




# Foundational Biodiversity Information Programme (FBIP)

## DSI/NRF/SANBI

## Framework Document and Funding Guide
## Large Funding Projects

**February 2026**

TABLE OF CONTENTS

**FIGURES AND TABLES**



## APPENDICES

## 1. PROGRAMME TITLE AND DESCRIPTION

### 1.1 Title of the Programme

Foundational Biodiversity Information Programme (FBIP)

### 1.2 Description of Programme

RATIONALE: South Africa is one of the world's "megadiverse countries" which means that it is especially rich in terms of biodiversity. This wealth of biodiversity underpins a large proportion of the economy and many urban and rural people are directly dependent on it for their livelihoods, jobs, food, shelter, medicines and spiritual well-being. Sustainable use and management of South Africa's biodiversity requires a solid knowledge base and access to relevant information and data.

Researchers in South Africa have made considerable progress towards documenting our biodiversity, but large gaps in our knowledge still exist and it has been estimated that more than 50,000 species remain undiscovered or un-described. These species may have economic benefits, or they could play a critical role in the functioning of ecosystems. There are also several parts of South Africa in which the biodiversity has been only superficially explored and so data critical for development planning and ecosystem management are poor. The distribution and abundance of most species in South Africa is also far from complete, even for the better known groups including plants, small mammals, reptiles and amphibians, which makes understanding change in status and sustainable use problematic. The scale of the effort required to fill all gaps means that this will not be achievable within a reasonable time frame, and so a strategic approach is critical to ensure that priorities are addressed. For the knowledge that has been and continues to be generated, there is generally poor co-ordination and it is not all readily accessible to stakeholders who currently or potentially need it. A new, long-term programme has been developed to address these challenges.

The primary focus of the programme is to generate, co-ordinate and make accessible knowledge relevant to "essential biodiversity variables" which include species occurrence, species identity, population abundance, and phylogenetic / DNA information, including barcoding. This type of information is often referred to as "fundamental" or "foundational" because it forms the basis of so many other aspects of biodiversity research and decision-making. These data sets are critical for ecosystem mapping, monitoring and reporting on the state of biodiversity, for sustainable use of biodiversity, and for understanding and mitigating the impacts of global change on biodiversity and the programme priorities lie in these areas of activity.

While "foundational biodiversity knowledge" plays an essential role in facilitating understanding of ecosystem services and goods, its link to sustainable use of biodiversity for societal benefits and policy input is indirect. This often makes its relevance less attractive compared to other more exciting areas of research where the outputs can directly feed into societal benefits or policy. In addition, this aspect of research often deals with descriptive science and is therefore not perceived as cutting-edge. An additional challenge is that researchers who generate the information on essential biodiversity variables, and those practitioners who use this type of information in research or decision-making generally work in isolation from each other, resulting in misalignment in what knowledge is generated and what is needed and used. The uptake of the outputs of

this foundational science by practitioners further up the value chain and closer to the science-society and science-policy interfaces is rather low due to these blockages.

The FBIP requires that funded projects align knowledge generation or data mobilization with the needs of knowledge users higher up the value chain. Having a long term programme will ensure information security and incremental knowledge generation which is not the current situation.

AIM: The aim of the Foundational Biodiversity Information Programme (FBIP) is to fund the generation, mobilization and integration of priority foundational biodiversity knowledge and information so that this can be managed, secured and disseminated to address the needs of society, the Department of Science Technology & Innovation (DSTI) Global Change Programme and the bio-economy.

ADDED VALUE: The DSI indicated that an integrated programme that covers previously funded programmes such as the South African Biodiversity Information Facility (SABIF) and the South African Biosystematics Initiative (SABI) and those that are strategic but unfunded (South African Barcode of Life and South African Encyclopedia of Life) would not only reduce transaction costs but would benefit from stronger collaboration and increase the impact of the investment.

## 2. EXECUTIVE SUMMARY

The FBIP addresses the generation, mobilization and integration of foundational biodiversity knowledge and information so that it can be managed and disseminated for addressing societal needs. The Programme is fully aligned to international and national obligations and objectives including the Convention on Biological Diversity (CBD), the Intergovernmental Platform on Biodiversity & Ecosystem Services (IPBES), National Biodiversity Act, the National Biodiversity Strategy & Action Plan, the Global Change and Bio-economy Grand Challenges of DSI and its programme on Indigenous Knowledge Systems. The Programme integrates SABIF, SABI, DNA barcoding as promoted by the International Barcode of Life (IBOL), and the compilation of species information in line with the Encyclopedia of Life (EoL). The main approach of the FBIP is to fund large, collaborative / integrated team projects which align with knowledge needs, or which involve participants along the entire value chain from knowledge generation to application for decision-making. These projects will also include postgraduate students and emerging researchers, and the up-skilling of researchers and practitioners who use the data generated. The projects will generate or mobilize species occurrence data, DNA barcode data, and descriptive information on species, and will ensure that the knowledge is co-ordinated, managed and disseminated through appropriate structures and systems. Monitoring of the uptake and impact of the knowledge generated will allow the development of an understanding of best practice for ensuring that research outputs do have an impact on global change understanding and decision-making relating to biodiversity and sustainable livelihoods.

# 3. STRATEGIC CONTEXT

## 3.1 Environmental scan

The Programme will deliver products that contribute to the fulfilment of objectives included in the Global Biodiversity Framework, adopted in December 2022, in particular, halting human-induced extinction of threatened species and reducing the rate of extinction of all species tenfold by 2050 and sustainable use and management of biodiversity to ensure that nature's contributions to people are valued, maintained and enhanced, the Sustainable Development Goals, the Global Taxonomic Initiative of the CBD, the National Biodiversity Act, the National Biodiversity Strategy & Action Plan, the Global Change and Bio-economy Grand Challenges of DSTI and its programme on Indigenous Knowledge Systems. The outputs of the Programme are foundational to protecting South Africa's ecological infrastructure on which many industries and communities depend for their livelihood and to supporting the sustainable use of components of biodiversity.

Several workshops involving DSTI, NRF, SANBI and representatives of programmes such as SABI, SABIF, EoL and SA-IBOL were held in 2011 and 2012 to discuss the DSTI request for an integrated programme which would reduce transaction costs of separate programmes and increase impacts. This group formed a task team which developed the Programme concept. In October 2012 a brain-storming session was held for the users of foundational biodiversity information in other programmes or in decision-making to identify priority needs. Two workshops were run for potential participants / contributors to the Programme to discuss the approach, and the Programme concept was discussed by both the SABI and the SABIF Steering Committees, as well as at the SABI Forum in 2012. A National Strategy for Biosystematics Research in South Africa has been developed by SANBI, and this identifies priority outputs. A workshop at the Southern African Society for Systematic Biology (SASSB) in July 2012 discussed these priorities and some of the constraints on researchers in the field.

## 3.2 Objectives

The Programme has four main strategic objectives which deal with the generation of knowledge, the mobilization of information, integration of data, ensuring the management and dissemination of knowledge and data, capacity development and development of an understanding of how best to ensure the uptake and application of outputs in foundational biodiversity knowledge.

Strategic Objective 1: Generate knowledge and mobilise existing data to address priority knowledge / information gaps identified through consultation with or involvement of relevant stakeholders who use and apply foundational biodiversity information in decision-making for sustainable use and development (Figure 1).

Knowledge generation includes:

- discovery, description, and identification of taxa,
- surveys of areas or taxa of strategic importance for presence / absence (species occurrence) and / or population abundance data,

- phylogenetic and population genetic diversity, including DNA barcodes, which enable the distinction and identification of taxa

Mobilization of existing data includes:

- data capture / digitization of specimen data according to the Darwin core standard for biodiversity collections
- compilation of species information according to the FBIP / EoL requirements.

Publications for the scientific literature will also be generated, and data sets will be handed over to the FBIP / SANBI for long-term archiving, dissemination, integration and application as detailed in Strategic Objective 2.

