Report Number: ICRR0022343

1. Project Data

Project ID	Project Name
P096367	KE-Water & Sanitation Srv Impr (FY08)
Country	**Practice Area(Lead)**
Kenya	Water

L/C/TF Number(s)	Closing Date (Original)	Total Project Cost (USD)
IDA-43760,IDA-51030	31-Dec-2012	425,103,255.30
Bank Approval Date	**Closing Date (Actual)**	
20-Dec-2007	31-Dec-2019	

	IBRD/IDA (USD)	Grants (USD)
Original Commitment	150,000,000.00	0.00
Revised Commitment	449,347,250.85	0.00
Actual	425,103,255.30	0.00

Prepared by	Reviewed by	ICR Review Coordinator	Group
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2. Project Objectives and Components

a. Objectives

Original PDO: The objectives of the Project, as stated in the Financing Agreement (June 4 2008; p.6), were “to (a) increase access to reliable, affordable and sustainable water supply and sanitation services; and (b) improve the water and waste-water services in the Project Implementing Entities’ Service Areas”.

The project objectives, as stated in the PAD (p.5), were similar – but not identical - to the above. According to the PAD, the development objectives were “to: (a) increase access to reliable, affordable and sustainable

water supply and sanitation services, and (b) improve the water and waste-water services in the areas served by AWSB, CWSB and LVNWSB".

Revised PDO: When the project was restructured in April 2012, and additional financing provided, the PDO was revised to state that the objective was: "to increase access to water supply and sanitation services in the project implementing entities' service areas".

b. Were the project objectives/key associated outcome targets revised during implementation?
Yes

Did the Board approve the revised objectives/key associated outcome targets?
Yes

Date of Board Approval
10-May-2012

c. Will a split evaluation be undertaken?
Yes

d. Components

1: Support to the Athi Water Services Board (AWSB – subsequently, with their conversion into Water Development Authorities, AWWDA): (cost at appraisal: US$71.5 million; increased to US$269.2 million after additional financing. Actual at completion: US$246.6 million**)**

This component financed the rehabilitation and expansion of existing water systems, as well as of existing sewerage networks and sewage treatment facilities in Nairobi and selected small towns, including informal settlements. Also included was technical assistance and capacity building support to the AWSB (subsequently termed the Athi Water Works Development Agency) and its Water Services Providers (WSPs), the Water Services Regulatory Board (WASREB) and the Water Tribunal (WT).

2. Support to the Coast Water Services Board (CWSB – subsequently, CWWDA): (cost at appraisal: US$45.0 million; increased to US$135.49 million after additional financing. Actual at completion: US$140.55 million -)

This component financed the rehabilitation and expansion of existing water supply systems and of sewerage networks and sewage treatment facilities in selected small towns and informal settlements. Also included was technical assistance and capacity building to the CWSB (subsequently termed the Coast Water Works Development Agency) and its WSPs.

3. Support to Lake Victoria North Water Services Board (LVNWSB – subsequently, LVNWWDA): (cost at appraisal: US$42.5 million; increased to US$79.58 million after additional financing. Actual at completion: US$74.69 million)

This component financed the rehabilitation and expansion of existing water supply systems, and of sewerage networks and sewage treatment facilities in selected small towns, hygiene campaigns, on-plot sanitation, including expansion of services to informal settlements. The component also financed technical

assistance and capacity building support to the LVNWSB (subsequently termed the Lake Victoria North Water Works Development Agency) and its WSPs.

After restructuring in 2012, in support of the additional financing (AF), the above components were revised to reflect the project's expanded scope in supporting drought emergency response and financing of priority bulk water infrastructure for Nairobi. All three components included activities for development of bulk water supplies, expansion of water and sanitation infrastructure, drought mitigation measures and institutional strengthening. Under the AF, Component 1 focused on the construction of the 11.3 km Northern Collector Tunnel (NCT) to support Nairobi's bulk water supply scheme, rehabilitation and extension of water supply systems, drought mitigation measures, and improvement in wastewater collection and treatment in the jurisdiction of the AWWDA (formerly the AWSB). Component 2 focused in increasing the capacity of the bulk water supply system, and rehabilitation and expansion of water supply schemes in areas such as Kilifi, Lamu, and Taita Taveta, and construction of the Sabaki-Kakuyuni pipeline. Component 3 focused on rehabilitation and expansion of water supply schemes in small towns, and on construction of water and sanitation systems in Eldoret. All three components included investments in water and sanitation services in informal settlements.

e. Comments on Project Cost, Financing, Borrower Contribution, and Dates

Project Cost: The original estimated project cost was US$159.3 million; increased to US$484.3 million after additional financing. Actual cost at project completion was US$461.82 million.

