

**STATEMENT BY ENG. MALAQUEN MILGO,  
CHIEF EXECUTIVE OFFICER, ATHI WATER SERVICES BOARD ON THE  
WATER MASTER PLAN AND THE NORTHERN COLLECTOR TUNNEL  
PHASE 1, DATED 14<sup>TH</sup> OCTOBER 2016**

Kenya is ranked as a water scarce country and as a nation we need to invite investment and encourage sustainable innovation towards utilization of this precious and rare commodity. With the evident threat of depletion in our natural water resources which has resulted in intense scarcity compared to other East African countries, we are at the forefront in cultivating a culture of innovation and sustainability through our partners, staff and respective stakeholders in order to co-create a secure future and protect this precious resource.

As an institution, we are committed towards increasing its availability and ensuring access of safe water to all our consumers and citizens. At this age of global warming and inconsistent weather patterns we cannot afford to resist innovation. By properly utilizing the research tools in our possession we could help promote development and encourage a wave of innovation and investment towards improved water and sanitation services.

It is for this reason that we have committed our time and resources towards the development and implementation of the Water Supply Masterplan and the Northern Water Collector Tunnel. The Water Supply Masterplan addresses the short, medium and long-term development needs for the City and Satellite towns, and further defines a priority strategy to meet the 2017 water demand.

The solution proposed involves conjunctive utilization of ground water and surface water sources, inter-basin transfers, and water conservation and demand management efforts. They are based on least cost alternatives that have integrated economic, technical, environmental and social considerations. The Water Master Plan has five phases to be implemented at different periods within the planning horizon of up to year 2035.

While the current NCT Phase I project intends to draw water from three river systems, the dam components are within phases 3 (2017-2020) Maragua Dam, and Phase 5 (2025-2027) Ndarugu Dam contributing to long term improvement of water service delivery to Nairobi and Metropolitan areas.

Nairobi City has grown over the last 100 years from a settlement of 25km<sup>2</sup> to the current city of 684km<sup>2</sup> with an estimated population of 4 million people. The population in Nairobi is projected to rise to 10M people by 2035 respectively. Though the population of Nairobi and the satellite towns has been increasing over the years, investments in water supply infrastructure have lagged behind since the completion of the 3rd Nairobi Water Supply Project in 1994. The current water demand in the Nairobi Metropolitan area now far outstrips the supply.

The water demand for Nairobi city is projected to reach 720,000m<sup>3</sup> per day by 2020 against the current supply of 540,000m<sup>3</sup> per day. (Thus a deficit of 180,000m<sup>3</sup> per day). In line with the National Development Plan and Vision 2030, the Government of Kenya has prioritized improvement of water services in Nairobi City and the surrounding areas. Meeting this demand in the age of global warming and continued depletion of water resources is a huge task for any institution. However, water remains a fundamental human right and this calls for continued innovation and increased investment.

The NCT 1 which is currently under construction in Muranga forms part of this masterplan. NCT1 is an exceptional project that entails the construction of 11.8km raw water transfer tunnel along the Eastern fringes of the Aberdare Conservation Area. The tunnel will entail construction methodologies that will involve full water proof lining, contact grouting, consolidation grouting and probe drilling such that there will be no impact on the existing aquifers and subsequently any rivers. The tunnel shall divert defined flood flows from Maragua, Gikigie and Irati rivers into the existing Thika dam (Ndakaini Dam). Thereafter treatment of water will be done at Kigoro water treatment plant and subsequent transmission through 1200mm diameter pipeline to Kabete water reservoirs via Gigiri to supply Nairobi city. An upgrade of the system in Nairobi city is being implemented to ensure the additional inflows are effectively and efficiently distributed to the consumers. These investments are financed by the GoK with support of various development partners namely:

1. The World Bank – NCT1 and Pipeline (15%)
2. The French AFD – Kigoro Water Treatment Plant and Pipeline (85%)
3. The German KfW – City Upgrade

Once completed, the supply of water to Nairobi residents will increase by 140,000 cubic meters per day. Through the implementation of the NCT 1 project, communities in Murang'a will derive benefits through the implementation of community water projects. These projects will improve clean water supply by 17,000 cubic meters per day and extend water supply network by 247Km to benefit more than 600,000 people with improved water services. The following projects have been financed by Government at a cost of Kshs. 4.4 Billion to benefit host communities in Muranga County:

No	Project Name	Scope and Target Areas	Cost
1	Muranga Bulk Water Supply	This project has Laid 81Km water pipelines, Constructed 11000m <sup>3</sup> /day water treatment works and 2000m <sup>3</sup> /day concrete tank, Augmented sewerage system in Muranga town to serve 189,000 persons in Muranga South and Muranga Town. The system is designed/ expected to serve 417,000 persons by 2030.	Kshs 1.6 Billion. Complete

