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**TANZANIA COMMISSION FOR SCIENCE AND TECHNOLOGY**

**INVITATION TO SUBMIT FULL PROPOSALS ON CLIMATE CHANGE RESEARCH IN TANZANIA.**

**GUIDELINES FOR APPLICANTS**

- **Proposals should be submitted through the COSTECH Research Management Portal**
- **The deadline for application is Thursday, 4<sup>th</sup> April 2024 23:59 (EAT).**

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## **1. INTRODUCTION**

Climate change has come and its impacts are larger, with bigger risks than even most climate scientists expected as recently as a few years ago. The stakes in climate change are very high and affect the productivity of farms, forests, and fisheries, the prevalence of oppressive heat and humidity, geography of disease, damages from storms, floods, droughts, wildfires, property losses from sea-level rise, expenditures on engineered environments, distribution and abundance of species. The whole life and environmental systems are under severe pressure. Temperatures across regions in Tanzania have increased at approximately twice the global increase in mean temperature in the last thirty years. This increase in temperatures is driving devastating changes to the main climate systems and has increased the frequency and intensity of weather and climate extremes. These weather and climate extremes are causing disastrous consequences for human and societal systems, the natural environment, ecosystem networks, and engineering systems.

Tanzania has developed several policy documents, strategies, and frameworks to adapt to the impacts of climate change based on local circumstances but also in alignment with international guidelines such as the United Nations Framework Convention on Climate Change (UNFCCC), in particular Articles 3 to 6, and Sustainable Development Goals (SDGs), in particular Target 13 on Climate Action, and the Paris Agreement, in particular, Article 2 of the agreement. The developed policy documents describing adaptation to climate change impacts include the Tanzania Development Vision 2025, the National Climate Change Response Strategy 2021-2026, the Zanzibar Development Vision 2050, the Zanzibar Climate Change Strategy 2014, and the Nationally Determined Contribution (NDC). However, the effectiveness, upscaling, and sustainability of the implementation of devised climate change adaptation strategies require scientific evidence from carefully designed and executed climate research. Indeed, research in climate change has substantial potential to contribute to addressing climate change challenges and related impacts and to developing pathways to pursue a low-carbon development trajectory.

To address the climate change challenges focusing on research intervention, the Tanzania Commission for Science and Technology (COSTECH) in collaboration with NORAD has established a dedicated program within the National Fund for the Advancement of Science and Technology (NFAST) to support climate research in Tanzania. The climate research program is focused on providing grants to interdisciplinary and multidisciplinary research teams with the ambition of ensuring the availability of contextually relevant knowledge on climate change adaptation and mitigation at various levels across Tanzanian society.

## 2. OBJECTIVE

The overall objective of the COSTECH climate research program is to ensure that contextually relevant knowledge on climate change adaptation and mitigation is used by Public and private sector stakeholders at various levels across Tanzanian society.

## 3. THEME

Applicants to this call should consider six identified thematic areas where each applicant could address one or a combination of the following thematic areas:

- a) **Climate-adapted food production.**
- b) **Nature-based solutions to climate change adaptation and mitigation.**
- c) **Alert systems and climate services, including addressing loss and damage.**
- d) **Health challenges exacerbated by climate change.**
- e) **Institutions and governance structure in addressing climate challenges.**
- f) **New technologies and innovative funding instruments to address climate change challenges.**

Across the six thematic areas, there will be a focus on increasing the quality of research and its ability to interact with institutions responsible for climate policy implementation. Therefore, the applicant(s) should develop their proposal with the focus of inter alia by promoting the following approaches:

(a) Strengthening interdisciplinary research, focusing on addressing multiple impacts of climate change, assessing how uncertainty in climate projections/predictions can be reduced, providing options for transformative climate action plans, and highlighting co-benefits for achieving the nationally developed strategies and policies agendas, in the context of sustainable development and efforts to eradicate poverty.

(b) Strengthening climate change communication and knowledge capacity to understand the operational pathways and institutional structures for governance that effectively support climate action in central and local government and that is inclusive of diverse priorities and voices in planning and decision-making.

