

**PROJECT INFORMATION DOCUMENT (PID)  
APPRAISAL STAGE**

Report No.: AB6979

<b>Project Name</b>	Urban Water Supply and Sanitation Project-Additional Financing
<b>Region</b>	AFRICA
<b>Sector</b>	Water Supply (41%); Waste Water Treatment (41%); Sanitation (15%); Sub-National Government (2%); Central Government Admin (1%)
<b>Project ID</b>	P129174
<b>Original Project Name:</b>	Ethiopia Urban Water Supply and Sanitation
<b>Original Project ID:</b>	P101473
<b>Borrower(s)</b>	GOVERNMENT OF ETHIOPIA
<b>Implementing Agency</b>	The Ministry of Water & Energy Attn: Ato Yohannes Gebre Medhin Director, Water Supply and Sanitation Directorate Ministry of Water and Energy Telephone# 251 11 6625526 Fax# 251-1-6610885/6610710
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	Participating Water and Sewerage Enterprises/ Authorities Ethiopia
<b>Environment Category</b>	[ ]A [X]B [ ]C [ ]FI [ ]TBD (to be determined)
<b>Date PID Prepared</b>	January, 2012
<b>Estimated Date of Appraisal Authorization</b>	March 2012
<b>Estimated Date of Board Approval</b>	May 29, 2012

**I. Country and Sector Issues**

1. At the time of the Urban Water Supply and Sanitation Project (UWSSP) approval in mid-2007, Ethiopia was in its second cycle of developing a Poverty Reduction Strategic Plan (PRSP) – the Plan for Accelerated and Sustained Development to End Poverty (PASDEP) covering the period 2005-2010. The main thrust of PASDEP was ensuring accelerated growth through a multi-faceted approach of tackling interlinked poverty traps, including the very low level of infrastructure, including water supply and sanitation.

2. The Millennium Development Goal (MDG) targets for Ethiopia are to achieve 63 percent access to safe water supply and 58 percent access to improved sanitation by 2015. In 2000, approximately 7 of the 50 million people in rural areas (13 percent) and 8 of 11 million people in urban areas (73percent) had access to safe drinking water. Access to basic sanitation in the same year was 6 percent for rural and 62 percent for urban. The Government had also prepared an ambitious Universal Access Plan (UAP) targeting universal access to safe water supply and sanitation by 2012.

3. The Government has committed considerable resources in recent years to the establishment of an enabling environment for the sector's development. The Water Resources Policy, developed with broad stakeholder participation, is rather bold in its pronouncements, for example, on decentralization, cost recovery, involvement of all stakeholders including the private sector, and coordinated planning for water supply and sanitation. The Water Sector Strategy and Water Sector Development Program have been developed based on the Policy. Revision of the sector development program is under way while at the same time the sector is finalizing a program implementation framework for the Water Supply, Sanitation and Hygiene (WASH) sub sector to facilitate the move towards programmatic approach.

4. Regional governments have taken an active role in the development of the Policy, Strategy, and Sector Development Program. In addition, they have implemented legislative reforms to improve the institutional arrangements – by establishing autonomous Water Boards, staffing water supply service units and reforming tariffs.

5. The proposed Operation is consistent with the Ethiopia's current five year poverty reduction strategic plan (2010-2015), the Growth and Transformation Plan (GTP), which aims at achieving universal water supply coverage by the end of the plan period. The activities in the proposed Additional Financing are fully consistent with the Bank's Country Assistance Strategy for Ethiopia discussed by the board on November 27, 2008.

6. In its GTP, the Ethiopian Government has recognized the role of urbanization in economic and social development, and prioritizes building the necessary urban infrastructure to ensure rapid and equitable growth of urban centers. It further stated that, "Adequate attention will also be given to improve urban sanitation amenities to create suitable living and working environment". Provision of better access to safe water and sanitation facilities has been identified as one of the main initiatives that is expected to ensure the plan's key pillar of "Improving citizens' living standards and development of their human potential".