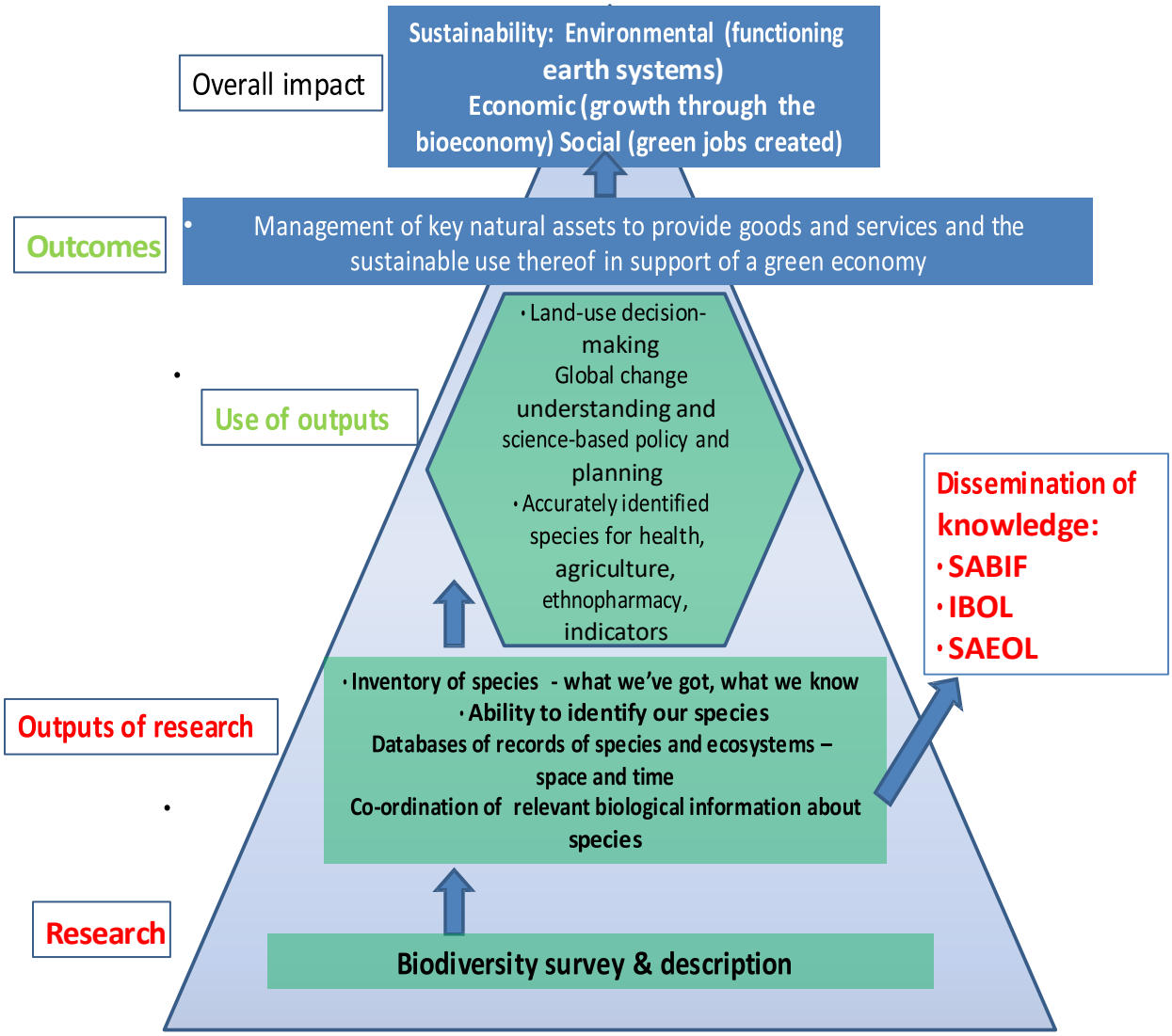


**Figure 1:** Framework for aligning knowledge generation and data mobilization with needs of users in the field of global change and the bio-economy. Red text = components of the value chain that will be funded Green text = components of value chain that must inform the focus of the foundational biodiversity knowledge generation and dissemination that is funded.

Strategic Objective 2: Contribute content to an integrated information management and dissemination system to provide long-term access to outputs from the FBIP. The main content outputs from the FBIP for management and dissemination include:

- A national inventory / checklist of all South African species, which is updated according to the latest research findings.
- Co-ordinated species pages for South African species including photographs / illustrations, information on biology, ecological role and interactions, links to DNA barcode / sequence data, distribution maps, indigenous knowledge, existing and potential use, threat status, population trends and literature through the Biodiversity Heritage Library.
- Primary data sets (species occurrence) which include specimen identity, date of collection, locality of collection, collector details, origin of record and where possible other data such as habitat description, biological notes, abundance, in accordance with the Darwin Core standard.
- Peer-reviewed, scientific publications relating to foundational biodiversity knowledge and information (these are used to provide content or update other outputs).

Strategic Objective 3: To attract, develop and up-skill people to ensure appropriate capacity for biodiversity knowledge generation, dissemination and application. This includes:

- Training of postgraduate students in the generation, management, dissemination and application of foundational biodiversity knowledge.
- Development of capacity for application / use of the knowledge / data among practitioners.
- Provision of opportunities for emerging researchers.
- Training of researchers / data managers who work with foundational biodiversity information in capture and management of data.
- Training of researchers in novel approaches to identifying biological material

Strategic Objective 4: To develop an understanding of best practices for ensuring that foundational biodiversity knowledge generated and disseminated is taken up for use and application in decision-making and sustainable use (bio-economy) by testing different approaches to project development and implementation and monitoring and measuring uptake and impact of each approach.

### 3.3 NRF perspective

The NRF Mandate is centred on the following:

Promote and support research through funding, human resource development and the provision of the necessary facilities in order to facilitate the creation of knowledge, innovation and development in all fields of research, including indigenous knowledge, and thereby to contribute to the improvement of the quality of life of all the people of the Republic.

In order for the NRF to realise its vision of catalysing knowledge production for societal benefit, the NRF has identified five strategic outcomes that will lead to the attainment of our vision.

1. Creating an internationally competitive, transformed and representative research system
2. Establishing and maintaining leading-edge research and infrastructure platforms
3. Growing the NRF into a reputable agency that will shape the science and technology system
4. Pushing for science literacy and actively engaging with society
5. Managing and improving on a committed and representative NRF research and technical workforce

The integrated approach being proposed within the context of FBIP is innovative and the publication of the research outputs in formal scientific literature is one of the Programme outputs. The approach is also transformatory in that it addresses the traditional individualistic and self-serving approach of researchers, and the Programme recognises the need to include the development of previously disadvantaged people, whether these are students, scientists or communities. The work of the Programme is foundational to a sustainable environment.

The Programme will deliver products that contribute to the fulfilment of objectives, the Global Taxonomic Initiative of the CBD, the National Biodiversity Act, National Biodiversity Framework, the Global Change and Bio-economy Grand Challenges of DSI and its programme on Indigenous Knowledge Systems.

### 3.4 Institutional structure

SANBI manages the implementation of the Programme, and the NRF, through the Global Change Programme and the Grants Management and Systems Administration (GMSA), manages the project proposal review and grant allocation process.

The Programme Manager and Co-ordinator are based at SANBI and work with the NRF GMSA team and the Global Change Programme Director to ensure that the strategic objectives of the Programme are met through the grants, and to meet both financial and performance reporting requirements of the DSI.

The GMSA's role is to establish (with input from the Programme Manager and Co-ordinator) and distribute the proposal submission and review process for grant applications, to distribute allocated grants, and to track and report to the Programme Co-ordinator (SANBI) and the Global Change Programme Director (NRF) on allocation to and expenditure by grant holders.

## 3.5 Financing support

The Programme is funded by the DSI through the Global Change Programme. SANBI provides in-kind co-funding in terms of the salary of the Programme Manager, and the salaries of other staff who will be involved in aspects of data management and dissemination, provision of office space and associated facilities, and access to IT infrastructure.

## 3.6 Key stakeholders

The key stakeholders include:

- Academics and researchers at higher education institutions, government departments, science councils and parastatals, museums, herbaria and other natural science collection facilities. Role: generation of knowledge and use and application of knowledge and data.
- Decision-makers, including spatial planners and policy developers in municipal, provincial and national government and institutions such as SANBI. Role: identification of gaps and knowledge needs, application of knowledge generated for science-based policy and decision-making and planning.
- Civil society and communities. Role: contribute as citizen scientists to generation of knowledge; users of knowledge.
- Private sector industry: users of knowledge and data for planning and for unlocking economic opportunities.
- Consultants (environmental impact assessment consultants). Role: contributors of information and users of knowledge.

## 3.7 Risks/barriers

### 3.7.1 Current barriers to achieve the stated objectives

While "Foundational Biodiversity Knowledge" plays an essential role in facilitating understanding of ecosystem services and goods, its link to sustainable use of biodiversity for societal benefits and policy input is indirect. This often makes its relevance less attractive compared to other more exciting areas of research where the outputs can directly feed into societal benefits or policy. In addition, this aspect of research often deals with descriptive science and is therefore not perceived as cutting-edge.

An additional challenge is that researchers who generate the information on essential biodiversity variables, and those practitioners who use this type of information in research or decision-making generally work in isolation from each other, resulting in misalignment in what knowledge is generated and what is needed and used. The uptake of the outputs of this foundational science by practitioners further up the value chain and closer to the science-society and science-policy interfaces is rather low due to these blockages.

Traditionally there has been little alignment between priorities and focus areas, which reduces the impact of the outputs, and there is also duplication of effort, loss of data and little synergy in shared expertise across projects. There are also many uncoordinated mechanisms for storing and disseminating the knowledge and data generated and no generally accepted means of ensuring long-term security and broad, open access.

### 3.7.2 Risks to Programme achieving its objectives and proposed measures to address risks:

**Insufficient participation**

There are approximately 200 taxonomists who are responsible for generating the type of knowledge that is the focus of the Programme. This is a fairly substantial capacity base but there is a risk that insufficient individuals will be willing to participate in a programme that requires extensive collaboration and teamwork, and that has an non-traditional approach, deliverables and scope.

This risk must be addressed through a communications strategy to promote the Programme and highlight the outputs and their impacts. A regular forum is a mechanism to generate interest in participation. These communication activities will be the responsibility of the Programme staff.

**Negative impact on the discipline of taxonomy**

The need for ring-fenced funding for taxonomy, because of its importance to other biodiversity-related disciplines, and the decline in capacity and outputs was recognised by the DSTI in 2002 and was the rationale for the establishment of SABI.

The FBIP funds a limited number of large projects and while these involve teams of researchers, it is likely that some researchers will not be able to align their expertise within any of the funded projects. The work that they do may be highly relevant and of high quality, and without access to funding, the research could collapse. In order to address this risk, limited funds will be allocated for strategic interventions. The extent of this funding must, however, remain capped to ensure that the bulk of the research funding is directed towards achieving the strategic objectives. There are also other funding streams through the NRF that taxonomists can access.

**Loss of focus**

There is a risk that funding applications to the NRF will be referred to the FBIP even if they fall outside its scope. There is also a risk that funds become diverted to activities higher up the value chain at the expense of the foundational knowledge generation, or that projects funded do not produce the outputs required by the FBIP. This will need to be monitored by the Programme Manager and Co-ordinator, and the scoring criteria for proposal assessment will need to ensure that FBIP objectives are addressed.

