



Research Program on Policies, Institutions, and Markets



INTERNATIONAL FOUNDATION FOR SCIENCE



Call for research notes/applications to

Training Course on Research Proposal Writing

with a focus on upgrading value chains of neglected and underutilized species of plants

<i>Dates</i>	<i>Venue</i>	<i>Eligible countries</i>
27-31 October, 2014	Zimbabwe	Botswana, Malawi, Mozambique, South Africa, Zambia, Zimbabwe
3-7 November, 2014	Kenya	Burundi, Kenya, Rwanda, South Sudan, Tanzania, Uganda
17-21 November, 2014	Togo	Benin, Burkina Faso, Ivory Coast, Mali, Niger, The Gambia, Togo

Background

Africa hosts thousands of edible plants, but only a small number dominate agriculture research and development. Yet, many farmers, especially in marginal areas, rely on neglected and underutilized species (NUS) for their livelihoods. The genetic diversity of NUS and their wild relatives comprises a major part of agricultural biodiversity, but is in rapid decline. Worldwide, farmers and consumers are abandoning them as globalization, population growth and urbanization change agricultural and food systems. However, there is also a growing international recognition that NUS play a role in providing food and nutrition security and income opportunities among smallholder farmers, and that NUS crops, trees and animals can help in adapting agriculture and food systems to climate change. But the expansion and commercialization of NUS is constrained by a low knowledge base, weak value chains and inadequate capacity and policies.

The project '**Strengthening capacities and informing policies for developing value chains of neglected and underutilized crops in Africa**', supported by the EU-ACP Science & Technology Programme with co-financing by the project partners¹ and the CGIAR Research Programme on Policies, Institutions and Markets, runs from 1st January 2014 to 31st December 2016. The project's vision is 'Enhanced value chains of neglected and underutilized species (NUS) in Africa contributing to improved food and nutritional security, income of smallholder farmers and entrepreneurs and mitigation of, and adaptation to climatic, agronomic and economic risks.'

¹ The project is implemented by a partnership consisting of Bioversity International (Coordinator); Africa University, Zimbabwe; African Network for Agriculture, Agroforestry and Natural Resources Education (ANAFE), Kenya; International Foundation for Science (IFS), Sweden; Laboratory of Agricultural Biodiversity and Tropical Plant Breeding (LAAPT), Benin, and; University of Nairobi, Kenya.

The project focuses on the value chains of two model crops: Bambara groundnut (*Vigna subterranea*), a native African legume, and amaranth (*Amaranthus spp.*), a leafy vegetable and a grain. Both are recognized as priority crops in Western, Eastern and Southern Africa, but they are constrained by weak value chains. Opportunities to upgrade value chains are available, and some farmers and entrepreneurs are investing in production, product development and marketing, but demand is still weak, and various bottlenecks along the value chain need to be addressed.

Often, these bottlenecks require biophysical and socio-economic research to generate new knowledge that value chain actors can apply to make the chains more effective. **The EU-ACP project is therefore training young scientists in developing such research projects proposals** on NUS in general and on Bambara groundnut and amaranth in particular.

We are particularly interested in receiving applications that focus on the value chains of Bambara groundnut and amaranth (grain or vegetable). Preference will be given to applicants working on these crops.

This call

The project will contribute to ‘Enhanced capacity in three African sub-regions to design value chain research, and to communicate results’. To achieve this, the project offers three regional **training courses on proposal writing skills for NUS research, with emphasis on Bambara groundnut and amaranth (grain and vegetable) and their value chains.** The courses target scientists **only from eligible countries** in East Africa, Southern Africa, and West Africa, respectively, who are conducting research in their home region, according to the following:

Dates & venue	Organizer	Eligible countries
27-31 October, 2014, Zimbabwe	Africa University, Zimbabwe	Botswana, Malawi, Mozambique, South Africa, Zambia, Zimbabwe.
3-7 November, 2014, Kenya	University of Nairobi, Kenya	Burundi, Kenya, Rwanda, South Sudan, Tanzania, Uganda.
17-21 November, 2014, Togo	Laboratory of Agricultural Biodiversity and Tropical Plant Breeding (LAAPT), Benin, in collaboration with University of Lomé, Togo	Benin, Burkina Faso, Ivory Coast, Mali, Niger, The Gambia, Togo.

