmental and social management instruments of the project.

All project activities will need to be fully coordinated at the appropriate level including the local, district, regional and national levels. The roles of each of the local authorities in project implementation and in water quality enforcement, monitoring and measurement, is not clear at the stage and will be assessed as institutional arrangements become clearer during project preparation. The following local authorities will be involved in and coordinated with for project implementation: Regional Administrative Units, Local Government Authority (LGA), District Irrigation and Environmental Units; Basin Water Boards and their entities: Catchment Committees (CCs), Sub-catchment Committees (SCCs), Water User Associations, among others.

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

A. Environmental and Social Risk Classification (ESRC)

Substantial

Environmental Risk Rating

Substantial

This project aims to increase water security in for the cities of Dodoma and Arusha of Tanzania to tackle the current water challenges in supply and increasing demand. The project will support investments to increase water supply to these cities, with infrastructure to lead to groundwater recharge and retain water in the watersheds which feed these cities, as well as measures to increase efficient use and productive use in agricultural water management and water demand control. The net impact of the project on water and environmental systems is expected to be positive.

The risk classification will be review at the decision stage based on the current performance on safeguard management of the REGROW and WSSP2 projects under implementation, field findings, current environmental capacities at the implementing agencies at the national and regional levels.

The project is rated as Substantial at this stage because of the following reasons:

- The project will promote different type of interventions upon superficial and groundwater resources which sustain ecosystems and communities. Many rivers and streams are affected by pollution of agriculture activities or domestic waters and overused. In some regions groundwater is contaminated with fluoride and nitrate concentrations.

- The Potential direct, indirect and cumulative environmental impacts the project might have as result for example of groundwater interventions (MAR), land use changes, among others

- The limited experience and capacities that the government at different levels might have with the application of the new Environmental and Social Framework (ESF) and proper supervision.

- The high number of stakeholders that will participate in project implementation from national agencies (Ministries), regional, river basin boards, districts and wards participants that the experience and capacities to handle environmental impact evaluation, mitigation and management will be challenging.
• Occupational health and safety (OHS) will be challenging to monitor since many areas are isolated, district engineers are few, and the practice of recording, reporting and maintaining records of accidents, injuries and emergencies is not well established.

Social Risk Rating

The TWSG social risk rating is classified as substantial, based on the possibility of project interventions to displace persons physically and/or economically and the potential for restrictions of land use within vulnerable groups areas in the north eastern parts of Tanzania of Arusha, Pangani water basin. During project preparation, the Bank will discuss with the Borrower on the requirements and next steps towards the application of the new ESF approach.

The potential social risks include: exclusion of persons based on gender and disability during consultation and in design of mitigation measures or project benefits; restriction of access to pasture and land for agriculture and areas within the proposed buffer zones especially in vulnerable community; land acquisition and physical and/or economic displacement in some of the proposed infrastructure developments; impact on vulnerable communities resources and way of life such as challenges in the identification of culturally appropriate alternative livelihoods for the vulnerable communities and of identifying alternative livelihoods that are within cultural norms for women; labour influx and associated risks of Gender Based Violence/Sexual Exploitation and Abuse (GBV/SEA); and risk of increase in prevalence of HIV/AIDS.

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:

During preparation, the team performed a due diligence assessment to determine capacities and experience of the government to implement the project according to the ESS. The Bank team will review Implementation Status Reports (ISR) from previous and ongoing water projects and the technical reports been prepared for this project. The team will also perform field visits and will meet the counterparts (MOWI, NEMC, Water Boards), apply the IBAT tool for ESS6 and review documents from past investments to complete the due diligence. Potential direct, indirect and cumulative impacts will be identified. This ESRS is done with preliminary information. At this concept stage, only Component 1 and 2 are expected to generate some potential environmental and social impacts/ risks. Component 3 will support capacity building, strategic planning, valuation of water services, information systems, among others. The Terms of Reference for contracting any strategic plan and documentation will need to meet ESF provisions.

