

NRF 2022-23 ANNUAL REPORT

PRESENTATION TO THE PORTFOLIO COMMITTEE ON HIGHER EDUCATION, SCIENCE AND INNOVATION

DATE: 20 OCTOBER 2023



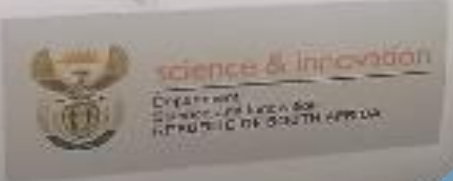
Presentation Outline

- NRF Mandate
- Strategic context
- Progress on Strategic Plan
- Highlights for achievements of 2022/23 FY
- 2022/23 FY performance targets.
- Financial overview 2022/23.
- Closing remarks

NRF mandate

The Object of the NRF is to contribute to National Development by:

- a) Supporting, promoting and advancing research and human capacity development, through funding and the provision of the necessary research infrastructure, in order to facilitate the creation of knowledge, innovation and development in all fields of science and technology, including humanities, social sciences and indigenous knowledge;
- b) Developing, supporting and maintaining National Research Facilities;
- c) Supporting and promoting public awareness of, and engagement with, science; and
- d) Promoting the development and maintenance of the national science system and support of Government priorities.



STRATEGIC CONTEXT

Strategic Context

Positioning of the NRF

A transformed and agile knowledge organisation that shapes and influences all aspects of the research and knowledge enterprise, with unwavering commitment to transformation, impact, excellence and sustainability.

Strategic Pillars

- **Transformation:** *The imperative for a better future.*
- **Impact:** *A better society through knowledge.*
- **Excellence:** *The foundation that sets the standard.*
- **Sustainability:** *Building a better tomorrow today.*

Strategic Context

NRF Strategy 2025 - Impact Statement: “national development enabled through advancing, promoting and supporting research”.

To achieve this impact, the organisation identified four Outcomes that set performance priorities for the MTSF period, namely:

- A transformed (internationally, competitive and sustainable) research workforce;
- Enhanced impact of the research enterprise;
- Enhanced impact of science engagement; and
- A transformed organisation that lives its culture and values.

Progress on Strat. Plan

Outcomes and Indicators

- Transforming the research Workforce.
 - Profile of NRF-funded Postgraduate Students who have **completed their studies**. [Black, Women].
 - Profile of NRF-funded researchers **producing research outputs** [Black, Women].
- Enhance impact of research enterprise.
 - Ex-post impact assessments.
 - Domain balance in research infrastructure provision.
 - Evidence based decision making.

Key levers/initiatives

- Post Graduate Students Policy
 - Emerging Researchers Programmes - (e.g. nGAP, BAAP, Thuthuka etc.)
 - Leading Researchers and Scholars Programme
 - Equity, Diversity and Inclusion
 - Institutional capacity development
-
- NRF Framework to Advance the Societal and Knowledge Impact of Research
 - NRF Research Framework (Agenda) – aligned to Decadal Plan
 - Research Infrastructure for Humanities and Social Sciences
 - Innovation Platforms
 - Research Development Information Platform

Progress on NRF Strategic Plan

Outcomes and Indicators

- Enhanced impact of Science Engagement.
 - Engaged science entrenched in the research enterprise: mainstreaming of engaged science.
- A Transformed Organisation that lives its Culture and Values.
 - Staff composition at decision making levels [Black, Women]
 - Inclusive, enabling and learning org.
 - Culture that enhances high performance and service excellence.

Key levers/initiatives

- Engaged Research Framework – citizen science and science shops implementation
- Inclusion of SE funding in research grants
- SE Capacity Development Initiatives
- Fit-for-purpose SAASTA – to play national coordination role
- EE Plan that aligns to planned targets
- Employee Development Programmes
- Culture Change Programme
- NRF Service Delivery Model and Structure



**HIGHLIGHTS OF
ACHIEVEMENTS
FOR 2022-23 FY**

Highlights for 2022/23 FY

DSI-NRF-Sasol jointly-funded South African Research Chairs

- The R40 million, five-year investment in clean energy research of the NRF-Sasol partnership, announced on 10 February 2023.
- To date, **nine** Just Energy Transition (JET) Research Chairs (**five** in Energy and Power Systems Modelling and **four** in Green Hydrogen) and six Postdoctoral Innovation Programme Fellowships have been awarded through this tripartite partnership.