The project will sponsor the travel and accommodation for up to 25 participants per course.

This call is focused on research on NUS plants of priority in the Eastern and Southern Africa region, and West Africa region, respectively (Annex 1). The research themes should be relevant to the upgrading of value chain of the priority crops (see suggested themes listed in Annex 2).

Participants in the training course can subsequently submit their proposal for a research grant to any research financing agency, including the competitive granting process of the International Foundation for Science (IFS).

Who should apply?

Applicants eligible for this call should:

- **Be a citizen and resident of an eligible country in the region where the course is held** (see the table above)

- Be a national scientist attached to a university, national research institution or a research oriented and not-for-profit NGO (scientists working in international research organizations are not eligible)
- Be under 35 years of age (male) or under 40 years of age (female)
- Have at least a Master's or equivalent degree
- We particularly welcome applications from female scientists
- For the course in West Africa (Togo), applications may be submitted in English or French

Procedures: application, selection and preparations for the course

1. Applicants should fill in the Application Form and write a Research Note outlining a project with potential for submission to the International Foundation for Science (IFS) (or any other granting agency).
2. The proposed research should address a research topic related to the value chain of a NUS plant, with a focus on regional priority species listed in Annex 1. In particular we welcome proposals on Bambara groundnut and amaranth.
3. The deadline for applications is 24 August, 2014 (see submission instructions below)
4. The research notes/applications will be assessed by a joint panel from among the project partners
5. Successful applicants will be notified by 10 September 2014
6. The selected participants will be required to prepare a draft research proposal prior to the course; instructions will accompany the notification of selection.
7. The course aims to mentor the applicants regarding their research proposal, research methods, etc, and to develop skills in writing quality proposals.
8. Upon completion of the course, the participants will have acquired the necessary knowledge and skill to prepare a complete research proposal for submission to IFS or any other granting agency.

Applications should include:

- Application Form including Research Note (download from www.ifs.se or www.biodiversityinternational.org)
- Curriculum Vitae

Submission instructions

Dates	Venue	Eligible countries	Submit your application to
27-31 Oct. 2014	Zimbabwe	Botswana, Malawi, Mozambique, South Africa, Zambia, Zimbabwe	Biodiversity International, email: zimbabwe2014@cgiar.org
3-7 Nov. 2014	Kenya	Burundi, Kenya, Rwanda, South Sudan, Tanzania, Uganda,	International Foundation for Science (IFS), email: Kenya2014@ifs.se
17-21 Nov. 2014	Togo	Benin, Burkina Faso, Ivory Coast, Mali, Niger, The Gambia, Togo	International Foundation for Science (IFS), email: Togo2014@ifs.se

Deadline for application is 24 August, 2014

Late applications will not be considered.

Only the selected participants will be notified by 10 September 2014.

Annex 1. Priority species

Priority species

This call is focused on research on neglected and underutilized plant species of priority in three sub-regions: Eastern Africa, Southern Africa, and West Africa, respectively. We are interested in applications that focus on:

1. The value chains of two target crops: **Bambara groundnut and amaranth** (grain or vegetable). Preference will be given to applicants working on these crops.
2. **Priority species of NUS plants**, as identified at two regional workshops in 2010 (Table 1).
3. Other **NUS plants of national/regional importance**.