ENVIRONMENTAL- Component 1- will support infrastructure and non-structural measures to improve water supply in two cities (Dodoma and Arusha) by interventions such as recharging of local aquifer, storm and wastewater treatment, exploration and management of groundwater resources, recycling of waste-streams for non-potable uses, as well operational actions to improve management of shallow aquifers. Some of the proposed interventions could cause direct and indirect impacts in superficial water systems (on river and streams and their aquatic ecosystems because of reduced water flow; drying out of springs or water holes or in the groundwater systems serving other communities due to abatement of the aquifer; high rates of groundwater pumping can also lead to increase soil salinity. Managed Aquifer Recharge (MAR) could also lead to potential indirect impacts (depending of
the water source if surface water, treated effluent, reclaimed or recycled water, the geology and sensitivity of the aquifer) and it must be done carefully to avoid injecting contaminants, pathogens and mobilizing ions and metals because of the difference in pH and oxidation potential of the recharge water and the aquifer.

Component 2- will support infrastructure and non-structural interventions (studies, capacity building) at the same selected river basins for watershed restoration, improved local livelihoods, protection of waters sources for the cities and agricultural water management. Under component 2, some of the potential infrastructure to be develop includes (i) check ditches; (ii) area infiltration (semi-circular bunds or soil bunds); (iii) rock catchments; and (iv) rehabilitation and/or construction of boreholes for groundwater extraction. No dams of any size will be supported. With above infrastructures, the projects will support the restoration of degraded lands, forest and wetlands and enhance agriculture production.

Other proposed interventions of Component 2 includes, i) to improve watershed management and restoration; ii) may support improvement of local likelihoods by activities such as establishment of fish ponds, bee hives, small-scale agro-processing; and iii) intensification of agriculture (no crops yet identified) to improve production, improving irrigation technologies (agricultural water management ) and promoting climate-smart agriculture and iv) strengthening of institutional structures for community and basin-level water management, allocation and monitoring.

During construction of infrastructure, some potential environmental impacts could be related to: change of river/streams flows and ecosystem dynamics; waste generated at construction sites which can pollute land and water; ground excavations can lead to accidents of people and fauna; ii) domestic residues from construction camp sites can attract wildlife; iii) clearing of vegetation; iv) increase transit in construction sites; among others.

During operation of infrastructure, potential environmental impacts could include reduced water flow for aquatic ecosystems and downstream communities; increase open water/lentic habitat could lead to potential water vector (malaria, dengue) breeding sites that can affect public health; introduction of exotic fish species in the ponds; increase salinity in the long term (due to irrigation systems); land use and land degradation due to increase agriculture and overgrazing by livestock; potential increase use of herbicides or pesticides, among others.

Social risks include: Labour / project induced population influx and associated GBV/SEA associated with the infrastructure developments in urban developments and rural areas with low absorption capacity; increase in the prevalence of HIV/AIDS due to interactions of project workers and/or labour migrants local community; Conflict on natural resource such as pasture as a result of restriction of use of land in buffer zones within the water basins; conflict over available water resources for various uses among and between urban and rural water users or that increased water-use monitoring actions indirectly impact the poor and vulnerable; land acquisition and physical and/or economic displacement for storm and wastewater treatment, drainage operations; labour management related risks; Community health and safety risks related to proposed infrastructure construction; cultural impacts associated with adoption of alternative livelihood streams that may not be culturally appropriate especially for the vulnerable populations in Arusha. During preparation, the Bank will also determine the presence of other categories of vulnerable persons in the project areas; and Impacts on intangible cultural heritage will be assessed during project preparation.
Infrastructure designed under the project, such as managed aquifer recharge and irrigation modernization, may have associated facilities identified during implementation depending on design parameters and sites/technologies selected. Risks associated with any associated facilities identified during implementation will be evaluated under the ESMF and documentation will be update as required in the ESF.

