REQUEST FOR EXPRESSION OF INTEREST

PROGRAMME TO SUPPORT NIGERIAN RESEARCH TEAMS PARTICIPATION IN HORIZON EUROPE

INTRODUCTION

As part of the move to institutionalise Research and Development in Nigerian tertiary institutions, TETFund has launched an initiative to organize and support the participation of Nigerian researchers in the Horizon Europe framework programme that is funded by the European Union. Horizon Europe is the world's largest research funding programme, with a budget of EUR 95 Billion (Ninety-Five Billion Euro) over a seven-year period (2021-2027).

Under Horizon 2020, the predecessor programme to Horizon Europe which ran from 2013 to 2017, Nigerian research teams (or Nigerian led research consortia) had an abysmal outing failing to secure any grants, but several Nigerian research teams up to 26 participated as junior partners in projects led by researchers from other countries. In contrast, South African researchers won 140 out of the 310 grants awarded to research projects led by African researchers. Kenya, Egypt, Tunisia and Morocco also recorded substantial successes in Horizon 2020 framework programme. The TETFund intervention on promoting and enhancing Nigerian researchers' competitiveness in Horizon Europe is aimed at changing this narrative. Consequently, TETFund embarked on a science diplomacy initiative by engaging in robust discussions with the European Union and the Nigerian Mission to Belgium and the EU, as a result, a structure to support the aspirations of Nigerian researchers interested in applying for grants under the Horizon Europe programme has been established with the appointment of National Contact Points for focal areas and research themes.

SUPPORTING RESEARCH TEAMS

TETFund is now seeking to select several research teams from its beneficiary institutions. Successful teams will be given enhanced support in the form of training and technical assistance, to enable them to prepare strong grant applications, identify partners, and form research consortia. Research teams can comprise of researchers from a single institution or across several institutions. They can also include researchers from private universities, public research institutes and relevant industry, provided the lead institution and principal investigators are from TETFund beneficiary institutions.

REQUEST FOR EXPRESSION OF INTEREST

Interested researchers are hereby invited to submit a written Expression of Interest , paying attention to the parameters listed below.

The Expression of interest should contain the following:

- Cover letter from research team leader including:

  (a) Concept note on the specific field(s) of interest/objects of study and expected results. This should be aligned to the AU-EU focal areas of Green Transitions, Public Health, Innovation & Technology, or cross cutting across two or more of the focal areas;

  (b) A list of all the team members and their institutional affiliations; and

  (c) Capacity development and research infrastructure requirements (that can be accessed under the Horizon Europe Capacities for Science focal area);

  (Please find further information on the AU-EU focal areas in the appendix)
- Information on publications (published and unpublished). State total numbers in each category but list 10 most recent/most cited works with digital links indicated;
- Details of ALL [institutional, national and international (early career & major)] past research projects, and past grants obtained and source of funds. and the Team/Group, indicating own designation (PI, Co-Lead, Research Asst, Enumerator, Member, etc.;

- Details of Patents, Creative works and other research outputs (publication, patent, prototype, product, policy – 5Ps);
- Details on international research collaborations (if any);
- Any particulars of previously submitted proposals to TETFund (if any); and
- Individual Resume of all team members containing relevant details (Names, contact details, publications, Summary of academic metrics – google scholar, web of science, ORCHID, etc. grants obtained previously and sources of funds, past research projects (Successful and unsuccessful) with lists of scientists involved, previous experience with international research collaborations, particulars of any proposals previously submitted to TETFund (whether successful or not).

NOTE: Only teams that take into consideration gender balance and a good blend of experienced and early career researchers will be considered .

The above particulars should be submitted in PDF format, with the first six placed in a single document and all resumes placed in another single document. Both documents should be emailed as attachments to horizoneu@cognityadvisory.com

Kindly note that only PDF files will be processed.

Expressions of interest must be sent on or before February 10, 2023.

PROJECT MANAGEMENT

The Fund has engaged Cognity Advisory , an Africa focused development consulting practice, to manage the project.

For inquiries and further information contact:

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APPENDIX

RESEARCH AREAS; THEMES AND SUB-THEMES

The EU Horizon research collaboration between Europe and Africa birthed the African initiative which focuses on four priority areas as agreed upon at the ministerial meeting between Research and Innovation Ministers from both continents. These areas are public health, green transition, innovation and technology, and capacities for science (human capital development, science for policy, open science, and gender).

Therefore, applications are requested in the areas outlined below:

1. GREEN TRANSITION

This pillar focuses on the need for a transformative change of the EU economy and society in order to reduce environmental degradation, halt and reverse the decline of biodiversity and better manage natural resources while meeting the EU's climate objectives and ensuring food and nutrition security and accelerate the transition to a low carbon, resource efficient circular economy and sustainable bio-economy including forestry.