**Lack of delivery of data / knowledge outputs by grant holders**

While SABIF required that funded projects deliver the data mobilized to SANBI, NRF-funded research does not have this requirement. This means that there could be low levels of delivery of data, either because researchers

are reluctant to share data, or the data may not be in an appropriate form to enable its integration and application, or there may simply be a lack of delivery on the outputs stated in the project proposals. Approaches to address these risks include the development of guidelines for delivery of data outputs, the ineligibility of grantholders who have not delivered data for future grants, and training to ensure that data standards are met.

# 4. MODUS OPERANDI

## 4.1 Funding approaches and Call for proposals

The NRF will publish a call for proposals for the FBIP as part of their "One Call for Proposals" during 2026 and all applications must be submitted electronically via the NRF Online Submission System at https://nrfconnect.nrf.ac.za/ . The call will be accompanied by a detailed NRF General Application Guide. The FBIP Call Framework document and FBIP Application Instruction Guidelines will be available on the NRF website.

All applications must be endorsed by the research office of the principal applicant before submission to the NRF. NRF closing dates will be published in the "General Application Guide" and it is the responsibility of each applicant to familiarise themselves with the internal closing dates, set by their institution in order to meet the NRF closing date included in the NRF's "General Application Guide". Incomplete or late submissions will not be accepted.

There are two different funding approaches in the Programme and applicants will be invited to apply for funding for: (1) Large grants for integrated team projects and (2) Small grants for strategic projects:

**This funding call is specifically aimed at Large Grants:**

**1. Large grants for integrated team projects**

The call for proposals is a two- step process managed through the NRF.

(i) Concept document call, evaluation and selection for full development (First Review Period); Concept notes will be assessed by a panel within 2-3 months after submission and a limited number (usually 2-4) will be selected for further development into full proposals in the same year.

(ii) Development of full proposals for selected concept documents (Second Review Period); Evaluation and selection of 2 proposals for funding for a three-year period (2026-2028).

## 4.2 Programme focus area

### 4.2.1 Large, integrated team projects

Projects falling within the following seven focus areas have been identified for support (selection in 2026 and implementation in 2026-2028):

**Environmental sustainability:**

i. **Multi-taxa surveys, with the geographic area clearly identified on the basis of a large scale proposed development, or neglected areas for which no spatial plan exists for biodiversity, resulting in potentially poor decisions or management**. The NDP and the National Strategic Infrastructure Plan as well as provincial spatial development plans and biodiversity strategy and action plans and bioregional plans for metros can be accessed on the internet to provide a context for sites selected for surveys. Local community involvement in the project must be a core component. The survey must deliver occurrence records, DNA barcodes, and species pages.

ii. **Surveys of the biodiversity of a particular habitat / biome that is neglected and important for ecosystem services, across a broad geographic area.** There must be a strong rationale for how the survey data will be used in managing or rehabilitating habitats. Examples of the type of habitats are soil habitats, wetlands, urban environments.

**Agro-biodiversity and food security:**

iii. **Crop Wild Relatives (CWR): taxonomy and distribution of crop wild relatives in South Africa.** A preliminary checklist of priority CWR has been developed for South Africa as part of a National Strategy & Action Plan for Crop Wild Relatives. The understanding of the distribution of CWRs should be enhanced by additional databasing of collections, and surveys that expand current collections of herbaria and genebanks, species must be barcoded according to IBOL requirements, taxonomic / nomenclatural problems must be resolved, and existing species pages enhanced with images and additional information.

iv. **Crop and livestock pests, parasites and disease vectors, with a focus on indigenous taxa**: documenting and describing these, understanding their distribution and changes in this through data capture from historical collections and new surveys; includes taxonomic studies, occurrence records, specimens for collections, identification keys / DNA barcodes and species pages. Must be multi-taxa and of a sufficiently broad scope to justify the three year period and financial investment.

**Human health and biocultural diversity:**

v. **Vectors of disease, parasites, pathogens, allergens. Documenting diversity** – including characterisation, building collections, data mobilisation, species pages, understanding changes in historical distribution and predicting future spread.

vi. **Cultural significance of biodiversity:** documenting biodiversity from a cultural diversity perspective in order to promote social cohesion, increase awareness of cultural value of biodiversity, and preserve biocultural diversity. This theme should include indigenous names and classification systems, traditional use for medicinal, food and other uses, and should result in species pages and additional information for species pages where these already exist, as well as occurrence records and DNA barcodes.

**Taxonomic revisions of priority South African taxa:**

vii. **The purpose of this theme is to substantially shift the taxonomic knowledge of taxa that require large scale revision, and that have a large component of their diversity in South Africa / have high proportion of South**

**African endemics and that include economically or ecologically important species.** The revision should include different approaches (morphological and molecular), and lead to descriptions of new taxa and re-descriptions where required, DNA barcodes, compilation / updating of species pages, mobilisation of collections data and upgrading of existing data in terms of georeferencing and nomenclatural updates, and may include surveys where these are justified and can produce material that is included in the revision. Representative specimens and associated samples (eg. DNA extracts) must be deposited in appropriate institutions. A collaborative team approach, which may include international expertise, is required. The list of priority families and genera for plants should be used to identify potential plant taxa for revision (see https://www.sanbi.org/biodiversity/foundations/biosystematics-collections/biosystematics-strategies/for the list of genera). For animals, entire invertebrate orders or families can be selected for revision.

## 4.3. Applicant eligibility

Researchers working towards the generation and mobilization of foundational biodiversity knowledge are the priority target group for accessing programme funding.

Applicants (Principle investigator) must be either:

- full-time researchers based at NRF-recognised research institutions[1] in South Africa.

OR

- part-time researchers on contract at NRF recognised research institutions[1] in South Africa, on condition that the appointment is for (at least) the duration of the project applied for in the submission. The length of the contract should be stated on the application form. Salaries must be paid by the research institution, and the primary employment of the individual concerned must be at that institution.

OR

- retired researchers affiliated to an NRF recognised research institution[1] provided that institutional support is evident in the form of an employment contract, office space, administrative support, access to research equipment and space. The institution will have to ensure that a minimum of six months are spent at the facility for the purpose of research and research capacity development. The researchers must have a research publication track record and must be actively supervising postgraduate students at present.

Who are **NOT** eligible to apply for grants:

- **Large, integrated team projects (including concept notes)**: Postdoctoral fellows, students, technical and support staff.

### 4.4 Research team structure and rules of participation

Only researchers based at NRF recognised research institutions[1] in South Africa are eligible to apply as a principal investigator (4.3). Co-investigators, research associates and collaborators can be based at other institutions or be associated with appropriate citizen scientist associations.

[1] NRF recognised research institutions are declared (and gazetted) by the Department of Science and Innovation and include Public South African (SA) Higher Education institutions (HEIs), Science Councils, Museums, and other research performing public institutions.

The principal investigator must be an active researcher who takes intellectual responsibility for the project, its conception, any strategic decisions called for in its pursuit, and the communication of results. The principal investigator must have expertise and a track record in the field dealt with in the proposal, and they must play an intellectual leadership role in both the development of the proposal and the implementation of the activities covered in the project. The principal investigator must have the capacity to make a serious commitment to the project and cannot assume the role of a supplier of resources for work that will largely be placed in the hands of others. S/he will take responsibility for the management and administration of resources allocated to the application.

A co-investigator is an active researcher who provides significant commitment, intellectual input, relevant expertise into the design and implementation of the research application. S/he will be involved in all or at least some well-defined research activities within the scope of the application. South African-based co-investigators are eligible to receive NRF funds from the grant if the team's application is successful. Postdoctoral fellows, students, technical and support staff should NOT be listed as co-investigators.

Research associates / collaborators are individuals or groups who are anticipated to make relatively small but meaningful contributions to the research endeavours outlined in the application. Research associates/collaborators will not actively participate in the design and implementation of the research application. They are not considered a part of the core research team.

### Transformation

The need for greater participation of women and black scientists in foundational biodiversity information related work is of paramount importance. Applicants are required to carefully consider how their proposed project will contribute to transformation of the field. Possible contributions include, but are not limited to:

- Special support offered to disadvantaged students
- Significant involvement of women, black students and researchers
- Collaboration with Historically Disadvantaged Universities
- Specialist training offered to postgraduate students.

## 4.5 Eligibility criteria

### 4.5.1 The following eligibility criteria are applicable for the large integrated team projects:

- Applicant eligibility as described in Section 4.3 applies.
- The core research team must consist of a principal investigator (i.e. applicant) and one or more co-investigator(s). The project may also include research associates / collaborators. The research team structure rules are described under 4.4.
- Funding will only be allocated to projects involving at least four institutions, but teams must be led by an identified principle investigator. Funds will be made to a recognised research institution under the name of the principle investigator who can allocate part of the grant to team member institutions.

