Natural Science Collections Facility

SOUTH AFRICA

HALF-YEAR REPORT

Department of Science, Technology & Innovation (DSTI)

1 April to 30 September 2026

science, technology & innovation

Department:
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REPUBLIC OF SOUTH AFRICA

SANBI
Biodiversity for Life
South African National Biodiversity Institute

NATURAL SCIENCE COLLECTIONS FACILITY (NSCF)

HALF-YEAR REPORT TO THE DSTI: 1 APRIL TO 30 SEPTEMBER 2026

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1. Rationale and Scope

- Research collections are essential for all countries with scientific enterprises, and they should be considered as large-scale, global research infrastructure. South Africa has an estimated 20 million objects or specimens representing over 100,000 different species in natural science collections.
- Natural science collections and the data associated with these are a crucial resource for a wide range of society both nationally and globally, including researchers, environmental assessment consultants, land use managers and planners, farmers, bioprospectors, students, learners and decision-makers.
- South Africa's natural science collections are managed in a highly fragmented and largely isolated environment and there is no common strategy or approach to research, which means that their full potential as a national research infrastructure is not being realised. In addition, the specimen data are largely inaccessible, which causes delays in decision-making or poor decision-making relating to sustainable development and sustainable harvesting of natural resources, both of which have considerable economic impacts. Inaccessible data also limits their use in large-scale, multi- and trans-disciplinary studies.
- The NSCF aims to address this situation, which will have positive impacts on research in numerous fields, on the economy through providing critical information for agriculture, fisheries, pest control, alien invasive management, natural products, and on society which benefits from biodiversity in virtually all aspects of life.
- The NSCF is a distributed network of institutions that hold natural science collections, with a Central Co-ordinating Hub hosted at SANBI in Pretoria. There are currently 19 partner institutions participating in the NSCF (including national, provincial and municipal museums, science councils, universities and a citizen science organisation). SANBI is responsible for the overall implementation of the project plan and management of the budget allocation for the NSCF from the DSTI. The individual institutions continue to be supported by their existing structures, and continue to report to these, but collaborate to meet the objectives of the NSCF and receive support in order to enable this.

Expected deliverables, outputs, outcomes and impacts

Deliverables specified in the Agreement between the Department of Science, Technology & Innovation and SANBI for the NSCF from 2024/25 to 2028/29.

Deliverables	Outputs	Outcomes	Impact
Publication of methods and approaches used in 2023 collections assessment	Papers published in peer reviewed journal	Sharing of knowledge and tools developed by NSCF internationally	Recognition of NSCF and South Africa for innovation in collection assessment
Three to six orphan and at risk collections transferred to secure environments according to the NSCF guidelines	Well managed, secured and accessible collections of biological specimens; secured for long term use.	Increased research and education outputs in a range of fields, by national and international scientists currently and into the future.	Increased knowledge of South Africa's past and present biodiversity for the benefit of all of society, including future generations; International recognition for SA collections
Online tracking tool for status of collection management and curation - ongoing updates by collection institutions according to	Information available for collection management and curation activities and targets in annual and three-year plans of	Efficient allocation of resources to address priorities. Increased accountability.	

Deliverables	Outputs	Outcomes	Impact
progress on meeting standards set in NSCF Manual	institutions and individual workplans. NSCF Hub staff able to identify problem areas for interventions (training, investment or other forms of support).		
Virtual museum includes type specimen images (>3000 specimens); herbarium specimen images (>1.5 million); specimen data sets (15 collections); and archival documents (1000) for plant, animal, fungi and fossil groups	Integrated and openly accessible images of specimens and digitised archival documents used by researchers, postgraduate students, undergraduates and learners nationally and globally.	Increased research and education outputs in a range of fields. Reduced impact of use on specimens and documents which results in longer term preservation.	
Review of status of collection data sets (extent, quality and completeness; extent of publication on GBIF)	Information available for data management and digitisation activities and targets in annual, three-year and individual workplans. Informed decisions for NSCF plans.	Increase in extent and quality of data available for research and decision-making. More efficient use of resources by institutions and NSCF to address priorities.	Improved quality of biodiversity assessments and decision-making to mitigate development impact on biodiversity; sustainable development. Increased knowledge generation in a wide range of fields including biodiversity conservation, climate change and mitigation; and improved conservation assessments
Tracking tool for status of specimen data: extent of digitization, verification, upgrading and publication on GBIF			
Expansion of collection data sets: data for a minimum of 300 000 specimens captured	Specimen data accessible globally for research, decision-making.	Increased use of collection data for research and decision-making.	
Publication of at least 15 new collection data sets on GBIF			
At least 3 Communities of Practice established for collection management and curation; data management, with regular sessions focused on specific topics identified in the collections assessment	Collection based staff, including interns and postgraduate students upskilled. NSCF network strengthened.	Upskilled and qualified collections-based staff; greater effectiveness and efficiency in curation and management of collections.	Improved capability of institutions. Secured collections used globally by scientists to address critical issues related to biodiversity.

Deliverables	Outputs	Outcomes	Impact
Attendance by staff at a minimum of 6 courses in collection management / curation and data management		Sustainable network developed with increased collaboration and sharing of knowledge and resources.	
Participation in a minimum of 6 international conferences and workshops on natural science collections and data			
Three NSCF Forums to bring all collection staff together to share knowledge and experience			
Organisational development and transformation sessions run with a minimum of 6 institutions; and with the NSCF Hub team	Institutional plans for collection management and curation, data management and research. Improved team coherence and effectiveness within institutions and the NSCF Hub.	Improved standard of collection management and curation; data management. Improved efficiency and productivity; use of scarce resources.	Collection management and curation, data management, research improved in institutions in both short and long-term
Emerging leaders development: at least 6 sessions run	At least 30 young staff working in collections as researchers, curators or technicians developed to play leadership role.	Improved succession in institutions. Improved productivity of staff in institutions. Youth empowerment.	
Report and publication on the impact of collection-related research and data in terms of the value chain	At least 1 paper published. Identification of mechanisms to improve knowledge and data flows.	Improved understanding of the value of collections and associated data. Increased accessibility of knowledge and data from collection-based research.	Improved evidence-based conservation and sustainable use of biodiversity
NSCF website provides materials promoting the value of natural science collections	Video showing collections, iconic specimens.	Improved public understanding of biodiversity, its importance for human well-being and for	Biodiversity and collections viewed as national assets and treasures of value for science and decision-

Deliverables	Outputs	Outcomes	Impact
	Downloadable showcase documents explaining value of natural science collections.	national and cultural identity.	making; social cohesion; increased interest in life sciences by learners

2. Aim and objectives

The overall aim of the NSCF is to enable sustainable, enriched life on Earth by working as a dynamic network that values the African context, to promote, upgrade and make accessible natural science collections and data for research and services.

In order to realise this aim, the NSCF has the following overall goals:

NSCF goals, progress and future plans

1. Securing and Curating South Africa's Natural Science Collections

Estimated 18–20 million preserved plant, animal, fungi and fossil specimens collected over the last 200 years, well curated, and accessible either virtually or physically to the global research community for research in biological, environmental and palaeosciences, for contributing to documenting past and present biodiversity, understanding global change impacts on species and biological communities, and possible mitigation and adaptation mechanisms.

2024/25 – 2028/29:

- The methodology and approach for the collection assessment are novel and could be used internationally by other research collections or network initiatives (there is currently no standard system for assessing management and curation status). This will be published in appropriate international journal/s.
- The assessments have revealed some collections that remain at significant risk of deterioration and loss. There are a number of factors that are responsible for this situation and in some cases the collections or at least the most significant specimens should be moved to more secure institutions. This will require negotiation and support for packing and moving the collections and their accessioning at the receiving institution. Guidelines for decision-making for moving orphaned collections are required, including resourcing of recipient institutions and legal considerations.
- Support will be provided to institutions for addressing gaps in documentation (policies, procedures, workflows and standards) and for some of the curation processes. This support will be in the form of a number of Communities of Practice, co-ordinated and facilitated by the NSCF Hub together with staff from partner institutions.
- Interventions in the form of guidance and support for aligning plans with the gaps identified are planned, with the assistance of organisational development and transformation facilitators.

