NAIROBI RIVER MONITORING PROGRAMME

The Nairobi River originates from a network of small rivers and tributaries and passes through the city's Central Business District, Mathare, Dandora, and Kibera.

Today the river is impacted by urban growth and limited agriculture. Just 50 years ago, the river was a vital source of freshwater for crop irrigation, livestock, and household activities.

19
Citizen Scientists
have collected monthly measurements from 17 sites since July 2023

109
citizen science water quality measurements over 19 months

PLASTIC POLLUTION WAS FOUND IN 93% OF THE MONITORING SITES

- PHOSPHATE WAS ELEVATED NEARLY EVERYWHERE, ESPECIALLY IN 'NNP-KANDISI', 'NNP-MBAGATHI', '14 FALLS', 'KOROGOCHO - PEOPLE'S PARK', 'MARARUI DAM', 'NGONG RIVER', SUGGESTING THE PRESENCE OF WASTEWATER.
- NITRATE WAS GENERALLY LOW, EXCEPT IN '14-FALLS', 'MUKA MUKUU DRIFT' AND 'KIBOKO SECONDARY SCHOOL', WHICH SHOWED ELEVATED CONCENTRATIONS (10x HIGHER THAN OTHER SITES), INDICATIVE OF AGRICULTURAL RUNOFF.
- POOR WATER QUALITY IS THREATENING 89% OF THE SITES. ONLY 'SMALL AXE' HAVE GOOD CONDITIONS OF PHOSPHATE, NITRATE OR SEDIMENT (TURBIDITY).

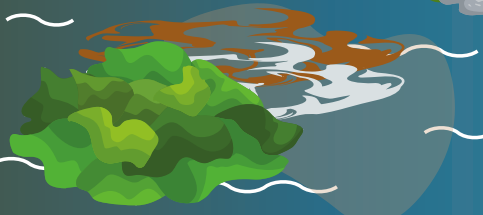
50% of water measurements have high phosphate levels (>0.10 mg/l) indicating poor water quality

45% of water measurements have high nitrate levels (.1,0 mg/l) indicating poor water quality

HARMFUL ALGAL BLOOMS (CYANOBACTERIA)

WERE PRESENT CONSISTENTLY IN MORE THAN 10% OF MEASUREMENTS, INCLUDING SITES AT 'MATHARE RIVER - OUTER RING ROAD TUNNEL' AND 'KIBERA'. THESE CAN PRODUCE HARMFUL CHEMICALS FOR ANIMALS & PEOPLE

IMPACTS OF URBAN AND AGRICULTURAL ACTIVITIES Citizen scientists recorded active pollution discharges in 30% of the measurement events, with urban road or agricultural pollution sources in nearly all of the sites monitored



SUSTAINABLE DEVELOPMENT GOALS

Through a co-design process with Nairobi river local communities, this project gathers information on pressures to water quality. Data is useful for SDG indicator 6.3.2 reporting requirements, as it describes the proportion of bodies of water with good ambient water quality.

Monitoring by citizen scientists is providing the important information to the local communities about the importance of wastewater management and improving land use by increasing vegetation cover.

Visit freshwaterwatch.org to find out more about the work we do all over the world.

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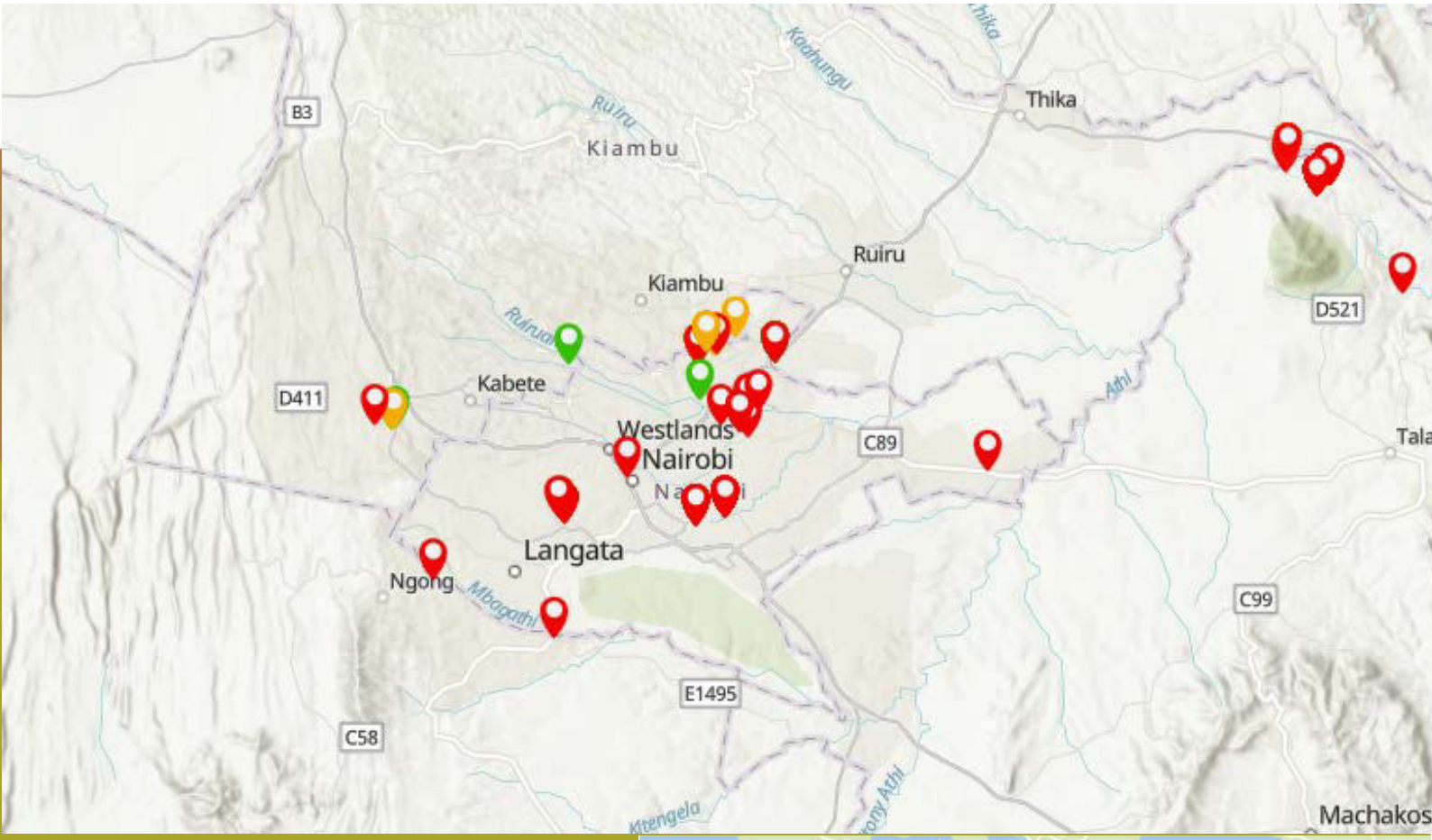
FreshWater Watch
www.freshwaterwatch.org

WWQA World Water Quality Alliance
www.unep.org/wwqa

GEMS Water
www.unep.org/gemswater

NAIROBI RIVER SITES



The pins on the map represent good (green), moderate (orange) and poor (red) ecological status.

Citizen science water quality data is being gathered across Africa. Thank you to the large network or citizens, scientists, and agencies, sharing knowledge and best practice to make this possible.

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