Table 1. Priority species for NUS research¹

Type of crop	Priority species, Eastern and Southern Africa	Priority species, West Africa
Cereals	Grain Amaranth (<i>Amaranthus spp</i>) Finger millet (<i>Eleusine coracana</i>) Pearl Millet (<i>Pennisetum glaucum</i> and <i>Pennisetum spp</i>) Sim Sim (Sesame) Seed	Fonio (<i>Digitaria exilis</i>) Pearl Millet
Legumes	Bambara groundnut (<i>Vigna subterranea</i>) Cowpea <i>Vigna unguiculata</i> Lablab bean	Bambara groundnut (<i>Vigna subterranea</i>) Kersting's groundnut (<i>Macrotyloma [=Kerstingiella] geocarpum</i>) African yam bean (<i>Sphenostylis stenocarpa</i>)
Leafy vegetables	Vegetable amaranth (<i>Amaranthus spp</i>) African nightshades (<i>Solanum spp</i>) Spider plant (<i>Cleome gynandra</i>)	Vegetable amaranth (<i>Amaranthus cruentus; A. spp</i>) <i>Corchorus olitorius</i> <i>Crassocephalum rubens</i> <i>Telfairia occidentalis</i> <i>Cassia obtusifolia</i>
Roots and tubers	Arrow Roots (<i>Colocasia spp</i>) Livingstone potato (<i>Plectranthus spp</i>) Yams (<i>Dioscorea Spp</i>)	Bitter yam (<i>Dioscorea dumetorum</i>) Elephant ears/taro/cocoyam (<i>Colocasia esculenta</i>) <i>Xanthosoma spp</i>
Fruit trees	Guava (<i>Psidium guavaja</i>) Prickly Pear (<i>Opuntia spp</i>) Mexican Wild Apple (<i>Uapaca spp</i>)	No regional priority species was agreed upon, due to differences across countries
Other undomesticated plant species	Horseradish tree/Drumstick tree (<i>Moringa spp</i>) Vine spinach (<i>Basella alba</i>) Baobab (<i>Adansonia digitata</i>)	

¹ Identified at two regional stakeholder workshop held in 2010, in Benin and Kenya, respectively, under the project '**Building human and institutional capacity for enhancing the conservation and use of Neglected and Underutilized Species (NUS) of crops in West Africa, and Eastern and Southern Africa**', financed by EU - ACP Science & Technology Programme. The following countries contributed: Ethiopia, Kenya, Malawi, Mozambique and Uganda (Eastern and Southern Africa), and Benin, Ghana, Mali, Nigeria and Senegal (West Africa).

Annex 2. Research themes

Suggested research themes relating to value chain upgrading identified by stakeholders (this is not an exhaustive list; you may have other highly relevant research ideas). It must be clear in your concept note how your research theme relates or might relate to value chain upgrading.

- Consumer demand/market access – e.g. identification of consumer preferences and identification or improvement of varieties to meet consumer demand.
- Value chain analysis and market research.
- Development of new products based on NUS
- Improvement of processing operations where necessary. Development of new technologies. How can technologies be improved to reduce labour and reduce post-harvest losses?
- Development of biological and integrated pest and disease management during cropping and, if necessary, product storage.
- Development of organic production. Research on consumer demand for organic produce.
- Selection of varieties for possible climate change adaptation (abiotic stresses) and pest resistance.
- Domestication, propagation & production packages.
- Phenological studies, e.g. where photoperiod restricts a crop to a narrow range of latitude (e.g. Bambara groundnut) and solutions for this.
- Nutritional stability of NUS during processing and storage. Do the current processing methods affect the nutrient content and bioavailability of nutrients?
- Recipe development and evaluation.
- Post-harvest handling to address shelf life.
- Research (where appropriate) into the identification of anti-nutritional factors and how to mitigate or eliminate these. How to reduce the musty taste of some grains without affecting the nutritional qualities?
- For e.g. Bambara groundnut, identification of varieties with short cooking times. Development of practical and economic methods of pre-cooking Bambara prior to marketing.
- What are the different products that can be produced from NUS waste material?
- Characterization of different provenances in different ecologies
- Is it possible to intercrop prioritized legumes with crops commonly grown in the region?
- Develop agronomic information on legumes. Are there varieties associated with efficient nitrogen fixing bacteria?
- Research possibilities for value addition in terms of various products for different market
- Nutrition information
- Medicinal studies
- Collection of indigenous knowledge. Access and benefit sharing.
- Studies on gender and cultural dimensions (in some communities there are male and female crops)
- Collection and conservation