Financing: The project's cost was financed through an IDA credit, initially of US$150 million equivalent, followed by an Additional Financing (AF) of US$300 million equivalent, including US$20 million from the Crisis Response Window and cofinancing of US$100 million equivalent from Agence Française de Développement (AFD).

Borrower Contribution: Borrower contribution at project approval amounted to US9.31 million in local currency financing. A further US$34.30 million contribution from the borrower was included in the financing plan for the AF. Actual borrower contribution at project closing amounted to US$36.72 million.

Dates: The project was approved in December 20, 2007, becoming effective on September 2, 2008. Its original closing date was December 31, 2012. The project was restructured on May 10, 2012, to provide an Additional Financing, and its closing date extended to December 31, 2015 (eight years from approval). A second restructuring on March 30, 2015 further extended this date to December 15, 2017, to allow time for completion of works. A third restructuring followed on December 28, 2017, extending the closing date by two years, to December 31, 2019, to allow the Borrower to complete critical water supply works and fully disburse the credit amount.

3. Relevance of Objectives

Rationale

Country and Sector Context:

With a supply of freshwater resources of less than 650 cubic meters per annum, Kenya stood in the bottom 8 percent of countries in terms of water scarcity, at the time of appraisal in 2007. Though the country had made large investments in water and sanitation systems during the 1980s and 1990s, due to poor management and maintenance these did not result in efficient and sustainable service distribution. The delivery of water and sanitation services was fragmented, with responsibilities allocated across various Ministries and agencies. Water and sanitation services (WSS) lacked transparency, were characterized by low coverage and lack of commercial management, and were unresponsive to customers' needs. Inadequate service delivery disproportionately affected the poor living in informal settlements, which accounted for over 30 percent of Nairobi's population, so that people had become increasingly reliant on private vendors, paying relatively high prices for their supply, and having to spend considerable time obtaining water.

The Government's National Water Policy (1999) had envisaged 100 percent access to safe water for the country's population by 2010. Achieving this objective called for institutional reforms and investments in the sector to alleviate the bottlenecks existing. Towards this end, the Government commenced a comprehensive reform of the sector in early 2003, via the Water Act (2002), aimed at harmonizing the management of water resources and sanitation. The Act, which initiated a far-reaching and comprehensive reform effort, created a new institutional set-up, aimed at harmonizing and streamlining the management of water resources and water supply and sanitation services. A central tenet of the new service delivery framework was the separation of functions between each aspect of service delivery – policy making, regulation, asset ownership/control and service delivery operations – so as to reduce conflicts of interest and increase transparency and accountability. To implement the Water Act, the Government reorganized the Ministry of Water and Irrigation into a body focused on policy issues, established and operationalized new sector oversight institutions, such as the Water Services Regulatory Board (WSRB), and established seven Water Services Boards (WSBs). Each WSB was mandated to appoint Water Service Providers (WSPs), which were legal entities responsible for service delivery operations. Despite some initial setback and delays, the implementation of the plan was proceeding satisfactorily by the time of project appraisal.

Alignment with Strategy: At appraisal, the project's objectives were consistent with the Government's strategy as presented in its Vision 2030 document – which aimed to ensure that improved water and sanitation services were available and accessible to the entire population. The project remained similarly consistent with the Government's strategy, even with the revision of its objectives after restructuring in 2012, for the purpose of Additional Financing.

By scaling up the World Bank's financing for WSS, focusing on service expansion, and helping to close the infrastructure gap, the project directly supported the specific initiatives of the Bank's Africa Action Plan (AAP, 2005). At the same time, the project was expected to help strengthen partnership at the country level through joint operations and coordination with development partners.

The project's objectives were broadly consistent with the Bank's Country Partnership Strategy (CPS) for Kenya 2010-13, whose strategic objectives included unleashing Kenya's economic growth potential, reducing inequality and social exclusion, and managing resource constraints and environmental challenges. The CPS also had a special focus on governance. The project's objectives were more directly consistent with the CPS for 2014-18 (which, after its 2017 update, remained in effect at the time of project closing. The CPS's Engagement Domain 3: "Consistency and Equity – Delivering a Devolution Dividend" (CPS, p.24), in particular, included specific outcomes for "Better Provision of Health and

Sanitation Services by Counties" (Outcome 8), to which the project's objectives were directly aligned, as well as outcomes for "Adequate Systems to Monitor Performance of Services Delivered by Counties" (Outcome 9) and for "Heightened Transparency and Accountability in the Use of Public Resources" (Outcome 10), to which they were partially aligned.

