Call for Proposals

Responsible Artificial Intelligence for Gender Inclusion and Equality

Background

This call is conducted as part of the Artificial Intelligence for Development in Africa (AI4D Africa) program, with the financial support of Canada's International Development Research Centre (IDRC) and the Swedish International Development Cooperation Agency (Sida).

AI has been predicted as the next big digital revolution that will fundamentally change different aspects of our life. Developing responsible AI that supports gender inclusion and addresses existing bias faced by women will be crucial to accelerating progress on SDGs.

Several issues have been identified to argue that Artificial Intelligence is still a new field: disaggregated data and gender bias; gender gap in the AI field; research capacity in Responsible AI; and the challenge of trans/inter-disciplinary. Solutions to Africa's challenges can be contextually different from those associated with nations outside the continent. This reason leads to the need to think about AI in a more multi-African context. West Africa, East Africa, South Africa and Central Africa by their social, political, economic structure are diverse and varied. Even though there is limited Anglophone and Francophone connection in the research field, there is a strong need for pan-African collaboration to share, reflect and find solutions for Gender inclusion and Equity. Recognizing this, the Gender and Responsible AI Network (GRAIN) is developing a collaborative framework for AI and gender actors in the concerned areas of Africa.

The network is animated and facilitated by a Hub consisting of IPAR (Initiative Prospective Agricole et Rurale), CSEA (Centre for the Study of the Economies of Africa) and Sunbird AI.
This call invites proposals that address developmental issues at the nexus of AI and gender. The selected teams will also have the opportunity to join the *Gender and Responsible Artificial Intelligence Network (GRAIN)* in Africa, a network of individual researchers, research and advocacy organizations, social innovators and think tanks.

Purpose of the Call

This call targets to interest researchers and organizations working in or with strong interest in responsible AI and gender to address topical issues at the intersection of these two domains. In particular, we hope to achieve the following:

- Gain an understanding of the structural and systematic barriers to promoting gender equality and inclusion in the AI sector at the local level.
- To engage with diverse groups of experts and stakeholders in these broad domains.
- Test transdisciplinary approaches to addressing the challenges posed by AI in gender.
- Advance research on building positive cases based on the call for proposals on innovation and research conducted by institutions/organizations in Sub-Saharan Africa.

Grant Categories

This call has three grant categories. Respondents are requested to explicitly state the category they are applying for. These categories are detailed in the later section of this call.

- *Category 1:* Data-driven research
- *Category 2:* Thematic contribution papers
- *Category 3:* Call for prototypes/systems (e.g., a translation tool)

All applicants are requested to respond to the following categories:

- Applications must demonstrate use of responsible AI and gender and inclusion considerations in development, deployment and results.

Please only answer for the categories you are applying for in English or in French.

Category 1: Call for data-driven research

Under this category, we will fund 4 proposals with regional focused research (West, East, Central and Southern Africa).
Grant: 53930,60 CAD
Duration: 18 months
Outputs: data collection, scoping studies, gap analysis, innovative approaches

Digitalization and AI development have been uneven across Africa. Regional leaders are emerging in various sub-region such as Nigeria, Kenya and South Africa leading

roles in West, East and Southern Africa respectively. Grants to be funded under this category are expected to:

- Provide detailed scoping study of the state of the selected region and deepen the understanding of important factors driving AI growth in the region. The study should also look into the prevailing gender issues and inclusion within the region and how AI either amplifies or ameliorates the challenges.
- Identify innovative and visionary approaches to inform decision-makers and address gender biases in AI tools used or in development particularly in the African region.

Category 2: Call for papers

Under this category, we will fund 4 proposals with different thematic focuses. The topic of interest identified here are only examples and by no means the exclusive topic for papers that will be funded. The proposed topics here are for guidance only and other research ideas fitting the call will be considered.

Grant: 20223,98 CAD

Duration: 6-8 months

Outputs: Literature review, Gap analysis, co-developed recommendations

Paper 1 thematic focus:

AI and women's economic empowerment in agriculture

The role of women in agriculture in Africa is widely recognized and documented. How women, major actors in the agricultural sector, can benefit from adapted AI solutions in the continent?

The aim is to propose AI solutions to improve and strengthen the economic empowerment of women in agriculture.

In this case, it will be expected to inform on different responsible AI tools that use data on agriculture and land to promote the deployment of inclusive AI solutions that make agriculture more profitable and sustainable while analyzing and correcting inequalities between men and women in agriculture and access to productive resources

Paper 2 thematic focus:

STEM AND Education

Women and girls are particularly underrepresented in science, technology, engineering, and mathematics (STEM) disciplines and consequently in STEM careers. It turns out that there are more girls in school than ever before, but they do not always have the same opportunities as boys to finish school and reap the benefits of the

education of their choice. Gender inequalities are visible in school and vocational education, in higher education, in careers, and in research.