2. Upgrading and Expanding Specimen Databases

The data from the specimens (what it is, where it was collected, when it was collected as a basic minimum) assembled into databases that are openly accessible in an integrated way for researchers, practitioners involved in monitoring and assessing the status of biodiversity (e.g. threatened species assessments, alien invasive species risk assessments, environmental impact assessments for various forms of land use change and development), and decision-makers involved in authorisations for land use change (e.g. mining, agriculture), development, and harvesting quotas (e.g. medicinal plants, fish). The data are currently incomplete (only an estimated 50% of specimens have label data captured in databases), with a large number of specimens for which data have not been captured (estimated 6 million, mostly insects) and gaps in the data for which there are digital records.

2024/25 – 2028/29:

- We have realised that the process of transcribing/digitising specimen data using an NSCF-appointed team of data technicians was inefficient in relation to the extent of the work and the salary costs. Over the next year the use of automated technologies and machine learning will be investigated in collaboration with

international teams and, if feasible, implemented to increase specimen data sets over the subsequent five years.

- A detailed analysis of the status of existing specimen data sets, the publication of these and use of published data will be carried out to inform data mobilisation and publishing activities, as well as the development of a progress tracking tool.
- More targeted and strategic data mobilisation and publishing activities will be carried out depending on user needs (e.g. species threat assessments and data for the Department of Forestry, Fisheries and the Environment's screening tool, projects on food and medicinal plants).

3. Establishment of an Online Virtual Museum

Establishment of a Virtual Museum that provides online access to images of specimens from the collections of all participating institutions, specimen data sets and archival documents such as field notes of historic collectors. Researchers, postgraduate students, EIA practitioners, threatened species and alien invasive species assessors, conservation authorities, and learners will be able to access the Virtual Museum for a range of projects.

2024/25 – 2028/29:

- The Living Atlas software, which is open source, will be used to set up the platform.
- Specimen data sets, specimen images and digitised documents will be uploaded and made accessible on an ongoing basis.
- Herbarium specimen imaging will continue and completion of all of the medium-sized and smaller herbaria is expected by the end of 2026.
- SANBI is working with a conveyor belt system for imaging of the two largest herbaria (National and Compton Herbaria) and they are also expected to complete the work by the end of 2026. This system will then be moved to herbaria in other African countries.
- All newly collected specimens will be imaged on a regular or ongoing basis depending on the availability of equipment.
- Imaging of Karoo fossil and vertebrate (mammal, bird, reptile, amphibian and fish) type specimens will continue and it is expected that this will be completed by the end of 2026.
- Technologies for mass digitisation of millions of insect specimens need to be explored and potentially implemented from 2026/27.
- Digitisation of historical accession registers / catalogue books, field notes and research notes related to collections will continue and priority documents will be completed by the end of 2028.

4. Research Outputs and Translational Research: Understanding the Use, Impact and Value of Collections

2024/25 – 2028/29:

- Over the next three years we intend investigating how the taxonomic outputs are used by other researchers and for informing policy and decision-making and how knowledge flows along the value chain. This is essential to promote an understanding of the value of the collections as well as for addressing any breaks or blockages in the chain. Partnerships with institutions or units that have experience in bibliometrics and scientometric analyses will be necessary for this research. We will also analyse the use of collection data sets for South African biodiversity accessed on GBIF.
- The report and publications from the analyses will include recommendations for increasing access, uptake and use of publications and data for enhancing impacts and benefits to society and these will be implemented from 2027.
- The NSCF Hub will continue to co-ordinate the use and outputs from the collections and data and will need to develop mechanisms to track use of the Virtual Museum resources.

- Data and specimen identification services will be provided to requesters on an ongoing basis. This includes provision of data for conservation and threat assessments for species, for the DFFE Screening Tool for land use decision-making, and for environmental impact assessments. Identification of biological material is carried out for a wide range of clients. These services are generally demand-driven rather than being initiated by the collections community.

5. Outreach and Communicating the Value of Natural Science Collections

The natural science collections are generally inaccessible to the general public, and few people, including decision-makers, are aware of their existence or extent or value. The collections are often perceived as colonial relicts or as curiosities rather than as critical research infrastructure and a tangible, irreplaceable reference for the country's biodiversity.

2024/25 – 2028/29:

- Over the next six years communication and outreach activities will be more targeted and strategic to promote understanding of the value of collections to society. The information presented will be audience-specific, relevant to the African context, promote indigenous knowledge systems and contribute to public understanding of science and social cohesion. The outcome of this goal will have relevance beyond South Africa because many countries face similar challenges related to the lack of awareness of the value of the collections posing a threat to the sustainability of natural science collections.
- Some of the specific activities and outputs include the development of videos of collections and specimens of scientific or cultural significance for distribution on the Virtual Museum and other appropriate platforms, compilation of recommendations for museum displays on the collections and biodiversity to increase relevance to the African context and increasing public engagement in this topic.

6. African and International Engagement

The value of international engagement through attending and presenting at conferences and workshops and participation in international bodies has become evident over the last few years, even though this has been predominantly virtual / online. We will increase international engagement through participation in the Society for the Preservation of Natural History Collections (SPNHC), Biodiversity Information Standards (TDWG), and iDigBio conferences and workshops, participation in the Specify Consortium Board of Directors and scientific and technical advisory boards.

We have not previously engaged extensively with natural science collection institutions in other African countries. This was largely because the focus over the first six years was on establishing the NSCF structures and having tangible products and skills that can be shared and have a meaningful impact. Curation and research staff at natural science museums in other African countries will be contacted to consider opportunities for knowledge sharing and collaboration. The possibility of an online African natural science collections symposium, participation in various NSCF online activities such as the collection management and curation course, and the Communities of Practice will be explored.

Enabling Strategies

In order to achieve these objectives the following enabling strategies are critical:

Strategy 1: Staffing and capacity development

- The NSCF has run training in the use of Specify software for managing collections and data, and a higher-level mentorship programme for staff. The NSCF sponsored 17 staff to attend a customised Data Management course presented by the University of Pretoria. Various other workshops related to data management and use have been run by the NSCF or participation in workshops organised elsewhere has been supported. This type of work will continue.

- The NSCF Collection Management and Curation (CMC) course material will be reviewed and refined and be available online for independent study. More focussed shorter courses will be offered or participation supported over the next six years.
- The Community of Practice (CoP) approach will be used for increasing capacity for collection and data management and curation. The NSCF will facilitate the establishment and coordination of these sessions.
- Emerging leaders from the participating institutions have been identified and a range of activities will be run to support the development of this component of the collections community.
- The NSCF Hub and institution-based project team comprises contract staff across curation, digitisation, data management, science communication and coordination. Ensuring team cohesion, staff well-being and ongoing development is critical for the successful implementation of the NSCF.

Strategy 2: Transformation and organisational strengthening to enable the long-term sustainability of the collections and associated research to benefit society

The initial aim of the transformation process was to build a sustainable and functional NSCF network, with full participation and collaboration across institutions, recognising the African and South African context. Having run a facilitated transformation and organisational strengthening process over the first phase, and following the 2023 collections assessment and regional sense-making workshops, the underlying institutional factors contributing to challenges or achievements became clear.

- The focus of the transformation and organisational strengthening process for the current phase is on supporting selected institutions with specific challenges identified during the collections assessment process, and supporting institutions with planning and implementation for collection management and curation.
- Communication across the institutions includes regular use of a WhatsApp group, newsletter mailing list, LinkedIn and Facebook platforms.
- The NSCF Forum brings collection staff together to share knowledge and experience across the network.

Strategy 3: Contributing to the identification of strategies and models that will ensure financial sustainability of the natural science collections

As allocations from government and higher education institutions continue to decline, pressure to increase efficiencies is increasing. There are limited opportunities for commercial activities associated with the collections, but sharing knowledge and resources across institutions, and potentially rationalising some collections will be continuously investigated.

3. Progress: 1 April to 30 September 2026

The table below summarises progress achieved during the first half of the 2026/27 financial year (1 April to 30 September 2026) against the 2026/27 deliverables of the NSCF Implementation Plan.