SUMMARY of INSTRUMENTS NEEDED - BEFORE APPRAISAL:
(i) An Environmental and Social Management Framework (ESMF) which will cover all risks associated with ESS1, ESS2, ESS3, ESS4, ESS6, ESS8 including Labour Management Procedures (LMP);
(ii) Resettlement Policy Framework (RPF) to guide the development of site specific RAPs which will be prepared during project implementation;
(iii) Process Framework (PF) to guide mitigation management resulting from restrictions in access to natural resources in legally designated parks and protected areas in the RPF;
(iv) Vulnerable Groups Planning Framework (VGPF) to lay out steps to be followed to promote sustainable development benefits and opportunities in a manner that is accessible, culturally appropriate/inclusive for the interventions implemented in VG interest areas;
(v) Stakeholder Engagement Plan, to comply with ESS10;
(vi) Environmental and Social Commitment Plan (ESCP), which will be agreed with the borrower.

During IMPLEMENTATION:
(i) Environmental Impact Assessments (for increase aquifer production, waste water treatments plants and irrigation rehabilitation) will be prepared following the measures described in the ESMF, the Terms of Reference prepared and reviewed by the Bank and the Tanzania EIA process and iii) site-specific Environmental and Social Management Plans (ESMP) for subprojects during implementation of the project but prior procurement and contract of civil works.

Emergency context. Contingency Emergency Response (Component 5), following the Bank’s Guidance on CERC (Oct 2017), both the ESMF and RPF will include a specific section on CERC describing environmental and social risk management procedures.

Areas where “Use of Borrower Framework” is being considered:
The operation will not rely upon the Borrower’s E&S Framework. However, the project will comply with Tanzania E&S, EIA, Labour, Occupation and Health and Safety legal and other regulatory requirements.

ESS10 Stakeholder Engagement and Information Disclosure
Project’s stakeholders are tentatively divided in four (4) categories which include: (i) national level government line ministries and agencies; (ii) Basin Water Boards (BWBs), Water Users Associations (WUAs), and Irrigation Organizations (IOs), (iii) Local Government Authorities (LGAs) and local communities which include land users in the catchment areas’ buffer zones, targeted groups for alternative livelihood strategies, and catchment area downstream water users; and (iv) Non-government organizations (NGOs related to environment, climate change, others civil Society Organizations (CSOs), Community Based Organizations (CBOs) and other non-state actors.

The Stakeholder Engagement Plan (SEP) will provide an outline for stakeholder identification, analysis and the engagement strategies. For the sub-projects, stakeholders will be identified by their physical location in relation to
project boundaries, impacts from the proposed interventions and stakeholder interests. To ensure that consultations are culturally sensitive and inclusive, the SEP will be aligned with the Vulnerable Groups Planning Framework (VGPF) and Process Framework (PF). It will also outline the general principles and a collaborative strategy to identify stakeholders and plan for an engagement process that will be followed/implemented once project locations are unknown prior to appraisal will have been identified. The project will explore locally available complaint handling systems and develop a culturally appropriate and accessible Grievance Redress Mechanisms (GRMs) that will be socialized to all stakeholders through the SEP.

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

At this stage is not possible to determine the size and types of the project workers as defined in the ESS2 (direct, contracted, supply and community workers). The type and number of workers will depend on the scope of the contracts, civil works, goods and no-structural contracts. The team will update this information at the ESRS appraisal stage.

The project may result in the labor related risks and impacts which include but not limited to: (i) Lack of compliance with national employment and labor laws; (ii) Unsafe and unhealthy working conditions, and the health of workers; (iii) Gender and disability discrimination in provision of employment opportunities; (iii) Gender Based Violence/Sexual exploitation and abuse and harassment at workplace and/or within the project host communities; (iv) Risk of spread of infectious and communicable diseases including HIV/AIDs; and (v) child labor.

To contribute to risk alleviation, the contractors will be encouraged to hire locally. As more details become available during project preparation and implementation, an assessment and documentation of the typology of workforce, their numbers and expected sources of labor will be conducted. The Borrower will therefore prepare draft Labor Management Procedures (LMP) during preparation which will have detailed information on the work terms and conditions including explicit prohibition of child labor. The LMP will be included in the ESMF, the ESCP and works contracts. The LMP will also have the details of the grievance redress mechanism for project’s workers; allocate roles and responsibilities for monitoring such workers.