7. The Government's request for Additional financing of US\$ 150 million is motivated by its desire to ensure the realization of the foregoing key strategic goals in the water supply and sanitation sector.

8. At the beginning of the UWSSP, Addis Ababa City has been:

- a. Served with 210,000 m<sup>3</sup>/day of water supply, of which 170,000 m<sup>3</sup>/day is supplied from the Legadadi, Dire and Gafersa dams, and 40,000 m<sup>3</sup>/day from the Akaki ground water field. This corresponds to 50 liters per capita per day or 35 lpcd taking account 35% water losses. In comparison, most comparable cities in Africa are provided with at least 100 lpcd. With a 3.5% population growth rate by 2012 water production must increase by 150,000 m<sup>3</sup>/day to provide 75 lpcd.
- b. A waste water master plan of the city was updated in 2002. It divided the city into three catchments and set out sewer alignments and located stabilization ponds in each, one at Kaliti where the existing treatment facilities are located, and the others at Kotebe and Akaki on the eastern and southern sides of the city. There are 30 km of trunk sewers and 100 km of secondary

sewers and laterals in the Kaliti catchment. The sewerage system was designed on the basis of an average water consumption of 150 liters per capita per day to serve an equivalent population of 200,000. Some 3000 connections discharge about 6000-7000 m<sup>3</sup>/day into the sewer system corresponding to 4.8% percent of volume of billed water. The sanitation master plan also recognizes onsite septic tanks and pit latrines, and calls for sludge to be collected by vacuum trucks and taken to drying beds, disposed in sanitary landfills, injected into the sewer network at selected sites, or applied to forestry lands.

- c. The Kaliti wastewater treatment plant was commissioned in 1981 with a design capacity of 7,600m<sup>3</sup>/day flow and 3,500 kg/day biochemical oxygen demand. Treatment consists of inlet screens and grit chambers, two settling chambers, and two parallel pond systems, each made up of a facultative pond, a maturation pond and two polishing ponds. Sludge lagoons and drying beds were constructed in 1999 with treatment capacity of 110,000 m<sup>3</sup>/year of sludge.
9. The Secondary cities: Hawassa in the Southern Region, Jimma in Oromia Region, Gondor in Amhara Region, and Mekele in Tigray Region with an average population of 200,000 are the beneficiaries of the UWSS project. Typical conditions in the four towns show that only 75% of households are served by the utility, two to five households share each residential connection, and the duration of supply is about 12 hours per day. All connections are metered, with several thousand new ones added each year. In particular:
  - i. Water production is at 30 liters per capita per day, but with more than 30% non-revenue water, actual consumption is only about 20 liters per capita per day. This is less than half what most African cities of similar size require. Since 30% of the volume produced is not billed, and 25% of what's billed is not paid, the utilities are collecting tariffs on only half the volume of water produced. This, combined with low tariffs (3 of 4 cities with \$0.25 per m<sup>3</sup>) results in operating revenues covering only about 75% of operating expenses, falling short of the Government's full cost recovery policy, - i.e. recovery of recurrent, renewal/replacement of short life assets, and debt service.
  - ii. Sanitation services are limited to onsite septic tanks and pit latrines in the secondary cities. Piped sewerage is needed in the high-density, commercial centers of these cities and wastewater stabilization ponds are needed to treat their wastewater before it is discharged to surface sources.

## **II. Rational for Bank involvement**

10. Rational for Additional Financing: The proposed additional financing is sought to: i) enhance the development effectiveness of the project through upgrading of the design capacity and efficiency for the Addis Ababa city waste water treatment plant beyond what was anticipated during the original project design. This design change is needed because the city's urban renewal program has resulted in shifts in the resident's living style and hence increased generation of waste, ii) complete part of the original project activities that faced a financing gap due to cost overruns incurred in the course of implementation caused by unanticipated design changes and price escalation of imported items for the construction of water supply and sanitation works as well as the increased cost of related construction supervision activities in Gondar, Hawassa, Jimma and

Mekelle cities, and iii) expand support to a second federal city –Dire Dawa- that is in great need of the WSS improvement intervention.

