



# AfricaBP Framework for Partnerships

*November 2021*

**African BioGenome Project**

## **Objective**

The future of Africa's biodiversity relies on the availability of accessible, high quality genomic data of all African eukaryotes. Through a coordinated pan-African initiative, the African BioGenome Project will drive the sequencing of all African eukaryotic species to subdue the threats posed by the loss of biodiversity. This initiative will bring together diverse stakeholders across Africa and beyond. The purpose of this document is to provide a framework of engagement between the AfricaBP and its strategic partners.

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# 1 Introduction

## Genomics for the future of biodiversity across Africa

### 1.1 Background

Africa's rich biodiversity faces unprecedented levels of threats from climate change, deforestation and human population growth. The loss of Africa's biodiversity will have devastating consequences for human and environmental health which will bring about significant economic hardships. With half of African birds and mammals predicted to be extinct by 2100, there is an urgent need to integrate strategies that would effectively protect the unique biodiversity of Africa.

Insights gained from programmes affiliated with the Earth BioGenome Project (EBP) have emphasised that conservation and restoration of biodiversity are possible through genomics. However, Africa is yet to leverage genomics to safeguard her biodiversity.

Through a coordinated pan-African initiative, the African BioGenome Project (hereafter AfricaBP) was constituted to promote novel research efforts centered on African biodiversity genomics.

### 1.2 The AfricaBP agenda

AfricaBP was initiated to address current environmental and socio-economic challenges on the African continent in the era of genomics. The collaborative goals of AfricaBP and its partners are summarised below:

#### 1.2.1 Coordination of non-human genome sequencing initiatives

AfricaBP, along with its partners, strives to provide coordination for all non-human genome sequencing initiatives (existing and emerging) in Africa. Herein, it will act as a forum for stakeholders who will generate and exploit genomic data.

#### 1.2.2 Sequencing of all eukaryotic species across Africa

This project will initiate, develop and support new non-human genome sequencing projects in an effort to sequence all eukaryotic species (*circa* 105,000 species) across Africa. AfricaBP would strategically engage partners to harness and utilise the existing African expertise and facility with the help of multinational collaborators. Moreover, this is with an aim to coordinate capacity building in the field of genomics across Africa.



### 1.2.3 Deployment of genomic data

The generated genomic sequencing data will be made available on regional genome sequence databases. Thus, the data will be freely accessible to inform policy and build scientific capacity across Africa.

### 1.2.4 Support stakeholders in the exploitation of generated data

The exploitation of the Digital Sequence Information (DSI) will benefit biodiversity stakeholders and policy makers in Africa. The scientific investigations that will make use of the newly generated data will revise and reinvigorate an understanding of biology, ecology and the evolution of African eukaryotes, and also impact knowledge here globally. In turn, this will enable the conservation, management and regeneration of biodiversity to be in balance with societal and human welfare in the Anthropocene.

## 1.3 Partnerships as part of AfricaBP's agenda

The parties of AfricaBP realise that the scope of their initiative exceeds the capability of any one party to undertake. Thus, collaborations with stakeholders within and outside Africa is crucial for a successful coordinated pan-African initiative. These partners will participate in the development of the AfricaBP initiative, in a way that will advance their individual interests and that of society at large.

This document provides a framework of engagement for AfricaBP and its existing and potential partners.

## 2 Defining partnerships in the AfricaBP context

The AfricaBP community regards effective partnerships as collaborative relationships among various partners that combine their complementary expertise and resources to achieve their joint goals. In view of this, partnerships are sought within sectors that strive to address the challenges that overlap with the Grand Challenges of AfricaBP (see Frame 1). Broadly, partners will play a role in:

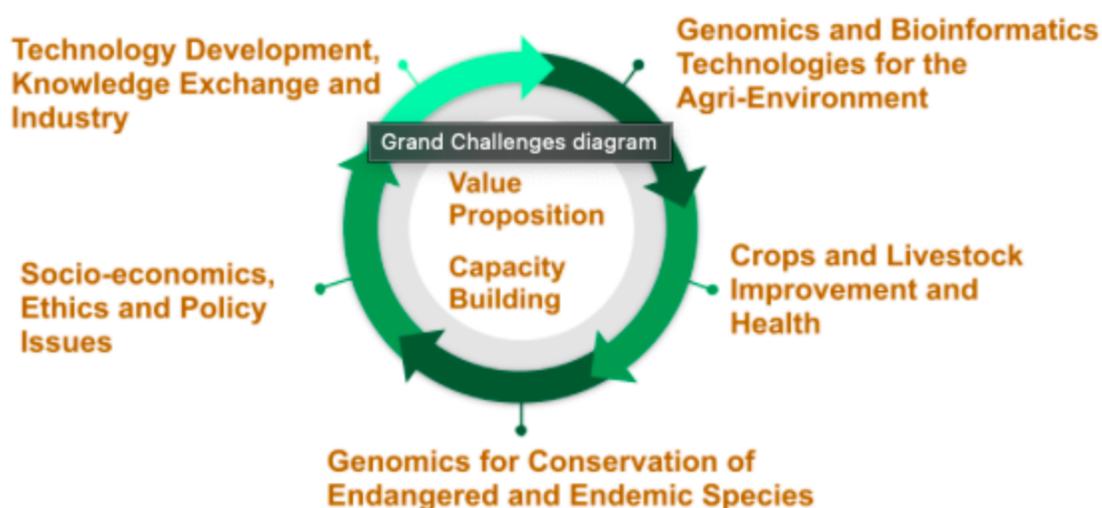
1. provision of expertise to further the AfricaBP agenda,
2. development and implementation of strategies to generate, analyse and deploy sequence data of eukaryotes in Africa, and
3. provision of funds and resources for the proposed activities.

### FRAME 1: Five Grand Challenges that will deliver value to the African people

AfricaBP will foster multi-institutional partnerships as a strategy to deliver its goals. The community networks within AfricaBP will bring together genomics, bioinformatics, digital innovation, biodiversity and agroecosystem stakeholders across Africa to form a critical mass of academics, researchers, NGOs and policymakers. The stakeholders are selected to represent five thematic clusters.

The clusters will explore existing and novel technologies and processes from both African and non-African expertise to identify and promote emerging digital innovations applicable to agroecosystems and biodiversity conservation, with a particular interest in reducing food insecurity and in the preservation of vulnerable and endangered African organisms and their habitats. This community will co-develop ideas within the Grand Challenges (GCs) and deliver a cohesive proposal for core funding.

#### Five GCs that will deliver value to the African people



Clearly, the delivery of AfricaBP's Grand Challenges requires a wide range of partnerships within and beyond the African continent. Partners may include, but are not limited to, philanthropists, researchers and research institutions, companies and non-governmental organisations, including regional and international networks and societies. These partnerships can broadly be classified under associate, institutional and corporate partners (see Frame 2).

## FRAME 2: Types of partnerships

### **ASSOCIATE PROJECT PARTNERS**

New or existing projects or communities operating across and outside Africa, that wish to connect or become affiliated to AfricaBP through project-based and scientific community-based or non-scientific community-based efforts, whose activities are relevant in advancing AfricaBP's goals, especially those addressing sustainable development, management and preservation of biological resources.

### **INSTITUTIONAL PROJECT PARTNERS**

Institutions or organizations in and outside Africa, who aim to make more direct contributions to the AfricaBP agenda either through direct funding of specific activities, donations or in-kind contributions to AfricaBP's goals.

### **CORPORATE PROJECT PARTNERS**

Companies in and outside Africa that aim to make more direct contributions to the AfricaBP agenda either through direct funding of specific activities, donations or in-kind contributions to AfricaBP's goals.

To ensure effective collaborations, strategic partnerships must be assessed before and after the partners come on board. This involves the development of clear action plans and deliverables. This framework aims to provide the tools to initiate, develop, monitor and assess partnerships with AfricaBP.