Prior Experience in the Sector: The Bank Group had a long history of supporting water supply and sanitation infrastructure development in Kenya, and had maintained an active dialogue with the Government of Kenya on the formulation of new policies and legislation. The Bank supported the Government's efforts to introduce sector reform in 2003, through the Nairobi Water and Sewerage Institutional Restructuring Project (NWSIRP) in FY04, which aimed to demonstrate a sustainable institutional model, capable of managing, operating and maintaining infrastructure investment. The current Water and Sanitation Service Improvement project was intended to scale up support to strengthen this institutional model in AWSB, CWSB and LVNWSB, and move to support needed infrastructure investments to physically rehabilitate and expand WSS service provision to unserved and underserved areas.

Rating
High

4. Achievement of Objectives (Efficacy)

OBJECTIVE 1
Objective
"To increase access to reliable, affordable and sustainable water supply services"

Rationale
Theory of Change:

A fairly direct causal link can be drawn between the project's original activities and the expected outcomes. The activities consisted of (a) Rehabilitation and extension of water supply systems, and construction of water supply infrastructure, (b) Improvements in wastewater collection/treatment facilities, and construction of sanitation infrastructure, and (c) Strengthening of institutions. Resultant outputs included construction of bulk water infrastructure, piped household connections, etc., laying of transmission and distribution pipes, rehabilitation of wastewater collection, treatment and disposal facilities, sewers laid/replaced, and capacity building trainings to WSPs, wastewater development authorities and the regulatory board. These in turn would be expected to lead to increased access to reliable, affordable and sustainable water services, sanitation services and improved delivery of water and wastewater services (on account of capacity building).

While the activities were broadly appropriate to achieving the desired outcomes, the theory of change (TOC) discussion in the ICR does not specifically analyze whether they were of adequate scale to create a critical mass for change. Also, the results framework did not include an indicator to measure affordability. Reliability of service was to be measured in terms of hours per day of service, in addition to access, and sustainability in terms of O&M costs recovered from customers, as well as from increased sales made possible through

development of bulk water services. All of these were less than perfect measures, difficult to attribute specifically to the project. Similarly, an additional indicator that had been included to measure the percentage of people rating the services provided by the WSPs in the service areas as “satisfactory or better”, was also found difficult to measure on account of problems in attributing results to project-related activities, and had to be discontinued. As such, the sub-objectives of reliability, affordability and sustainability were ultimately dropped during the 2012 restructuring.

After restructuring in 2012, the theory of change remained materially the same, though simplified. Under the additional financing (AF), the objective of improving water and wastewater services was dropped. A sizeable portion of the additional resources went towards construction of the Nairobi Collector Tunnel to develop Nairobi’s bulk water supply and help alleviate its acute water shortages. Other activities, such as rehabilitation and extension of water supply systems, were scaled up in project areas. In addition, the AF supported some activities to mitigate the impact of a severe drought that had devastated the country during 2007-09 – part of which was financed under the IDA Crisis Response Window.

Outputs:

Though most of the construction work was on-going at the time of restructuring in 2012, the project did achieve the following outputs, according to data provided by the Project Paper: (a) Nearly 39,000 new household connections were made to bulk water infrastructure supported by the project, all of them in the AWSB area. (b) Over 600 community water points had been constructed or rehabilitated, also in the AWSB area. (c) The quantity of water billed and delivered to customers had risen from 308,600 cu. m. to 348,800 cu. m. per day. (The ICR provides figures that are similar, but not identical). Neither ICR nor Project Paper provides information on targets. However, the PAD had indicated a Year 4 target for the number of new household connections of 15,000 in the Nairobi (AWSB) area, a target for additional standposts in informal settlements in Nairobi of 650, and for the quantity of water delivered of 350,000 cu. m., so achievements in this respect were broadly on track.

Outcomes:

At restructuring, in 2012, as confirmed by the Project Paper, the project was mostly on track to meet its development objectives. The number of people benefiting from increased access to improved sources of water (Baseline, 2007: Nil) had reached 368,328 by mid-2011. All three WSBs and most water services providers had met or exceeded the targets for recovering their costs of operations and maintenance (O&M) from customers. O&M costs of WSBs recovered were of the order of 147 percent for ASWB, 124 percent for CWSB and 100 percent for LVNWSB by mid-2011 (Project Paper, 2012, p.22).