The themes and sub-themes under this pillar are given below:

- Biodiversity and ecosystem services:

  - Better understanding of routes of exposure and toxicological and ecological impacts of chemical of chemical pollution on biodiversity;
  - Nature protection: better methods to and knowledge to improve the conservation status of EU – protected species;
  - Restoration of deep sea habitats;
  - Addressing biodiversity decline and promoting Nature-based solutions in higher education;
  - Biodiversity loss and enhancing ecosystem services in urban and peri-urban areas;
  - Crop wild relatives for sustainable agriculture;
  - Biodiversity friendly practices in agriculture- breeding for Integrated Pest Management (IPM);

- Integrative forest management for multiple ecosystem services and enhanced biodiversity;
- Valorisation of ecosystem services provided by legume crops;
- Inter-linkages between biodiversity loss and degradation of ecosystems and emergence of zoonotic diseases;
- Invasive alien species;
- Digital for nature;
- Promoting pollinator friendly farming systems;
- Conservation and protection of carbon rich and biodiversity rich forest ecosystems;
- Selective breeding programme for organic aquaculture;
- Demonstrating Nature-based solutions for the sustainable management of water resources in a changing climate, with special attention to reducing the impacts of extreme drought;
- Promoting minor crops in farming systems.

- Fair, healthy and environment-friendly food systems from primary production to consumption:
  - Sustainable farming;
  - Sustainable fisheries and aquaculture;
  - Transforming food systems for health, sustainability, and inclusion;
  - Global transition to sustainable food systems.

- Circular economy and Bio-economy sectors:
  - Circularity including local and regional focus;
  - Bio- based innovation;
  - Multifunctional and sustainable management of European forests;
  - Aquatic biological resources and blue biotechnology.

- Clean environment and zero pollution:
  - Halting emissions of pollutants to soils and waters;
  - Protecting drinking water and managing urban water pollution;
  - Addressing pollution on seas and ocean;

- Increasing environmental performances and sustainability processes and product.

- Land, ocean and water for climate action:
  - Better understanding and enhancing the mitigation potential of ecosystems and sectors based on the sustainable management of natural resources;
  - Advanced understanding and science to support adaptation and resilience of natural and managed ecosystems, water and soil systems and economic sectors;
  - Efficient monitoring, assessment and projections related to climate change impacts, mitigation and adaptation potential in order to bring out solutions;
  - Fostered climate change mitigation in the primary sector , including by the reduction of GHG emissions, maintenance of natural carbon sinks and enhancement of sequestration and storage of carbon in ecosystems;
  - Improved adaptive capacity of water and soil systems and sectors including by unlocking the potential of nature-based solutions;
  - Better managed scarce resources, in particular soils and water, thus mitigating climate related risks, in particular desertification and erosion, thanks to informed decision-makers and stakeholders and integration of adaptation measures in relevant policies.

- Resilient, inclusive, healthy and green rural, coastal and urban communities:
  - Enhancing social inclusion in rural areas: focus on people in a vulnerable situation and social economy;
  - Investigating the contribution of geographical indications (GIs) to sustainable development and optimising support for newly established schemes;
  - Assessing urban farming impact;

- Inclusive and smart ways to communicate sustainability of food. Innovating for climate-neutral rural communities by 2050;
- New sustainable business and production models for farmers and rural communities.

- Innovative governance, environmental observations and digital solutions in support of the Green Deal:
  - Experimenting with new ways to govern the transition process;
  - Modernising the governance, in particular by making information and knowledge available and accessible;
  - R&I for governance to support the Green Deal shall provide insights into institutional barriers such as lock-ins, path dependency, political and cultural inertia power imbalances and regulatory inconsistencies or weaknesses.

2. PUBLIC HEALTH

This pillar focuses on activities aimed at improving and protecting the health of citizens at all ages, by developing innovative solutions to prevent, diagnose, monitor, treat and cure diseases. It will also focus on mitigating health risks, protecting populations and promoting good health, as well as on making public health systems more cost-effective and sustainable. The themes and sub-themes under this pillar are given below.

- Health throughout the life course: This would encompass maternal and child health, adolescent health and aging, particularly reproductive health, child health, adolescent health and aging.
- Environmental and social health determinants.
- Non-communicable and rare diseases: This would encompass all non-communicable diseases such as obesity, diabetes, hypertension and its complications, cancers and haemoglobinopathies.
- Emerging and re-emerging Infectious diseases, including poverty-related and neglected diseases: including poverty-related and neglected tropical diseases including “One health”.

- Tools, technologies and digital solutions for health and care, including personalised medicine; including personalised medicine and phytomedicines.
- Health care systems;
- Drug discovery.

