



National  
Research  
Foundation

## **NRF DATA INSIGHTS**

*Unveiling the trends to shape tomorrow*



# **NRF-Funded Researchers and Postdoctoral Fellows**



science, technology  
& innovation

Department:  
Science, Technology and Innovation  
REPUBLIC OF SOUTH AFRICA

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## Introduction

In this edition of *NRF Data Insights*, we analyse funding trends for NRF-funded researchers and postdoctoral fellows, with an emphasis on transformation, equity, and strategic investment. The data reflects the NRF's commitment to the advancement of inclusive research excellence, particularly through increased support for Black South African researchers and women through key targeted programmes.

Despite a slight reduction in the number of funded researchers, mainly due to funding constraints and increased grant values, research output remains strong (as discussed in [NRF Data Insights Volume 2](#)) and the diversity of publishing authors is improving steadily. This *NRF Data Insights* offers a concise overview of funding distribution, researcher demographics, and publisher trends, underscoring the NRF's role in shaping a more equitable and sustainable research system.

### Key findings noted in this edition of *NRF Data Insights* are:

- NRF support for Black South African researchers increased by 24%, from 1 445 in 2020 to 1 794 in 2024. Black South African women researchers increased by 30%, from 673 to 878. These increases are driven by targeted funding programmes.
- In 2024, 55% of postdoctoral fellows were Black South Africans, compared to 41% in 2020.
- Increased grant values and a growing number of university staff, without increased funding, means that the NRF supports a smaller proportion of university staff members.
- The NRF's investment in the South African Research Chairs Initiative (SARChI) and Centres of Excellence (CoEs) has decreased from R748.9 million in 2020 to R620.4 million in 2024 as a number of strategic investments have come to the end of their funding period.
- In 2024, 90% of Web of Science publications by NRF-funded authors were by South Africans, with 53% by Black South African authors.

### Trends and demography of NRF-funded researchers and postdoctoral fellows

Figure 1 below shows NRF support for researchers, including postdoctoral fellows, over the past five years, with a demographic breakdown. The data reflects the NRF's sustained commitment to transformation and equity, despite support for a fluctuating number of researchers. The dip in support in 2020 was partly due to the impact of COVID-19 as researchers did not claim awards due to their inability to travel or carry out field research during lockdowns. Over the five-year period, support for a growing number and proportion of South African Black, women, and Black women researchers is evident. Support for Black researchers increased from 1 445 to 1 794 (24% growth), for women from 1 318 to 1 489 (13% growth), and for Black women from 673 to 878 (30% growth). Of the 3 212 researchers and postdoctoral fellows supported in 2024, 56% were Black South Africans (49% in 2020); 46% South African women (44% in 2020); and 27% Black South Africa women (23% in 2020). This growth is partly driven by targeted programmes such as [Thuthuka](#) and the [Black Academics Advancement Programme \(BAAP\)](#). It also reflects policy shifts prioritising inclusivity, including the development of an [NRF Transformation Framework and document on Equity, Diversity and Inclusivity \(EDI\)](#).