Strategic Objective	2026/27 Deliverables	Progress 1 April to 30 September 2026
1. Securing Collections	• Transfer and incorporation of orphaned and at-risk collections to secure institutions (2 orphan/at-risk collections relocated)	**On Track** A total of 10,617 specimens from orphan collections were incorporated into partner collections during the reporting period. • **SAIAB:** Incorporation of the repatriated Malawi Cichlid Fish collection (Penn State University, USA) progressed strongly, and 334 Malawi fish type specimens were imaged by NSCF technicians. • **UKZN Bews Herbarium:** Incorporation of the relocated University of Zululand Herbarium collection continued. • The incorporation of the Harold Porter & Karoo Desert Herbaria at **SANBI Compton Herbarium** was completed. • Under the 2026/27 NSCF Partner Funding Call, allocations were approved for securing and mobilising orphan and relocated collections, including continued relocation and incorporation of the Malawi Fish Collection at SAIAB, incorporation of the CSIR Xylarium collection at the SANBI National Herbarium, absorption of the East London Museum Butterfly collection at the Iziko South African Museum, and data mobilisation of the relocated South African Museum (SAM) Herbarium collection at the SANBI Compton Herbarium.
	• Communities of Practice (CoP) for sharing best practices in curation	**On Track** 10 Communities of Practice (CoP) sessions were convened between 1 April and 30 September 2026 across 4 active CoPs: • Documentation Development CoP • Invertebrate Imaging CoP • Plant Identifications CoP • Data Management CoP (community-led)
	• Tracking of progress in implementing best practices for collection management and curation	**On Track** Roll-out and institutional uptake of the NSCF Collection Status Tracking Tool continued across partner institutions. During the reporting period, 810 updates were logged across 14 collections. There were significant gains in Collections Documentation (increasing from a baseline of 22.09% to 59.05%) and Institutional Documentation (increasing from 32.16% to 39.21%).
2. Upgrading and Expanding Databases	• 100,000 specimen records captured/upgraded (and	**On Track** A combined total of 43,470 specimen records were captured or transcribed during the six-month period:

Strategic Objective	2026/27 Deliverables	Progress 1 April to 30 September 2026
	piloting of AI-assisted label transcription)	• Partner institutions captured 31,627 new specimen records into Specify/BRAHMS databases. • Following completion of the small/medium herbarium imaging milestone, the NSCF Hub plant digitisation team pivoted to piloting AI-assisted transcription workflows, successfully transcribing 11,843 plant specimen images into structured database records.
	• Updating of existing data sets on GBIF • Updating of data set status on tracking tool	**On Track** This work is on track with the recent development of the Data Progress Tracking Tool Dashboard and will be fully implemented once the Specimen Database Coordinator post is filled.
	• Publication of five collection data sets on GBIF	**On Track** Following the publication of 5 partner datasets on GBIF in the prior cycle, 2 additional datasets from the South African National Collection of Fungi (ARC-PHP) have been prepared and are undergoing final quality checks for publication on GBIF.
	• Community of Practice for data management (regular sessions)	**On Track** While recruitment for the vacant Specimen Database Coordinator and Data Quality Specialist posts was hindered by the short remaining duration of the current funding agreement (ending April 2027), the community-led Data Management CoP convened a peer-learning session and supported data standards alignment.
3. Virtual Museum	• Uploading of all new images and data and archival documents onto Virtual Museum	**Delayed, in progress** While remote hosting and storage access bottlenecks at SAIAB are being resolved through ongoing technical engagements, significant backend and local deployment progress was achieved: • Local instances of both the Living Atlas platform and the Access to Memory (AtoM) archival platform have been successfully configured and deployed. • Over 50,000 test specimen records and associated images have been uploaded to the local Living Atlas instance, and archival document collections uploaded to the local AtoM instance. • A 5-day intensive hands-on Virtual Museum training workshop was held from 22–26 June 2026 for Hub and partner technical staff to transfer skills and identify upcoming areas of work.
	• Monitoring use of the specimen images and digitised documents	**Delayed, in progress** Metadata standards and tracking architecture are built into the Living Atlas and AtoM platforms; public usage

Strategic Objective	2026/27 Deliverables	Progress 1 April to 30 September 2026
		monitoring will commence immediately upon public production launch.
	• Specimen imaging of 500 vertebrates, fossils, and completion of plant specimen imaging	**On Track** • Partner institutions imaged 17,835 specimens across collections. • NSCF Hub imaging technicians imaged 465 animal and fossil type specimens at SAIAB, Iziko Museums of South Africa, and Ditsong National Museum of Natural History. Across all partner institutions, 84% of vertebrate type specimens are now fully imaged. • Following completion of imaging across 14 small and medium-sized herbaria (>800,000 plant specimens digitised), the Hub botanical team shifted focus to piloting AI-assisted transcription and analysis.
	• 200 archival documents digitised	**Achieved (Target exceeded)** The NSCF archival document digitisation team at the Agricultural Research Council (Plant Health and Protection, ARC-PHP) digitised 14,567 archival pages/documents during the six-month period, including historical accession registers, collector field notes and index cards for integration into the Virtual Museum AtoM library.
	• Initiation of imaging of insect type specimens (workflows, imaging standards and SOPs)	**On Track** The appropriate robotic mass insect imaging system (Gigamacro) is in the process of being procured; work has started on developing workflows, imaging standards and SOPs.
4. Research Outputs and Impact	• 100 publications produced by researchers using collections • 100 new species described from the collections • 200 scientists visiting the collections for research purposes • 50 loans of specimens sent out for research • 25 MSc, PhD and Postdocs using collections for their research • Use of collections for identification of biological specimens	**On Track** Outputs reported by partner institutions for 1 April to 30 September 2026: • 118 peer-reviewed papers (with 65 open access papers, 55%) • 54 new species described • 450 national research visitors and 142 international research visitors • 8,924 specimens sent out on loan for research • 140 external data requests serviced, providing 64,653 specimen records • 155 postgraduate students using the collections, 55 students trained, and 12 students graduated • 273,815 biological specimens identified for external stakeholders
	• Publish assessment of use of research outputs from	**On Track**

Strategic Objective	2026/27 Deliverables	Progress 1 April to 30 September 2026
	collections and impact on society, flow of knowledge and data along value chain	Postdoctoral Fellow appointed from 1 August 2026 to lead the study on the scientific and societal value chain of collection-based research. In parallel, the NSCF Data Impact Dashboard was finalised to track global citations and downloads of NSCF-affiliated datasets.
5. Outreach and Communication	• Development of video materials on collections and iconic specimens	**On Track** Concept notes and storyboards for short-form video reels and collection spotlights were developed under the new NSCF CONNECT framework, alongside multimedia features produced for Women's Month ('Her Name on the Label'), Heritage Day and SPNHC 2026.
	• Promoting the value of collections to society based on the analysis of data and knowledge flows and case studies through various platforms targeting a range of audiences/communities	**On Track** Between April and September 2026 the NSCF sustained a continuous programme of public outreach across exhibitions, campaigns, conferences and digital channels. The period opened with the Yebo Gogga exhibition at Wits (13–17 May), and built towards the inaugural National Science Month in July, a month-long, theme-aligned content drive launched at VUT on 4 July. August brought the Women's Month campaign *Her Name on the Label* (three website features and a five-platform launch set), followed in September by Heritage Day coverage (24 September) and full on-the-ground reporting from SPNHC 2026 in Cape Town (7–11 September), the network's largest international delegation to date. Digital outreach grew steadily across three platforms: 30 Facebook posts (9,427 views, 5,221 reach), 25 Instagram posts (4,009 views, 2,291 reach), and the strongest engagement-to-reach rate at 11.6%, and 42 organic LinkedIn posts (93,901 impressions), with the last dominated by a single 19 August coelacanth story that reached 82,589 people. A people-first, specimen-storytelling approach produced the best results, and September was the peak month on every channel.
	• Review of impact of different forms of outreach and engagement activities with recommendations	**On Track** The NSCF CONNECT framework is a practical framework for promoting public engagement with South Africa's natural science specimens, held across the facility's 19 partner institutions. Its seven mutually reinforcing components (Co-design, Open access, Narratives, Networks, Events, Capacity and Tracking) together form a complete engagement system rather than a checklist, each paired with a clear purpose, guiding principle and set of activities. It aims to build public awareness of what collections are and why they matter and to move beyond