According to [UNESCO's flagship report](#), only 35% of girls worldwide are studying STEM disciplines at the tertiary level, and there are gaps within each discipline. Gender disparity is all the more alarming given that STEM careers are often referred to as the jobs of the future, the engine of innovation, social well-being, inclusive growth, and sustainable development. How can AI be the tool that participates in girl's involvement and empowerment in STEM?

Paper 3 thematic focus:

AI and local African languages

Nowadays, language as a social, economic and technological barrier is more and more discussed. In many countries, the limited mastery of official languages is a reality that has motivated scientists, sociologists, linguists, etc. to develop tools to bridge the gap that exists in communication and in the use of modern technology. Other justifications are also put forward, notably the preservation of languages as a cultural identity and a vehicle for social integration (African Language Program, 2021).

Several AI-based innovations aim to significantly impact the education, health and business sectors to reduce inequality. More concretely, NLP relies on an implementation of words and topics via programming to provide quality translation. Beyond the existence of a still rudimentary legal framework, the low use of local African languages in the foreign language-dominated global economy (English, French, Mandarin etc.) dampens interest in these languages.

Category 3: Call for a prototype/system (translation tool or any other)

Only one grant will be awarded under category 3.

Grant: 80895,90 CAD

Duration: 12 months

Outputs: Data collection, training, tool's interface

Research in AI and gender and related fields has had some traction differently and separately in two parts of Africa, the Anglophone and the Francophone. This category seeks to create a translation tool with no gender bias where the initial corpus could be scientific literature papers.

This category calls for proposals for practical projects leading to the deployment of a tool that achieves this translation functionality. Publications from either language, French or English can be parsed via the tool and translated whilst keeping them legible. It is expected that Natural Language Technology will be the AI framework of choice for this project. Consideration will be given to tools that use the latest research in the field

of translation and sustainable methods of deployment. Tools that leverage already existing models through transfer language are highly encouraged. Where necessary this grant can also be used to collect extra language data resources to facilitate the development of the tool.

Eligibility Criteria

To be eligible to this call, an organization should be responsive to the following criteria:

1. Be an organization that has their headquarters based in Sub-Saharan Africa. The list of eligible African countries is provided in the annex.
2. Have a team with sufficient expertise or knowledge of AI, and gender equality and inclusion and in other relevant areas as identified. A multi-disciplinary team is desired but not required.
3. Ability to work in both English and/or French at a minimum or be constituted as a multidisciplinary team with these language capabilities.

Requirement for selected grantees:
- Participation in the network meeting scheduled in Kampala in June 2023 for the lead applicant and another team member.
- Monthly participation to network meetings
- Participation in the network implementation and animation

Timeline

Activities	Dates
Launch of the call for proposal	28th October 2022
Submission of the proposals	11th December 2022
Response to selected applicants	10th January 2023

Budget

The budget includes provision for research to be conducted during the proposed work.

Budget item	%	AMOUNT in CAD	Brief description of budget item
Personnel			
Consultant			
Equipment			
Local travels			
Research activities			
International travel*			
Consumables			
Total directs costs			
Indirect costs**			
Grand Total			

* Please include funds and a rough budget for travel and attendance (including accommodation) to the network meeting scheduled in Kampala in June 2023 for the lead applicant and a team member.

**Should not exceed 7% of the budget

Evaluation Criteria

The evaluation criteria are considered in the categories where applicable.

Knowledge and expertise on gender and inclusion and managing AI innovations and research (25%)
• Demonstrated experience (by the host organization, or shared by the full consortia) in supporting research and innovations in Africa, in supporting action-oriented research that helps to advance gender equality, inclusion and rights (in one domain or more generally) or strong experience in one of the above with proven track record of collaborations in the other domains.
• Experience with machine learning or other AI applications to address pressing challenges in Africa that may augment or contribute to increasing and advancing gender equality and inclusion (for example, in access to finance, health care, access to government services, combating gender-based violence, access to land, and more).
• Understanding of the emerging challenges of AI applications that may pose gender equality and inclusion, including bias.

• Expertise in advancing a change-oriented research agenda that has advanced gender equality in two or more relevant research domains.
• Connections with relevant research and policy communities, and experience advocating for gender and equality in those communities.

Innovation research network plan (20%)
• Logical network plan that would support research projects to support field building, advance novel research and apply it.
• Approach ensures inclusion and equity of both genders and other vulnerable groups.
• High-impact knowledge synthesis and sharing activities.
• Reasonable and feasible budget.

Expertise in synthesis, learning facilitation, and knowledge mobilization (15%)
• Ability to facilitate cross-grantee learning and synthesis.
• Experience in designing and developing products that support knowledge sharing and use: high quality practitioner-oriented outputs, toolkits, rapid knowledge syntheses, supporting resources, and policy briefs.
• Experience in knowledge mobilization for policy and practice improvement.

Organizational performance (20%)
• Evidence that the organization has the basic systems, resources, and management capacities to succeed in setting up and running a Pan African research network.
• Capacity to work in English and French (other languages would be an asset).

