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Call for applications for the PhD scholarships under the EU-funded Pamoja Tuhifadhi Bahari Yetu Project

A call for applications for seven PhD scholarships in marine plastics waste management, marine ecology/biology, coastal forest ecology and GHG related studies.

Deadline: 1st June 2025

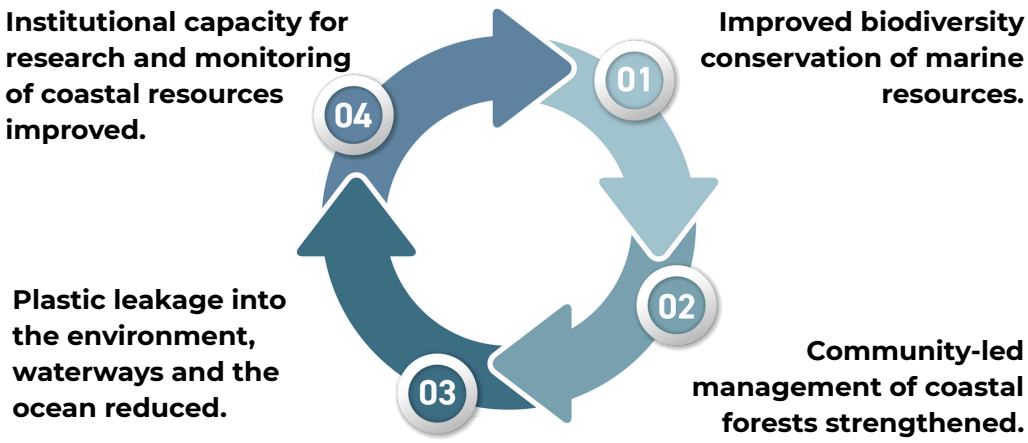
Background

Tanzania's marine and coastal areas are among the most biodiverse and ecologically significant in the Western Indian Ocean Region. The country boasts mangrove forests, seagrass beds, coral reefs, and productive fisheries, supporting both marine biodiversity and local livelihoods. These ecosystems are vital for coastal protection, carbon sequestration, and sustaining fisheries, which millions of people depend on for food and income. Additionally, marine protected areas (MPAs) and locally managed marine areas (LMMAs) play a key role in conservation efforts, helping to balance biodiversity protection with sustainable use.

Despite their importance, these coastal and marine ecosystems face significant challenges. Overfishing, habitat destruction, pollution, and climate change threaten biodiversity and ecosystem services. Additionally, climate change-induced threats, such as rising sea levels, coral bleaching, and extreme weather events, further exacerbate environmental pressures. Addressing these challenges requires strong governance, sustainable resource management, and community-led conservation efforts to safeguard these critical ecosystems for future generations. The EU-funded Pamoja Tuhifadhi Bahari Yetu (short form "Bahari Yetu") Project is designed to support in addressing these challenges through improving governance, sustainable resources management, community led conservation efforts and institutional capacity building to enhance research, monitoring and surveillance of marine and coastal resources.

Bahari Yetu project is a 4-year project implemented by IUCN. This project is part of a broader effort, backed by the EU with 110 million euros, aimed at supporting the United Republic of Tanzania through a programme called the Blue Economy for job creation and climate change adaption.

The project aims to achieve 4 interlinked outcomes:



Call for applications

The Bahari Yetu project intends to support seven (7) PhD scholarships, hosted by local Universities in Tanzania. These scholarships are open to all Tanzanians. Staff from public institutions responsible for management and conservation of marine and coastal environment and resources who are capable and qualified to pursue PhD programme are highly encouraged to apply. The priority research themes, and distribution of the PhD positions include:

One (1) student with research study that focuses on marine plastics waste management.