However, it was difficult to determine whether the sub-objective of affordability was being achieved. Although the project helped to strengthen the regulatory Board (WASREB), it was not clear that the water tariffs adopted were specifically attributable to the project’s activities; nor did the results framework (RF) include a measure of affordability. To measure reliability of supply, the RF did include an indicator to measure improved constancy of water supply (hours per day average) which would have been a reasonable proxy measure; unfortunately, reliable data proved too difficult to collect and the indicator was dropped at restructuring. The sustainability sub-objective was easier to determine, as the RF included a measure of Operations & Maintenance (O&M) costs recovered from consumers – and was retained as an indicator, with minor modifications, in fact being moved up from an intermediate output indictor to a PDO-level indicator after restructuring in 2012.

Based on the above, achievement of this objective is rated Substantial.

Rating
Substantial

OBJECTIVE 1 REVISION 1
Revised Objective
"To increase access to water supply services"

Revised Rationale
After restructuring in 2012, the sub-objectives of affordability, reliability and sustainability were dropped from the PDO. The project supported construction and rehabilitation of water sources, storage facilities, water treatment plants, transmission lines and reticulation networks, so as to enhance access to water services. This included services extended to informal settlements in the areas served by the project's implementing agencies. The project also supported technical assistance and training to the water sector institutions to strengthen their ability to expand networks and maintain services.

Outputs:

- The construction of the NCT was delayed on account of disruptions to the Government of Kenya (GoK)'s financing budget. The target of 11.8 km to be constructed by project closing (extended to end-2019, during the 2017 restructuring) was achieved only by mid-2020. The NCT is expected to be completed and operational by June 2021, until which time the full benefit of the Nairobi bulk water system is not expected to materialize.

- Notwithstanding the delay in completing the NCT, the project was able to deliver some 38,000 cubic meters of new bulk water per day, exceeding the target of 33,000 cubic meters set at restructuring in 2017. This consisted of 24,000 cubic meters per day from the Baricho boreholes and 14,000 cubic meters per day from the Tiwi boreholes.

A total of 149 boreholes were constructed and made operational to supply water during droughts, against a target of 120 boreholes. These boreholes were providing 406,000 people with improved access to water sources during droughts, achieving the 2017 restructuring target of 400,000.

- The project supported construction of reticulation networks, including extensions to informal settlements. Some 65,000 new piped household water connections (target was 66,000) were made through these investments, benefiting 661,500 people. Some 4,000 of these connections were made by WSPs to households in informal settlements. In all, some 11,000 connections were provided to informal settlements, benefiting 231,000 people (target was 186,300).

- The project constructed/rehabilitated some 1,195 community water points, exceeding the target of 1,171 set at restructuring in 2017, and nearly twice the target set at the time of the additional financing. Most of the community water points were constructed at schools. Yard taps were provided in informal settlements in Mumias and Malindi.

- Some 1,405,700 people with existing connections were benefiting from more reliable services arising from the development of new water sources and rehabilitation/expansion of existing water supply facilities. Continuity of supply (number of hours per day) rose in seven out of eight WSPs receiving water from infrastructure supported by the project (e.g. Eldoret from 16 to 18 hours per day, Malindi from 12 to 22 hours).

- Though the revised project did not include the objective of improving water and wastewater services, the project continued to support activities such as studies, training and technical assistance, aimed at strengthening water sector institutions and increasing their accountability and transparency. It also supported training and technical assistance for WASREB to strengthen its engagement with consumers. Also, annual statutory audits were carried out for all three implementing agencies during each year of project implementation - to demonstrate the transparent and accountable financial management of each agency.

Outcomes:

The objective of providing increased access to water supply services was achieved. The original target of 2.427 million people was met, despite the fact that the target had been revised downwards at restructuring in 2017 (to 2.382 million). This was also significantly higher than the earlier target of 736,000 set out in the Additional Financing Project Paper. People benefiting included those with access to new community water points and new household connections, as well as those with existing connections receiving more reliable water service.

Based on the achievement of the revised objective, but taking into account the fact that the NCT was not completed on schedule, efficacy is rated as Substantial

Revised Rating
Substantial

OBJECTIVE 2
Objective
“To improve the water and waste-water services in the Project Implementing Entities’ Service Areas”.

Rationale
The project supported training and technical assistance for WASREB to institutionalize social accountability measures by supporting Water Action Groups to serve as engagement partners between communities and WWDAs and WSPs. Strengthening WASREB was key to improving performance of the WWDAs and WSPs, as WASREB was responsible for monitoring and reporting on their performance and for enforcing license conditions. The project also supported capacity building for the WWDAs and WSPs in various areas, including corporate governance, utility management, procurement, contract and financial management. It also financed technical and financial audits of these institutions, to help them identify weaknesses and find ways to improve performance.