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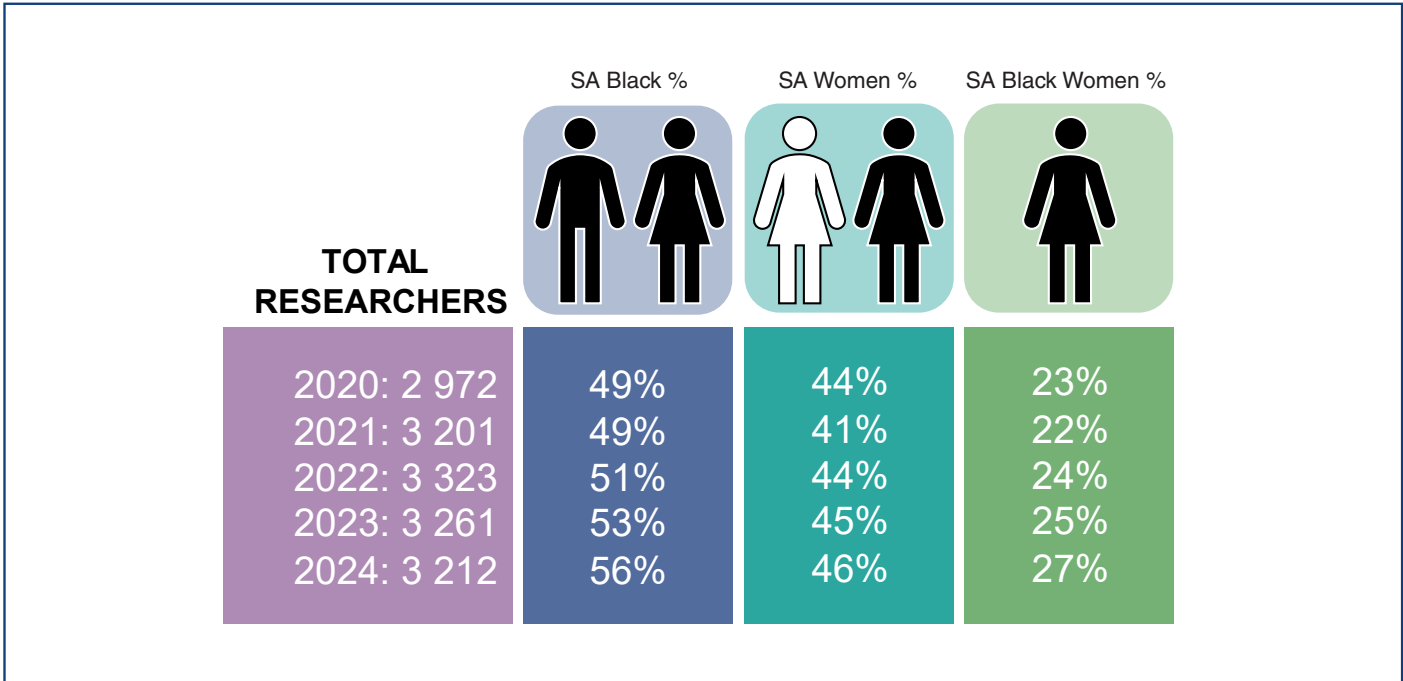


Figure 1: Black and/or Women Researchers Supported, Including Postdoctoral Fellows (2020 to 2024)

Shifts in the demography of funded researchers highlight the NRF’s deliberate focus on increasing support for Black South Africans, with a particular focus on Black South African women. Overall, 89% of NRF-funded researchers in 2024 were South African citizens or permanent residents, a slight increase from 88% in 2020 (Figure 2). While the percentage of researchers from the rest of Africa remained unchanged (5%) over the period under review, the proportion from outside of Africa declined from 7% to 6%.