Occupational Health and Safety (OHS). The project is planning to undertake the civil works through the contract of firms and local contractors more often “local builders” (which do not often apply OHS measures). Potential risks may include accidents and injuries, safety and health hazards. Accidents related to water infrastructure construction could include: construction related fractures, lacerations or more serious injuries, road accidents. The project will reduce OHS risks by applying OHS measures according to the ESS2, national legislation, the Environmental, Health and Safety Guidelines of the World Bank and the Good International Industrial Practices (GIIP). The arrangements to respond to the requirements of ESS2 will be described in the ESMF and will consider the national requirements, the Environmental Health and Safety Guidelines on Occupational Health and Safety and GIIP.

OHS measures in the construction site will include: organization of OHS working teams in the construction site, provision of OHS trainings, mandatory use of personal protective equipment (PPE), fencing of construction area,
reporting of accidents, emergency plans and provision of sanitary and waste disposal facilities, first aid kit, eating, resting and hygiene facilities (including water for drinking and sanitary areas). At the moment there is not sufficient information on if and how community contribution of labor would be engaged in the project. In the event the project includes community workers (as part of the effort to maximize local benefits) it must ensure that PPE is distributed and used and in case of accidents, these community workers will receive the same care as other project workers.

Insurance in case of accidents or death will need be considered in contracts with firms and local builders. During screening, assessment and approval of project interventions, OHS measures will be included in the contracts of firms and local builders to ensure contractual obligation and ensure compliance with ESS2, national legislation, and GIIP. For local contractors, during preparation, the team will explore the experience of these builders in water and sanitation infrastructure construction works and the application of OSH. The supervision for application of OHS measures to be defined for each subproject will be assessed during the due diligence process. The ESMF will define the responsibility of OHS application (possibly engineer in charge, district engineers, project PIU staff or local counterparts such as Water Users associations).

ESS3 Resource Efficiency and Pollution Prevention and Management

The ESS3 defines the responsibilities the project will have to address resource efficiency, pollution prevention, mitigation and management throughout the project life cycle which are consistent to the Environmental, Health and Safety Guidelines (EHSG) of the World Bank and the GIIP.

Resource Efficiency: the project will include in the ESMF measure to use resources (such as water, energy and raw materials) efficiently and will apply measures according to the ESS3, national legislation and the EHSG.

Energy use: it has been identified that many rural areas lack electricity, thus the use of generators might be needed. This will bring the use of diesel, oil and batteries to the construction sites. Diesel, oil car containers and batteries can become hazardous electronic waste in rural communities and oil containers are widely used to carry/fetch for water.

Water use: Water is needed for the construction of civil work. Since the project will capture, store and improve water resources availability for rural and urban areas, it is expected that the project will ensure water availability for the construction civil works and to prevent conflict over water sources for biodiversity and local needs. Component 2 will support landscape and restoration interventions, thus water management agreements will probably will be needed at micro-areas to avoid conflict upon use of water resources which are very scarce for many rural people and ecosystems.

Raw materials: At the moment, the use of raw materials is not clear. During the due diligence process, the team will identify the possible raw materials needed for some of the interventions in Component 1 and 2.

Pollution Prevention and Management

The project will avoid the release of pollutants, minimize and control the concentration and mass flow of their release using the performance levels and measures specified in national law or the World Bank EHSGs. The EHSGs contain the performance levels and measures that are normally acceptable and applicable to projects. If Tanzania
requirements differ from the levels and measures presented in the EHSGs, the Bank will require the project to achieve or implement whichever is more stringent. If less stringent levels or measures than those provided in the EHSGs are appropriate in view of the government' limited technical or financial constraints or other specific project circumstances, the Bank will require the project to provide full and detailed justification for any proposed alternatives through the environmental and social impact assessment. This justification must demonstrate, to the satisfaction of the Bank, that the choice of any alternative performance level is consistent with the objectives of the ESSs and the applicable EHSGs, and is unlikely to result in any significant environmental or social harm.

