



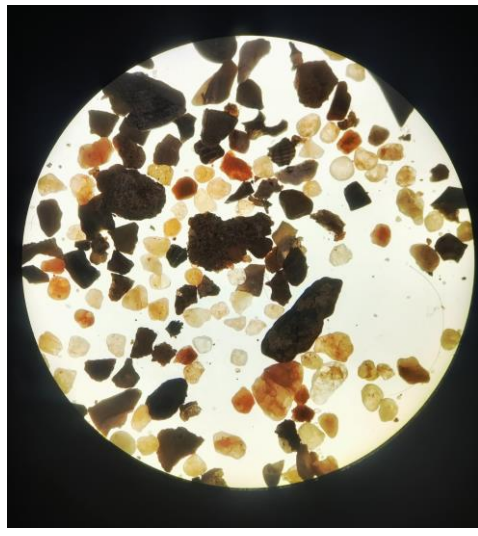
African implementation of harmonized operational protocols for microplastics in beach sand and surface seawater under the IAEA NUTEC plastic initiative

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Plastic pollution is a significant environmental issue, with plastics comprising a large portion of municipal and industrial waste. These materials do not decompose easily, leading to severe environmental problems. A four-year project under the African Regional Cooperative Agreement for Research, Development, and Training Related to Nuclear Science and Technology (AFRA) is aligned with Sustainable Development Goal (SDG) 14, which aims to conserve and sustainably use the oceans, seas, and marine resources. It builds on previous IAEA projects and national programmes, aiming to enhance the capabilities of member states to monitor microplastics in beach sand and surface seawater.

Key activities include NUTEC project setup, harmonizing national programmes with the NUTEC objectives, and training/capacity-building.

Sampling and laboratory kits are standardized, and a common protocol is used by all member states to generate data. These efforts aim to create a regional African network.

BASIC
LEVEL I

REPORT (1-5 mm)

TRAINED

KIT SAMPLING

INTERMEDIATE
LEVEL II

REPORT (0.5-5 mm)

TRAINED

KIT AIR-ATIR

ADVANCE
LEVEL III

REPORT (20-300 um)

TRAINED

RAMAN/ATIR

ADVANCE+
LEVEL III*

REPORT (0.5-5 mm)

TRAINED

ALFA-GANIMA

RAF1010 data will be submitted as open source:

South Africa's oceans and coastal data archive

Example of results: Morocco

- Standardised method on sand
- Standardised laboratory analysis
- Standardised time period: February
- Standardised monitoring sites:
 - Mehdya beach, Kenitra
 - Ras R'mel beach, Larache
- Standardised reporting format
- Standardised data submission format

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KEY

MEMBER STATES WHO HAVE AGREED TO THE NUTEC PROTOCOL

Kits have been received by member state

Kits in transit to member state

Regional hub, advanced lab, more to be determined

UN Ocean Decade endorsed project

No.3.5. Comparable microplastics monitoring of oceans

Led by South Africa

Multiple countries with the aim to use comparable methods to monitor beach sand and water twice a year [February and August] until 2030 and submit this data to UN SDG14.1.1.b.

Open for collaboration globally, please scan the QR code if you are interested:

forestry, fisheries & the environment

Department: Forestry, Fisheries and the Environment

REPUBLIC OF SOUTH AFRICA