### 3 The AfricaBP Partnership Framework

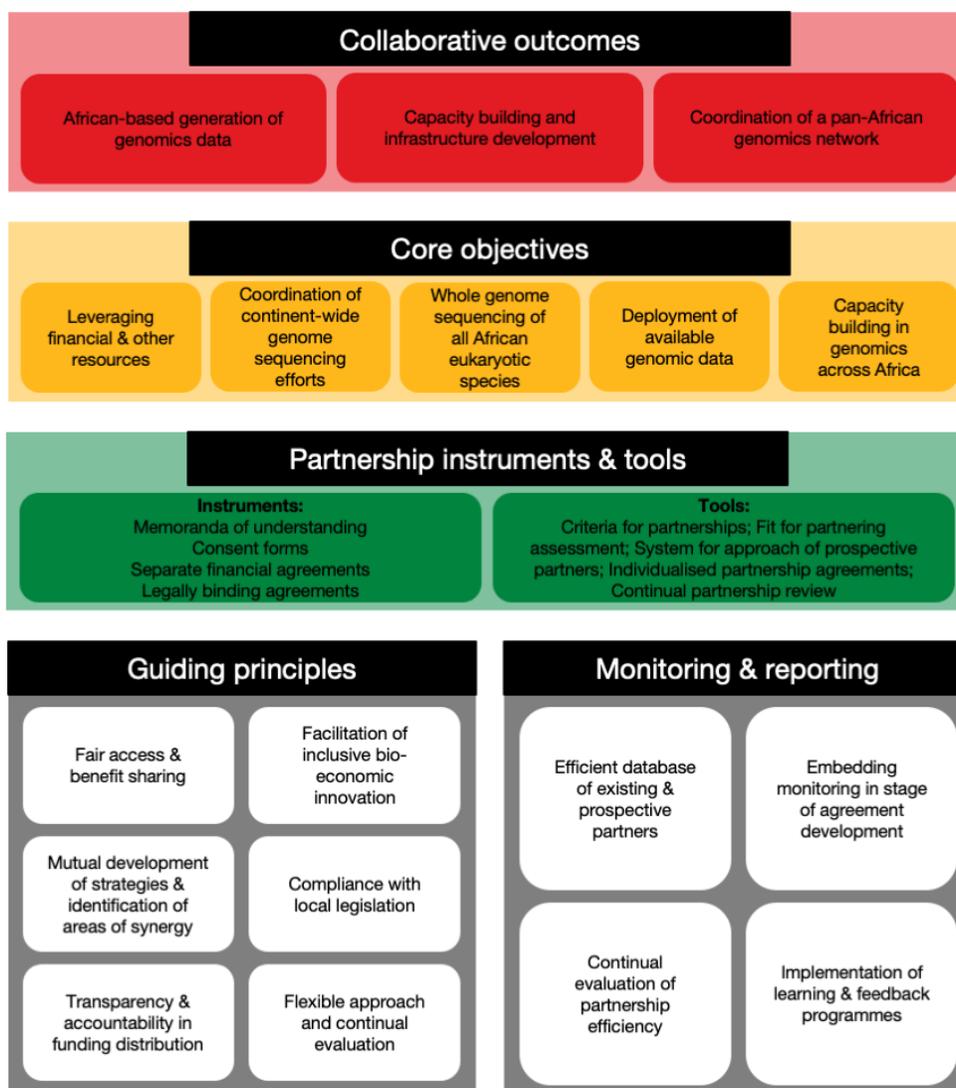


African **BioGenome** Project  
Genomics for the future of biological diversity across Africa

## AFRICAN BIOGENOME PROJECT

### DRAFT FRAMEWORK FOR PARTNERSHIPS

*Genomics for the future of biodiversity across Africa*



**Figure 1:** Graphical summary of partnership framework

The AfricaBP Partnership Framework (Figure 1) provides an approach to:

1. identify and invite potential strategic partners;
2. develop agreements for commitments of expertise, data, funds and other resources between the AfricaBP and its partners;
3. monitor partnership results to ensure effective collaboration.

### 3.1 Collaborative outcomes

The framework identifies three partnering outcomes that address the "why" of partnering.

1. **African-based generation of genomics data** to further the study and conservation of African biodiversity and to inform regional policy.
2. **Capacity building and infrastructure development** in the context of the genomic investigation of African eukaryotes, in Africa, by Africans and for Africans.
3. **Coordination of a pan-African network of genomics expertise** and the exploitation of genomics data to improve human, animal and environmental welfare on the continent amidst global change and socio-economic challenges.

The identified outcomes embody the intersecting goals of the AfricaBP and its partners, based upon shared interests. Defining the shared agenda of AfricaBP and its partners will allow for the identification and prioritisation of effective partnerships. Furthermore, these outcomes provide a framework for the high-level assessment of the performance of existing partnerships.

### 3.2 Guiding principles

The achievement of these partnering outcomes will be guided by six partnering principles that encapsulate the "how" of partnering.