- Projects must include a minimum of five team members from a minimum of four institutions, but teams that involve all relevant specialists will be favoured.
- Project teams must include at least two young researchers (younger than 40 at the time of application) and ensure adequate mentorship and involvement as necessary.
- Project teams must include at least one researcher from a Historically Disadvantaged Institute (HDI).
- **Note:** Contribution to equity in terms of race and gender of young and senior researchers will be positively considered as part of the capacity development / transformation criteria.
- Projects should include postgraduate training. A minimum of three postgraduates involved in each large funded project are recommended (including MSc and PhD).
- Projects must identify specific users of the knowledge generated and information co-ordinated and must indicate how engagement with users has been or will be addressed to ensure that data needs are met in terms of what is generated and mobilized and how it is accessed by users.
- Projects must clearly state the impact of the project on understanding and mitigation of global change and / or the bio-economy.
- Projects must be in line with one of the seven focus areas identified (4.2.1).
- Projects must generate primary biodiversity data sets according to the Darwin Core standard.
- Projects must contribute to the compilation of species pages according to the specifications provided by the FBIP.
- Projects must produce DNA barcodes for species, using the recognised barcoding gene/s for the taxon and must submit data to BOLD.
- Projects must contribute to science engagement with the aim of creating a society that is knowledgeable about science, critically engaged and scientifically literate.
- Successful applicants must sign the NRF Conditions of Grant (CoG) document attached to the award letter.
- The data generated or mobilized through the grant must be provided to the FBIP / SANBI at the end of the project. This is to ensure that the data can be archived, integrated and made accessible for a range of applications and products.
- Data deliverables as stated in the proposal must be made available at the end of each year, and all data must be submitted six months after the end of the three-year project (i.e. 42 months after the signing of the Conditions of Grant document).
- Grantholders who have not submitted data within the specified timeframes from previous grants will not be eligible to receive further funding from the FBIP until the data have been submitted.

## 4.6 Specific FBIP funding conditions

**4.6.1** **Ethics:** All activities undertaken by the research team will need to meet the required ethics standards of the contracting institution. FBIP management reserves the right to request ethics clearance certification from the Principle investigator (PI).

**4.6.2** **Research permits:** Obtaining research permits is wholly the responsibility of the PI. Proposals must indicate that due consideration has been given to all permitting requirements for implementation of the project. This information

must be included under the ethics section of the proposal. FBIP management reserves the right to request copies of the permits from the PI. **Note:** Any material sent outside the country for analysis must have the required Material Transfer Agreements and export permits. Collection of any animal or microbial materials must have considered the Section 20 permit from the Department of Agriculture, Land Reform and Rural Development ( https://www.nda.gov.za/Branches/Agricultural-Production-Health-Food-Safety/Animal-Health/disease-control/research).

4.6.3 **Curation of samples**: DNA samples and specimens must be deposited in national or openly accessible collections / biobanks. **Note**: University collections are usually not openly accessible and therefore only duplicates should be deposited in those collections.

**Research outside South Africa:** Only research within South Africa (including Prince Edward and Marion Islands) is eligible for FBIP grants.

4.6.4 **Data submission:** As a requirement, data sets generated through the proposed research projects must be made publicly available. Data sets must be submitted to FBIP staff unless the data have been submitted directly to BOLD. In the latter case, lists of specimens with links to the BOLD accession number must be provided to the FBIP. Where appropriate the data will be integrated into the SANBI Integrated Publishing Toolkit or submitted to a global repository such as GBIF. Data must be made available at the end of the project funding period. In the case of integrated team projects, data deliverables as stated in the proposal must be made available at the end of each year, and all data must be submitted six months after the end of the three- year project (i.e. 42 months after the signing of the Conditions of Grant). It is essential that applicants consider the resources required to ensure that data meet the standards specified and that they are delivered within the Programme time frames. **Note:** Applicants could consider budgeting for technical support to assist with this aspect of the project (for rates please refer to 5.3.2). For the compilation of species pages, these could be included as an appendix in postgraduate student theses in order to ensure that they are compiled.

4.6.5 **Third party data:** For projects involving the capturing of third party data (i.e. not belonging to the Grantholder or Grantholder Institution) that will be delivered to the FBIP, all data owners will need to sign a consent form (example of Third Party Data Release Agreement attached, Appendix C and/or D). The consent form will be provided by the NRF upon awarding the grant. The signed consent form must be submitted to the FBIP Manager.

4.6.6 **Formats and standards for data submission:** Data submitted must conform to FBIP requirements which are aligned with global standards (see Appendix A).

4.6.7 **Public release of data:** Conditions and requirements in terms of the release of data generated or mobilized through FBIP funded grants are provided in the attached "FBIP Data Release Requirements" (Appendix B).

4.6.8 **Acknowledgements:** All project outputs (publications, etc.) must formally acknowledge the Foundational Biodiversity Information Programme (FBIP) in addition to the NRF.

4.6.9 **Reporting & Project follow-up:** The FBIP has reporting requirements over and above the annual progress reports required by the NRF. Following the award of the grant, deliverables will be agreed to between the PIs and the FBIP

Management Team. Grantholders will be expected to provide email progress updates and additional reports to the FBIP Management team on request. The purpose of the progress updates is to ensure that if required, corrective measures can be implemented to meet the stated objectives and produce the outputs within stipulated timeframes and the FBIP management team collates grantholder reports to inform overall reporting to the DSI.

**4.6.10** **DSI Key performance areas (KPIs)**: FBIP is contractually bound to the DSI to produce deliverables such as:

- student numbers according to demographic targets;
- peer-reviewed papers;
- foundational biodiversity data outputs.

## 4.7 Application and assessment process

**Table 1: Application and assessment process guidelines**

| Description | Processes and guidelines |
|---|---|
| **Where to apply?** | All applications must be submitted via the NRF Online Submission System https://nrfconnect.nrf.ac.za/. |
| **Documentation required** | All documents must be submitted online and these include the following:<br>1. Completed application form (applicants must please ensure that their Curriculum Vitae are updated on the NRF Online Submission System).<br>2. Required documents (as described below) and any other additional supporting documents.<br><br>**Concept notes:**<br>Any supporting documentation should this be deemed necessary.<br><br>**Full proposals of large, integrated team projects:**<br>You are required to upload the following supporting documents:<br>(i) Letters from co-investigators and collaborators confirming their participation in the proposed research.<br>(ii) Workplan table / chart including a detailed breakdown of activities, timeframes, and responsibilities.<br>(iii) List of participants and postgraduate students anticipated to be involved in the project. As far as possible, please indicate level, role and for students their supervisor, project title, and bursary source. |
| **Assessment process** | Proposals submitted will be peer-reviewed by a panel. Panels will be selected based on their broad experience in terms of the respective knowledge field and their research standing. Concept notes will be assessed by a panel within two to three months after submission and a limited number (usually 2-4) will be selected for further development into full proposals in the same year. |
| **Assessment criteria** | Reviewers will evaluate proposals using the FBIP panel assessment score card and criteria. Consult Tables 2, 3, 4 & 5 below for details on the criteria and score card used for the different types of grants as well as their relative weighting. |
| **Funding decision process** | In general, the NRF's funding decisions are informed by the review panels' total weighted score for each assessed application. The NRF will fund the top-scoring applications within the programme specific budget. Awards are subject to availability of funds and the quality of proposals. All grants allocated are subject to compliance with the NRF Conditions of Grant (CoG) attached to the Award Letter to successful applicants. |
| **Feedback** | In principle, feedback on the assessment of the application is regarded as a crucial value-adding function of the NRF. In a limited number of cases, feedback from panel members who evaluated your application will be sent. These selected comments will be provided to give insight into some of the thinking that informed the grant decision-making process, and to give constructive support to applicants. |

**Table 2: FBIP grading for proposal assessment**

| Scoring scale to be used | | |
|---|---|---|
| **Score** | **Meaning of score** | **Notes** |
| 4 | Excellent | It is clear that the proposed research and application could not be improved within the specific context. |
| 3 | Above average | The proposed research and application is above average but could still be improved within the specific context. |
| 2 | Average | Both the research application and proposed research is average within the appropriate context. |
| 1 | Below average | The application and proposed research is below average. This could be improved with amendments/revisions. |
| **Context:** The scoring process must be made with sensitivity to the context in which the proposal is made. The context will include the research field or discipline. It will also include other relevant influences such as societal and institutional textures. | | |

**Table 3: Detailed Foundational Biodiversity Information Programme (FBIP) Descriptive Score Card:**

| Review Criteria/ Weight | Scorecard for the Assessment of Foundational Biodiversity Information Programme (FBIP) 2026– Large Grants | | | | |
|---|---|---|---|---|---|
| | Four Point Rating Scale, Weight and Descriptor | | | | |
| | **Description** | **4 = Excellent** | **3 = Above Average** | **2 = Average** | **1 = Below Average** |
| **Track Record of Applicant (10%)** | **Past record in research (5%)**<br>- Past record: The applicant's past record in research which could include peer reviewed publications, conference proceedings and student supervision.<br>- Expertise: The applicant's expertise in foundational biodiversity information that will enable the applicant to successfully undertake the proposed research. | Past record: Panel to use own discretion for established researchers. *Early career scientists: >8 papers; >4 MSc students supervised (completed); > 6 conference presentations.<br><br>-Expertise: The applicant has worked in the study area/the proposed work is an extension of the applicant's work and is considered an expert. Has produced several (international/national) research outputs in the study area.<br><br>*Early career scientists: 40 years or younger, who have held the doctorate or equivalent qualification for less than five years at the time of application. | Past record: Panel to use own discretion for established researchers. *Early career scientist: 5-8 papers; 2-4 MSc students supervised (completed); 4-6 conference presentations.<br><br>-Expertise: The applicant has worked in a similar study area and is familiar with the proposed methodology. Some of the research outputs reflected under the track record result from the applicant's previous work.<br><br>*Early career scientists: 40 years or younger, who have held the doctorate or equivalent qualification for less than five years at the time of application. | Past record: Panel to use own discretion for established researchers. *Early career scientists: 3 papers; 1 MSc student supervised (completed); 1-2 conference presentations.<br><br>- Expertise: The proposed study area is new to the applicant, but the applicant's collaborators/research group have produced outputs in the area and have expertise in the study area.<br><br>*Early career scientists: 40 years or younger, who have held the doctorate or equivalent qualification for less than five years at the time of application. | Past record: Panel to use own discretion for established researchers. *Early career scientists: <3 papers; No students supervised; 1-2 conference presentations.<br><br>-Expertise; The proposed study area is new to the applicant/ collaborators/research group. The applicant has produced no outputs, nor has any experience been acquired by the research group/collaborators.<br><br>*Early career scientists: 40 years or younger, who have held the doctorate or equivalent qualification for less than five years at the time of application. |

