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Plastic Pollution in the Nile and its tributaries

Strategies for monitoring, assessing, and reducing plastic pollution in the Nile

The challenge

The impact of mismanaged waste is a global concern. In Africa, especially for countries in the Nile Basin, the unsustainably managed waste often ends up in the Nile River and subsequently, the Mediterranean Sea. Due to the increasing waste amounts and its several impacts, effective policies, and regulations on solid waste management (SWM) are key for ensuring sustainable waste management.

There are many challenges in the management of plastic waste in the Nile Basin such as (1) inadequate management of plastic pollution at local and regional levels; (2) mismanagement of plastic waste that ends up in water systems; (3) limited knowledge, information and human capacity for the identification of the sources and quantification of plastic waste in the basin; (4) few studies on transport mechanisms of plastic waste into Lakes Victoria and Albert and in the Nile River in general and (5) lack of harmonized policies and strategies on management and monitoring of plastic pollution in the basin.

Our approach

Through the Global Marine Pollution project, we aim to strengthen the capacity of the Nile Basin member states in monitoring of plastic pollution in the Nile Basin with a focus on macro-plastics. This is done through

- undertaking studies to understand the amount of plastic waste transported by the Nile River to the Mediterranean Sea;



Project	Macro Plastic Monitoring in the Nile and its tributaries
Commissioned by	Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection (BMUV)
Implementing partner	Nile Basin Initiative (NBI)
Project region	Nile Basin: Burundi, Democratic Republic of the Congo, Egypt, Ethiopia, Kenya, Rwanda, South Sudan, Sudan, Tanzania and Uganda
Duration	2021 – 2024 (Phase I & II)
Financial volume	€ 0.25 million

- understanding and promoting existing approaches such as citizen science for monitoring plastics by different actors (government, civil society, private sector, etc.);
- strengthening the capacity of the Nile Basin Member states in monitoring plastics pollution in the Nile basin; and
- developing an action plan for long-term plastic pollution monitoring in the River Nile State of Basin reporting.

Whilst the relevance of micro-plastics is acknowledged, the initial focus will be on macro-plastics due to general lack of experience in plastic monitoring. The aspect of micro-plastics shall be addressed at a later stage.





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Results in figures...

A diagnostic study on plastic waste transport from the Nile River and its major tributaries into the marine Environment

6 case studies on the analysis of the waste management status quo in Uganda, Kenya, Ethiopia, Egypt, Rwanda, and Sudan

2 trainings for stakeholders in the Nile Basin on plastic monitoring and assessment and basin-wide reporting on plastic pollution

An action plan to monitor plastic pollution in the River Nile Basin

... in stories

A review of solid waste management (SWM) policies from the Nile Basin countries revealed that generally, weak legislative and regulatory frameworks are in place. While several countries have focused on updating their SWM-related legislative frameworks, others do not have comprehensive nationwide legal frameworks in place pertinent to SWM.

Many countries lack explicit legislative frameworks that focus on plastic waste management. On the other hand, **imposing a ban or taxes on plastic bags is currently the standard policy in Africa.** Recently, 20 countries on the continent have adopted bans, including countries in the Nile Basin. Rwanda and Uganda have announced or implemented a full ban on all single-use plastic (SUP) bags. Ethiopia, Kenya, and Tanzania have either announced or have already implemented a ban on single-use plastic bags.

... in a nutshell

The project supports the Nile Basin countries in strengthening their capacities for monitoring plastic pollution, which causes severe danger to flora and fauna; blocks drainage systems, canals, and other waterways resulting in floods; lead to landscape degradation and is ubiquitous in the environment.

Background

Plastic pollution impact on freshwater ecosystems and associated marine environments includes increasing floods risks, impairment of functionality of water and transport infrastructure, contamination of water quality, ingestion and entanglement of aquatic animals, chemical leaching and accumulation and loss of aesthetics.

From a marine perspective, a growing number of studies focused on coastal areas as main source of plastic pollution entering the marine environment increasingly recognize rivers as 'conveyor belts' transporting plastic waste from their catchment areas into oceans and seas. However, for the Nile Basin, in terms of plastic waste transport from the river to the marine environment, the region is one of the data scarce areas.

It is estimated that 14 million tons of plastic out of 400 million tons produced per year end up in the ocean. In addition, plastic makes up 80% of all marine debris found from surface waters to deep-sea sediments. Even though marine pollution by plastic waste is currently a global issue, the estimates of river to ocean plastic fluxes vary by up to five orders of magnitude. This is due to various methods used such as field data collections and use of models to extrapolate loads at large scale.

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