(c) Strengthen the understanding of the interplay between policies and actions taken at different scales, and how this affects the ability to take effective and coordinated climate action at central and local levels.

(d) Improving capabilities for producing higher resolution data, predicting near-term climate futures, and producing or applying process-based impact evaluation models for understanding the nature of the challenges posed by climate change, and to provide evidence for policy interventions.

(e) Providing insight into potential challenges and shortcomings of current policies and solutions.

#### **4. ELIGIBILITY CRITERIA AND APPLICATION REQUIREMENTS**

All applicants for this call should adhere to the following set of criteria:

- a) Must be researchers who are citizens of the United Republic of Tanzania.
- b) The Principal Investigator (PI) should be an established and active researcher with a Ph.D. and have a proven capacity to deliver interdisciplinary research projects on climate change and its impacts.
- c) The PI should be working as an employee in higher learning Institutions (Universities) or Research and Development Institutions (R&D institutions), Non-governmental Organizations (NGOs), and Civil Society Organizations (CSOs) legally registered in Tanzania mainland and/or Zanzibar.
- d) Applicants must form interdisciplinary and multidisciplinary research teams to write a comprehensive proposal that addresses one or a combination of the six thematic areas mentioned above.
- e) The research proposal must present a plan for collaboration with relevant stakeholders such as local authorities, communities, Civil Society Organizations (CSO), private sector entities, non-governmental organizations (NGOs), or relevant training institutions at various levels of implementation with the ultimate goal of enhancing resilience to climate change impacts/risks through improved climate change policies, practices, and curricula development for training institutions.
- f) Female applicants are highly encouraged to apply as PIs.
- g) Research proposals addressing climate change issues in Zanzibar, with PI from Zanzibar Institutions, will be given higher priority.
- h) Co-Principal Investigators (Co-PIs) must be an established and active researcher /expert with minimum qualification of MSc affiliated to Government authority or private sector (industries/startups) with a track record of delivering interdisciplinary climate change research.
- i) The research team must be composed of both male and female researchers.
- j) The PI is eligible to submit only one application but could also participate in other research teams.
- k) The Proposal must be written in English following the format provided on the Research and Innovation Management System available at [www.costech.or.tz](http://www.costech.or.tz).
- l) Must demonstrate great impact on the achievement of the objectives of the call
- m) Must consider gender equality and inclusivity from project design throughout project implementation.
- n) Must include the capacity-building components by involving MSc and Ph.D. students in the research project.

- o) Must include an official endorsement letter(s) from the host and collaborating institutions.
- p) Must articulate clear on how the research ethical issues will be addressed, if possible, to provide an ethical clearance certificate from relevant bodies or authorities as might be required.

## 5. SUBMISSION PROCEDURES

Full proposals must be submitted through COSTECH Research Management Portal available at <https://crweb.costech.or.tz> Using template for application. This template has sections that require to be filled with information described as follows:

- a) **Name(s) and addresses of PI, Co-PI and collaborating team of at least three and at most four researchers:** Full name and address of the applicant(s) must be given.
- b) **Title of the Project;** the title should be scientifically valid and sufficiently descriptive to reflect the nature of the proposed work.
- c) **Summary of the Project;** a summary of the proposed project taking into account the importance of the project, the objectives, research type and design, methodology, expected outputs, result dissemination, the total budget required and duration and co-funding if any.
- d) **Objectives of the project;** a clear statement of the general problem(s) and gap or issue(s) at hand should to be addressed. Specific objectives and targets must be clearly stated.
- e) **Justification or rationale:** This section should clearly show the importance of the project and how the results of the research will reach the end users and would contribute towards bringing about potential socio-economic development. The possible policy implications and intervention strategies should be documented as well as to indicate which target is addressing NDC
- f) **Background and Literature Review;** the applicant must show the interrelationship of prior research and development in the field and a gap to be bridged by the intended study. It should reflect a thorough survey of the existing state of knowledge and how the intended work is going to contribute to the advancement of knowledge about the problem to be solved or addressed.
- g) **Methodology (Project description, research design);** the researcher should clearly and thoroughly spell out the research and development plan for the project. The plan should identify and describe the different phases of the project. It should also indicate the proposed methods, analytical frameworks and their appropriateness, as necessary. This section should also describe the facilities and equipment to be used. It should also describe the study type, research design, technology development and innovation, place, intended population to benefit from the innovation, sampling frame and methods-*where applicable*