| Review Criteria/ Weight | Scorecard for the Assessment of Foundational Biodiversity Information Programme (FBIP) 2026– Large Grants<br>Four Point Rating Scale, Weight and Descriptor | | | | |
|---|---|---|---|---|---|
| | **Description** | **4 = Excellent** | **3 = Above Average** | **2 = Average** | **1 = Below Average** |
| | | | | | |
| | **leadership and or management (5%)**<br>- The applicant's previous leadership and management experience that will enable the applicant to successfully undertake such a large-scale project. | Significant experience in leadership and management. Has managed / lead similar large projects (at least one, multi-year, multimillion Rand value) involving other researchers and postgraduate students (at least 15), including those from outside own institution (at least 5 other institutions); project successfully completed. | Adequate experience. Has managed / lead projects involving at least 5-9 other researchers, including from outside own institution. Or manages large lab / team (>15 staff and postgraduate students) within own institution. | Minimal experience. Potential for growth. Would need institutional/team support. Has managed medium sized projects with <5 collaborators / postgraduate students, mostly within own institution / department / unit. | Inadequate experience. No experience in managing a team of any size. |
| **Proposal and Alignment to Programme and focus areas (40%)** | **Quality of Proposal (20%)** | **The proposal is exceptionally strong, well conceptualised, strongly motivated and meets the requirements:**<br><br>-The objectives are clearly stated and are appropriate to meet the aims of the study. The aim and objectives align with a problem statement, align strongly with the objectives of the Programme and align with a specified national strategy.<br><br>-Although literature review included to illustrate relevance and that the work has not been previously done (ie. the current status of knowledge is provided and addresses the existing gaps in the extant literature). Includes citations to relevant literature with a reference | **The proposal is strong, clearly conceptualised and motivated and addresses most of the requirements:**<br><br>-The research question, problem statement and rationale are clear. The objectives are stated and are appropriate to meet the aims of the study. Attempted to align the aim and objectives with a problem statement and/or the objectives of the Programme and/or a specified national strategy.<br><br>-Supporting literature satisfactory illustrate relevance and that the work has not been previously done (ie. the current status of knowledge is provided). Includes most citations to relevant literature with a reference list provided.<br><br>-Proposed activities align with objectives, but some linkages could be | **The proposal partially addresses the requirements in this section; some key issues are not adequately addressed:**<br><br>-The research question, problem statement and rationale could be refined. The objectives are suitable but only partially address the study aim. Aims and objectives marginally aligns with the problem statement and/or with the objectives of the Programme and/or with a specified national strategy.<br><br>-The supporting literature is only slightly relevant/some important references are not included/or are outdated. It is unclear which gaps in the extant literature are being addressed.<br><br>-Activities are loosely connected to stated objectives, with some inconsistencies.<br>Objectives are broad, partially misaligned, or insufficiently linked to deliverables.<br>-Limited or superficial | **The proposal is poorly formulated & provides inadequate information or has many discrepancies to enable a fair evaluation. Unclear about what is/are to be achieved:**<br><br>-The problem statement and the rationale are not included/or are unclear. Aims and objective poorly aligned with the problem statement and/or with the objectives of the -Programme and/or with a specified national strategy. The objectives are misaligned with the study aims/not stated.<br><br>-The literature is irrelevant and outdated/ not cited/referenced. Current status of knowledge is unclear.<br><br>-Poor alignment between aims, objectives, and proposed activities.<br>-Objectives unclear, contradictory, or not achievable within scope. |

| Review Criteria/ Weight | Scorecard for the Assessment of Foundational Biodiversity Information Programme (FBIP) 2026– Large Grants | | | | |
|---|---|---|---|---|---|
| | Four Point Rating Scale, Weight and Descriptor | | | | |
| | Description | 4 = Excellent | 3 = Above Average | 2 = Average | 1 = Below Average |
| | | list provided.<br><br>-The proposed activities are fully coherent and directly aligned with clearly articulated aims and objectives.<br>Objectives are specific, measurable, and logically structured to achieve FBIP strategic outputs.<br>Demonstrates a strong conceptual and technical understanding of foundational biodiversity knowledge generation, including:<br><br>species occurrence data (Darwin Core compliant), DNA barcoding standards (IBOL/BOLD requirements),<br>species page compilation, data mobilisation, integration, and dissemination.<br>Methodology is rigorous, clearly described, and appropriate for achieving stated objectives.<br><br>-Scientific merit is high, with strong theoretical grounding and justification.<br>Includes citations to relevant literature with a reference list provided.<br>-Clear articulation of data sources, sampling design, analytical approaches, and quality control measures.<br>Integration across institutions is scientifically justified, not merely administrative. | strengthened or clarified.<br><br>-Objectives are clear but may lack precision or measurable indicators.<br>-Demonstrates a good understanding of foundational biodiversity knowledge generation, though some technical aspects (e.g., data standards, integration pathways) may lack depth.<br>-Methodology is generally appropriate but may lack detail in the sampling design, analytical approach, or data-handling procedures.<br>-Scientific merit is evident, but novelty or contribution could be better articulated.<br>Some assumptions are not fully justified.<br>-Minor gaps in methodological clarity or feasibility.<br>-Overall, a strong proposal with moderate areas for refinement. | understanding of foundational biodiversity data requirements (e.g., unclear data standards, vague integration plans).<br>-Methodology is described in general terms without sufficient technical detail.<br>-Scientific rationale is present but underdeveloped.<br>-Weak articulation of how outputs will be generated, curated, or disseminated.<br>-Analytical methods are not clearly linked to research questions.<br>-Feasibility is dependent on assumptions that are not adequately justified.<br>-Overall, the proposal is scientifically plausible but requires significant strengthening in alignment and methodological clarity. | -Limited understanding of foundational biodiversity knowledge generation and FBIP requirements.<br>-Methodology vague, inappropriate, or insufficiently described.<br>-Scientific merit is weak or poorly justified.<br>-No clear link between proposed work and required FBIP outputs.<br>-Major gaps in research design, sampling strategy, or data management approach.<br>-Overall, the proposal is scientifically underdeveloped and misaligned with Programme expectations. |

| Review Criteria/ Weight | Scorecard for the Assessment of Foundational Biodiversity Information Programme (FBIP) 2026– Large Grants | | | | |
|---|---|---|---|---|---|
| | Four Point Rating Scale, Weight and Descriptor | | | | |
| | Description | 4 = Excellent | 3 = Above Average | 2 = Average | 1 = Below Average |
| | | -Shows awareness of knowledge gaps and explains how the project advances the field.<br>Risk factors and methodological limitations are acknowledged and mitigated.<br>-Overall, the proposal is scientifically robust, strategically aligned, and methodologically sound. | | | |
| | **Alignment to Programme (20%)**<br>Foundational biodiversity knowledge / information generation, co-ordination, dissemination and application in line with the outputs required for FBIP.<br>Project concept within one of the large grant focus areas identified; | The concept is strongly aligned to the FBIP and falls within one of the large grant focus areas. | The concept is adequately aligned to the FBIP and falls within one of the large grant focus areas. | The concept is marginally aligned to the FBIP and/or one of the large grant focus areas. | The concept is poorly/not aligned to the FBIP and falls outside the scope of one of the large grant focus areas. |

| Review Criteria/ Weight | Scorecard for the Assessment of Foundational Biodiversity Information Programme (FBIP) 2026– Large Grants | | | | |
|---|---|---|---|---|---|
| | Four Point Rating Scale, Weight and Descriptor | | | | |
| | Description | 4 = Excellent | 3 = Above Average | 2 = Average | 1 = Below Average |
| Feasibility of the project (20 %) | ***Workplan (10%)***<br><br>Is there a workplan with reasonable timeframes for activities and with responsible team members identified?<br>Is the project achievable within a 3-year period relative to the team and resources (funds, facilities) available?<br>Does the team have the required capacity/experience to enable the achievement of the outputs?<br>Are all relevant researchers /institutions included in the workplan? | The project meets the requirements of these criteria:<br>-Workplan with reasonable timeframes and responsible team members identified.<br>-Activities can be completed successfully within the 3-year period.<br>-The project is achievable with the available funds and resources.<br>-The team has the necessary capacity/experience, and all relevant researchers/institutions are included in the workplan. | The project has a good probability of success. Correctable deficiencies may exist in one of the following areas:<br>- Workplan with reasonable timeframes and responsible team members identified.<br>- Activities and timeframes feasible within the 3-year funding period.<br>-Sufficient funds and resources available to undertake the proposed research activities.<br>- Capacity of team sufficient to achieve the proposed project outputs.<br>- Relevant researchers/institutions are included in the workplan. | The project has an average to low probability of success. Significant weaknesses and deficiencies exist in one of the following areas:<br>- Workplan with reasonable timeframes and responsible team members identified.<br>-Activities and timeframes feasible within the 3-year funding period.<br>-Sufficient funds and resources available to undertake the proposed research activities.<br>- Capacity of team sufficient to achieve the proposed project outputs.<br>-Relevant researchers/institutions are included in the workplan. | The project is not feasible as it fails to meet the minimum criteria:<br>-Workplan vague.<br>- Timeframes not in line with the 3-year funding period.<br>-The project is not achievable with the available funds and resources.<br>- The team do not have the necessary capacity to undertake the proposed research activities.<br>-Relevant researchers/institutions were not included in the workplan.<br>-Insufficient details were provided to assess the feasibility of the project. |