1. **Fair access to genetic resources and benefit sharing**, as stipulated by the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilisation to the Convention on Biological Diversity that entered into force in 2014.
2. **Facilitation of inclusive bio-economic innovation** for sustainability and development towards Agenda 2063 of the African Union, to the benefit of the African continent.
3. **Mutual development of strategies and identification of areas of synergy** between AfricaBP and its partners to prime the project for success and to guide the nature of various partnerships.

4. **Compliance with local legislation** in terms of intellectual property rights, Access and Benefit Sharing, permits for sample collection, transfer and exploitation, and data deposition and protection.
5. **Transparency and accountability in funding distribution** where partners will be held accountable for the responsible use of funds and resources within the AfricaBP network.
6. **Flexible approach to and continual evaluation** of partner participation in the various stages of the AfricaBP initiative, for the mutual benefit of AfricaBP and its partners.

Adherence to these principles will allow for equitable and effective partnerships.

### 3.3 Core objectives

The partnering outcomes will be realised by working towards five core objectives that embed the "what" of partnering.

1. **Leveraging of financial and other resources:** Financial or in-kind contributions from partners are necessary to develop a cohesive and sustainable core funding strategy to further the AfricaBP agenda. Contributions of experts, such as taxonomists or sample ambassadors, to identify, preserve and voucher specimens to be sequenced.
2. **Coordination of continent-wide genome sequencing efforts:** AfricaBP will provide a platform to support partners involved in existing non-human genome sequencing initiatives across Africa and to development of new non-human genome sequencing projects on the continent.
3. **Whole genome sequencing of all currently known eukaryotic species native to Africa:** AfricaBP will support partners in the effort to sequence the genomes of more than 105,000 eukaryotic species and make the information available in an equitable manner.
4. **Deployment of available genomic data:** Generated data, made available on regional biobanks and biorepositories, gene banks and databanks, should be freely accessible and contribute to policy making and research efforts via partners.
5. **Capacity building in genomics across Africa:** AfricaBP partners should prioritise the development of sequencing infrastructure in Africa, as well as the nurturing of expertise to exploit the genomic data in a way that will empower indigenous communities and maximise long-term gains for the African population.

Partners will contribute towards one or more of these strategic objectives that will further the AfricaBP agenda and overlap with their own mandates.

### 3.4 Partnership instruments & tools

Guiding principles will be implemented via formal partnering agreements that will enable AfricaBP and their partners to better address risks, seize opportunities and tackle critical issues in the different phases of a diverse range of partnerships. This involves instruments that intend to formalise the details of the partnerships.

- *Memoranda of understanding (MoU)* to formalise the intention of AfricaBP partners to engage in collaborative activities.
- *Consent forms* to facilitate the use of images, photographs, institutional logos and other related media materials within the AfricaBP website and related activities as outlined in the MoU.
- *Separate written agreements* for the commitment of funds and relevant resources between the partners.
- *Legally binding agreements* between AfricaBP and partners in later stages of partnership to strengthen their collaboration.

Additional tools that can improve the efficacy of partnerships include:

- Initial commencement with a detailed and effective criteria for partnerships that includes rigorous fit-for-partnering assessment prior to partnering;
- An efficient system for the proposal, invitation and follow-up of prospective partnerships;
- Individualised partnership agreements that take into account the diversity of partners that operate on different scales (national, regional, international) and in different spheres (funding, sampling, taxonomy, genomics, bioinformatics, capacity building, knowledge transfer);
- Continual partnership review to ensure the health and efficacy of partnerships in addressing the African grand challenges.

Some of these tools have already been developed, often in conjunction with existing partners. The authors of this document recommend that the remainder of these tools are developed during the pilot phase of the AfricaBP initiative.

### 3.5 Partnership monitoring & reporting

Finally, the framework includes actions to improve the capacity and processes to measure and report on the outcomes of partnerships.



- The development of a comprehensive, user-friendly and efficient database of existing and prospective partners in accordance with regional and national data protection laws.
- Embedding monitoring at the stage of agreement development between AfricaBP and partners.
- Continual system of evaluation of the efficacy of partners in reaching their specific deliverables and the assessment of the contribution of partners to the AfricaBP agenda.
- Implementation of learning and feedback programmes to improve the future engagement with partners and ensure skills and capacity building.