*and as necessary.* Where relevant, the section should also clearly indicate a novel knowledge technology that will be developed or improved during the course of this research.

- h) **Management Plan;** the applicant should describe the project management and supervision plan and the role of the Principal Investigator (PI) and the research team members.
- i) **Work schedule and division of tasks;** the details and rationale for manpower needs, work schedules, tasks to be accomplished and responsible persons for each task of the project should be given here.
- j) **Anticipated Output and Utilization Plan;** anticipated contribution to the specific problem(s) or issue(s) that are planned to be addressed by the research project should be clearly described. These outputs must tally with the objectives spelt out for meeting this call's theme. In this section, steps planned to be taken to utilize the anticipated research results (or the developed technology) should be clearly described.
- k) **Research Ethical Consideration:** Applications should clearly state how ethical issues will be addressed.
- l) **Capacity Building:** Projects must describe how they will build human (MSc and PhD) and institutional capacity or required physical infrastructure capacities for R&D and S&T developments in the country.
- m) **Gender consideration:** application must indicate gender inclusivity in all aspects of project implementation.
- n) **Engagement of private sector:** proposal should describe on how various stakeholders, e.g. private sector, government authorities, LGAs, and civil society actors will be engaged in the project
- o) **Intellectual Property Rights (IPR):** the proposal must articulate clearly on how the IPR issues (if any) will be handled, where relevant.
- p) **Dissemination of Research Results:** Applicants should indicate where and in which form the results of the work may be disseminated. This must include plans for dissemination to specific end users including policy/decision makers and communities where data and research materials were collected.

- q) **Sustainability plan:** The applicants should describe clear the sustainability plan to ensure the project continue to perform and deliver its intended purpose to target group upon the completion of the granting period.
- r) **Budget:** The proposals will be implemented over a maximum of 48 months with a minimum budget of **TZS 224,000,000/=** and a maximum budget **TZS 515,200,000/=** per proposal. However, in case a high-quality and relevant outstanding research proposal is received with a budget exceeding the set limit could be considered for a higher amount of funding, which will not exceed **TZS 604,800,000/=**. This consideration aims to encourage researchers with very impactful research proposals that could address multiple climate stresses and more complex climate adaptation challenges. Please note all the requested budget items need to be justifiable. The budget will not cover research salaries and institutional overheads. The application should include a detailed budget and budget justification as per the attached budget template. The grants are meant to cover direct costs for special equipment, expendable items, research costs (fieldwork/data collection laboratory, data management, and analysis), publication and dissemination, capacity building at MSc and Ph.D. (the project will cover only research costs) and travel which cannot be provided by the host institutions. Whenever possible, the applicant's budget should include unit costs and quantity of units. Applicants will be required to provide their insurance cover as well as insurance of the research equipment acquired through the Fund. Where the applicant has applied for or obtained funds from some other sources, they should specify the name of the organization, the date of application/obtaining, the amount, and its planned use. Specifically, the budget should be prepared using the following guidelines:
- s) **The budget should be prepared carefully considering the value for money for each budgeted item based on actual experience or quotes (reasonableness). This should include an explanation and justification or narration for each line item inserted in the budget spreadsheet.** Over-budgeting or unrealistic budgeting will lead to disqualification of the submitted research proposal
- t) Any allowable costs should include a clarification and justification.
- u) The costs paid to the project team traveling outside their regions of residence that include Daily Subsistence Allowance (DSA)/per diems shall follow Tanzania public service rates and should not exceed TZS 170,000/=
- v) Some of the items that could be included in the budget are the following;
- i. Direct cost incurred for undertaking research, which shall include but not be limited to research equipment; consumables; essential infrastructure/upgrading systems or development online platform to enhance climate action in Tanzania; data collection and analysis, and daily subsistence allowances. The research team with the lead of



PI could include a budget to work extra hours on the project activities with the agreed project timeline and outputs.