| Review Criteria/ Weight | Scorecard for the Assessment of Foundational Biodiversity Information Programme (FBIP) 2026– Large Grants | | | | |
|---|---|---|---|---|---|
| | Four Point Rating Scale, Weight and Descriptor | | | | |
| | Description | 4 = Excellent | 3 = Above Average | 2 = Average | 1 = Below Average |
| | ***Budget (10%)*** | -The budget is fully aligned with the proposed activities and outputs.<br>-Costs are realistic, justified, and detailed per activity.<br>-Clear linkage between expenditure and deliverables (e.g., barcoding numbers, species pages, surveys).<br>-International and sequencing costs comply with FBIP thresholds, i.e., it do not exceed 30% of the total grant.<br>-No ineligible costs included.<br>-Demonstrates strong value-for-money and return on investment.<br>-Overall, the budget is realistic, justified, and optimally structured. | -Budget is generally appropriate and aligned with activities.<br>-Minor areas require clarification or stronger justification.<br>-Some cost estimates could be more detailed.<br>-Overall, reasonable and feasible within funding limits.<br>-Overall, a sound budget with minor improvements needed. | -Budget broadly matches activities but lacks detailed justification.<br>-Some cost items appear inflated or insufficiently explained.<br>-Weak linkage between requested funds and quantified outputs.<br>-Limited demonstration of return on investment.<br>-Overall, the budget is adequate but requires revision and clearer justification. | -Budget poorly justified or misaligned with project scope.<br>-Includes ineligible costs or exceeds allowable thresholds.<br>-Major inconsistencies between the workplan and financial allocation.<br>-Poor value-for-money demonstration.<br>-Insufficient detail to assess feasibility.<br>-Overall, the budget requires substantial revision. |
| **Outputs and Impacts (30%)** | ***Outputs (15%)***<br>What are the anticipated outputs (quantity and type)? Projects must contribute to the FBIP target deliverables (i.e. a high return on investment in terms of number of data deliverables is envisaged, such as records generated / mobilised and/or; species pages compiled and/or; species / specimens barcoded using the recognized barcode gene/s. | The proposed project has excellent potential to contribute substantially to the FBIP target deliverables. | The proposed project has potential to make a good contribution to the FBIP target deliverables. | The proposed project has limited potential to contribute to the FBIP target deliverables. | The proposed project has a very low potential to contribute to the FBIP target deliverables. |

| Review Criteria/ Weight | Scorecard for the Assessment of Foundational Biodiversity Information Programme (FBIP) 2026– Large Grants | | | | |
|---|---|---|---|---|---|
| | Four Point Rating Scale, Weight and Descriptor | | | | |
| | Description | 4 = Excellent | 3 = Above Average | 2 = Average | 1 = Below Average |
| | ***Impacts (15%)***<br>What will the impact of the outputs be on global change understanding and / or the bio-economy?<br>- What will change because the project has been done?<br>- Are the stated impacts realistic? | The envisaged potential impact on global change and/or the bio-economy is strong and well-aligned to the FBIP. | The envisaged impact on global change and/or the bio-economy is realistic and aligned to the FBIP. | The potential impacts on global change and/or the bio-economy is not considered strong / well-aligned to the FBIP. | The potential impacts on global change and/or the bio-economy are weak and not aligned with the FBIP. |

**Table 4: FBIP panel assessment criteria and scorecard: Large integrated team projects (Concept notes)**

| Foundational Biodiversity Information Programme: Concept notes<br>**Note:** * Alignment to Programme and Focus areas & Outputs & Impact must score a minimum of 3 to be assessed further | | | | | |
|---|---|---|---|---|---|
| **Criteria** | **Sub-criteria** | **Details** | **Score /4** | **Weight** | **Hurdle (Pass/Fail)** |
| Track record of PI (20%) | Past record in research | - Publications, conference presentations; | | 10% | |
| | - Project management experience. | -Leadership/Management | | 10% | |
| Proposal (20%) | Quality of proposal | - Are the proposed activities in line with the objectives?<br>- Does the proposal indicate a solid understanding of foundational biodiversity knowledge generation and information sources and requirements. | | 20% | |

| | | | | | |
|---|---|---|---|---|---|
| | | - Is there scientific merit? Are aims and objectives aligned? Is the methodology clearly articulated. . | | | |
| Alignment to Programme and focus areas (10%) | Alignment to Programme | - Foundational biodiversity knowledge / information generation, co-ordination, dissemination and application in line with the outputs required for FBIP.<br>- Project concept within one of the focus areas identified; | | 10% | |
| Feasibility (20%) | Workplan | - Is the project achievable within a 3-year period relative to the team and resources (funds, facilities) available?<br>- Is there a workplan with reasonable timeframes for activities and with responsible team members identified?<br>- Does the team/PI/applicant have the required capacity/experience to enable the achievement of the outputs?<br>Are all relevant researchers /institutions included in the workplan? | | 10% | Minimum score of 3 is required |
| | Budget | -Is there sufficient detail in the budget to allow assessment of feasibility?<br>-Is the budget reasonable considering the proposed activities and outputs? | | 10% | Minimum score of 3 is required |
| * Outputs and Impacts (30%) | Outputs (15%) | - What are the anticipated outputs (quantity and type)?<br>- What will the impact of the outputs be on global change understanding and / or the bio-economy? | | 15% | Minimum score of 3 is required |

| | | | | | |
|---|---|---|---|---|---|
| | Impacts (15%) | - What will change because the project has been done?<br>- Are the stated impacts realistic? | | 15% | Minimum score of 3 is required |

**Table 5: FBIP panel assessment criteria and scorecard: Large integrated team projects (Full proposal)**

| Criteria | Sub-criteria | Details | Score / 4 | Weight |
|---|---|---|---|---|
| Track record and team | Past record in research and leadership / management of team leader | - Publications, conference presentations.<br>- Experience in management of large, multi-institutional projects. | | 5% |
| | Team members specified with expertise and role in project | - Different institutions represented (minimum of five team members from a minimum of four institutions).<br>- Relevant expertise involved.<br>- If the concept aims to include role players along the entire value chain has this been adequately addressed? | | 5% |
| Proposal | Quality of the proposal document | - Are the proposed activities in line with the objectives?<br>- Does the proposal indicate a solid understanding of foundational biodiversity knowledge generation and information sources and requirements | | 20% |
| Alignment to Programme and focus | Alignment | - Is there a clear aim and objectives that align with the objectives of the Programme? | | 20% |

| | | | | |
|---|---|---|---|---|
| *Feasibility | Workplan | - Is there a detailed workplan with specific activities and outputs?<br>- Is there a clear schedule and reasonable timeframes for activities and outputs?<br>- Are the roles and contributions of all team members specified?<br>- Have ethics and permit requirements been specified and adequately considered? | | 10% |
| | Budget | - Is there sufficient detail in the budget to allow assessment of feasibility?<br>- Is the budget reasonable considering the proposed activities and outputs? | | 10% |
| Impacts | Output | - Are the outputs in line with FBIP targets?<br>- What is the extent of the outputs (how many of each type of output will be produced)? | | 15% |
| | Broader impact | - Have the impacts on global change and / or the bio-economy been specified? Are these realistic?<br>- Have the users of the knowledge / information been identified?<br>- Will there be a direct or indirect change in global change understanding / mitigation or economic opportunities because of the project?<br>- Has consideration been given to the format in which the knowledge / information will need to be made accessible (even if this is not done by the project)?<br>- Will there be any science engagement that will contribute to a society that is knowledgeable about science, critically engaged and scientifically literate? | | 15% |

### 4.8 Management of the Foundational Biodiversity Information Programme

SANBI is responsible for managing the implementation of the Programme in order to achieve the specified outputs in the Business and Strategic Plans. SANBI (Programme Manager) will liaise with the NRF Global Change (GC) Programme Director to report on the Programme to the DSI. The Strategic Science Mission (SSM) Unit of the NRF manage the grant call distribution, the online submission system, the panel review process, grant disbursement, tracking of expenditure by grant holders and reporting to the FBIP Programme Manager and GC Programme Director on expenditure. A Steering Committee provides strategic direction for the FBIP.

## 5. FINANCIALS

### 5.1 Funding model

The funding is allocated from the DSI to the NRF as ring-fenced funds as part of the Global Change Programme grant, which follows a three-year cycle. Operating funds are allocated from the NRF to SANBI on an annual basis.

### 5.2 Programme budget and ranges for the research grant

#### 5.2.1 Large integrated team projects:

- The range of funding available per project is R500,000 to R1.5 million per annum for a three-year period (R1,500,000 – R4,500,000 in total per project. The total amount of funding requested should not exceed R4.5 million in total with a maximum of R1.5 million in any one year. The grant covers research operating costs and postdoctoral fellowships and excludes postgraduate student support which will be covered separately by the NRF's Postgraduate Student Funding.
- Depending on funding availability, one or two full projects are selected for support for a three-year period, with the first transfer of funds being made in the year after the review process has been completed. Funding will be made available in annual instalments (maximum of R1.5 million per year) commencing in 2026.
- No funding is available for the development of the concept notes.
- Limited seed funding is available as a once off payment in order to assist teams whose concept note is selected for further development into full proposals (R20,000 per team).