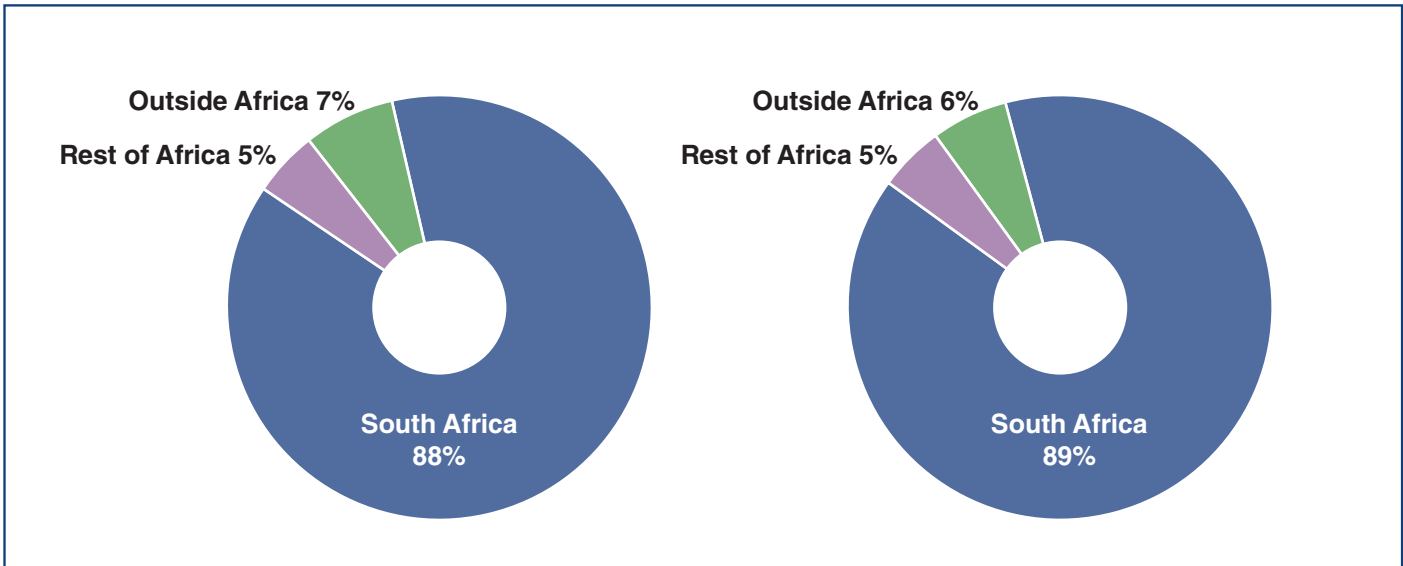


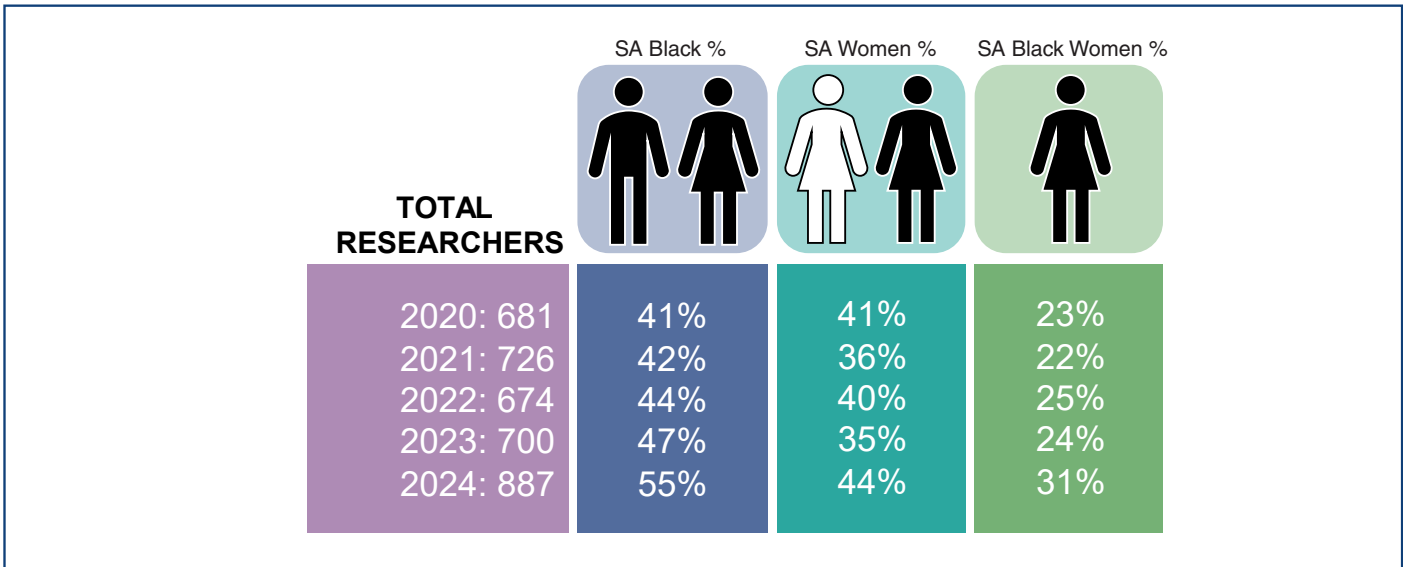
Figure 2: NRF-Supported Researchers and Postdoctoral Fellows by Citizenship (2020 vs 2024) <sup>1</sup>