Pollutants might affect air, water and land due to routine, non-routine, and accidental circumstances, and with the potential for local, regional, and trans-boundary impacts. Some of the project activities that will require careful planning and evaluation is the proposed Managed Aquifer Recharge (MAR) which can lead to potential indirect impacts (depending of the water source if surface water, treated effluent, reclaimed or recycled water, the geology and sensitivity of the aquifer) and it must be done carefully to avoid injecting contaminants, pathogens and mobilizing ions and metals because of the difference in pH and oxidation potential of the recharge water and the aquifer.

In the ESMF the government will include a chapter to respond to the requirements of the ESS3 for both the construction and operational phases with measures to ensure: i) the efficient use of resources; ii) to prevent, manage mitigate and reduce pollution (air, surface and groundwater and soils); iii) management of domestic wastes and hazardous materials; and iv) management of pesticides.

The project will consider proximity of communities, protected areas, presence of wildlife (which can frequent water holes), cumulative impacts. The project itself will implement many different environmental measures to increase water resources management, protection and increase water quality such as: wetland and land restoration, water quality monitoring programs, erosion control. During construction, contractors will be required to protect the soil and nearby streams from the use of cleaning machinery and disposing construction wastes, domestic residues. The project will also estimate GHG emissions as part of the requirements of the ESS3 and the co-benefits of the project.

The government will need to define construction disposal sites according to acceptable parameters of ESS3 and to ensure that contractors do not leave hazardous wastes in rural villages and urban areas (paint containers, cement bags, diesel/oil containers, batteries, etc.).

Since the project will support improved agricultural activities in some of the project areas, the project team will assess if a Pest Management Plan will be required. The project will support the implementation of pest management plans as described in ESS3. The project will not use pesticides/herbicides that can harm public health and ecosystems or can be cancerogenic. The project will support installation of check ditches for reducing water erosion and reduce water velocity. During project preparation the team will consider possible impacts of stagnant waters or reduced flow for pest-aquatic plants which can accelerate depletion of dissolved oxygen and increase habitat for aquatic insects (mosquitos) leading to increased water-borne diseases; prevention measures will need to be considered in project implementation and operation.
ESS4 Community Health and Safety

The project will support infrastructure development and other investments to improve water resources management. Thus, the project will need to evaluate the risks and impacts that these investments could potentially affect the health and safety of local communities during construction and operation stages, including those who, because of their particular circumstances, may be vulnerable.

In order to prevent and mitigate any negative impact the project will identify risks and impacts and propose mitigation measures in accordance with the mitigation hierarchy and the ESS4 and the project ESMF. The ESMF will define the procedures to prepare site specific Environmental and Social Impact Assessment (ESIA) that will need to include an Environmental and Social Management Plan (ESMP) for each sub-project. Some sub-projects might require environmental licenses (certificates issues by NEMC) and construction permits as well municipal permits for the construction and development of the proposed MAR operation.

Infrastructure design and safety: the project will ensure safety for workers and communities during construction and operation of new water infrastructure to be developed, taking into consideration: the review of relevant subproject designs by an qualified entity or consultants to assess structural safety, geological high risk locations and risks association to extreme events (droughts, floods), climate change and failure. In relation to other potential risks (accidental leaks, spills, emissions, fires, and other unforeseen crisis emergency events) the ESMP will include Emergency Response Plans according to ES4 that will be mandatory for the construction period and recommended for the operation stage. Contents and scope for the plans according to the different identified risks will be described in the ESMF.

Safety of Services: the overall outcome of the project is to improve the provision of bulk water to cities water supply systems to serve urban areas and water management in rural areas. The ESMF will include measures to ensure investments can deliver water that may be treated to comply with drinking water quality standards that are in accordance to national legislation and the World Bank EHSGs.

Traffic and road safety: in urban and rural areas transit accidents could occur as well due to the operation of water infrastructure to be installed. All subprojects will apply measures to ensure safety of nearby communities, road users from project infrastructure and traffic effects caused during construction; in urban areas contractors will be required to implement Traffic/Road Safety Management Plans.

Ecosystem services and public health: during construction and operation of water infrastructure or MAR activities, direct or indirect impacts on superficial water resources, local aquifers and ecosystems could result on adverse health and safety risks to local communities and ecosystems. Water flow reduction in downstream areas, creation of isolated drying ponds, could increase health risks to communities because of water vector borne diseases (malaria, dengue); involuntary contamination of local resources (as result of MAR operation); increase salinity might result in zone arid areas due to increase irrigation and land farming which can later affect local livelihoods.