Unfortunately, the ICR provides no details as regards performance towards achievement of this objective up to restructuring (when the objective was dropped). As pointed out by the ICR, results indicators to track performance of this objective were “poorly defined” (ICR, p.14). One indicator, relating to the share of

persons in a survey indicating satisfaction with the services provided, could not be attributed to the project and was dropped in the restructuring. Another, relating to O&M coverage, was a measure of operational efficiency rather than of service improvement. In the absence of any measure of performance, achievement of this objective is rated as Negligible.

Rating
Negligible

OBJECTIVE 2 REVISION 1
Revised Objective
"To increase access to Sanitation Services"

Revised Rationale
Outputs:

- The number of people provided with improved shared sanitation services under the project improved from 4,000 in 2011 to 11,560 by close of project (target of 11,180).

- The project constructed 17 ablution blocks, including 13 at schools and the remainder in informal settlements or markets.

- The project financed rehabilitation of the Dandora sewage treatment plant, which treats 80 percent of Nairobi's sewage.

Outcome:

The objective of increasing access to sanitation services was fully achieved. The number of people benefiting from connections to the sewage system reached 343,000 by project closing, against a post-restructuring target of 258,050 (and more than four times the target presented in the AF Project Paper). This was the result of trunk sewers and reticulation networks in the Nairobi region, including in the Matopeni Spring Valley settlements, Riverbank and Huruma. Some 43,000 connections to the trunk sewerage network were made directly through the WSPs, and an additional 7,000 connections made with the support of the Nairobi Sanitation OBA project, which provided subsidies for connections to project-supported sewerage infrastructure in low-income communities in Nairobi region.

Revised Rating
High

OVERALL EFFICACY

Rationale

In the period prior to restructuring in 2012. the project substantially achieved its objective of increasing access to affordable, reliable and sustainable water services. However, since the achievement of its objective of improving water and waste-water services in the project area could not be assessed, overall efficacy of the original PDO is rated Modest. In the post-restructuring period, under the revised PDO, the objective of increasing access to water supply services was substantially achieved, while that of increasing access for sanitation services was fully achieved or exceeded, and hence rated High. Overall efficacy of the revised PDO is rated Substantial.

Overall Efficacy Rating

Substantial

5. Efficiency

Economic and Financial Efficiency

Economic analysis of the project conducted at appraisal, taking into account benefits arising from the value of time saved in water collection, the value of incremental water produced and sold, and savings in O&M recurring costs, generated an economic rate of return (ERR) of 20 percent, and a Net Present Value (NPV) of net benefits of US$101 million. A new analysis prepared at the time of the 2012 restructuring for the additional financing, estimated the ERR (based on benefits accruing on account of the project's investments in water supply), at 24.5 percent and the NPV at US$388.7 million. The ERR at project closing, as estimated in the ICRR, worked out to a slightly higher figure of 28 percent in the base case, declining to 23 percent, over three sensitivity-analysis scenarios.

The ICR also separately evaluated economic returns to investments in informal settlements and community schemes. The project invested US$8.6 million in trunk infrastructure for water supply in the informal settlements of Kayole Soweto in Nairobi, Kisumu Ndogo in Malindi, VOK in Mombasa and some settlements in Mumias, In the area served by LVNWWDA. The ERR for these investments worked out to a much higher 50 percent in the base case, declining to 38 percent over three alternative scenarios of costs and benefits. A similar analysis of the project's investments in rural community schemes gave rise to an ERR of 56 percent in the base case (falling to 43 percent over alternative cost-benefit scenarios).

Administrative and Operational Efficiency

Actual costs at project closing were lower than projected at the time of the AF (US$461.8 million vs. US$484.3 million), or just over 95 percent of the total, and the IDA credit had been disbursed. Most activities were completed by project closing – the date of which had however been extended by four years from the original date set at the time of the AF. Reasons for the delays varied - some of which were beyond the control of the project. In the first instance, the widespread post-election violence that occurred following the disputed elections that took place on December 27, 2007, just one week after the project received Board approval, and which led to considerable internal chaos, delayed project effectiveness by about six months. Implementation of the NCT contract was delayed in February 2015 by six months on account of a legal challenge to the National Environmental Management Authority on the environmental and social impact assessment license allowing

construction of the NCT, leading to a stop order by the court until the challenge was heard. The injunction was eventually vacated by the High Court, allowing work to continue. Another legal case in the High Court, arising out of a procurement complaint made by a losing bidder on work relating to implementation of a bulk water contract, requiring CWWDA to re-evaluate the bids led to a similar eight-month delay, as did flooding of the Baricho wellfield in 2018, which delayed works by an additional six months. On the other hand, a factor more directly under the control of the project was that of shortcomings related to compliance with safeguards, including health and safety standards, at the NCT construction site, which needed to be addressed.