Strategic Objective	2026/27 Deliverables	Progress 1 April to 30 September 2026
		broadcasting toward genuine two-way engagement, in which publics contribute to and benefit from collections through data, stewardship and learning.
	• Maintenance and regular posts of news items on the NSCF website and social media platforms	**On Track** Website, LinkedIn, Facebook and Instagram platforms were actively maintained with weekly news items, thematic campaigns and bi-monthly newsletters.
	• Monitoring and analysis of views and visitors to online platforms	**On Track** Website views: 69,307 Website visitors: 49,491 Facebook page followers: 1,042 Instagram followers: 319 Twitter (X) followers: 248 LinkedIn followers: 525 Facebook group members: 448 WhatsApp group members: 169
6. African and International Engagement	• Participation in international conferences, Specify Software Consortium	**On Track** International and global-south leadership during the first half of 2026/27: • SwissCollNet Closing Event (20–21 August 2026, Bern, Switzerland): NSCF Lead Dr Anthony Magee was invited and fully funded by the Swiss Academy of Sciences (SCNAT) to deliver a keynote address (Weaving Collections into National Research Infrastructure: A South African Approach ') and serve on the international panel on the future of collection networks. • TDWG 2026 Conference (17–21 September 2026, Oslo, Norway): 3 partner and hub staff supported to present on NSCF data standards, AI transcription pilots and biodiversity informatics. • SPNHC 2026 Conference (7 to 11 September 2026, Cape Town): The NSCF sponsored and supported 15 Hub and partner institution delegates (including Emerging Leaders) to present papers, posters and symposia at the 41st Annual Meeting of the Society for the Preservation of Natural History Collections, the first SPNHC hosted on the African continent. • Specify Collections Consortium: Country membership maintained and active participation in Board and Technical Advisory Committee meetings.
	• Invitations to African natural science collection institutions to participate in NSCF online	**On Track** Expanded African regional networks through engagements with African delegates at SPNHC 2026 in

Strategic Objective	2026/27 Deliverables	Progress 1 April to 30 September 2026
	activities / new collaborative activities	Cape Town, and linkages through the CBD Sub-Regional Technical and Scientific Cooperation (TSC) Support Centre planned.
Governance & Networking	• Meetings of Advisory Committee (twice a year); Co-ordinating Committee (3 times a year)	**On Track** Advisory Committee meeting held in May and next meeting scheduled for November 2026, Coordinating Committee meetings held in April and September 2026.
	• Six-monthly and final report to DSTI; quarterly report to SANBI EXCO / Board	**On Track** 2025/26 Annual Report submitted to DSTI in May 2026; Q1 and Q2 2026/27 Strategic Initiatives and International Travel reports submitted to SANBI EXCO and the Research, Development and Innovation (RDI) Board Committee.
	• Develop new Collaboration Agreements / addenda with partner institutions	**On Track** Following the 2026/27 NSCF Partner Funding Allocation Panel meeting, 12 project proposals across 8 partner institutions (10 collection units) were approved for funding, totalling R5,360,401.50 (R3,620,401.50 for Phase 1 in 2026/27 and R1,740,000.00 for Phase 2 dependent on 2027/28 funding). Phase 1 Collaboration Agreement Addenda were submitted for signature from July 2026, with remaining addenda in finalisation.
Enabling Strategy: Capacity Development	• Training courses in data management and Virtual Museum tools	**On Track** A 5-day intensive Virtual Museum & Biodiversity Informatics Training Workshop was held from 22 to 26 June 2026 for Hub and technical staff hosted at partner institutions. The Virtual Museum Coordinator also presented a short session on how to use VBA Macros and Formulas in Excel at one of the Data Communities of Practice.
	• Materials for NSCF Collection Management & Curation Course available online for independent study	**On Track** The review of the CMC Course was completed in March 2026 and a subsequent report was produced, comprehensively assessing the current design, content and delivery of the course. The report findings and subsequent recommendations on the way forward is currently being finalised for internal review.
	• Emerging leaders development (30–32 staff from participating institutions and the NSCF Hub)	**On Track** Following the third immersion workshop in March 2026, monthly facilitated online coaching and check-in sessions were held from April to September 2026 structured around the 6-component Leadership Portfolio. Preparations are underway for the final consolidation workshop in November 2026.

Strategic Objective	2026/27 Deliverables	Progress 1 April to 30 September 2026
Enabling Strategy: Staffing	• Team and individual development of the NSCF Hub and institution-based staff	**On Track** • Postdoctoral Fellow appointed on 1 August 2026. • Hub and partner staff supported to attend and present at SPNHC 2026 (Cape Town) and TDWG 2026 (Oslo), as well as the Virtual Museum technical training workshop.
Enabling Strategy: Transformation & Organisational Development	• Interventions at selected institutions to support organisational strengthening (minimum of 5 interventions)	**Achieved (Target exceeded)** 6 institutional Organisational Development ('Roots to Fruits') workshops were facilitated at partner institutions between April and September 2026: 1. SANParks (Skukuza) 2. McGregor Museum (Kimberley) 3. ARC: Onderstepoort Veterinary Institute (ARC-OVI) 4. University of Pretoria (Schweickerdt Herbarium) 5. University of the Witwatersrand: Evolutionary Studies Institute (ESI) 6. SANBI National Herbarium (Pretoria). Together with the 9 collections reached in 2025/26, a total of 15 collections have now completed tailored organisational strengthening interventions.

4. Financial analysis

A detailed financial report for the project (provided by SANBI's Finance Division and approved by the Chief Financial Officer) is provided below and attached to this report. This financial report forms the basis of the financial information presented below on income, expenditure and commitments as at 30 September 2026.

Income

The grant for the 2025/26 financial year (R19,051,674) was transferred to SANBI's bank account in September 2025. The project reached 90% spent of the 2025/26 grant at the end of July 2026. The budgeted grant allocation for the 2026/27 financial year (R18,398,500) is expected in October 2026. The total project grant income received to date is R162,338,065.

Expenditure

Expenditure to date: Cumulative project expenditure to date as at 30 September 2026 is R162,617,471:

- **Human Resources and Support Services:** Cumulative expenditure to date amounts to R74,419,776, of which R4,504,951 was incurred during the six-month period 1 April to 30 September 2026 for Hub and partner institution project contract staff.
- **Non-HR Operational Costs:** Cumulative expenditure to date totals R53,747,551, of which R2,214,788 was incurred during the six-month period 1 April to 30 September 2026.
- **Capital Expenditure and Partner Transfers:** Cumulative expenditure to date amounts to R34,450,144, of which R1,521,111 was incurred during the six-month period 1 April to 30 September 2026. This includes managed payments to partner institutions under signed Collaboration Agreements for the rescue and incorporation of orphan collections, collections storage and curation upgrades, and Virtual Museum / digitisation infrastructure.

Accrued Interest and Grant Balance

The project has accrued a cumulative total of R9,076,979 in interest to date. **Excluding accrued interest, 100% of the DSTI grant income received to date has now been expended, resulting in a net grant balance of -R279,406 as at 30 September 2026**.

5. Financial information

The tables below present the Budget Allocation vs Actual Expenditure statement, the Financial Summary, and the Details of Financial Commitments as at 30 September 2026.