The candidate will explore one of the following thematic areas (1) Marine plastic waste management (collection, recycling, and waste-to-energy solutions) and associated Life Cycle Assessments (LCA) to evaluate emissions from plastic waste disposal and interventions, (2) policy and economic implications, exploring potential under circular and blue economy to provide insights to improve country waste policies and mitigating plastic-related GHG emissions.

One (1) student with research study that focuses on marine ecology/biology.

The candidate will explore one of the following thematic areas (1) climate change and ecosystems resilience (2) investigate genetic diversity and population connectivity of key marine species (3) evaluate the impact of Marine Protected Areas (MPAs) and Other Effective Area-Based Conservation Measures (OECMs) on fish and invertebrate populations (4) develop models for ecosystem-based fisheries management integrating local knowledge and scientific data (5) model potential spread and ecological consequences of invasive species due to climate change or (6) map breeding, feeding and migratory routes of flagship marine species along the WIO region to enhance their conservation.

One (1) student with research study that focuses on coastal forest ecology.

The candidate will focus on gains and losses using the latest technologies to explore leveraging open access remote sensing, AI, and UAVs to measure and monitor deforestation, afforestation, and carbon stock changes using big data (AGC & BGC) and soil carbon modelling. Explore possibilities of real time monitoring of gain and losses in coastal forest ecosystems, contributing to national MRV systems. Will enhance data-driven decision-making for sustainable land management of coastal ecosystems.

Four (4) students with research studies that focus on GHG related studies

- **AFOLU- Sector**

  The candidate will explore quantifying methane emissions from livestock under varying diets and management practices (Cattles, goats, Sheep's etc.): measure enteric emissions across dominant livestock types and feeding practices, and link emissions with productivity levels; developing emission factors for different manure storage systems and assessing GHG emissions from manure treatments like composting or anaerobic digestion. Consider possibilities of including Life Cycle Assessments (LCA) to evaluate the overall GHG emissions from livestock systems, modelling emission predictions using simulation tools and technologies, and analysing the economic and policy implications of emission reduction strategies.

- **Energy Sector**

  The candidate will focus on Identify factors causing biomass non-renewability and refine fraction of Non-Renewable Biomass (fNRB) calculations considering national circumstances growth patterns, climate variability, and wood consumption per capita. Assessing biomass conversion rates (e.g., agriculture, logging) affect biomass renewal and supply chains for charcoal/biomass across residential, commercial, and industrial sectors. Model demand and supply of biomass energy (i.e. wood from protected areas vs unprotected areas) and provide suggestions for the application of marginality approach under UNFCCC.

- **IPPU (Industrial Processes and Product Use)**

  The candidate will focus on Identify factors causing biomass non-renewability and refine fraction of Non-Renewable Biomass (fNRB) calculations considering national circumstances growth patterns, climate variability, and wood consumption per capita. Assessing biomass conversion rates (e.g., agriculture, logging) affect biomass renewal and supply chains for charcoal/biomass across residential, commercial, and industrial sectors. Model demand and supply of biomass energy (i.e. wood from protected areas vs unprotected areas) and provide suggestions for the application of marginality approach under UNFCCC.

Waste

The candidate will be focusing on generation emission factors and activity data, could explore key areas such as quantifying GHG emissions from landfills, composting, and waste-to-energy systems, while developing emission factors for different waste types using innovative approaches such as sensors, AI, and MRV systems to improve waste flow tracking. Explore Life Cycle Assessment (LCA) to compare emissions from landfilling, incineration, recycling, and composting. Develop creative optimal strategies to reduce emissions focusing on circular economy models and policy implications on sustainable waste management solutions.

These scholarships will support capacity development of Tanzanians to enhance conservation of marine and coastal environment and carbon monitoring in Tanzania. At the same time the research and development (R&D) agenda will advance through the R&D activities of the PhD fellows.