Taking all factors into account, the project's efficiency is rated Substantial.

Efficiency Rating

Substantial

a. If available, enter the Economic Rate of Return (ERR) and/or Financial Rate of Return (FRR) at appraisal and the re-estimated value at evaluation:

	Rate Available?	Point value (%)	*Coverage/Scope (%)
Appraisal	✓	24.50	0 ☐ Not Applicable
ICR Estimate	✓	28.00	0 ☐ Not Applicable

* Refers to percent of total project cost for which ERR/FRR was calculated.

6. Outcome

The project's objectives were highly relevant to the World Bank Group's Country Partnership Strategy for 2014-18, which – after an update in 2017 - remained in effect at project closing. Overall efficacy was Modest for the project's original objectives, and substantial for its revised objectives, with 29 percent of the project's funds having been disbursed prior to restructuring and 71 percent post-restructuring. Efficiency was found to be Substantial. Overall outcome is based on a split evaluation, whereby outcome pre-restructuring is rated Moderately Unsatisfactory (rated 3 on a six-point scale, where 1 is HU and 6 is HS) and post-restructuring, is rated Satisfactory (or 5, on the same six-point scale). The overall outcome rating is the average of the weighted value of outcome ratings, i.e., (US$123.7 million x 0.29) + (US$301.4 million x 0.71) = 0.87 + 3.55 = 4.42, which translates to Moderately Satisfactory.

a. Outcome Rating

Moderately Satisfactory

7. Risk to Development Outcome

The risk to development outcome is considered to be low. At a technical level, the water treatment plants and associated infrastructure constructed under the project were all based on proven designs that had been used widely in other parts of the country, and were likely to be operated and maintained without undue problems. Operation of the NCT was also likely to be a manageable proposition, because – though it was the largest tunnel in East Africa – such tunnels were being successfully operated elsewhere in the world. Although, there was a risk of the construction of the tunnel not being completed, this too was low, as the Government was fully committed to the objective, as a means of addressing Nairobi's water shortage.

The fact that the project had helped strengthen the capacity of its implementing institutions, through technical assistance and training, which was helping them to better manage their investment planning, operational and financial performance, meant that the WSPs were better placed to maintain current services and expand them in the future.

The COVID-19 situation does pose one element of unforeseen risk, as it has had a strong negative impact on the finances of the WSPs. To help contain COVID-19, the WSPs have expanded water services to places that had limited access, which has increased their costs. This has been exacerbated by governmental directives to provide free water to informal settlements and vulnerable groups and to suspend disconnections – all of which has had a negative impact in WSP revenues, threatening their ability to cover their O&M costs, such as the cost of chemicals for water treatment plants, electricity for water pumps, and spare parts, which could compromise their ability to serve their customers without service disruption. WSP revenues dropped by some 39 percent between February and April, 2020, alone (see ICR, p.28), and WSPs did not expect the situation to improve until 2021. However, to try and mitigate the situation, the World Bank-financed Water and Sanitation Development Project (WSDP) will provide a conditional liquidity support grant to all 86 public WSPs, to help make up for the steep decline in their revenues and rise in costs during this emergency.

8. Assessment of Bank Performance

a. Quality-at-Entry

The design of the project benefited from the World Bank's experience with the Nairobi Water and Sewerage Institutional Restructuring Project (NWSIRP) and with previous Bank-financed water & sanitation projects in Kenya and other countries. The project itself appears to have been thoroughly prepared. The PAD outlined the risks that the project would face and indicated mitigation measures (see PAD, pp.17-18), including action plans to address risks that resources would be misused. Procurement and financial management arrangements of the implementing agencies were thoroughly assessed, and procedures for management of environmental safeguards were agreed, as were arrangements for monitoring and reporting. Under implementation arrangements, it was envisaged that the three implementing agencies (AWSB, CWSB and LVNWSB) would implement their own component of the project, with a Project Coordination Team (PCT) set up to provide overall coordination, ensure timely submission of project reports, exchange information, and share experiences and technical expertise.