Budget vs Expenditure

Description	Budget 2025/26	Budget 2026/27	Actual 2025/26	Actual 30.09.2026
Opening Balance			**13,560,050**	**16,553,650**
Opening Balance			13,750,608	**16,553,650**
Prior period adjusted			-190,558	**-**
Income	**19,051,674**	**18,398,500**	**20,209,992**	**484,774**
Grant	19,051,674	18,398,500	19,051,674	**-**
Interest earned	-	-	1,158,318	**484,774**
Expenditure	**19,051,674**	**18,398,500**	**17,216,391**	**8,240,850**
Human Resources & Support Services	**6,611,638**	**8,159,498**	**9,298,850**	**4,504,951**
Operational Expenditure	**8,973,933**	**6,772,899**	**7,371,670**	**2,214,788**
Training & research support (incl. workshops)	2,700,000	2,038,017	604,083	**546,470**
Fixed annual operational cost	3,308,766	2,497,461	1,649,086	**818,480**
Travel & accommodation	880,000	664,225	2,108,883	**341,365**
Consumables for office, collections upgrades	180,000	135,863	1,104,452	**508,474**
SANBI overheads charge (10%)	1,905,167	1,437,333	1,905,167	**-**
Capital Investments	**3,466,103**	**3,466,103**	**545,871**	**1,521,111**
Webservers & networking / partner transfers	2,518,852	2,518,852	545,871	**1,521,111**
Equipment	947,251	947,251	-	**-**
Workstations	-	-	-	**-**
Closing balance (incl. interest)			**16,553,650**	**8,797,574**
Less total interest accumulated to date				**-9,076,980**
Total grant balance as at 30.09.2026				**-279,406**

Financial summary

Financial Summary Item	Amount (ZAR)
Total Project Grant Income Received to Date	R162,338,065
Total Project Expenditure to Date	-R162,617,471
Grant Balance (excluding accrued interest)*	**-R279,406**

**Note: Excluding the R9,076,980 in accumulated interest earned to date, 100% of the DSTI grant allocations received to date have been expended (with expenditure exceeding grant income by R279,406 as at 30 September 2026).*

Details of financial commitments

There are several commitments at various stages of finalisation, and with various actions that are required before payments can be transferred from SANBI's accounts. These are commitments against signed staff contracts, service provider contracts, and partner institution collaboration agreements for which the project is obliged by SANBI to keep the committed funds in the project cost centre. Commitments against active contracts and approved agreements are detailed in the tables below.

1. Service provider contracts and partner institution collaboration agreements (committed through contracts and retained in cost centre by SANBI)

Item	Expected Date of Finalisation	Amount Committed
Service provider for organisational transformation and development process	March 2027	R831,492
Existing collaboration agreements with partner institutions	March 2027	R2,124,026
TOTAL NON-SALARY CONTRACTUAL COMMITMENTS		**R2,955,518**

2. Staff contracts for 18 NSCF Hub and partner institution positions (dependent on funding)

Item	Expected Date of Finalisation	Amount Committed
Staff Contracts (18 positions)	1 x staff January 2027 2 x staff February 2027 11 x staff March 2027 1 x staff June 2027 1 x postdoc July 2027 1 x staff November 2027 1 x staff January 2028	R6,357,575
TOTAL COMMITTED STAFF CONTRACTS (18 ACTIVE POSITIONS)	**October 2026 – January 2028**	**R6,357,575**

6. Summary and assessment

Achievements: 1 April to 30 September 2026

1. Integrated Monitoring

Integrated monitoring of outputs from the use of the collections has been carried out for the first half of the 2026/27 financial year illustrating the substantial ongoing value of South Africa's natural science collections as national and global research infrastructure: 140 requests for data serviced, with 64,653 specimen records provided; 450 national visitors and 142 international visitors using the collections; 54 new species described using the collections; 118 peer-reviewed papers published where the collections were used (already exceeding the annual target of 100 within six months); and 155 postgraduate students using the collections (note that the same student may be counted in both quarters or across institutions if they used more than one institution's collections). Eighteen partner institutions submitted reports through the online monitoring system. Institutions reported the following outputs from 1 April to 30 September 2026:

Indicator	Q1 (Apr–Jun 2026)	Q2 (Jul–Sep 2026)	Half-Year Total
Orphan collections: no. of specimens incorporated	4,106	6,511	**10,617**
New specimens accessioned	103,732	18,246	**121,978**
Number of DNA samples added	289	128	**417**
Number of tissue samples added	195	418	**613**
Number of DNA samples supplied for research purposes	2,744	202	**2,946**
Data provided to external users: no. of requests	69	71	**140**
Data provided to external users: no. of records	53,531	11,122	**64,653**
Number of new specimen records added to Brahms/Specify*	13,278	18,349	**31,627**
Number of specimens imaged (by partner institutions)**	7,694	10,141	**17,835**
Number of specimens sent out on loan for research	2,062	6,862	**8,924**
Number of visitors using collection (national)	279	171	**450**
Number of visitors using collection (international)	57	85	**142**
Number of new species described	44	10	**54**
Number of papers published based on collection	80	38	**118**
Number of papers open access	46	19	**65**
Number of specimens identified: external stakeholders	5,311	268,504	**273,815**
Number of outreach activities held	90	116	**206**
Number of learners/attendees exposed to the activity	44,512	24,903	**69,415**
Number of postgrad students using the collection	75	80	**155**
Number of students trained in the collections	30	25	**55**
Number of students graduated from using the collections	9	3	**12**
Number of Biodiversity Management and Policy Input Activities	0	1	**1**

2. Strategic Research Highlights and Translational Outputs

During the first six months of the 2026/27 cycle (1 April to 30 September 2026), NSCF partner collections underpinned 118 peer-reviewed publications (65 open access; 55%) and the discovery and description of 54 species new to science. These outputs demonstrate the vital role of South Africa's collections as foundational research infrastructure driving biodiversity science, biosecurity, agriculture, human health, and palaeosciences

A selection of 2026 publications is provided below to illustrate the diversity of outputs and their areas of national and global application:

- **Global Collectomics & Ethical Data Mobilisation:** Synthesising ethical considerations for the large-scale mobilisation of natural history collections, this paper provides practical recommendations for the responsible, equitable and transparent use of collections and specimen-derived data, addressing provenance and access and benefit-sharing. South Africa's Natural Science Collections Facility (NSCF) is discussed as an example of network-building supported by co-developed standards, capacity development and peer learning.
  Frankiewicz, K.E., Simões, A., Grenda-Kurmanow, M., et al. (2026). Ethical collectomics: A guide to the responsible and fair mobilization of natural history collections. BioScience, 76(9), 832–841. https://doi.org/10.1093/biosci/biag069
- **National DNA Barcoding & Biodiversity Reference Libraries:** Evaluating the status of DNA barcoding in South Africa, this study compares verified species checklists with more than 931,000 specimen-linked DNA barcode records in the Barcode of Life Data System (BOLD) and GenBank. The analysis identifies gaps in taxonomic representation, sequence coverage and metadata (particularly for plants and fungi), demonstrating the importance of reliable, specimen-linked genetic reference data for biodiversity identification, research and conservation.
  Kgatla, M.M., Barker, C., Baxter, J.R., et al. (2026). An overview of DNA barcoding of biodiversity in South Africa. PLOS ONE, 21(4), e0345173. https://doi.org/10.1371/journal.pone.0345173
- **Digital Flora & Foundational Taxonomic Backbones:** Documenting the development of the e-Flora of South Africa, this paper describes how existing botanical descriptions and baseline taxonomic data were compiled and made publicly accessible online, complementing the South African National Plant Checklist and contributing to the World Flora Online initiative. Mobilising and disseminating this foundational taxonomic information strengthens a core resource for botanical research, biodiversity assessment, monitoring and conservation.
  Le Roux, M.M., Klopper, R.R. & Victor, J.E. (2026). The e-Flora of South Africa: Expanding the foundations of botanical knowledge within a global framework. TAXON, 75(2), e70105. https://doi.org/10.1002/tax.70105
- **Livestock Health & Disease Vector Surveillance:** Investigating the potential accidental transport of Culicoides biting midges (vectors of livestock and equid arboviruses) through commercial cut-flower exports in Kenya, this study used field trapping and insect sampling across production and packing stages. While midges were detected at some greenhouse sites, none were recorded in the pack house, cold store or transport stages, illustrating the value of field-collected insect specimens and sampling data in evaluating disease-vector pathways.
  Stokes, J.E., Labuschagne, K., Fèvre, E.M. & Baylis, M. (2026). Investigation of the global transportation of Culicoides biting midges, vectors of livestock and equid arboviruses, from flower-packing plants in Kenya. Medical and Veterinary Entomology, 40(2), 260–267. https://doi.org/10.1111/mve.70016
- **Soil Biodiversity & Foundational Taxonomy:** Expanding baseline knowledge of South Africa's soil-associated weevil diversity, this taxonomic study describes nine new genera and 31 new species of Entiminae weevils and provides diagnostic identification keys. Grounded in morphological taxonomy and the examination of physical insect specimens, the study substantially expands the documented taxonomic baseline for future ecological research and species identification.
  Borovec, R. & Meregalli, M. (2026). Nine new genera and thirty-one new species of edaphic South African Entiminae (Coleoptera: Curculionidae). Zootaxa, 5859(1), 1–102. https://doi.org/10.11646/zootaxa.5859.1.1

- **Marine Biodiversity & Deep-Sea Exploration:** Examining physical sponge specimens from South Africa's deep-water environments using morphological and genetic evidence, this study describes one new family, one new genus and eight new species of glass sponges (Hexactinellida), including the first South African record of the family Aphrocallistidae. These specimen-based taxonomic findings strengthen baseline marine biodiversity data for underexplored deep-sea habitats.