South Africa to host African sustainability node

- The NRF's bid to host the **Africa Future Earth Secretariat Hub** was approved in April 2022 by the Future Earth Governing Council.
- The Africa Hub will join eight global secretariat hubs, namely: Canada, China, France, Japan, South Asia, Sweden, Taipei, and the United States.
- The University of Pretoria and Rhodes University have been confirmed as the host of the Africa Hub Leadership Centre.



Highlights for 2022/23 FY

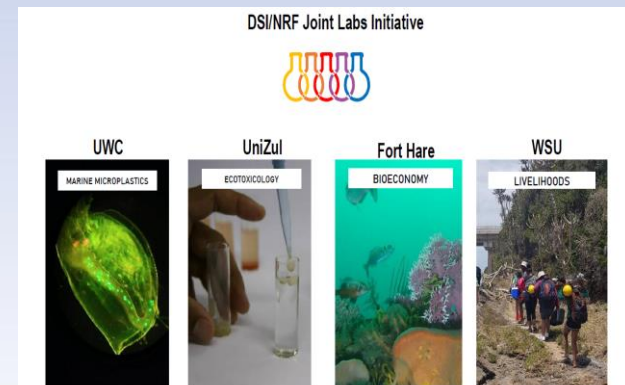
South African Isotopes Facility (SAIF)

- The SAIF infrastructure at NRF-iThemba LABS was completed and commissioned. NRF-iThemba LABS is the global sole supplier of certain medical isotopes, and therefore has a substantial international reach. It supplies South African nuclear medicine clinics for cancer treatment. SAIF will scale up the number treated South African patients by more than 5-fold from the current 5 000. SAIF was inaugurated on 09 June 2023.



Marine Science Research Infrastructure at HEIs

- Through The Joint Marine Laboratory Programme, NRF-SAIAB is building research laboratories at four Historically Disadvantaged Institutions (HDIs). This new infrastructure will enable these HDIs to produce next generation of marine scientists, which will in part address historical exclusion of black people. The programme also support knowledge generation by the Universities



Highlights for 2022/23 FY

SKA Construction

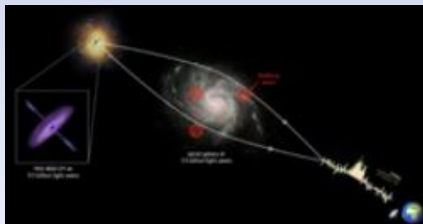
- SKAO Commences Telescope Construction of the world's largest telescope in Australia and South Africa. The project reached a pivotal milestone in South Africa with commencement of on-site construction of Square Kilometre Array (SKA) Mid-Frequency Telescope (SKA-MID 1).
- The NRF was allocated R1.26b by National Treasury through the DSI for the delivery of South Africa's SKA hosting obligations.



Highlights for 2022/23 FY

Scientific discoveries

A group of South African Astronomers from the South African Astronomical Observatory (NRF-SAAO) and researchers from the Max Planck Institute for Extraterrestrial Physics discovered a rare white dwarf binary star system occupying the Large Magellanic Cloud.



Rare White Dwarf Binary Star System [HP99] 159



Distant Galaxy Has Very Large Hydrogen Atoms



Artist's impression of Megamaser "Nkalakatha" discovered by astronomers using MeerKAT



**2022/23 FY
PERFORMANCE
TARGETS**

Performance Against Targets in the APP for 2022/23

Output	Output indicators	Audited Actual 2020/21	Audited Actual 2021/22	Planned Annual Target 2022/23	Actual Achievement 2022/23	Deviation from planned target	Reason for deviation
PROGRAMME 1: ADMINISTRATION							
A transformed leadership and management cohort	Proportion of employees from designated groups at Peromnes levels 1-7	47%	61.1%	63.7%	64.9%	1.2%	Target exceeded due to vacancies at this level and Recruitment focused on Designated groups.
Predictable and sustainable resourcing of the NRF mandate	Organisation Overheads as a proportion of total expenditure	9.5%	7.9%	<10%	8.7%	1.3%	Target achieved
PROGRAMME 2: SCIENCE ENGAGEMENT							
Science engagement interventions	Number of interventions implemented for the general public	-	-	12	17	5	Target exceeded due to more opportunities that arose as a result of collaboration with industry stakeholders.
	Number of Interventions for Maths, Science and Technology (MST) support for learners	-	-	14	26	12	Target exceeded due to more opportunities that arose as a result of collaboration with industry stakeholders.

