

ADOPT-A-RIVER INITIATIVE

Mobilizing and Empowering Youths to Champion Monitoring and Restoration of Rivers and other Wetlands within Nairobi River Basin

INTRODUCTION

The role of wetlands in the achievement of Sustainable Development cannot be over-emphasized. Wetlands are crucial to maintenance of the water cycle and provision of water-related ecosystem services, and therefore directly or indirectly power myriad sectors. Despite their importance, wetlands continue to be degraded and lost. It is estimated that the world has lost around 50% of its wetlands since 1990. In Africa, while information on the loss is lacking and/or highly variable and inconsistent, it is estimated that 66% of all listed wetlands are used for agriculture, leading to their degradation.

Urban wetlands are among the most threatened in Kenya. This is due to their direct conversion into built up areas (either planned or unplanned). In this situation, irreversible damages to and/ or loss of aquatic biodiversity, altered ecosystems' productive systems and adverse effects on human health and safety are inevitable challenges. In response to this, the National Environment Management Authority (NEMA) and World Student Community for Sustainable Development Kenya (WSCSD – Kenya) with the support of various stakeholders have partnered to implement the 'Adopt-a-River Initiative'.

This is a 'people-driven' wetlands monitoring and restoration project that entails adoption of a nearby river by university/college student groups, community youth groups and other interested institutions. These groups are expected to monitor the pollution levels of adopted rivers over time, identify sources of pollution and take local action to restore and conserve them.



A polluted section of Nairobi River

OBJECTIVES

The project's overall objective is to strengthen the link between the curricula and addressing real sustainability challenges in Kenya. This is by mobilizing students in universities, colleges and secondary schools, and community youth groups to champion for clean and healthy river ecosystems and other wetlands.

Specifically, the project aims to;

1. Strengthen monitoring of the Nairobi River Basin streams by local stakeholders
2. Steer restoration of polluted streams within the Nairobi River Basin to make them more clean and healthy
3. Make learning of biology, especially the dichotomous key more interesting and hands-on for secondary school students
4. Enhance knowledge on and spur interest in community led ecosystem conservation among youths.



Introducing the project to the Registrar, UoN Chiromo Campus (Top) and the principal, Strathmore School (Bottom)

METHODOLOGY

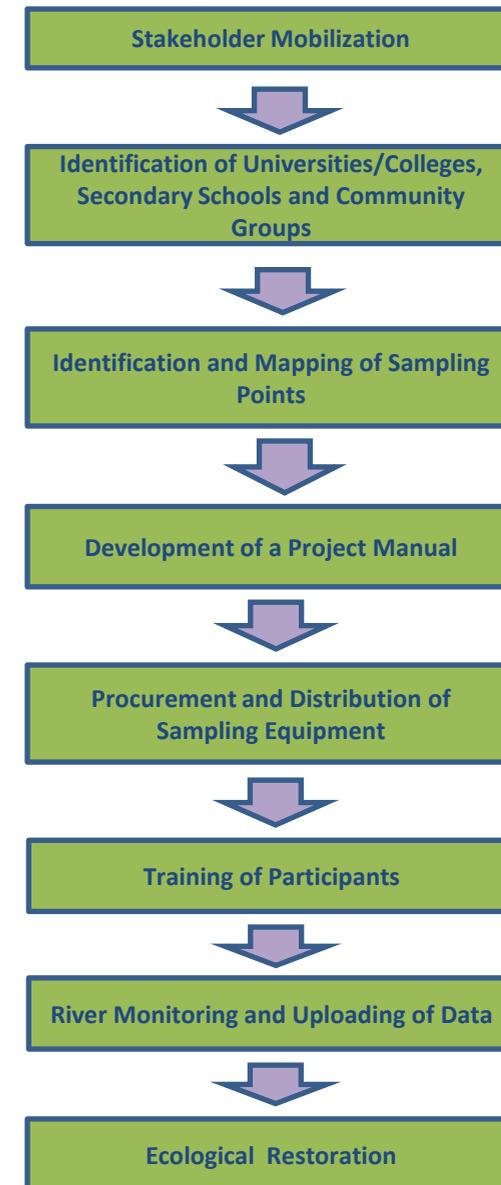
Mini Stream Assessment Scoring System (miniSASS)

The health of the rivers and general quality of their water will be measured using Mini Stream Assessment Scoring System (miniSASS) Version 2.0. This is a simple, user-friendly community river health bio-monitoring tool. It uses the composition of macro-invertebrates (small animals) in the river and is based on the sensitivity of the various animals to water quality. These animals are organized into groups, with each group having a specific sensitivity score. The groups of macro-invertebrates present at a given sampling point are identified using an identification guide.

The guide can be used in combination with the dichotomous key. To get the average sensitivity score at a sampling point, the sensitivity scores of the identified groups are summed up, and the total divided by the number of groups identified. The results will be uploaded on miniSASS google map based platform. The platform can tell the health of a river based on the average sensitivity score recorded. This is by indicating a clean river as a 'green frog' and a polluted one as a 'red frog'.

NB: miniSASS does NOT measure the contamination of the water by bacteria and viruses and thus does not determine if the river water is fit to drink or not.

PROJECT IMPLEMENTATION



Mapping one of the project's sampling point

CONCLUSION

The 'Adopt-a-River Initiative' exemplifies the use of key curricula components to solve real sustainability challenges. It is also a perfect model of how the public, especially youths can be mobilized to manage rivers and other wetlands around them. Through identification of polluted river ecosystems within Nairobi River Basin, the project is expected to result in enhanced enforcement of environmental and other related regulations to ensure healthy wetlands. It is therefore in line with Kenya's commitment to the Ramsar Convention and other numerous national commitments. Overall, it will help conserve aquatic biodiversity and therefore implicitly contributes towards achieving Kenya's Vision 2030 objectives. Key among these objectives is poverty alleviation and improved general welfare of the citizenry.

ACKNOWLEDGEMENT

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