  Samaai, T., Erpenbeck, D., Janussen, D., Janson, L., Macdonald, A. & Sink, K.J. (2026). Hidden diversity of South African hexactinellid sponges across mesophotic reefs, shelf sediments, and canyon habitats, with the description of a new genus (Amatholon gen. nov.), a new family (Cyrtaulonidae fam. nov.) and eight new species. Zootaxa, 5864(1), 1–67. https://doi.org/10.11646/zootaxa.5864.1.1

- **Conservation Policy & Genetic Diversity Indicators:** Applying genetic diversity indicators through the IUCN Red List process across 320 South African mammal taxa, this study combines regional Red Listing processes, published and non-public baseline datasets, and expert elicitation. Finding that approximately 98% of assessed populations were maintained and around 75% exceeded an effective population size of 500, the study demonstrates how mobilising baseline biodiversity and genetic data supports national reporting under the Kunming–Montreal Global Biodiversity Framework.

  da Silva, J., Machate, F., Simoen, J. & Patel, T. (2026). Mainstreaming genetic diversity indicators through the IUCN Red List process: A national-scale assessment of South African mammals. Ecological Indicators, 190, 115252. https://doi.org/10.1016/j.ecolind.2026.115252

Translational Identification Services: The collections continue to serve as a definitive national reference for the identification of biological materials across multiple economic sectors. In agriculture, they underpin the accurate identification of crop pests, livestock disease vectors and parasites, weed biocontrol agents, and phytosanitary diagnostics that enable the safe import and export of produce. In health, they support diagnostic work on disease vectors and parasites, while in environmental planning and management they provide the baseline evidence for environmental impact assessments (EIAs) in development applications. Between 1 April and 30 September 2026, 273,815 specimens were identified for external stakeholders. Without accurate, voucher-backed identifications, the consequences include crop and livestock losses, international trade embargoes on South African agricultural exports, or irreversible biodiversity loss through poorly informed development.

3. Input into Biodiversity Management and Policy Activities

During the reporting period, staff and datasets from NSCF partner institutions contributed to provincial, national and international biodiversity management, regulatory compliance, and conservation planning databases:

- **Ezemvelo KZN Wildlife Biodiversity Spatial Plan (C-Plan):** In Q2, staff at the Durban Natural Science Museum collaborated with and provided specimen occurrence data to Ezemvelo KZN Wildlife for the provincial Biodiversity Spatial Plan (C-Plan).
- **Permit, CITES & Statutory Compliance for DNA Barcoding and Taxonomic Backbones:** In Q1, curatorial staff at the Amathole Museum conducted a compliance and conservation-status review of destructive sampling requests for the South African Barcode of Life (SABOL) initiative against provincial (DEDEA) and national/international (Section 20, CITES, and NEMBA) permitting requirements, while 2026 GBIF taxonomic keys were aligned with the CITES species list and the SANBI national checklists.

EZEMVELO KZN WILDLIFE
Conservation, Partnerships & Ecotourism

GBIF Global Biodiversity Information Facility

CITES

Biodiversity conservation planning, global data publishing and regulatory compliance frameworks supported during the reporting period

4. International and Regional Leadership (SwissCollNet, TDWG 2026 & SPNHC 2026)

The April to September 2026 period saw international recognition of the NSCF's governance, collection assessment and transformation models:

- **Keynote Address at SwissCollNet Closing Event (Bern, Switzerland, 20–21 August 2026):** The NSCF Lead, Dr Anthony Magee, was invited and co-funded by the Swiss Academy of Sciences (SCNAT) to deliver a keynote presentation titled "Weaving Collections into National Research Infrastructure: A South African Approach" at the closing conference of the Swiss Natural History Collections Network (SwissCollNet), and to participate in the high-level panel on the future of national collection networks. European counterparts highlighted the NSCF's Collection Management & Curation Manual, Collection Status Tracking Tool, and people-centred Organisational Development model as global best practice.
- **TDWG 2026 Annual Conference (Oslo, Norway, 17–21 September 2026):** Three delegates were supported to represent the NSCF at the Biodiversity Information Standards (TDWG) conference, engaging international working groups on AI-assisted label transcription, Darwin Core data standards, and GBIF impact tracking.
- **SPNHC 2026 Conference in Cape Town (7–11 September 2026):** For the first time in its 41-year history, the Society for the Preservation of Natural History Collections (SPNHC) held its annual global conference on the African continent, hosted at the Iziko South African Museum in Cape Town. The NSCF sponsored 15 Hub and partner institution staff (including Emerging Leaders) to attend and present, the largest and most diverse NSCF delegation at an international conference to date. NSCF Hub and partner staff delivered oral presentations and posters showcasing the Collection Status Tracking Tool, the Emerging Leaders Programme, orphan collection rescues, and specimen stacking photography.

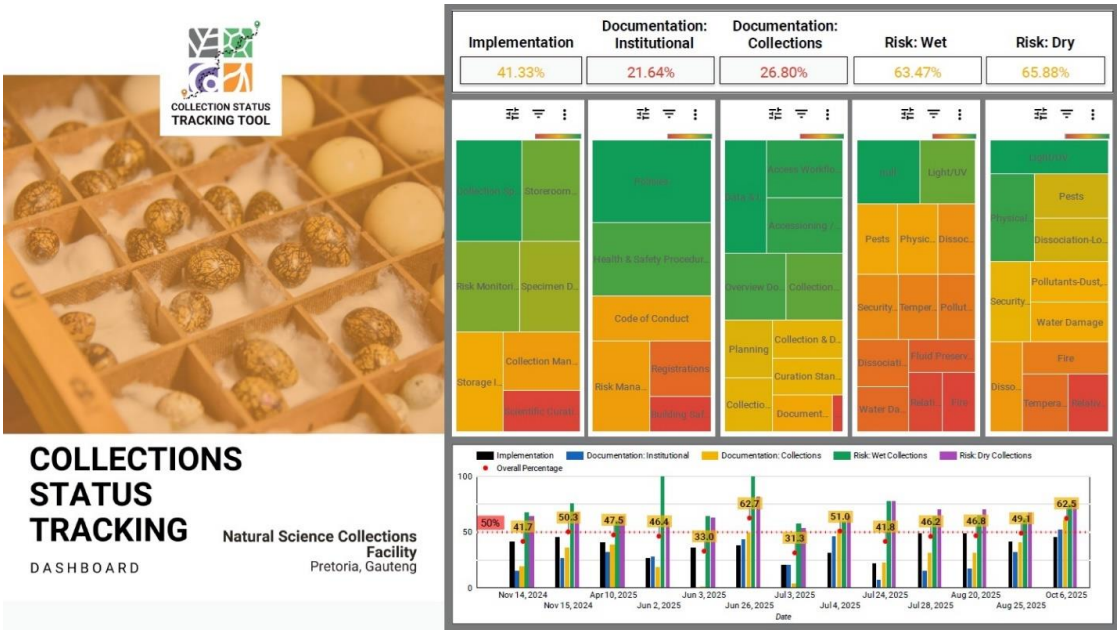


NSCF Hub and partner institution delegates participating in and presenting at the 41st Annual SPNHC Conference hosted at the Iziko South African Museum in Cape Town (7–11 September 2026)

5. Improvements in Collections Management, Curation & Communities of Practice

The NSCF Collection Status Tracking Tool continues to drive measurable improvements in collection care, risk mitigation, and professional documentation across partner institutions. Between 1 April and 30 September 2026, a total of 810 updates to standards and practices were recorded across 14 partner collections. Across the network, there were significant gains in Collections Documentation (which has risen from a baseline of 22.09% to 59.05%) and Institutional Documentation (rising from 32.16% to 39.21%).