The ESMF and ESIAs will apply the mitigation hierarchy to prevent, reduce, mitigate and compensate direct, indirect and cumulative impacts/risks associated with the proposed infrastructure. Development and strengthening of plans
for operation and maintenance of infrastructure supported and any associated facilities, particularly related to MAR, will be supported to ensure that the authorities can monitor the interactions of the ecosystem, the city wells production area, with nearby wetlands and streams to protect public health and ecosystems.

Hazardous materials: some potential risks are related to use of diesel, oil in camps, batteries, the ESMF will define the measures to avoid, prevent and mitigate adverse impact on the health and safety of works, communities and ecosystems. The project will include measures and actions to reduce risks during storage, transportation and final disposal of hazardous materials and waste.

Labour influx may occur during the implementation of some of the subprojects. The project will recognize that project activities and infrastructure can increase exposure of risk to communities. Therefore, the risk profile for social impacts associated with an influx of populations such as disease transmission and spread of HIV; potential for GBV/SEA; Child Labour and Violence Against Children will be determined during the environmental and social impact assessment.

In that regard, the Environmental and Social Management Plans forming part of the bidding documents and contractors contracts will include: (i) requirements for community health and safety measures (including HIV Social Mitigation Measures); (ii) Labour Influx Management Plans (contractor implemented: Codes of Conduct (CoC), HIV sensitization measures); (iii) GBV/SEA management will entail partnering with a NGO to sensitize, receive related grievances and offer referral services to survivors; adoption of explicit provisions on GBV/SEA in CoC; display of poster communication on prohibition on GBV/SEA at all worksites; sensitization and refresher trainings of workers on CoC and GBV/SEA; Community sensitization on GBV/SEA reporting channels and CoC; and (iv) procedures of management of security personnel will also be appropriately specified in line with the ESS4, as applicable

ESS5 Land Acquisition, Restrictions on Land Use and Involuntary Resettlement

The nature of the proposed project interventions in Component 1 and 2 are likely to result in some land acquisition and economic and/or physical displacement especially in infrastructure development in the Dodoma climate-resilient bulk water security subcomponent; loss of assets; impact on livelihoods and restrictions on land use to enable catchment and buffer zone conservations especially in Component 2. Gender inequalities in resource ownership in the country predispose women to be disproportionately affected by displacement as a majority do not own and/or control land and other economic resources. To manage these risks, the project will prepare a RPF by appraisal to guide the preparation of site specific RAPs for sub-projects that will not have been identified at appraisal. Where necessary, RAPs will have Livelihood Rehabilitation and Restoration Plans (LRRPs). To mitigate on restriction on land and natural resource use forests and catchment areas, the project will prepare Process Frameworks (PF) to be included in the RPF.

Tanzanian legal and regulatory framework has a clear hierarchy of water rights that are not directly connected to land rights. There are customary rights for communities and small-holders that the project will account for to ensure that the poorest are not disadvantaged by investments. The government has stakeholder engagement mechanisms at community, catchment and basin levels, where water use, allocation and monitoring activities will be strengthened through support for improved monitoring and communication systems to ensure that community concerns and de facto water allocations are considered in water management systems. The Basin Water Boards are responsible for
permitting and enforcement of the water rights and this project will strengthen their ability to carry out these responsibilities through river basin management and technical practices, IT tools, access of information, water monitoring programs and citizen participation in water user associations at the community level. The ESMF and ESIs to be developed for the project will include measures to avoid, prevent, mitigate and compensate direct, indirect and cumulative negative effects that the project interventions could bring and will incorporate good practices been applied in other Bank water projects in different regions.

ESS6 Biodiversity Conservation and Sustainable Management of Living Natural Resources

Tanzania is a country rich in biodiversity and ecosystems and about of third of the country is under some type of protection. The Project will support civil works in some remote areas where wildlife is present and unique aquatic species are present in river, lakes and wetlands. Since Project intervention locations are not unknown, it is not possible to know with precision which protected areas or high biodiversity areas could be affected by the Project.