This will enable an overview of how different partners contribute to the AfricaBP agenda. Moreover, the monitoring process will support the improvement of the engagement with existing and future partners, whilst keeping in mind their individual mandates and sectors of engagement.

The development of tools for monitoring and reporting should be a priority during the initiation of partnerships. Partners will play a large role in the development of these tools. The authors of this document recommend that the development of a database for managing the different partnerships (first point above) receive top priority during the pilot phase of the AfricaBP initiative.

## Appendix 1: Action plan

This is a checklist for the engagement of AfricaBP with its partners, from inception to delivery of final outcomes. This can be amended and expanded in future versions of this document.

**Table 1: Action plan for partnership framework**

Action	Lead responsibility	Phase	Support
1. Identification of prospective partners	P&F sub-comm	Prior to partnership	Pilot comm; Steering comm
2. Invitation of prospective partners	P&F sub-comm; Partnerships coordinator	Prior to partnership	Pilot comm; Steering comm
3. Monitoring of engagement with partners	P&F sub-comm; Partnerships coordinator	Partnership	Pilot comm; Steering comm
4. Evaluation of successes with partners (need for continuation or not)	Steering comm; Pilot comm	Partnership	P&F sub-comm

*Abbreviations* **P&F sub-comm**, AfricaBP Pilot Partnership & Fundraising Sub-Committee; **Pilot comm**, AfricaBP Pilot Committee; **Steering comm**, AfricaBP Steering Committee.

## Appendix 2: Synergies with deliverables for partnerships

Here we provide a summary of the areas of synergy along with deliverables that further define the different modes of partnership. This will help partners to identify their strategic relevance to AfricaBP. It will further provide a framework for concrete implementation measures to improve the selection and management of partnerships. This provides the Criteria for Partnership and a basis for the Fit-for-Partnering Assessment.

Below is the template for deliverables, with a few examples filled in. Different sub-committees of the AfricaBP can use this template to add and edit the deliverables that they expect of partnerships. These should be added to future versions of this document.

**Table 2: Synergies with deliverables for partnerships**

Deliverable	Core objective(s) addressed	Concrete implementation measures
Bioinformatics analysis	Deployment of available genomic data; Capacity building in genomics across Africa	<ol style="list-style-type: none"> <li>1. Assembly of whole genome sequences</li> <li>2. Annotation of sequences</li> <li>3. Quality control of sequences</li> </ol>
Taxonomic expertise	Leveraging of financial and other resources; Deployment of available genomic data	<ol style="list-style-type: none"> <li>1. Confirmation of identity of the sequenced specimens</li> <li>2. Documentation of specimen morphology</li> <li>3. Preservation and storage of voucher specimens</li> </ol>

*Abbreviations*

## Appendix 3: Intellectual contributors to the AfricaBP Partnership Framework

### Anneke Lincoln SCHOEMAN, PhD

South African Institute for Aquatic Biodiversity (SAIAB)  
African Amphibian Conservation Research Group (AACRG)  
North-West University  
Potchefstroom, South Africa  
[anneke.lincoln@gmail.com](mailto:anneke.lincoln@gmail.com)  
<https://annekelincoln.com>

### Charlotte NDIRIBE, PhD

Department of Cell Biology & Genetics  
University of Lagos  
Nigeria  
[cndiribe@unilag.edu.ng](mailto:cndiribe@unilag.edu.ng)

### Cyprien NDIKURYAYO

Institute for Agricultural Science  
Burundi  
[ndikuryayocyprien@yahoo.fr](mailto:ndikuryayocyprien@yahoo.fr)

### Josiah KUJA, PhD

Molecular and Microbial Ecology  
Plant Associated Microorganisms  
Bioinformatics for Insights into Microbial Ecology  
Jomo Kenyatta University of Agriculture and Technology  
School of Biological Sciences



PO Box 62000-00200

Nairobi, Kenya

+254 (0) 721841876

[kujahjos@gmail.com](mailto:kujahjos@gmail.com)

<https://www.linkedin.com/in/josiah-kuja-27634890/>

**Roksana MAJEWSKA, PhD**

Unit for Environmental Sciences and Management

Centre for Human Metabolomics

North-West University

Potchefstroom, South Africa

[roksana.majewska@nwu.ac.za](mailto:roksana.majewska@nwu.ac.za)