Relevant profiles

Academic Criteria

- You hold a relevant MSc degree, preferably with distinction, in a related field
  - **PhD 1:** marine plastics waste management (MSc in Environmental Science, MSc in Waste Management, MSc in Marine Science, MSc in Pollution Control, MSc in Environmental Engineering).
  - **PhD 2:** marine ecology/biology (MSc in Marine Biology, MSc in Marine Science, MSc in Aquatic Ecology, MSc in Oceanography, MSc in Fisheries Science)
  - **PhD 3:** coastal forest ecology (MSc in Ecology, MSc in Forestry, MSc in Conservation Biology, MSc in Botany).
  - **PhD 4 (4 positions):** GHG related studies (MSc in Climate Change and Environmental Science, MSc in Atmospheric Science, MSc in Environmental Engineering, MSc in Sustainable Development, MSc in Carbon Management).

- You have relevant experience in the research topic that you apply for (specify this clearly in the application letter)
- You have excellent analytical skills, and you develop a detailed project proposal (pre-proposal) demonstrating that you have the ability to finish it and produce a fully researchable and competitive proposal.

Professional Vocation

- If you are a staff member of a public institution, you will be expected to continue working for the public institution concerned for at least 5 years after graduation.

Communication skills

- You have excellent communication skills and written/verbal knowledge of the English language; and
- Experience in writing scientific papers (international scientific A1 journals)is strongly appreciated.

Offers of the Bahari Yetu project

The selected PhD candidates will benefit from:

- A 36-month stipend based on the respective university stipend structure and policy.
- A tuition fee for 36 months based on the respective university tuition fee's structure. PhD funding is conditional to the successful defence of a PhD proposal and subsequent positive annual progress reports.
- The fund of up to TZS 20,000,000 all-inclusive to support research studies.
- The project could also support candidates with modest resources for publications and dissemination of their research papers.

Conditions of scholarship

- Register as a PhD student at one of the relevant local universities and join the relevant Doctoral School/Institute
- Comply with universities' approved policies, procedures and practices of the doctoral schools/institutes involved
- Commit to attending Bahari Yetu project meetings/events and provide presentations/ updates of their research as required;
- Commit to completing their doctoral degree (PhD) by September 2028;
- By September 2025, be of the age of 35 years old or below.

Application procedure

Applicants should submit:

- Scholarship application letter stating for which PhD research theme you are applying, your motivation, your relevant experience and research interests, and how these relate to your current responsibilities and how the support will improve your responsibilities in the future:
- A 10-pages research proposal for the selected PhD research topic, excluding annexes and references.
- A detailed CV including a publication list;
- A copy of all your degrees, diploma's and relevant certificates;
- Your most recent academic transcripts of record (incl. BSc. and MSc.);
- A reference letter of at least two reference persons able to assess your academic capacities (e.g. who have been directly involved in your masters or other research); and
- For the public servants, you need to present a letter of support from your Head of Institution supporting your participation in the PhD programme, and assurance of study leave in case of successful acquisition of a scholarship.
- The applications should be sent to tenders.tz@iucn.org.

Applications will be received until 1st June 2025.

Please direct any enquiries to the following contact point:

Elinasi Monga
Regional Programme Manager
Coastal and Ocean Resilience
IUCN (International Union for Conservation of Nature)
Eastern and Southern Africa Regional Office (ESARO)
Email: elinasi.monga@iucn.org

Selection procedure

Process

The selection committee will consider only eligible and complete applications. After a pre-selection based on the application files, pre-selected candidates will be contacted for an oral interview/written exam.

Tentative calendar

1st June 2025 — Application deadline

15th June 2025 — Pre-selection of the candidates

30th June 2025 — Interviews of the pre-selected candidates

20th July 2025 — Contracting selected candidates

1st August 2025 — Start the PhD programme

Candidate's biannual progress reports

Important note

IUCN reserves the right to disqualify ineligible, incomplete and/or inappropriate applications. IUCN reserves the right to make no awards at all, to cancel the award if the conditions are not met, and to effect changes to the conditions of the award, if the need arises.