1. Due to rounding off, percentages may not equal 100.

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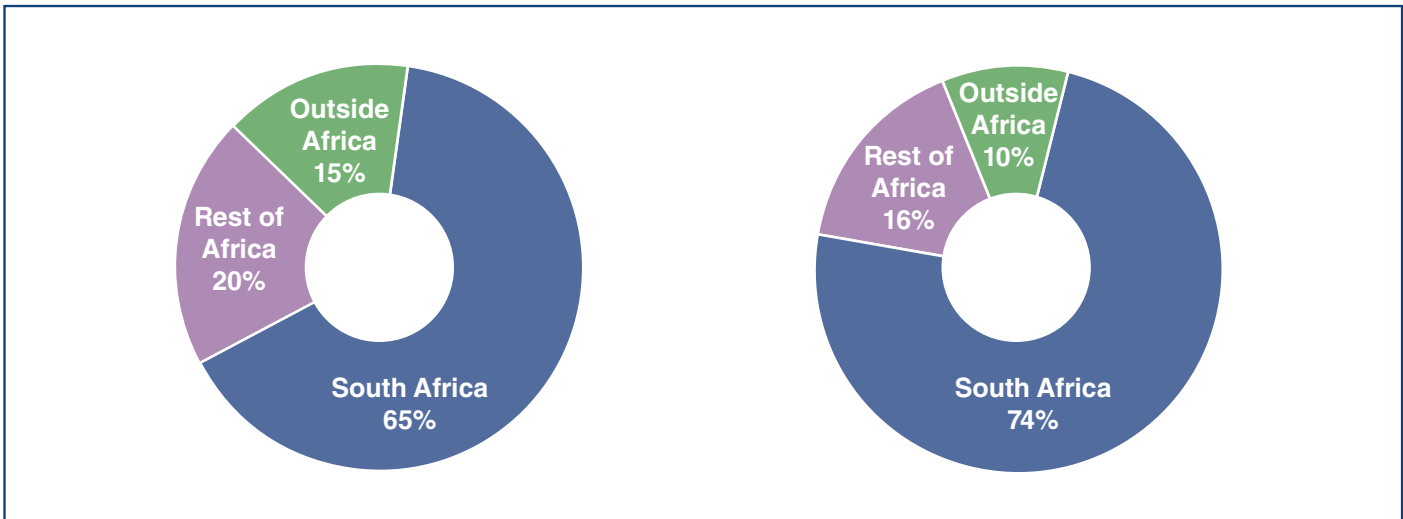
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As with all NRF-funded researchers, the number of NRF-funded postdoctoral fellows (Figure 3) increased from 2020 to 2024, in this instance from 681 to 887 (30% growth). The upward trend in support for South African Black and Black women postdoctoral fellows (number and proportion) shows how transformation efforts are evident at all funding levels from students to emerging researchers and established researchers. The number of Black postdoctoral fellows increased from 276 to 492 (78%); women from 280 to 391 (40%); and Black women from 158 to 276 (75%). In 2024, 55% of NRF-funded postdoctoral fellows were Black South Africans (compared to 41% in 2020); 44% South African women (41% in 2020), and 31% Black South African women (23% in 2020). The data highlights how the pipeline from postgraduate study to postdoctoral fellows has shifted significantly to enable transformation at postdoctoral level. This is also evident in the increase in the appointment of South African postdoctoral fellows, discussed below.



**Figure 3: Black and/or Women Postdoctoral Fellows Supported (2020 to 2024)**

In terms of nationality (Figure 4), the proportion of South African postdoctoral fellows has increased significantly from 65% in 2020 to 74% in 2024. The percentage of postdoctoral fellows from the rest of Africa decreased from 20% to 16% and from outside of Africa from 15% in 2020 to 10% in 2024. The marked increase in the proportion of South African postdoctoral fellows reflects the NRF’s strategic intent to retain and develop local talent. The greater proportion of international postdoctoral fellows, when compared to postgraduate students or all researchers, reflects the continued desire to establish international networks and attract scarce skills through this funding opportunity.



**Figure 4: NRF Postdoctoral Fellows by Citizenship (2020 vs 2024)**



## Targeted interventions to transform the researcher cohort

The NRF recognises that, while progress has been made in transforming the diversity of NRF-funded researchers, continued targeted supported and other interventions are required to continue this progress. To accelerate this transformation, the NRF has introduced several targeted initiatives, including the [Thuthuka Programme](#), the [Black Academics Advancement Programme \(BAAP\)](#), and the [DSI-NRF Postgraduate Student Funding Policy](#). These programmes are designed to address demographic imbalances and promote equity within the research community. Details on these interventions are provided on the [NRF website](#) and in the 2024 [NRF Data Insights Volume 5](#).

## Investment in research grants and the proportion of NRF-funded university staff

The proportion of university instruction and research staff receiving NRF funding has declined over the past five years (Table 1). In 2019, the NRF-funded 20% of all academic staff and 42% of those with a Doctorate. The proportion dropped sharply in 2020 (largely due to COVID-19 disruptions), with a partial recovery thereafter to 15.6% of all academic staff in 2023 and 29% of those with a Doctorate. The overall decline is due to the combined impact of increased grant values, declining funding, and a growing cohort of Permanent Instruction and Research Staff. Declining funding is partly due to the NRF's strategic decision to devote more funding to both postgraduate students and emerging researchers in order to ensure the sustainability of the South African research ecosystem. Support for these two groups is discussed in volumes 3 and 4 of the *NRF Data Insights*.