Performance Against Targets in the APP for 2022/23 (cont.)

Output	Output indicators	Audited Actual 2020/21	Audited Actual 2021/22	Planned Annual Target 2022/23	Actual Achievement 2022/23	Deviation from planned target	Reason for deviation
PROGRAMME 3: RESEARCH AND INNOVATION AND SUPPORT AND ADVANCEMENT							
Funded postgraduate students	Number of NRF-funded postgraduate students	11 103	7 732	6 218	6 697	479	Target exceeded due to over allocation of grants and additional awards during the year to manage grants that are not taken up.
Funded researchers	Number of NRF-funded researchers	3 000	3 201	3 000	3 323	323	Target exceeded due to over allocation of grants to manage grants that are not taken up.

Performance Against Targets in the APP for 2022/23 (cont.)

Output	Output indicators	Audited Actual 2020/21	Audited Actual 2021/22	Planned Annual Target 2022/23	Actual Achievement 2022/23	Deviation from planned target	Reason for deviation
PROGRAMME 4: NATIONAL RESEARCH INFRASTRUCTURE PLATFORMS							
Socio-Economic contribution of NFs	Foreign income (Rand million) derived from NFs activities	R61.8	R80.7	R171	R152	-R19	Target not achieved. <ul style="list-style-type: none"> • Interruption of radio isotope production schedule and operations due to frequent power dips. • The loss of isotope Supplier contract. • Timing of recoveries for SKAO work.
	Number of patient doses generated from radioisotopes produced by NRF-iThemba LABS	new	171 713	225 000	164 433	-60 567	Target not achieved. <ul style="list-style-type: none"> • Interruption of radio isotope production schedule and operations due to frequent power dips. • The loss of isotope supplier contract.
Knowledge translation for societal benefit.	Number of technical and policy briefs produced or published by NFs	new	new	28	28	-	Target achieved

Performance Against Targets in the APP for 2021/22 (cont.)

Output	Output indicators	Audited Actual 2020/21	Audited Actual 2021/22	Planned Annual Target 2022/23	Actual Achievement 2022/23	Deviation from planned target	Reason for deviation
PROGRAMME 4: NATIONAL RESEARCH INFRASTRUCTURE PLATFORMS							
Knowledge produced for societal benefit	Number of active intellectual property products	new	new	5	14	9	Target exceeded . The IP products that were projected to be developed over a longer period of time commenced earlier than originally anticipated through improved processes.

Overall, the NRF achieved 8 of its 10 primary performance indicators targets for the 2022/23 FY.



**FINANCIAL
OVERVIEW
2022/23**

Key Financial Performance Indicators for 2022/23

<p>Revenue ↑ 4.8%</p> <p>R 4.68b vs. R 4.47b in 2022 Higher contract income</p>	<p>Expenditure ↑ 6.4%</p> <p>R 4.5b vs. R 4.23b in 2022 SKAO membership fees payments</p>	<p>Personnel Costs ↑ 8%</p> <p>R 866m vs. R 801m in 2022 General increase, filling vacancies & SKA staffing needs</p>
<p>Property, Plant & Equipment ↑ 6%</p> <p>R 2.757b vs. R 2.609 in 2022 Capex on SAIF project</p>	<p>Investment in Research, Students and Research Platforms [RIISA +NRIP] ↑ 6%</p> <p>R 4,2b vs. R 3,9b in 2022 SKAO membership fees payments</p>	<p>Investment in Science Engagement ↑ 7%</p> <p>R 125m vs. R 117m in 2022 Mass participation events resumed</p>
<p>Asset Sustainability > 1 (benchmark)</p> <p>1.6 vs. 1.9 in 2022 Reduced capex in 2023</p>	<p>Total Liabilities ↓ 12%</p> <p>R 1.5b vs. R 1.7b in 2022 Increased delivery on contractual obligations</p>	<p>Cash on Hand ↓ 35%</p> <p>R 454m vs. R 697m in 2022 Outflows to fund infrastructure platforms/research/science engagement</p>