- ii. Mobility travels related to the research activities;
  - iii. Dissemination of results, involving attending the annual research review meeting that will be organized by COSTECH, validation workshops with stakeholders and journal publications, Costs of organizing conferences and workshops in connection with the funded research
  - iv. Capacity building including supporting research costs and not tuition fees for MSc and Ph.D. students
- w) The funding of the proposal will be subject to approval of both technical and financial aspects of the proposal.
- x) Expected **Outcome/impact**: the proposal should articulate the expected outcome/impact to be obtained as a result of implementing the proposed project, this including possible future market opportunities with a competitive advantage (if any).
- y) Curriculum **Vitae**: The CVs (maximum of 5 pages per team member) must be submitted with the proposal (as per the attached CV template) to indicate interdisciplinarity and multidisciplinary and gender inclusion OF THE RESEARCH TEAM.
- z) **Supporting Documents**: Applicants shall submit support letters from their employers/ attachment institutions and collaborating partners/ institutions where applicable. Each team member mentioned in the applications will also be required to submit a commitment letter.

## 6. EVALUATION CRITERIA

The evaluation of the submitted proposals involves two critical review stages: eligibility screening and the critical peer review processes of the submitted proposals. The *eligibility screening* is conducted by experts hereafter referred to as the “screening committee” to assess the extent to which applicants have met the set eligibility criteria and application requirements as stipulated in the call for proposal.

Each eligible proposal will be subjected to *peer review* by three external reviewers selected based on professionalism and experience in the thematic areas in the call for proposal. The external review process will be followed by panel meetings as indicated in the call timeline. The review will be based on the following set of criteria:

### **6.1 Scientific quality, competence and collaboration of the research team**

- a) To what extent the proposed project is scientifically rigorous<sup>1</sup>
- b) To what extent does the proposal address climate change challenges in interconnected, interdependent and multiple sectors or lifelines?
- c) Does the proposal address the identified thematic areas and at what extent?
- d) Does the proposal present an innovative solution in addressing adaptation and mitigation to impacts of climate change?
- e) To what extent do the team lead and consortium have the necessary skills, competence, and capacity for carrying out the project and achieving its objectives?
- f) To what extent is the proposed project based on strong and equitable partnership(s) between the different participating partners and stakeholders in co-designing and implementing the project?
- g) To what extent are there plans to include and strengthen individual and institutional capacities in the collaboration for knowledge generation and production across emerging and established researchers, stakeholders, and partners?
- h) To what extent does the proposal address research ethics and plagiarism?

### **6.2 Feasibility of Implementation**

- a) To what extent are the methods realistic and innovative for achieving beneficial results?
- b) To what extent does the project have a realistic, clearly defined, and relevant time frame, distribution of budget, work packages, milestones, roles, and responsibilities to reach the objectives of the project?
- c) To what extent does the project include appropriate considerations of ethical issues, and/or gender and other diversity perspectives where relevant?
- d) To what extent has the project included communication and engagement activities with relevant stakeholders/users throughout the project period?
- e) To what extent the presented budget is realistic to deliver expected objectives related to this call? Is the budget presented in a cost-effective manner<sup>2</sup>
- f) To what extent does the proposal follow the budget guidelines provided in this call?
- g) To what extent proposal include an innovative management approach to deliver the expected project outputs or results?

### **6.3 Relevance and potential impacts of the proposal**

- a) To what extent does the proposal build on relevant knowledge innovatively addressing climate challenges?
- b) To what extent does the proposal present the rigor of the prior research work<sup>3</sup>?

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<sup>1</sup> This refers to the strict application of the scientific method to ensure robust and unbiased experimental design, methodology, analysis, interpretation, and reporting of results. Emphasize how the experimental design and methods proposed will achieve robust and unbiased results.