The Additional Financing was, for the most part, also well designed and appraised. Major investments for Nairobi and the coastal region were identified through bulk water masterplans that were supported under tye project. The project's environmental category was appropriately raised from B to A (on account of

potential cumulative impacts of the NCT). However, the expectation that a complex investment like the NCT could be constructed and completed within three years was fairly optimistic.

Quality-at-Entry Rating
Satisfactory

b. Quality of supervision
The project appears to have been adequately supervised, with twenty-four supervision missions over eleven years – or an average of two per year. The ICR reports (p.26) that the team worked closely with the Government to restructure the project, to revise the results framework, reallocate funds between categories and provide more time to implement key contracts.

The ICR also reports that the team produced Aide Memoires (AMs) that were candid and of high quality, reporting routinely on progress, covering key issues and providing recommendations on addressing challenges. Draft AMs were discussed with the project implementing agencies to ensure they reflected a common understanding of issues and challenges. AM conclusions were reflected in Implementation Status & Results Reports (ISRs), which consistently rated project performance indicators realistically.

When it became clear that the NCT and the transmission line would not be completed by project closing, the team ensured that the financing gap would be covered and that contracts (agreement being reached with the Government that it would allocate US$63 million to cover the cost of the remaining works and implementation of the outstanding RAP) would be executed in accordance with Bank guidelines, especially as regards safeguards compliance. The Bank and development partner, Agence Française de Développment (AFD), agreed to conduct joint supervision missions to monitor safeguards issues.

That said, the safeguards-related complexities that arose from implementation of the AF (see Section 10) indicated that closer supervision by the team and earlier resolution would have been useful. The project closed with a Moderately Unsatisfactory rating for overall Implementation Progress, on account of pending safeguards actions, which in retrospect could have been addressed at an earlier stage.

Based on this, the quality of supervision of the project is rated Moderately Satisfactory.

Quality of Supervision Rating
Moderately Satisfactory

Overall Bank Performance Rating
Moderately Satisfactory

9. M&E Design, Implementation, & Utilization

a. M&E Design

The M&E system was aligned to project objectives and the results chain, which in turn contained indicators, some of which - for the original project - were not easily measurable or free of attribution issues (since other development partners or even the Government could potentially finance investments in the project area). Also, as seen from Section 4, the results framework (RF) did not include a measure of affordability – which was an important omission. That said, the RF was revised during the restructuring linked to the additional financing, and again in December 2017, which resulted in an improvement in the ability of te indicators to track the project's achievements and impact.

b. M&E Implementation

Implementation of the M&E system was adequate. An M&E specialist was appointed to the teams of each of the implementing agencies – though in some cases the specialists experienced difficulties in to collecting data from the WSPs relating to operational performance and numbers of household connections (ICR, p.23). The AWWDA did however make considerable efforts to build capacity for M&E at the implementing agencies, hiring a consultant to provide technical assistance in M&E to the implementing agencies, followed by the hiring of a firm to help compile the project's quarterly progress reports, and a firm to prepare the government's project completion and results report. The latter firm also held focus group discussions with beneficiaries to help assess the project's impact. The Bank team reported regularly on the operation of the M&E system in their Aide Memoires, noting progress and areas in need of strengthening.

c. M&E Utilization

Data collected for M&E were used to monitor the status of the project. Information collected was presented in quarterly progress reports and formed the basis for discussion on challenges facing the project, during supervision missions. M&E findings were disseminated and used to inform decisions to improve project performance and progress towards results. Regular updating of the results framework and of target values of its indicators helped ensure that the M&E framework remained relevant as a tool for monitoring progress and identifying challenges.

M&E Quality Rating

Substantial

10. Other Issues

a. Safeguards

The project was classified as Environmental Category B, with four safeguards policies triggered at appraisal, Environmental Assessment (OP/BP 4.01), Involuntary Resettlement (OP/BP 4.12), Indigenous Peoples (OP/BP 4.10) and International Waterways (OP/BP 7.50). The project complied with the Bank's Environmental, Health and Safety Guidelines, The project's environmental classification was raised to Category A at the time of the additional financing, because the environmental and social impact of one of its subprojects, the NCT, were considered to be significant. Accordingly, an Indigenous Peoples Planning

Framework was prepared and disclosed on December 15, 2011, and three additional policies were triggered – Natural Habitats (OP/BP 4.04), Physical Cultural Resources (OP/BP 4.11) and Safety of Dams (OP/BP 4.37).