2	Muranga Community Water Project	This project entails construction of two 4000m <sup>3</sup> /day water treatment units and laying of 147Km water pipelines to improve water supply service from 10hrs to 24hrs to 400,000 people by 2030 in Kandara, Kigumo, Kangema, Kiharu, and Maragua constituencies of Muranga County.	Kshs 749 million, 95% complete
3	Gatanga Community water project	This entails construction of intakes along the Kiama and Kimakia rivers, 2 No. 3000 m <sup>3</sup> /day water treatment plant and laying 35km pipelines to boost water supply from 6hrs to 16hrs for 70,000 people in the lower areas of Kiunyu and Gatunyu areas of Gatanga Constituency.	Kshs 264 million, 90% complete
4	Gatango water project	This entails construction of intake works, 30km water mainlines and 4 no storage tanks to improve water supply to 140,000 people in Gatari and Kamacharia wards	Kshs 170 million, just started
5	Ithanga Water Project	This entails construction of a river intake weir on Thika river, 47Km water mains, 6000m <sup>3</sup> /day water treatment plant to improve supply in Ithanga	Kshs 1.4 Billion, just started
6	Gatagwagwa storage tank	This entails construction of 225m <sup>3</sup> clear water storage tank to complement Gatagwagwa community water project	Kshs 3.3 Million
7	Gikoe Community Dispensary	This entails the improvement of Gikoe dispensary and purchase of an ambulance to serve people from Kigumo constituency and surrounding areas.	Part of NCT1 works
8	Ichichi, Kiruri and Makomboki	The project entails rehabilitation of 3 intake weirs, construction of 225m <sup>3</sup> storage tanks, water pipeline extension to serve approximately 50,000 people in Gitwe-Kanderendu in Kigumo upstream of Thika Dam, Makomboki, Ichichi/Githaini, Karurumo and Kiruri communities along the tunnel;	Kshs 170 Million
<b>Total Estimated Cost</b>			<b>Kshs 4.356 Billion</b>

For the successful implementation of The Northern Collector Tunnel project continued stakeholder engagement and support was and remains necessary. We therefore cannot take full credit of the successful development of the Nairobi Water Masterplan and subsequently the construction of the NCT1 Project without the support and meaningful feedback we received from our stakeholders and the general public.

Consultations for the NCT1 project started much earlier in the year 2011, including during the various stages of the preparation of the master plan, feasibility, design and ESIA phase. This

involved communities within the project area, Murang'a leaders, key agencies such as Water Resources Management Authority and KENGEN amongst others. The consultations were held at various venues with varied stakeholder representatives. So far 30 documented stakeholder consultation sessions have been held.

As an organization we believe in the rule of law and Athi Water has continued to follow the laid process in the implementation of its projects. The development of the Environmental and Social Impact Assessment (ESIA) Report for the NCT Phase 1 followed the procedures laid down in the Environmental Management and Coordination Act (1999) and Environmental Impact Assessment and Audit (EIA/EA) regulations of 2003. Having completed the ESIA, the Board submitted the Study Report to NEMA on 5<sup>th</sup> November 2014. Before approving the ESIA study report, NEMA advertised the project in the local dailies and in the Kenya Gazette and gave the statutory 30 days window for the public to raise any issues relating to the proposed project. The 1st advert –appeared in The Standard on Friday 21 November, 2014 while the 2nd advert appeared on The Daily Nation on Friday 28 November 2014. Another was out in the Kenya Gazette Notice (No. 8975) with the 1st Notice put up on 11 Dec 2014 and the 2nd Notice on 24 Dec 2014. NEMA further held a public hearing on 30<sup>th</sup> January 2015 in Kenyenyaini in Muranga County. The call for the public hearing was published in the local dailies on 21<sup>st</sup> January 2015.

During the consultations, various stakeholders presented their views and opinions on various NCT project related issues. All of which were addressed. NEMA issued a license for the implementation of the project on 9<sup>th</sup> February 2015 with specific conditions for AWSB (the proponent) to abide by. With the NEMA license in place the Board proceeded to issue a commencement letter to the contractor on the 19<sup>th</sup> of February 2015.

After commencement, and following concerns by Muranga County, a technical committee consisting of experts from Muranga, the County Assembly of Murang'a and Athi Water jointly reviewed the concerns and addressed the technical queries before signing an MoU. The project was eventually debated in the Muranga County Assembly and endorsed for implementation. Athi Water carried out and has to date continued with stakeholder's consultation and public engagement.

The NCT 1 project is a massive infrastructure project and calls for enhanced scrutiny and management. AWSB in partnership with Muranga County and other institutions will undertake catchment abstraction survey, assessment of integrated water demands in Muranga County and develop integrated water masterplan. In addition AWSB will develop and update an Environmental Management plan. In order to handle any issues or queries regarding the NCT, an Independent Panel Experts was launched on 18<sup>th</sup> August 2016. The Independent Panel Experts is chaired by Eng. Japhet K. Rutere - Principal Dam Specialist and constitutes;

1. Dr. George Dounias - Geotechnical and Tunnel Specialist

2. **Angelina Nduta Mwenda - Environmental and Ecological Expert**
3. **Charity Gathuthi - Community Water Specialist**
4. **Dr. Loannis Karavokyris - Hydrology and Hydraulic Specialist**

As I conclude I would like to re-assure Kenyans that the Water Master Plan is a development blue print that does not only promise to meet the water needs of the residents of Nairobi and satellite towns, but also goes towards the realization of Kenya's vision 2030 objective of being a middle income economy that guarantees its citizens a quality of life in a secure environment.

I would also like to re-assure the community in Murang'a and other downstream counties and users that the detailed design for the Northern Collector Water Tunnel Project, has considered all findings of the hydrological and ecological studies to ensure that the project shall neither result in low river flows nor divert water during low river flow seasons. Most importantly we urge all partners and stakeholders to support the implementation of the NCT1 and other subsequent projects to be implemented under the Nairobi Water Masterplan.

For us at Athi Water we believe that a good quality of life depends on having access to safe and sustainable water and sanitation supply for our communities, the environment and overall economic well-being. We are committed to the intelligent development of safe water and sanitation systems for the benefit of Kenya, now and in the future. With a daily focus on our communities, environment and economy, we are making a difference in people's lives, improving wellness, health and prosperity through the provision of sustainable water and sanitation systems. We are transforming Life. We are inspiring progress. Thank you!

**Eng. Malaquen Milgo**  
**CEO**