## 5.3 Funding allocation guidelines

### 5.3.1 Postgraduate student support

The National Research Foundation (NRF) has developed a new Postgraduate Student Funding Policy that will use postgraduate student funding as a lever to address the challenges of inequity of access, success, and throughput. The policy is underpinned by the pursuit of research excellence in all of its dimensions and has transformation of the postgraduate cohort as the core objective. Its purpose is to retain high academic achievers in the system to pursue postgraduate studies up to the doctoral level, as part of a national drive to grow the next generation of academics to sustain South Africa's knowledge enterprise. The NRF is prioritising postgraduate students with research inclination, with the aim to grow the pool of early career researchers. Another motivation for this policy is to fast-track the development of postgraduate students in high-impact, priority and vulnerable disciplines critical for national socio-economic development.

From the 2021 academic year onwards, the NRF will be phasing out the block grant nomination process as well as the grantholder linked modalities of funding postgraduate students. All the postgraduate students will be expected to apply on the NRF Online Submission System by accessing the link: https://nrfconnect.nrf.ac.za/. This single entry point will allow the NRF to co-ordinate the applications that have not yet had the financial means test conducted, this financial means test will be conducted by Ikusasa Students Financial Aid Programme (ISFAP). Postgraduate students will be funded either at Full Cost of Study (FCS) or Partial Cost of Study (PCS) under the new policy. To ensure equity of access to postgraduate studies, financially needy students (i.e., those whose combined household income is R350 000 per annum or less) and students with a disability will be funded at FCS. Academic high fliers achieving a distinction or first- class pass will also be eligible for funding at FCS. International students as well as any other South African student who is not eligible to be funded at FCS will be eligible for PCS funding.

The students are expected to meet the NRF minimum entry requirement in order to be eligible for FCS or PCS as illustrated in Table 5 below.

**Table 5: Eligibility criteria for NRF postgraduate funding for FCS and PCS.**

| Study Level | Full Cost of Study<br>*(South African Citizens and Permanent Residents only)* | | Partial Cost of Study<br>*(South African Citizens; South African Permanent Residents and 5% Non-South African Citizens)* |
|---|---|---|---|
| | **Exceptional Achievers** | **Financially Needy & Students with Disability** | **Other** |

| | | | |
|---|---|---|---|
| **Honours** | • ≥ 75% Mark in Final Year of study | • ≥ 65% Mark in Final Year of study | • ≥ 65% Mark in Final Year of study |
| | **Honours students** must be **28** years of age or younger in the year of application.<br>Non South African Citizens are not eligible for Honours Scholarships. | | |
| **Masters** | • ≥ 75% Mark for Honours<br>• Completed Honours in one year | • ≥ 65% Mark for Honours<br>• Completed Honours in one year | • ≥ 65% Mark for Honours<br>• Completed Honours in one year |
| | **Masters students** must be **30** years of age or younger in the year of application. | | |
| **Doctoral** | • ≥ 75% Mark for Masters<br>• Completed Masters in two years | • ≥ 65% Mark for Masters<br>• Completed Masters in two years | • ≥ 65% Mark for Masters<br>• Completed Masters in two years |
| | **Doctoral students** must be **32** years of age or younger in the year of application. | | |

**In cases where a grade is not indicated, the application will not be considered for funding by the NRF.**

The NRF will allocates all postgraduate bursaries under its management control as follows:

- 95% South African citizens and permanent residents;
- 5% students from SADC countries and from the rest of the world; and
- 55% women.

The NRF disaggregates these targets for South African citizens and permanent residents as follows:

- 90% Black (African, Coloured, and Indian);
- 10% White; and
- 1% students living with a disability.

For further details on the NRF Postgraduate Funding policy, kindly refer to the framework document which is available on www.nrf.ac.za

### 5.3.2 Research-related costs:

All funding allocated through the Programme will be for research purposes under the auspices of the NRF standard grant and finance policies. The money is released on acceptance of the conditions of grant both by the applicant and his/her employing/affiliated institution.

Research related costs should be justified and correspond with the scope of the planned project activities and outputs. General guidelines are provided below.

#### Travel and subsistence

- International conference attendance: For a large grant team application, the NRF generally restricts the amount to R25,000 per person to a maximum of R50,000 per team year.

- International visits: These will be considered on a case by case basis and will be funded up to a maximum of R50,000 per project. Such visits must be integral to the research plan and strong motivations should accompany these requests, for example to visit an international collection to do data capture or to examine collections for a taxonomic study. Only outgoing visits will be considered depending on the availability of funding.
- Local conference attendance: Generally expenditure against this item is restricted to R5,000 per person (all costs). Support for local conference attendance could be requested for the Principle Investigator and for all listed co-investigators and postgraduate students.
- Local travel: The NRF does not stipulate any rate for mileage as this will depend on the rate which varies per institution/organisation. Applicants are requested to provide details of this rate as well as the estimated distance to be travelled within the given year. This travel should be well motivated and excludes travel to conferences mentioned above. Travel costs for travel outside of South Africa is not supported by the FBIP.
- Local accommodation: Accommodation costs relating to local travel for research purposes should be clearly motivated for each trip and estimated costs should not exceed a 3-star establishment.

### Materials & Supplies

- In cases where an applicant wishes to send samples overseas for DNA / other analyses, a sound rationale for this must be provided, explaining why the analysis cannot be done in South Africa. In such cases the international payment for services may not exceed 30% of the budget.
- Expenses related to supplementary barcodes (in addition to the standard core DNA barcodes) will be accepted if a motivation is provided and this indicates how the additional genes could improve the project and DNA diagnostics.

Generally, the NRF does not provide financial support for:

- Basic office equipment and consumables;
- Computers / laptops unless the computer is required for research itself and then it must be well motivated and will be funded up to a maximum of R25,000;
- Purchase and/or renewal of software licenses unless for specialized equipment and software licenses;
- Basic office stationery, photocopying costs, printing costs unless these items form part of the research tools;
- Indirect costs (overheads, project management and administration fees);
- Journal publication page charges, journal subscription costs and book costs;
- Telephone, fax and internet costs.

### Research/Technical/Ad hoc Assistants

- The grants may not be used for consultancy fees and this instrument does not provide funding for salaries of team members who are already employed.

- Requests for research / technical / *ad hoc* assistance should be treated with caution. The NRF encourages applicants to engage students to undertake the research rather than employing research consultants. This guideline however does not apply when specific and/or highly specialized research/technical expertise is required. This should be clearly motivated in the application and up to 50% of large- grants may be used as a payment for technical support for data mobilisation / cleaning, or student assistants for laboratory or field work. In the case of large integrated team projects, part of this allocation may be used to employ staff to assist with project management or data management.

  Please note: Administrative assistance does not qualify as technical assistance.

**Research Equipment**

- Funding for equipment will be limited to R100,000. Requisitions for large equipment items (>R100,000) should be submitted through the NRF's National Equipment Programme.

**Postdoctoral fellowship support:**

- Grantholder-linked postdoctoral fellowship support is only applicable for large, integrated team projects.
- Postdoctoral fellowship value (pro rata per month): R320,000 p.a. (max of 2 years)

**Science Engagement**

- Science engagement events should be limited to a maximum of R30,000 per annum.

### 5.4 Financial control and reporting of the Foundational Biodiversity Information Programme

Financial reporting is done by SSM; and a written approval for continuation of the large integrated projects will be given annually to the team leader of the project by the Programme Manager. Large, integrated team projects will be supported for up to three years on condition that:

- Sufficient progress is demonstrated annually through the submission of an annual Progress Report (PR);
- There is sufficient evidence of scientific outputs / outcomes and critical mass involved in the project.

## 6. MONITORING AND EVALUATION OF THE FOUNDATIONAL BIODIVERSITY INFORMATION PROGRAMME

### 6.1 Reporting

The Programme Manager and Global Change Programme Director integrate information quarterly and annually into overall reporting to DSI on Global Change Programme: Progress against outputs specified in the Performance Plan for the Programme (see table below); Total grant allocation and expenditure for the year (SSM) to report to Programme Manager and Global Change Programme Manager); Budget and expenditure against budget on items other than grants.

The achievement of the Programme targets is dependent on projects funded through the FBIP. The extent (quantity) of data in line with these targets is an important consideration in the assessment of proposals.

### 6.2 Timeframes for Programme evaluation

The Programme will be evaluated after three years. An evaluation panel (maximum of 3 members) will be constituted to evaluate the following:

- outputs of the Programme relative to the strategic objectives and targets,
- impact of the Programme in terms of the uptake and application of knowledge generated,
- financial aspects of Programme (administrative vs disbursement of grants),
- appropriateness of the governance structure and functioning.

### 6.3 Broad terms of reference for Programme evaluation

Evaluation of the Programme will require that the following be assessed:

- To what extent were the targets specified in the Strategic Plan and Business Plan of the Programme achieved?
- To what extent were the broader strategic objectives achieved?
- What has the impact on the Programme been in terms of research, decision-making, and economic opportunities?

This evaluation will require access to databases of outputs, but interviews with stakeholders who need and use the knowledge and information will also be required to allow a qualitative assessment.

The evaluation must also include an analysis of the expenditure in terms of administrative vs research operations vs capacity development, and an analysis of the governance structures and administrative efficiency and effectiveness.
The evaluation process should also include the identification of future priorities that need to be addressed in the projects funded.

### 6.4 Utilisation of the results of the Programme evaluation findings

The evaluation will be used to review and revise administration and governance of the Programme, to review and revise the strategic objectives and targets, and to review and revise the priority themes and approach to projects and grants.