To support institutions in addressing the specific gaps identified by the Tracking Tool, 10 Communities of Practice (CoP) sessions were held during the six-month period across four active CoPs: Documentation Development (5 sessions), Invertebrate Imaging (2 sessions), Plant Identifications (2 sessions), and Data Management (1 session). In addition, the Hub finalised a comprehensive CoP Resource Toolkit (comprising a Concept Note, CoP Guidelines, Terms of Reference template, session templates and process blueprint) to empower collection professionals from partner institutions to co-chair and sustain these peer-learning networks.



NSCF Collection Status Tracking Tool Dashboard monitoring implementation of standards across partner institutions

6. Institutional Organisational Development ('Roots to Fruits') Workshops

Building on the nine partner institutions reached during 2025/26, the NSCF's organisational development facilitators conducted intensive 'Roots to Fruits' institutional workshops at a further six partner institutions between 1 April and 30 September 2026:

1. South African National Parks (SANParks: Skukuza Biological Reference Collection)
2. McGregor Museum (Kimberley)
3. Agricultural Research Council: Onderstepoort Veterinary Institute (ARC-OVI)
4. University of Pretoria (H.G.W.J. Schweickerdt Herbarium)
5. University of the Witwatersrand: Evolutionary Studies Institute (ESI)
6. SANBI National Herbarium (Pretoria).

Across the 2025/26 and 2026/27 cycles, 15 collection units have now participated in these tailored diagnostic and action-planning interventions. Each workshop creates a facilitated space for curatorial, technical, research and management staff to examine their institutional culture, align daily workflows with the NSCF Collection Status Tracking Tool, resolve operational bottlenecks, and embed shared accountability for long-term collection stewardship.








Institutional Organisational Development ('Roots to Fruits') workshops with partner institutions

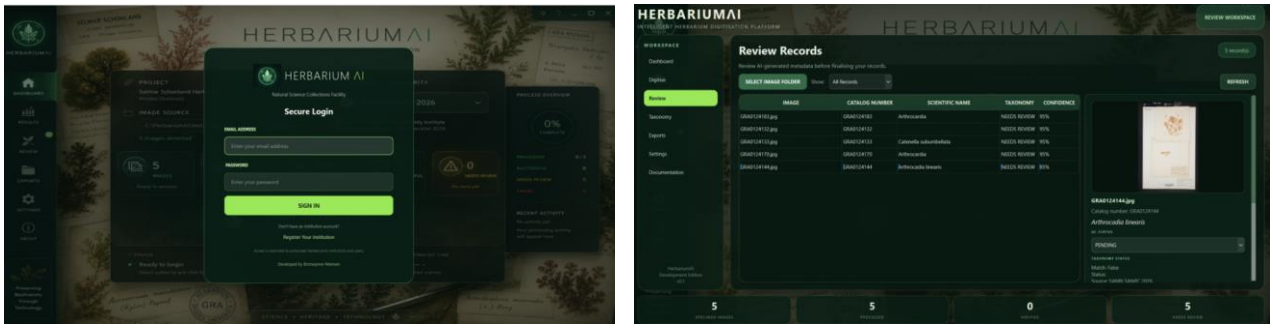
7. Emerging Leaders Development Programme

Following the third residential immersion workshop held in March 2026, the Emerging Leaders Programme (~30 young collection professionals from partner institutions and the NSCF Hub) transitioned into an intensive phase of workplace application and portfolio consolidation between April and September 2026. Facilitated monthly online check-in and coaching sessions were held throughout Q1 and Q2, supporting participants as they compiled their six-component Leadership Portfolios (personal leadership narrative, institutional change initiative, Community of Practice contribution, peer coaching log, reflective journal, and presentation of impact). The final consolidation and graduation workshop is scheduled for November 2026.

8. Virtual Museum, Digitisation & AI-Assisted Transcription Pilot

During the first half of 2026/27, the NSCF digitisation programme achieved major milestones across automated label transcription, vertebrate and fossil type imaging, archival document digitisation, and Virtual Museum platform readiness:

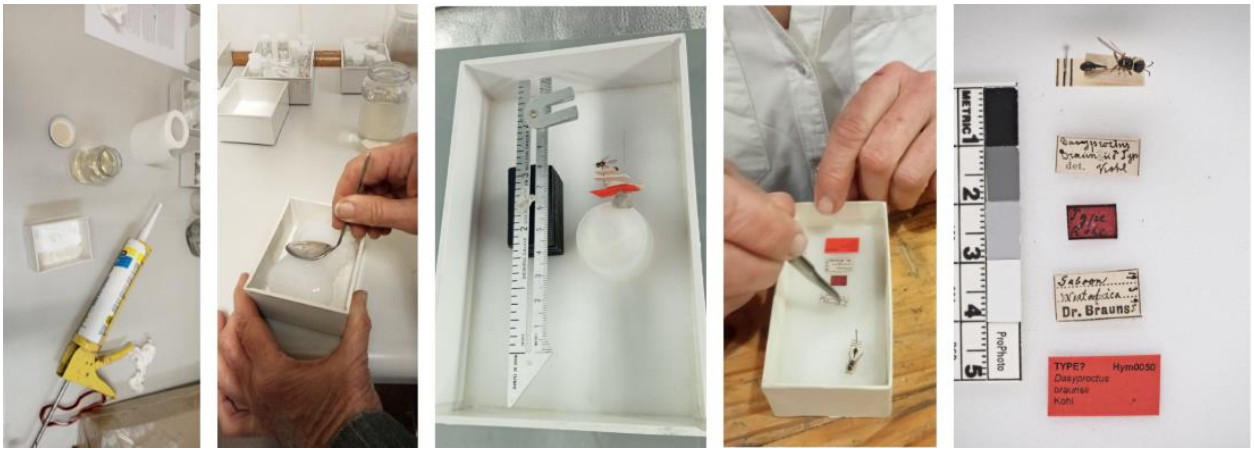
- **Automated Herbarium Label Transcription Pilot:** Following the completion of primary specimen imaging across 14 small and medium-sized herbaria (>800,000 plant specimens digitised), the Hub botanical digitisation team pivoted in April 2026 to piloting AI-assisted transcription workflows to address the national backlog of uncaptured specimen label data. Between 1 April and 30 September 2026, the team successfully transcribed and verified 11,843 plant specimen records demonstrating a scalable pathway to accelerate database expansion across the network.



The NSCF herbarium label transcription platform developed for further piloting across partner institutions

- **Vertebrate and Fossil Type Specimen Imaging (84% National Completion):** NSCF Hub imaging technicians photographed 465 animal and fossil type specimens during the six-month period. This included 334 fish type specimens from the repatriated Malawi collection at SAIAB, 104 Cenozoic palaeontology and mammal type specimens at Iziko Museums of South Africa, and 27 bird skin and insect type specimens at Ditsong National Museum of Natural History. Across all participating institutions, 84% of vertebrate type specimens have now been imaged to international Virtual Museum standards.

- **Archival Document Digitisation at ARC-PHP:** The NSCF archival digitisation team based at the Agricultural Research Council (Plant Health and Protection, ARC-PHP) digitised 14,567 archival documents, preserving irreplaceable historical accession registers, collector field notebooks, and index cards for open access via the Virtual Museum.
- **Virtual Museum Technical Training & Local Platform Deployment:** To build internal technical capacity to manage and sustain the Virtual Museum infrastructure, a 5-day hands-on training workshop was held from 22 to 26 June 2026. Local production-ready instances of both Living Atlas (loaded with >50,000 test specimen records and images) and AtoM have been established by the Hub team while remote storage and access arrangements at SAIAB are finalised.
- **Invertebrate Type & Mass Imaging Standards and Workflows:** Ahead of the delivery of the Gigamacro robotic imaging system, the Hub imaging team initiated the development and testing of standardised specimen staging, pin-height calibration, label layout, and imaging workflows and standard operating procedures (SOPs) for pinned insect type specimens.