3. INNOVATION AND TECHNOLOGY

This pillar aims to foster all forms of innovation, including breakthrough innovation, and market deployment of innovative solutions. It will focus on scaling up breakthrough and market-creating innovation through the European Innovation Council (EIC) as well as activities aimed at enhancing and developing the overall European Innovation landscape and support to the European Institute of Innovation and Technology (EIT). The themes and sub-themes under this pillar are given below.

- Culture, Creativity, and Inclusive Societies; specific areas of intervention in here include:
  - Democracy and Governance;
  - Social and economic transformations;
  - Culture, cultural heritage and creativity.

- Civil Security for Society; areas of intervention in here are:
  - Disaster-resilient societies (four sub-topics);
  - Chemical, biological, radiological, nuclear and explosive (CBRN-E) incidents;
  - Climate-related risks and extreme events;
  - Geological disasters, such as earthquakes, volcanic eruptions and tsunamis;
  - Pandemics and emerging infectious diseases;
  - Protection and Security – EU external borders;
  - Protection and Security – Protection of public places;
  - Protection and Security – Security and resilience of infrastructure and vital societal functions;

- Protection and Security – Maritime security;
- Protection and Security – Fighting crime and terrorism;
- Cybersecurity.

- Digital, Industry & Space: Specific areas here include;
  - Manufacturing technologies;
  - Advanced materials;
  - Next generation internet;;
  - Circular industries;
  - Space, including Earth Observation;
  - Emerging enabling technologies;
  - Key digital technologies, including quantum technologies;
  - Artificial Intelligence and robotics;
  - Advanced computing and Big Data;
  - Low-carbon and clean industry.

- Climate, Energy and Mobility: Areas for intervention here are:
  - Advance climate science and solutions for a climate-neutral and resilient society;
  - Cross-sectoral solutions for decarbonization;
  - Develop cost-efficient, net zero-greenhouse gas emissions energy system centered on renewables;
  - Develop demand-side solutions to decarbonize the energy system;
  - Develop low-carbon and competitive transport solutions across all modes;
  - Develop seamless, smart, safe, accessible and inclusive mobility systems.

4. CAPACITIES FOR SCIENCE

This Pillar sets out to promote scientific excellence through the following ways:

- Strengthening cooperation between AU and EU higher education institutions, research centers and organizations, and capacity-building

partnerships, with a focus on the potential of knowledge transfer, teaming, twinning, and learning mobility activities (e.g., by involving the European University Alliances, consortia from the Erasmus+ programme and the Intra-Africa Academic Mobility Scheme, and ARISE grantees), by reinforcing scientific and academic mobility opportunities (through notably the Marie Skłodowska-Curie Actions), to support the co-construction and/or co-reinforcement of training programmes, and research and innovation projects in line with the socio-economic needs of the concerned countries/regions, both in the AU and in the EU;

- Improve the transparency and recognition of higher education qualifications and the relevance of curricula and enhance mobility. Foster the development of high-performing digital education systems and upgrade digital skills and competencies for digital transformation;
- Promoting joint master and doctoral degrees between AU and EU universities, and supporting the inclusive mobility of students, researchers and staff by building on existing programmes (such as the Marie Sklodowska-Curie Actions) to increase the number of future researchers and innovators freely moving among and between both areas, while limiting the risks of talent drain;
- Supporting the creation of enabling STI environment for sustainable innovation ecosystems through Smart Specialization road-maps to reinforce the innovation culture across the quadruple helix actors, the evidence basis for prioritization of innovation investments and the participatory governance processes for tackling place-specific developmental challenges.

The main foci points under Capacities for Science are;

- Marie Skłodowska-Curie Actions (MSCA)

Capacity-building programmes on the Research theme of Interest to the Nigeria Research Team both at pre-submission and under the Marie Skłodowska-Curie Actions. Such programmes include:

  - Staff Exchange
  - MSCA Doctorates
  - MSCA Postdoctoral Fellowships

- MSCA Research Staff Exchanges
- Co-funded specific capacity (e.g., Europe Sandwich programme for Nigerian academics)

- Research Infrastructure

Identify facilities that provide resources and services for the research communities to conduct research and foster innovation compliant to Horizon Europe calls. This includes the associated human resources and covers major equipment or sets of instruments; knowledge-related facilities such as collections, archives, or scientific data infrastructures; computing systems, communication networks, and any other infrastructure, of a unique nature and open to external users, essential to achieve excellence in research and innovation. Opportunities to connect and cluster the Centres of Excellence in Nigerian HEIs to their contemporaries in Europe with a view to promoting joint research. Opportunities to foster appropriate partnerships for establishing new Centers of Excellence with EU Network support in areas critical for Nigeria's HEIs.