Financial Overview for the Year ending 31 March 2023

Statement of Financial Performance	2022 Actual R'000	2023 Budget R'000	Variance	2023 Actual R'000
Total Income*	4,466,375	4,834,407	(3%)	4,680,788
Total Expenditure**	4,231,522	4,301,627	4.7%	4,502,281
Net unspent funds/(deficit)	234,853	532,780		178,507
Transfers from Accumulated Fund (incl. capex transfers)	(227,579)	(532,780)		(167,862)
Accumulated surplus	7,274	-		10,645

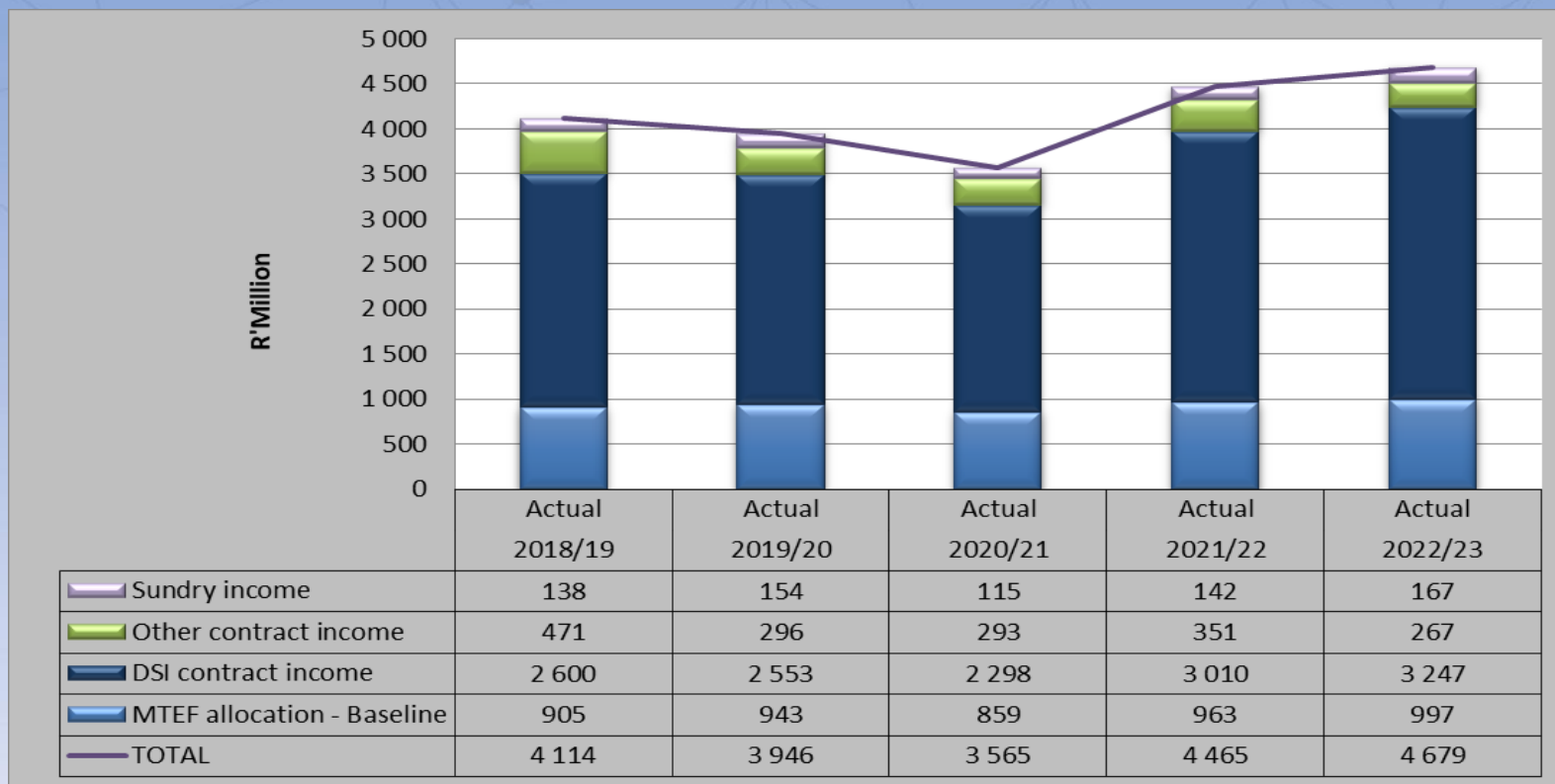
* Actual is lower than Budget due to decrease in the Science Missions and SARIR contracts and a delay in NSF funds transfer.