Standards and workflows development for the mass invertebrate imaging project

9. Strategic Rescue of Orphan Collections & 2026/27 Partner Funding Allocations

Securing vulnerable and orphaned collections that lack curatorial or resource capacity remains a core objective of the NSCF. During the April to September 2026 reporting period, partner institutions incorporated 10,617 orphan collection specimens into secure, curated repositories, led by SAIAB and the UKZN Bews Herbarium.

In addition, the NSCF Funding Allocation Panel convened in 2026 to evaluate partner proposals for the 2026/27 funding cycle. Twelve (12) project proposals across eight (8) partner institutions (10 collection units) were approved for support, totalling R5,360,401.50 (comprising R3,620,401.50 in Phase 1 allocations for 2026/27 and R1,740,000.00 in Phase 2 allocations dependent on 2027/28 funding):

Partner Institution	Approved 2026/27 Project Scope	Phase 1 Allocation (2026/27)	Phase 2 Allocation (Dependent on 2027/28 Funding)	Total Approved Amount
Agricultural Research Council (ARC)	Curation & data mobilisation at the National Collections	R1,139,700.00	R945,000.00	**R2,084,700.00**
Bayworld (Port Elizabeth Museum)	Herpetology collection specimen jars	R8,521.50	R0.00	**R8,521.50**
Ditsong National Museum of Natural History	Data mobilisation: General Entomology Collection	R100,000.00	R100,000.00	**R200,000.00**
Ditsong National Museum of Natural History	Herpetology Collection targeted intervention	R146,150.00	R0.00	**R146,150.00**

Partner Institution	Approved 2026/27 Project Scope	Phase 1 Allocation (2026/27)	Phase 2 Allocation (Dependent on 2027/28 Funding)	Total Approved Amount
Iziko South African Museum	Absorption of East London Museum Butterfly collection	R20,000.00	R0.00	**R20,000.00**
McGregor Museum	Zoological collections audit and data mobilisation	R122,000.00	R132,000.00	**R254,000.00**
South African Institute for Aquatic Biodiversity (SAIAB)	Continued relocation and incorporation of Malawi Fish Collection	R350,000.00	R265,000.00	**R615,000.00**
SANBI Compton Herbarium	South African Museum Herbarium (SAM) data mobilisation	R596,000.00	R298,000.00	**R894,000.00**
SANBI Compton Herbarium	Compton Herbarium equipment purchase	R150,000.00	R0.00	**R150,000.00**
SANBI KwaZulu-Natal Herbarium	KZN Herbarium cabinets purchase	R499,990.00	R0.00	**R499,990.00**
SANBI National Herbarium	Xylarium collection incorporation	R106,400.00	R0.00	**R106,400.00**
South African National Parks (SANParks)	Skukuza Biological Reference Collection rehousing and data mobilisation	R381,640.00	R0.00	**R381,640.00**
TOTAL APPROVED	**12 Supported Projects across Partner Institutions (Phase 2 dependent on 2027/28 funding)**	**R3,620,401.50**	**R1,740,000.00**	**R5,360,401.50**

10. Outreach, Science Communication & the NSCF CONNECT Framework

During 2026/27, the NSCF finalised its strategic public engagement framework, NSCF CONNECT, built around seven core pillars to make natural science collections relevant, accessible and inspiring to South African society, particularly youth and learners. Key highlights from 1 April to 30 September 2026 include:

- **Yebo Gogga 2026 Exhibition (13–17 May 2026, University of the Witwatersrand):** The NSCF Hub team hosted an interactive exhibition stand showcasing preserved specimens, live demonstrations and biodiversity careers, engaging approximately 5,000 learners, educators and members of the public.
- **DSTI National Science Month Launch (4 July 2026, Vaal University of Technology):** The NSCF participated in the national launch exhibition, highlighting the role of natural science collections as foundational research infrastructure.
- **'Her Name on the Label' Women's Month Campaign (August 2026):** A month-long multi-platform digital campaign profiling women curators, taxonomists, collection managers and emerging leaders across the NSCF network, generating strong public and professional engagement.
- **SPNHC 2026 & Heritage Month Coverage (September 2026):** Real-time conference coverage, spotlight interviews and Heritage Day features connecting South Africa's natural heritage collections to cultural identity and biodiversity stewardship, contributing to 93,901 impressions on LinkedIn alone.



NSCF public outreach and science engagement exhibitions during the reporting period, including the Yebo Gogga Exhibition at Wits University and the DSTI National Science Month Launch at Vaal University of Technology

Challenges

1. Operational and Recruitment Challenges (Short Remaining Contract Window): A critical operational challenge during the April to September 2026 period has been the inability to fill key vacant technical posts, specifically the Specimen Database Coordinator and Data Quality Specialist positions, because project employment contracts are required to be tied strictly to the end date of the current DSTI–SANBI funding agreement (April 2027). With less than seven months remaining on the current agreement, skilled biodiversity informatics and data specialists could not be attracted or appointed on such short-term contracts.

This highlights a broader challenge for long-term programmes where posts become vacant late in a funding cycle. Consideration could be given to allowing contracts to extend beyond the current funding period, where this is supported by an approved longer-term funding commitment, to strengthen recruitment and continuity of delivery. The DSTI has approved a five-year investment commitment for the NSCF, including funding for the 2027/28 and 2028/29 financial years. Furthermore, most current project staff contracts (11 of the 18 active positions, in addition to 3 ending in January and February 2027) come to an end in March 2027, and without a longer-term funding commitment these contracts are at risk of lapsing before the spending threshold is reached and the new agreement is finalised.

2. Procurement Delays for the Robotic Mass Insect Imaging System: Following a comprehensive technical evaluation, the NSCF identified the Gigamacro robotic imaging system as the optimal technology for high-throughput mass digitisation of pinned insect specimens. However, procurement was stalled while awaiting a final decision within SANBI on the required procurement mechanism. This delay not only affected the mass insect digitisation deliverable, but also impacts project expenditure rates required to reach the 50% spend threshold for tranche transfers under the upcoming 2027/28–2029/30 agreement.

3. Cash Flow and Funding Cycle Alignment Challenges: SANBI financial procedures require the project cost centre to retain sufficient cash balances to cover the full multi-year value of all signed employment contracts, service provider contracts (such as Organisational Development), and partner institution collaboration agreements. At the same time, DSTI tranche releases require demonstrating high actual expenditure thresholds (90% under the current agreement). As at 30 September 2026, 100% of the DSTI grant income received to date has been expended (grant balance of -R279,406), and ongoing operations are currently bridged by the accumulated interest while awaiting transfer of the 2026/27 grant allocation.

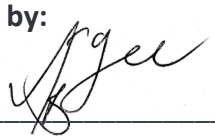
4. Fostering a Culture of Accountability, Institutional Ownership and Societal Relevance: Many collections and staff have historically operated in institutional silos, focusing on internal priorities rather than collective national outcomes. While the 'Roots to Fruits' Organisational Development workshops (now completed at 15 partner institutions) and the Emerging Leaders Programme have generated strong momentum, uneven buy-in from leadership or competing institutional pressures at some partner organisations continue to require sustained facilitation and structured accountability through the Co-ordinating Committee.

5. Development and Hosting of the Online Virtual Museum: Deployment of the public-facing online Virtual Museum has experienced delays due to server storage and remote developer access constraints at the hosting institution (SAIAB). To prevent these hosting bottlenecks from delaying platform readiness, the NSCF Hub team deployed local production-ready instances of both the Living Atlas and Access to Memory (AtoM) platforms, uploaded over 50,000 test specimen records and archival collections, and trained Hub and partner technical staff through the June 2026 CollexiumOne workshop so that migration to the public host can proceed seamlessly once remote access is finalised.

6. Scaling and Institutionalisation of NSCF Initiatives: Several flagship NSCF innovations, including the Collection Status Tracking Tool, AI-assisted label transcription workflows, Communities of Practice, Specimen Imaging standards and workflows, and the Emerging Leaders model, have demonstrated strong results at pilot and network level. The key ongoing challenge is embedding and institutionalising these practices within the permanent organograms, job descriptions, and annual performance plans of partner institutions so that gains are sustained over the long term.

Approval

Submitted by:



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Date: 27 October 2026

Approved by:



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Date: 28/110/2026