The targeted river basins cover a very large territory. The team has applied the IBAT tool for a preliminary screening of the project area within the targeted rivers basins and the results indicate the presence of: National parks, forest reserves, wildlife management areas, Nature Reserves, among others which may be present near project areas.

Some potential impacts might include impacts on aquatic ecosystems due to reduced river flows. The project has confirmed that no dams of any size will be supported -if this change from concept to appraisal - a revised methodology acceptable to the Bank on ecological flows will need to be considered for any dam. Other impacts that could occur includes increased poaching or illegal wildlife; cutting of trees or natural vegetation for construction areas and camp sites; excavations that can affect local fauna; land use changes due to increase agriculture; among others.

The project will assesses potential direct, indirect and cumulative impacts and will apply the mitigation hierarchy to defined measures to protect and reduce impact on ecosystems (natural and critical habitats) and biodiversity, and support preventive and mitigation measures, such as restoration of nearby areas using native species that could be affected by clearing to restore landscape and provide shade for the schools. Some potential exotic species (fish) could be involuntary introduced by the project in the ponds or lentic waters to be created by project interventions.

The project will be required to screen project interventions using some of the spatial tools (Global forest watch, IBAT) which are free and available to ensure the proper application of ESS6 to prevent environmental negative effects on biodiversity, critical habitats and ensure proper preventive and mitigation of impacts.

Sustainable management of living natural resources. The project plans to support an increase water availability to increase agricultural production. At this stage is not known the agricultural and production systems that the project will support which could include family farming and commercial agriculture. The ESMF will include the tors of reference for conducting an analysis of potential risks associated to harvesting of living natural resources and opportunities to improve sustainable land use practices in small scale and commercial producers. No forestry harvesting operations are contemplated to be supported by the project. No agriculture activity involved in introducing invasive species will be supported.
ESS7 Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities

Component 2 of the project has activities to be implemented in Pangani Basin which is in Kiliyanjaro and Arusha regions in areas in which may be inhabited by vulnerable groups that may include historically underserved communities. Risks and impacts associated with project implementation include: exclusion of vulnerable communities in design and selection of impact mitigation measures; selection of inappropriate alternative livelihoods options for the communities; impacts on land and natural resource use; restriction in access and use of land natural resources; and involuntary physical and / or economic displacement of persons.

Therefore, the project will prepare a Vulnerable Groups Planning Framework (VGP) that will provide a framework for: avoiding or mitigating adverse impacts; providing sustainable development benefits in a timely way and culturally appropriate manner; ensuring there is meaningful consultation and engagement in a culturally appropriate and gender and inter-generationally inclusive manner; providing for Free, Prior and Informed Consent in cases where there are (i) adverse impacts on land and natural resources subject to traditional ownership or under customary use or occupation, (ii) activities causing relocation of disadvantaged communities from land and natural resources subject to traditional ownership or under customary use or occupation, or (iii) significant impacts on the disadvantaged communities’ cultural heritage that is material to the identity and/or cultural, ceremonial, or spiritual aspects of the affected communities’ lives. This would as well provide guidance to the preparation of Vulnerable Groups Plans (VGPs) during project implementation. An assessment and proposal of culturally appropriate livelihood streams will be conducted under the environment and social assessment. The assessment will also focus to understand community structure and appropriate consultation processes specific to this community.

The project will also include a grievance redress mechanism that is culturally appropriate and accessible to disadvantaged communities, taking into account the availability of judicial recourse and customary dispute settlement mechanisms of the communities. The project may include broader social measures, such as sustainable land, forestry and water management, to strengthen the capacity of disadvantaged communities. The World Bank's standard applicable to Indigenous Peoples/Sub-Saharan Historically Underserved Traditional Local Communities was finalized in close consultation with Government of Tanzania.