** Actual is higher than Budget due to SKAO membership fees paid.

Statement of Financial Position	2023 R'000	2022 R'000
Current assets	1,610,234	1,798,390
Non-Current assets	2,872,650	2,712,537
Current liabilities	(1,491,574)	(1,698,124)
Net assets	2,991,310	2,812,803

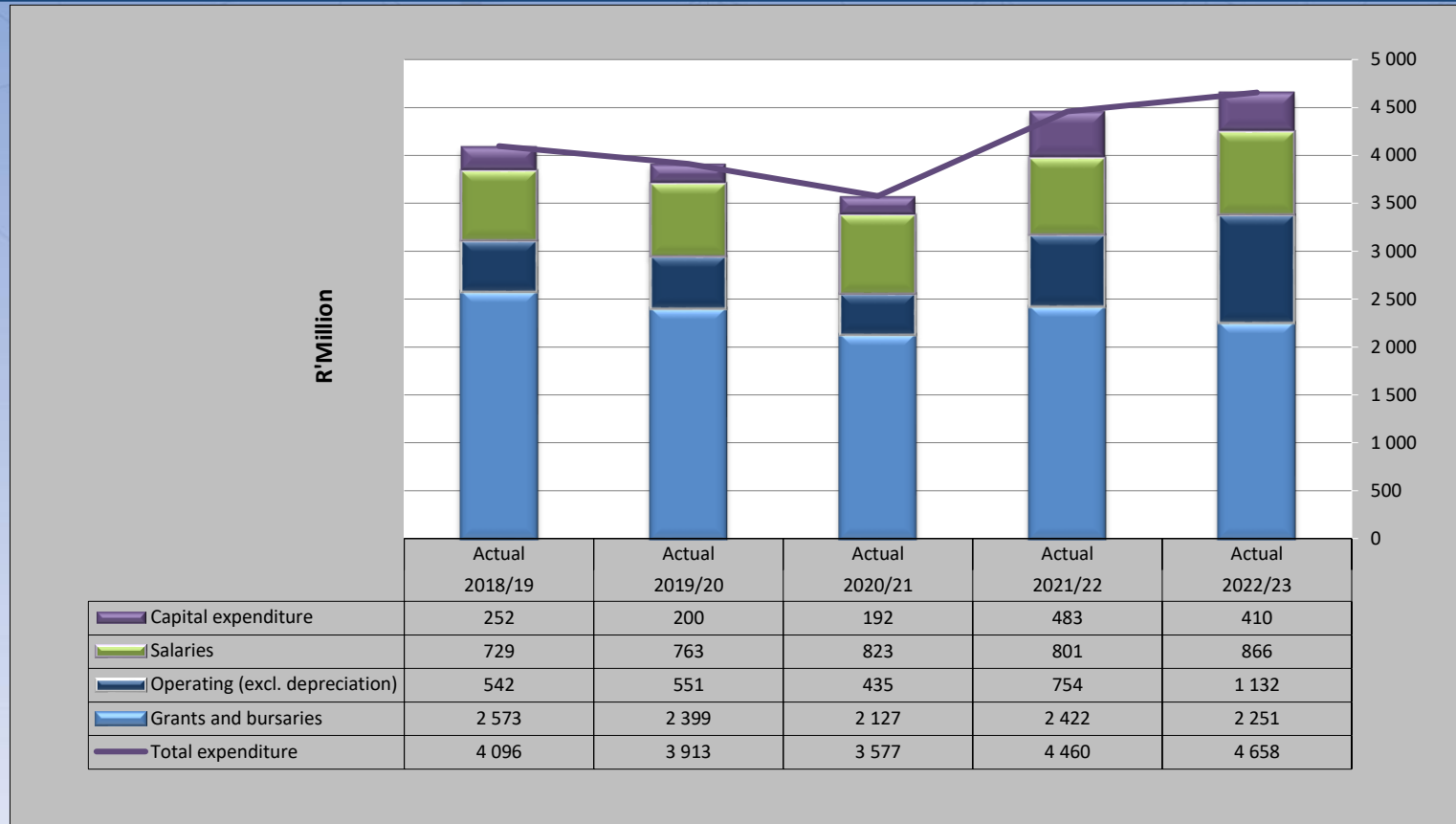
Statement of Cash Flow	2023 R'000	2022 R'000
Net cash flow from operating activities	167,952	348,326
Net cash flow from investing activities	(410,890)	(483,779)
Net decrease in cash and cash equivalents	(242,938)	(135,453)