### 6.5 Contact details

| REFER QUERIES TO: | |
|---|---|
| **Acting Programme Co-ordinator (for programme/content related queries):** | **Professional Officer (for technical and granting queries):** |
| Name: RJ Sebola<br>Tel: 012 002 5303<br>email: R.Sebola@sanbi.org.za | Name: Nocawe Ndayi / Thulani Mlotshwa<br>Tel: 012 481 4359 / 012 481 4188<br>email: NL.Ndayi@risa.nrf.ac.za/T.Mlotshwa@risa.nrf.ac.za |

## LIST OF ACRONYMS

| | |
|---|---|
| **CBD** | Convention on Biological Diversity |
| **DSTI** | Department of Science Technology & Innovation |
| **EoL** | Encyclopedia of Life |
| **FBIP** | Foundational Biodiversity Information Programme |
| **GC** | Global Change |
| **SSM** | Strategic Science Mission |
| **HDI** | Historically Disadvantaged Institutions |
| **IBOL** | International Barcode of Life |
| **NRF** | National Research Foundation |
| **PI** | Principle Investigator |
| **PR** | Progress Report |
| **KPI** | Key Performance Areas |
| **SANBI** | South African National Biodiversity Institute |
| **SABIF** | South African Biodiversity Information Facility |
| **SABI** | South African Biosystematics Initiative |

## APPENDIX A

### FOUNDATIONAL BIODIVERSITY INFORMATION PROGRAMME (FBIP)

### FORMAT AND STANDARDS FOR DATA SUBMISSION

**Data Templates, Format and Standards**

**February 2022**

1. **Species Checklist Format and Standards**
   Species checklists / checklist contributions must be submitted according to the Catalogue of Life (2013) standards and fields. Please see: https://www.catalogueoflife.org/content/contributing-your-data for details of the required fields. Data can be submitted to the FBIP in either MS Access or Excel format (template can be downloaded from the FBIP website: http://fbip.co.za/templates or from the FBIP on request.

2. **DNA Barcode Data**
   Grantholders undertaking DNA barcoding must use the standard protocols for their taxon, and must meet the required standards for recognized BARCODE data (see http://www.boldsystems.org/index.php/Resources)

   Data must be made publically accessible in the BOLD system. Microbial sequence data not accommodated in BOLD should be submitted to Genbank. Lists of specimens that have been barcoded with a reference to data in the BOLD or other recognized database must be submitted to the FBIP (template will be provided by the FBIP or it can be downloaded from the FBIP website: http://fbip.co.za/templates).

   The FBIP has created a BOLD campaign for all the FIBP funded projects. Data submitted to BOLD must be added to the existing FBIP Campaign (e.g. Foundational Biodiversity Information Programme). This is to group FBIP projects together to enable the FBIP to track the number of records submitted through the funded projects and also to track progress. Grantholders of FBIP funded barcoding projects must provide the FBIP campaign coordinator (BOLD name: Lita Pauw) limited access (viewing and analytical rights) to the project. The campaign coordinator will keep sequence data confidential until publishing. FBIP Campaign participants should create and manage their own projects on BOLD and they have controls on the distribution of data and how and when to publish the projects as per BOLD rules (there is a fixed time limit as to how long a project with barcode data can remain closed from public view).

3. **Species Pages**
   Species information can be captured in MS Access or Excel format, or on the Word template and submitted to the FBIP for dissemination via the SANBI portal and EoL where appropriate. A Word template with the headings / content categories are available on the FBIP website (http://fbip.co.za/templates) or from the FBIP on request.

4. **Specimen / Occurrence Data**
   The required standard for specimen or occurrence data is the "Simple Darwin Core". This is a subset of the terms that have common use across a wide variety of biodiversity applications and their use is critical for integration of data from different sources. The fields and descriptions for the Simple Darwin Core can be found at: http://rs.tdwg.org/dwc/terms/simple/index.htm. Not all the fields are critical for data to be submitted to the FBIP. An Excel template that includes the critical fields is available on the FBIP website (http://fbip.co.za/templates) or can be provided to Grantholders.

5. **Metadata**
   Each data set must be accompanied by the descriptive metadata required by the FBIP. The metadata fields are available on the FBIP website (http://fbip.co.za/templates) or from the FBIP on request.

## APPENDIX B

**FOUNDATIONAL BIODIVERSITY INFORMATION PROGRAMME (FBIP)**

**DATA RELEASE REQUIREMENTS**

**November 2017**

The SANBI Biodiversity Information Policy Framework provides legal principles and guidelines on managing biodiversity information. Through this Framework SANBI strives to ensure easy access to information whilst simultaneously providing protection to sensitive data and maintaining intellectual property rights.

**In terms of the release of data from the FBIP grant recipients/data publishers a number of requirements are provided below:**

**Public Release of Data**

- Biodiversity data accessible via the SANBI network are openly and universally available to all users. All grantholders are to agree in writing that data produced through the use of FBIP funding can be made publicly accessible without restriction, but attribution is required so that the data provider is acknowledged by all users of the data.
- Individuals and institutions must agree to make the data produced from FBIP grants available six months after the completion date of the project as stated in the proposal.
- For projects generating DNA barcode data, these are submitted to the Barcode of Life Database (BOLD) held by the international Barcode of Life (iBOL), and are made accessible according to the iBOL data release and resource sharing policy (http://ibol.org/resources/data-release-policy). IBOL considers all barcode data in BOLD to be a community resource to be shared publicly according to the terms and conditions outlined in its policy, but encourages users of the data to acknowledge the contributor and source.
- Data submitted in BOLD will be made public and transferred to GenBank for public release prior to user initiated publication. Data release will follow a two-phase process: Phase 1: quarterly release of all generated sequence data and high level taxonomic information. Phase 2: release of additional data elements that require manual curatorial efforts and detailed taxonomic enquiry.
- In current research practice, a researcher or institution may be granted temporary exclusive use of the data produced. In the event of the open dissemination of data posing a risk to a student thesis, the data provision to the FBIP can be delayed for one to two years on request to the FBIP.
- In the instance of data produced by a student that is withheld from public release the data must still be provided to the FBIP when the project ends. This data is required for monitoring and reporting purposes. In the event that the grantholder / student has improved the data since its submission to the FBIP, a new version should be provided for dissemination.
- Where data are considered to be sensitive (the GPS co-ordinates of a collection locality for a species threatened by over-collecting) or confidential (e.g. name of human subjects from which disease samples were taken), then GPS co-ordinates can be disseminated at a coarse scale or the names of human subjects must be removed from data sets. These or similar restrictions must be stated by the grant-holder when data are submitted to the FBIP.
- For FBIP funded projects, data being served via the SABIF/SANBI-GBIF platform, will be associated with one of two licences, **CC0** or **CC-BY**. All publishers are to choose a licence equivalent to CC0 or CC-BY:
    - **CC0** - Fully-open public access
    - **CC-BY** - Attribution required

.....000.....

## APPENDIX C

### FOUNDATIONAL BIODIVERSITY INFORMATION PROGRAMME (FBIP)

### CONSENT FORM FOR USE OF THIRD-PARTY INSTITUTIONAL DATA. TO BE COMPLETED IF THIRD PARTY DATA WILL BE CAPTURED AND PROVIDED TO THE FBIP

**FBIP PROJECT TITLE:** _____

**Grantholder:** _____

**Grantholder Institution:** _____

Concerning the digitised data from the items, objects, photographs, observation and/or specimens (the "Works") which are to be mobilised in the Foundational Biodiversity Information Programme (FBIP) project through funding transferred from the National Research Foundation (NRF) to the Grantholder Institution (the "Parties");

**(insert name of organisation)**,_____, hereby grants to the Parties the non-exclusive right to reproduce, distribute, display and store the Works in all forms, formats and media, whether now known or hereafter developed (including without limitation in digital and electronic form), in perpetuity and throughout the world on condition that ownership of the copyright in the Works remain with **(insert name of organisation)**.

**(insert name of organisation)**_____hereby warrants that:

(a) It is the sole owner of the copyright in the Works. If the Works includes materials of others, it has obtained the permission of the owners of the rights in all such materials to enable it to grant the rights contained herein. Copies of all such permissions are attached to this letter.

(b) Nothing in the Works infringes any duty of confidentiality which it may owe to anyone else or violates any contract, express or implied.

_____

On behalf of **(insert name of organisation)**
Duly Authorised

Date: _____

## APPENDIX D

### FOUNDATIONAL BIODIVERSITY INFORMATION PROGRAMME (FBIP)

### CONSENT FORM FOR CAPTURE OF THIRD PARTY INSTITUTIONAL DATA FROM AN INDIVIDUAL. TO BE COMPLETED IF THIRD PARTY DATA WILL BE CAPTURED AND PROVIDED TO THE FBIP

**FBIP PROJECT TITLE:** _____

**Grantholder:** _____

**Grantholder Institution:** _____

Concerning the digitised data from the items, objects, photographs, observation and/or specimens (the "Works") which are to be mobilised in the Foundational Biodiversity Information Programme (FBIP) project through funding transferred from the National Research Foundation (NRF) to the Grantholder Institution (the "Parties").

**I (**insert name of individual providing the data**)**,_____, hereby grants to the Parties the non-exclusive right to reproduce, distribute, display and store the Works in all forms, formats and media, whether now known or hereafter developed (including without limitation in digital and electronic form), in perpetuity and throughout the world on condition that ownership of the copyright in the Works remain with me.

I **(insert name of individual providing the data)**_____hereby warrants that:

(a) I am the sole owner of the copyright in the Works. If the Works includes materials of others, I have obtained the permission of the owners of the rights in all such materials to enable me to grant the rights contained herein. Copies of all such permissions are attached to this letter.
(b) Nothing in the Works infringes any duty of confidentiality which it may owe to anyone else or violates any contract, express or implied.
(c) I have the full right, power and authority to sign such consent

_____
**(insert name)**

Date: _____