ESS8 Cultural Heritage

The proposed project interventions may be located in areas with archaeological, paleontological, spiritual, landscape elements of cultural and aesthetic value. In addition, the proposed operation will entail physical works, excavations, movement of earth, quarrying and impounding in the construction of irrigation schemes, water storage structures, wastewater treatment, drainage, conveyance structures. These activities may have impacts on cultural heritage, mainly through chance finds. The ESMF will outline the established procedures on chance finds in Tanzania. The subprojects ESA will also assess possible impacts on intangible cultural heritage.

The requirements of adoption and implementation of chance find procedures will form part of the bidding documents and be part of contractual obligation of the contractor.

ESS9 Financial Intermediaries
C. Legal Operational Policies that Apply

OP 7.50 Projects on International Waterways
The project will support activities in the Pangani river basin of Tanzania. A small portion of the headwaters of this basin (northern area) extends into the Kenya territory. No negative impacts are expected as result of the project.

OP 7.60 Projects in Disputed Areas

III. WORLD BANK ENVIRONMENTAL AND SOCIAL DUE DILIGENCE

A. Is a common approach being considered?
No

Financing Partners
No partners

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

Actions to be completed prior to Bank Board Approval:
Prior to appraisal the following documents will need to be developed:

- The project will apply the mitigation hierarchy in the project preparation, implementation and operation. In order to comply with the ESF, the project will prepare an Environmental and Social Management Framework (ESMF) which will set up the procedures for investments (subprojects) screening, evaluation, monitoring and environmental management plans to comply with the ESS1, ESS2, ESS3, ESS4, ESS6 and ESS8. It will also ensure the application of the Environmental, Health and Safety, Protected areas, water resources legislation. The ESMF will also include a chapter on the Labour Management Procedures (LMP) - that will cover all aspects of the ESS2.

Some of the infrastructure interventions will be designed under the project (MAR, wastewater treatment plant, irrigation modernization) will prepare an EIA and request an environmental certificate (license) from NEMC as well as other water and construction permits. The EIA for MAR, irrigation modernization and the Dodoma wastewater treatment plant will be completed after appraisal, during implementation. The ESMF will also apply the mitigation hierarchy to technical assistance activities conducted during implementation. In particular, an Integrated Water Resources Management and Development Plan is proposed for the Panani Basin and if this Plan is advanced under the project, a corresponding Strategic Environmental and Social Assessment would be prepared during implementation.

- Resettlement Policy Framework (RPF) - to guide the development of site specific RAPs for yet to be identified projects; Process Framework (PF) to guide mitigation management resulting from restrictions in access to natural resources in legally designated parks, water rights and protected areas.
The following instruments and actions will need to be agreed and included in the ESCP and the government of Tanzania will be responsible for:

i) the application of the ESMF and all other ESF plans prepared for this project; to establish an environmental and social management unit at the PIU to support the application of the ESF; to complete the designation of additional staff for regional and local supervision; to implement the agreed budget for the environmental and social management of the project for project supervision and monitoring and strengthen the capacities at all levels to oversee the implementation of the ESMP (including environmental and social clauses) by contractors, subcontractors etc;

ii) The project will perform screening and evaluation according to the ESMF and the World Bank ESF. Some project interventions under component 1 and 2 might need permits and environmental licenses (Certificates), required by national legislation (Environmental Act) such as the managed aquifer recharge system, irrigation rehabilitation, and sanitation which will be sought during implementation.

iii) The preparation of environmental, occupational health and safety clauses for contractors to ensure application of all relevant ESS to the project, including the SEP.

iv) Development of Site-Specific Plans including Resettlement Plans as required under the RPF; Vulnerable Groups Plan as required in the VGPF, Stakeholder Engagement Plans, Grievance Redress Mechanisms and Emergency Response Plans as required per each ESS.

(v) ESF and risk management capacity building plan for the PIU and implementing agencies including monitoring and reporting requirements on environmental and social risk management, grievances and accidents and incidences

### C. Timing

**Tentative target date for preparing the Appraisal Stage ESRS**

10-Jan-2020
IV. CONTACT POINTS

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VI. APPROVAL
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Safeguards Advisor ESSA Nathalie S. Munzberg (SAESSA) Cleared on 10-Dec-2019 at 21:25:29 EST