Guidance on how to apply

Please submit your application electronically via the link on the Baobab Platform. You must create an account and follow the different steps. The application must be made in either English or French by using one of the templates available on the platform. Note that the applications submitted via email will not be considered.

The proposal should contain the following sections:

Section A. **Applicant information and experience**
Please provide this information for the lead organization and for the other partner organizations:
Name of the organization
Description of the organization
Project title
What are the main issues you are working on and what is your experience in the thematic areas?
Describe your team's previous activities or relevant experience that demonstrates your ability to carry out the project and achieve the planned outputs and outcomes.
Please introduce your key team members and explain how their skills on AI or gender and/or both will contribute to the successful implementation of your project.

Section B. **Abstract (150 words)**
Please provide a short abstract of the proposed project.

SECTION C. Objectives
Describe the general and specific objectives of the project.

Section D. Research problem(s) and justification (1500 words)
This section describes the problem(s) and or problem area(s) that could be investigated and the questions that will guide the innovation research conducted by the applicant.

Section E. Methodology (800 words)
This section describes the methodology and approach that will be used for the research.

Section F. Results
Provide the expected results in the form of project outputs and outcomes.

Section G. Achievements and Innovations
Please describe your theory of change and how your project will benefit your target group and beneficiaries

Provide details of your innovation research project.

Section H. Activities and deliverables

Activities proposed	Timeline	Deliverables(D)/Milestones (M)
Example: desk review on the subject	Month 1 – month 2	M: report and list of references

Q/A sessions:
To answer all questions related to this call, two live Q/A sessions are planned on 14th November 2022 and 28th November 2022. Please follow us on social media to get the links for registrations to the webinar sessions. Feel free to write to us as grain.africas@gmail.com for any further inquiries.

Annex 1: Type of Grant

CATEGORY NUMBER	GRANT CATEGORY	DURATION	AMOUNT
1	Database research n°1 AI for Gender Inclusion Eastern Africa	18 months	53930,60 CAD Including contribution to network co-creation
	Database research n°2 AI for Gender Inclusion Western Africa		
	Database research n°3 AI for Gender Inclusion Central Africa		
	Database research n°4 AI for Gender Inclusion Southern Africa		
2	Paper thematic focus: AI and women's economic empowerment in agriculture	6- 8 months	20223,98 CAD Including contribution to network co-creation
	Paper thematic focus: STEM AND Education		
	Paper thematic focus: AI and local African languages		

	Paper thematic focus		
3	Tool development "Transformation of research"	9-12 months	80895,90 CAD Including contribution to network co-creation

Annex 2: Eligible Countries

The Lead Applicants must come from any of the Sub-Saharan African countries. These include: Angola, Benin, Botswana, Burkina Faso, Burundi, Cameroon, Cape Verde, Central African Republic, Chad, Comoros, Congo (Brazzaville),Congo (Democratic Republic), Côte d'Ivoire, Djibouti, Equatorial Guinea, Eritrea, Ethiopia, Gabon, The Gambia, Ghana, Guinea, Guinea-Bissau, Kenya, Lesotho, Liberia, Madagascar, Malawi, Mali, Mauritania, Mauritius, Mozambique, Namibia, Niger, Nigeria, Réunion, Rwanda, Sao Tome and Principe, Senegal, Seychelles, Sierra Leone, Somalia, South Africa, Sudan, Swaziland, Tanzania, Togo, Uganda, Western Sahara, Zambia and Zimbabwe

Annex 3: Key definitions

- **Gender**: Gender refers to the socially-constructed roles, responsibilities and relationships that society considers appropriate for women and men–it also has implications therefore for individuals and groups who identify as gender non-conforming. Gender is upheld by political, economic, social, and cultural institutions. Gender is context and time-specific, and thus changeable as well.

- **Gender Inclusion** is when disadvantaged groups (based on gender, age, caste, ethnicity, religion, disability, race, etc.) have equal rights, equal opportunities.

- **Gender Equality** represents the objective of equal access to resources, opportunities, benefits and rights for women, men and marginalized groups.

- **Responsible AI** is when people are designing AI and collecting data on gender-disaggregated intersectionality. They work on framework and policy to avoid bias in algorithms by working to achieve equity in the use of data, algorithm creation, expertise frameworks, and policies of AI practice.

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- **Sex:** The sum of biological and physiological characteristics that typically define men and women, such as reproductive organs, hormonal make-up, chromosomal patterns, hair-growth patterns, distribution of muscle and fat, body shape and skeletal structure.

- **Intersectionality:** The cumulative way in which the effects of multiple forms of discrimination (including but not limited to racism, sexism, and classism) combine, overlap, or intersect.

- **Inclusion:** The aim of inclusion is to embrace all people irrespective of race, gender, disability, medical or other need. It is about giving equal access and opportunities and getting rid of discrimination and intolerance (removal of barriers). It affects all aspects of public life.

Annex 4: References:

Equality Statement | IDRC - International Development Research Centre

Transforming Gender Relations: Insights from IDRC Research by IDRC | CRDI - Issuu