11. The UWSSP is a five year project (2007-2012) with the Development Objective of “increased access to sustainable water supply and sanitation services in Addis Ababa and four secondary cities.” The project provides assistance to Addis Ababa city and four secondary cities (Gondar, Hawassa, Jimma, and Mekelle) to: (i) produce and distribute more water and improve sanitation services; (ii) improve the utilities operational efficiency by reducing non revenue water, and improve financial management, billing and collection, and customer management; and (iii) improve governance by the water boards and introduce performance incentives for operators.
12. The project has disbursed US\$ 43 million of the US\$ 100 million of IDA financing so far and the total value of additional contracts already awarded is USD 15 million. Procurement of civil works for additional water production amounting to US\$ 21 million is underway.
13. Given similarity in size of the city, nature of the proposed project, and its implementation arrangement, use of Additional Financing instrument is better suited than preparation of a new project.

### **III. Proposed objective(s)**

14. The Development Objective of the Urban Water Supply and Sanitation Project is to increase access to sustainable water supply and sanitation services in Addis Ababa and four secondary cities. The objective will be maintained with slight modification to reflect the addition of the new city and provide more flexibility i.e, the revised development objective will be “to increase access to sustainable water supply and sanitation services in Addis Ababa and targeted secondary cities.” Accordingly, the objective will be achieved by:
  - i) Producing more water for customers and extending the distribution network to un served areas.
  - ii) Improving the operational efficiency of the participating water utilities by reducing non revenue water and improving financial management.
  - iii) Strengthening the autonomy of existing water boards and utilities and introduction performance based contracts with utilities.
  - iv) Out sourcing selected activities to private sector providers to increase capacity and attract more investment.
  - v) Constructing public sanitation facilities in low income areas, finance priority elements of municipal sanitation plans, and promote improved hygiene and sanitation practices.

### **IV. Description**

15. The Additional Financing will be used to: i) complete the original project activities that faced financing gap due to cost overrun incurred in the course of implementation caused by an unanticipated design change and ii) include support to the second federal city that is in great need of the WSS improvement intervention. Activities proposed under the additional financing will include the following:

- a. Addis Ababa City: The waste water transport and treatment system in Addis City includes use of vacuum trucks and connection to the sewer line. Currently, the service coverage is estimated to 14% of which the Kaliti sewer system contributes about 7%. AAWSA has divided the city into three catchments for ease of operation and management of the sewer. The UWSS project has originally planned to rehabilitate and expand the Kaliti waste treatment plant to increase the capacity by adding couple of similar lagoons to the existing system. Current peak season treatment capacity is 10,000 M<sup>3</sup>/day while the sewer line has carrying capacity of 55,000 M<sup>3</sup>. However, the Addis city urban renewal project targets an increased capacity sufficient to address the projected increase in waste load from the ongoing redevelopment of parts of the city. The AAWSA roadmap plan for Addis city's sewerage system improvement proposes to upgrade the WWT plant to 100,000 M<sup>3</sup> per day to respond to the increasing demand. The additional finance is sought to expand the treatment plant to this capacity within the available space in the existing plant site. A master plan updated and design prepared on the basis of findings. The final design will be reviewed and appropriate tender document will be prepared to ensure cost effective expansion and choice of technology within the available space.
- b. Dire Dawa City: The second populous federal city with estimated population of 267, 3119 in its metropolitan area as of 2010 and is located in the eastern part of the country. The city is served with 301 l/s (22,000 M<sup>3</sup>/day) of supply from 12 bore holes and one spring source scattered in the city. The water demand of the City was estimated to be 438 l/sec (37,843 M<sup>3</sup>/day) as of the end of 2010. This shows that currently the supply and demand gap is 36% requiring improvement in both additional water production and institutional reforms. Thus the proposed additional financing will provide for: a) increased water production, b) improved operational efficiency and c) institutional reforms to ensure efficiency and autonomy of the utility.
- c. Gondar City: The ongoing project has provided for rehabilitation of the reservoir and ground water sources to increase the short term water supply. A well field has been identified and wells drilled to serve for medium term supply to the city. The new well field is 30 km away and involves pressure main with booster pump to a reservoir, a long transmission main, and expansion of the existing distribution system. This raised the estimated cost from what was anticipated during the preparation of the original project. The revised overall project cost is estimated to US\$21.00 million out of this the regional and city administrations will contribute US\$ 7 million and the UWSSP allocated US\$4.10 million. The balance of US\$ 9.95 million will be covered from the additional financing. The design and tender document for this sub-project is completed and made ready for procurement. Given the status of this sub-project the ministry of Water and energy expressed interest to initiate the procurement with the anticipation of retroactive financing when the project is approved.
- d. Hawassa City: The city has completed its short term water supply from a spring with additional daily supply of 3000 M<sup>3</sup>. The medium term demand for the city is expected from a ground water source the development of which is estimated to US\$ 12.40 million. The ongoing project has allocated US\$ 3.80 million and the balance will be mobilized from the additional financing and matching fund from the regional and city administration.
- e. Jimma city: Jimma city is implementing rehabilitation and expansion of the city water supply system by increasing the treatment plant capacity and boosting the treated water to two reservoirs with 2000 M<sup>3</sup> capacity each and to another reservoir to provide water to an area that is not connected to the system. However, cost of the electro mechanical equipment and pipes and fittings has substantially increased requiring additional financing to complete and

achieve its original objective. Therefore, in order to fill the financing gap in this city, the additional financing will allocate US\$ 6.20 million.

- f. Mekelle City: The short term water supply system expansion work has been completed with daily supply 6,624 M3 additional water to the city from ground water sources. However, the city has planned to drill and develop two more water wells to produce additional 8,000 M3 of daily water production to meet its medium term demand. The additional financing will finance drilling of additional wells, supply of appurtenant equipment, and corresponding works to increase the water supply to the city. The cost of the additional activities to be financed from the proposed additional financing is estimated to US\$ 8.00 million.

16. The US\$ 150 million Additional Financing will therefore be used to fill the financing gap to complete the work in the original five cities and to include additional activities in Dire Dawa City.

## V. Safeguard Policies that might apply

Safeguard Policies Triggered by the Project	Yes	No	TBD
<a href="#">Environmental Assessment (OP/BP 4.01)</a>	X		
Natural Habitats ( <a href="#">OP/BP 4.04</a> )		X	
Pest Management ( <a href="#">OP 4.09</a> )		X	
Physical Cultural Resources (OP/BP 4.11)	X		
Involuntary Resettlement ( <a href="#">OP/BP 4.12</a> )	X		
Indigenous Peoples ( <a href="#">OP/BP 4.10</a> )		X	
Forests ( <a href="#">OP/BP 4.36</a> )		X	
Safety of Dams ( <a href="#">OP/BP 4.37</a> )	X		
Projects in Disputed Areas ( <a href="#">OP/BP 7.60</a> )*		X	
Projects on International Waterways ( <a href="#">OP/BP 7.50</a> )	X		
Piloting the Use of Borrower Systems to Address Environmental and Social Issues in Bank-Supported Projects ( <a href="#">OP/BP 4.00</a> )		X	

## VI. Tentative financing

Source:	(\$m.)
Borrower/Recipient	19.30
International Development Association (IDA)	150.00
<b>Total</b>	<b>169.30</b>

## VII. Contact point

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\* By supporting the proposed project, the Bank does not intend to prejudice the final determination of the parties' claims on the disputed areas

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