<sup>2</sup> It is a measure of how well the resources used are aligned with the results achieved. A cost-effective solution achieves the desired outcome while using the least amount of money

- c) To what extent does the proposal contribute to implementing climate change policies, guidelines, strategies including NDC and the National Research priorities and Zanzibar research Agenda?
- d) To what extent can the proposal lead to societal impact<sup>4</sup>?
- e) To what extent does the proposal employ transdisciplinary approaches and appropriate methods in addressing the identified research topic?

## **7. ATTACHMENTS**

- a) Budget Template (enclosed to this call)
- b) Detailed Project Work Plan (enclosed to this call)
- c) Curriculum Vitae of PI and the team (enclosed to this call). Note The team must include multi disciplinary and interdisciplinarity
- d) Endorsement letters from the head of Institution or Ministry
- e) Supporting letter to indicate a willingness to participate in the project from collaborating institutions.

## **8. DECISION FOR FUNDING**

The selection of the proposals will be guided by the reviewers' grades and reviewer panel meeting. All proposals with the score of more than 70% will automatically receive funding, while those with score of 69-60% are fundable projects subject to revisions while those with score of less than 60% are not eligible for support. The funds will be disbursed to grantees through the host institutions and will be disbursed based on the satisfactory implementation of the agreed milestones and reporting them quarterly. The first disbursement, however, depends on the satisfactory submission of the inception report. The subsequent disbursement depends on the satisfactory implementation of the project activities funded in the previous disbursement. In this regard, the grantees are obliged to submit a technical report that details the implementation of funded activities and a financial report that detail describes the use of disbursed funds quarterly.

## **9. PROGRESS MONITORING AND REPORTING**

COSTECH secretariat shall conduct follow up of projects implementation as per grants manual. Soon after approval of the projects, the secretariat will conduct due diligence (pre

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<sup>3</sup> This is a careful assessment of prior research that serves as the key support for a proposed project and will help applicants identify any weaknesses or gaps in the line of research. Describe the strengths and weaknesses in the rigor of the prior research (both published and unpublished) that serves as the key support for the proposed project. Describe plans to address weaknesses in the rigor of the prior research that serves as the key support for the proposed project

<sup>4</sup> Societal impacts are the ways that research, and the process of conducting research, influences the world beyond the academic realm

award assessment) to assess the institutional capacity to host the project. This will be followed by the inception meeting that will facilitate the grantees to develop an inception report and work plan with clear milestone that will be followed up during project implementation. Later the grantee will be required to sign a contract agreement followed by disbursement of the 1st installment through host institution bank account. All grantees are required to submit quarterly technical and financial progress reports and will be visited annually for physical verification. Grantees will also be required to attend the annual dissemination meeting organized by COSTECH.

## **10. AUDITING OF THE PROJECTS**

All the successful projects will be subjected to an annual external audit. The audit will be done as per the Controller and Auditor General's guidance, who prescribe the audit firms for Government institutions. In addition, the host institution is obliged to make sure all the project undertakings are adhered to good governance procedures.

## 11. TENTATIVE TIMELINE

SN	ACTIVITY	DATES
1.	Call opening and advertisement	4/1/2024
2.	Call closing	4/4/2024
3.	Screening of proposals	4 - 9/04/2024
4.	Review of proposals	10 - 30/04/2024
5.	Reviewers' harmonization panel meeting	1 - 3/05/2024
6.	Approval of fundable proposals	8 – 15/5/2024
7.	Feedback to the applicants	11 - 25/5/2024
8.	Due diligence	1 - 25 /6/2024
9.	Inception Meeting	1 - 5/6/2024
10	Contracts signing and submission of inception report	5 -19 /6/2024
11	1 <sup>st</sup> Funds disbursement	20– 31/06/2024
12	Monitoring of progress	Throughout

## 12. CONTACT INFORMATION

For any clarification regarding to this call, please contact: call secretariat at

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