Financial Overview - Income Trends



- **NRF Total Income** increased by 4,8% from R4 465m in 2021/22 to R4 679m in 2022/23.
- **Sundry Income** increased by 18% as interest rates increased on funds held in deposit for capital projects.
- **Other contracts** income decreased from R 351m in 2021/22 to R 267m in 2022/23 – due to a delay in the transfer of funds from DHET for the Scarce Skills Development Fund in 2022/23. Funds received in April 2023.
- **DSI contracts** increased by R237m (8%) from R 3 010m in 2021/22 to R 3 247m in 2022/23 to fund SKAO membership fees.
- **Parliamentary Grant (PG)** increased nominally by 4% from R963m to R997m in 2022/23 to cater for inflationary adjustment.

Financial Overview - Expenditure Trends



- **Total expenditure** increase of 4,4% from R4 460m in 2021/22 to R4 658m in 2022/23 mainly due to RSA SKAO membership obligations.
- **Salaries** increased by 8% mainly due to the annual general increase and filling of various vacancies post a moratorium and much needed technical expertise for SKA MeerKAT+ and SKA-Mid.
- **Research expenditure relating to grant and bursaries** lower due to slower funded grants on take-up and spend by HEI's.
- **Capex** decreased by R73m due to some lag in the completion of the SKA fibre and the iThemba LABS SAIF Project.

Key Ratios

Ratio	2021	2022	2023
Current ratio	1	1.06	1.08
Quick ratio	0.92	0.83	0.73
Total asset/liability ratio	2.5	2.66	3
Asset sustainability ratio against general benchmark > 1	0.71	1.9	1.6
PG as % of Total Income	24%	22%	21%
DSI contract funding as % of Total Income	64%	67%	69%
Other contract funding as % of Total Income	8%	8%	6%
Overheads against NRF target of <10%	9.5%	7.9%	8.7%
Grants & bursaries as % of Total Income	59%	54%	48%
Remuneration as % of Total Expenditure	23%	19%	19%
Remuneration as % of PG [reduced PG in 2021 due to COVID]	96%	83%	87%
Repairs & maintenance as % of Operating Expenditure	3%	3%	2.3%

Governance and Audit Outcome

- Unqualified Audit opinion with a Clean Award.
- Clean audit outcome maintained for the past three years [AGSA]
- Good internal controls implemented by management [AGSA]
- Healthy going concern position and sound financial disciplines noted [AGSA]
- NO Irregular Expenditure.
- NO Fruitless and Wasteful expenditure.
- BBBEE Level 2 achieved [2022 BBBEE Level 4]

Closing Remarks

During the next MTEF period, the organisation will continue to deliver on the following key priorities:

- Advance the knowledge value chain, by promoting translation of research outputs into new and improved products and services – directed funding and research infrastructure provision.
- Revive and optimise portfolio of partnerships with more focus on growing partnerships with industry.
- Continue embedding engaged research within the knowledge enterprise.
- Work with the DSI to crystallise priorities of the next MTSF period into a new NRF Strategic Plan, aligned to priorities of the 7th Administration.
- NRF continues to maintain a good governance and favourable audit outcomes.

*Enkosi, Thank you,
Re a leboga, Siyabonga, Dankie*