At closing, compliance with involuntary resettlement and overall safeguards management were rated unsatisfactory, having earlier (October 2016) been downgraded from satisfactory to moderately satisfactory on account of capacity shortcomings at the Coast Waterworks Development Agency (CWWDA). Similarly, the rating for environmental assessment was downgraded to moderately satisfactory because of poor management of soil erosion, spoils, health and safety at the NCT construction site. At project closing, several activities related to Component 1 remained incomplete, including completion of a comprehensive dam safety assessment and dam safety plans for the existing Thika Dam, as a result of which, in December 2019, the rating for involuntary resettlement and for overall safeguards management were further downgraded to unsatisfactory, and the rating for environmental assessment to moderately unsatisfactory.

In November 2016, a request for investigation of the NCT 1 was submitted to the World Bank's Inspection Panel, based on a claim that the environmental and social impact assessment carried out for the NCT did not involve sufficient community participation, and the NCT was constructed without adequate geotechnical studies to map rocks, aquifers, water table, etc., which could affect in interrupted groundwater flow paths, leading to irreversible environmental impacts. The Inspection Panel conducted an eligibility visit in February 2017, and subsequently decided against recommending an investigation into the existing mitigation measures of the project.

b. Fiduciary Compliance

Financial Management (FM): The project's implementing agencies generally complied with the Bank's fiduciary policies, though with some shortcomings. Financial Management (FM) arrangements were generally adequate during implementation, being rated as satisfactory until mid-2017, when the rating was downgraded to moderately satisfactory, on account of internal control weaknesses over imprest funds and fixed assets management. There were also occasional delays in disbursement of funds from the designated account to the project's operational accounts, due to delays in processing disbursements at the line ministry. Quarterly interim un-audited financial reports and annual audit reports were generally submitted on time. The ICR does not specify whether auditor's opinions on the final audit report were unqualified or not.

Compliance with financial covenants was satisfactory, with all seven covenants being met by the due date.

Procurement: Procurement compliance was considered to be Satisfactory overall. Procurement systems and the implementing agencies' arrangements functioned reasonably well during implementation, though some delays and weaknesses in contract management did arise in-between. By project closing, most major works, goods, and consultancy services contracts had been completed and payments made for all goods delivered.

c. Unintended impacts (Positive or Negative)

Implementation of the NCT created opportunities for knowledge generation and learning. One such outcome was the establishment of the Tunneling Association of Kenya in 2019, to promote knowledge sharing on the use of underground space in Kenya, furthering education and training and improving tunnel safety construction and operation.

d. Other

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11. Ratings

Ratings	ICR	IEG	Reason for Disagreements/Comment
Outcome	Moderately Satisfactory	Moderately Satisfactory	
Bank Performance	Moderately Satisfactory	Moderately Satisfactory	
Quality of M&E	Substantial	Substantial	
Quality of ICR	---	Substantial	

12. Lessons

IEG derives the following lessons drawn from the ICR:

1. **Setting realistic expectations for complex investment components could lead to smoother implementation:** The NCT was the first large water tunnel of its kind in East Africa, and many aspects related to its construction were unknown at the time of its inclusion in the project. Given the uncertainties, it would have been better to have erred on the conservative side as regards the timetable for its construction; in which case a decision might well have been taken to initiate a new project, rather than to introduce it to the existing operation via an AF. This might have made it easier to address the complexities around safeguards, and the additional supervision that was required.

2. Ensuring that the implementing agencies establish a strong safeguards team from the start of the project would make for a smoother preparation and implementation of Resettlement Action Plans (RAPs) and Environment and Social Management Plans. The project's implementing agencies did not initially have strong safeguards teams, which led to some non-compliance with the Bank's safeguards policies and delays in preparation of RAPs, ESMPs and safety procedures. Even after the Bank worked with the agencies to strengthen these teams, the project closed with several safeguards issues still outstanding.

3. A strong regulator can help achieve transparent and accountable governance of institutions in the sector: The project helped to strengthen WASREB (Water Services Regulatory Board) through training and technical assistance, which helped it to become a more effective institution, in dealing with customer-related issues, enforce license conditions, engage on tariff

issues, and establish complaints-handling systems – thereby establishing the value of investing in strengthening the role and capacity of the regulator.

13. Assessment Recommended?

No

14. Comments on Quality of ICR

The ICR is clearly written, concise and consistent with guidelines. It provides adequate details of the project's activities, including very detailed annexes summarizing Safeguards Compliance and Performance, and Efficiency analysis. Its analysis is broadly evidence-based. The ICR could however have usefully provided more details on Bank performance, where the description is relatively concise, especially on the frequency of supervision missions (including the extent of country office support) and nature of interaction with the authorities, and the adequacy of supervision inputs (including skills mix) and resources.

a. Quality of ICR Rating
Substantial