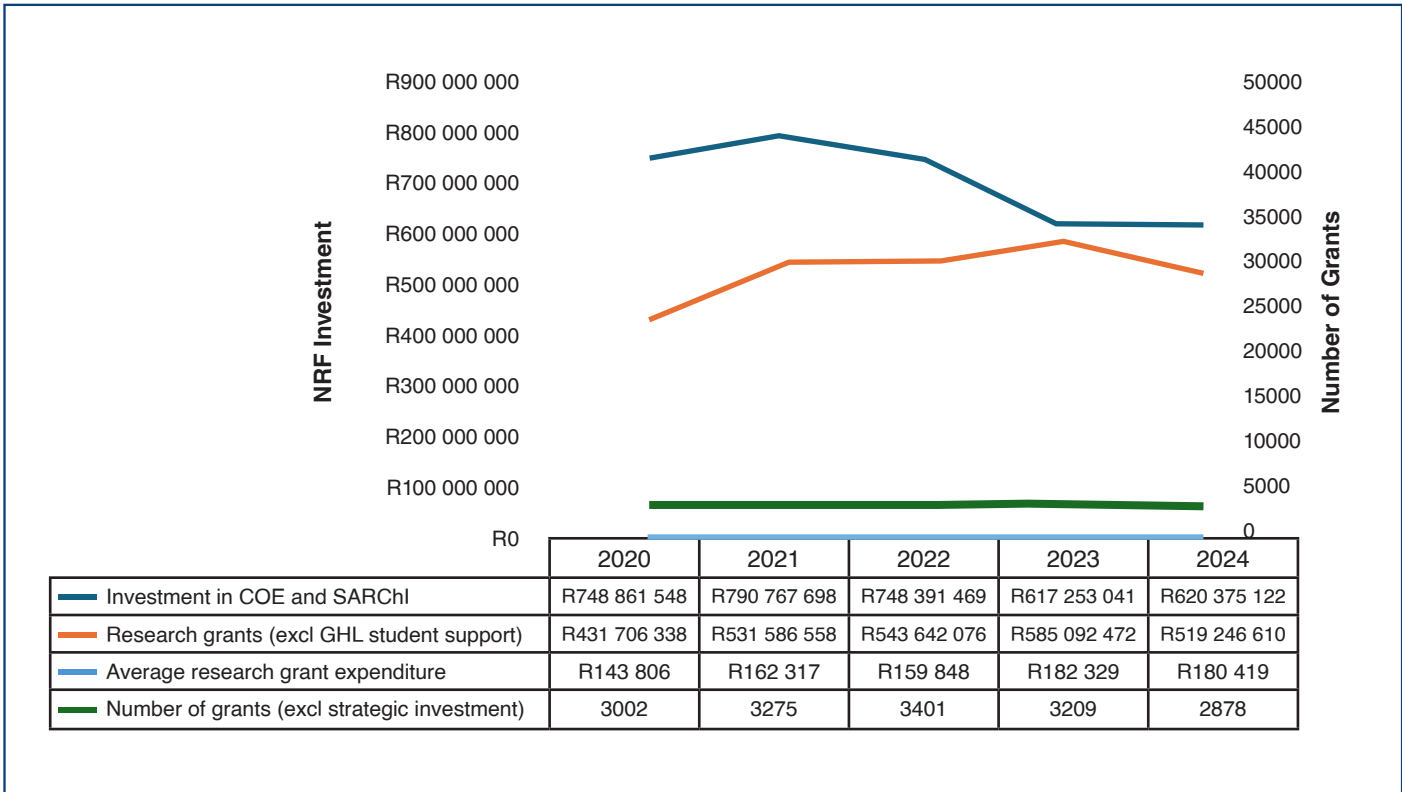
**Table 1: NRF-supported researchers as a proportion of all academic staff (2019 to 2023) <sup>2</sup>**

Academic Year	Number of NRF Supported Researchers	HEMIS Headcount Permanent Instruction and Research Staff		HEMIS Headcount Permanent Instruction and Research Staff with PhDs	
		Number	NRF as %	Number	NRF as %
2019	3 976	19 901	20.0%	9 458	42.0%
2020	2 972	20 309	14.6%	10 021	29.7%
2021	3 201	20 414	15.7%	9 965	32.1%
2022	3 323	20 612	16.1%	10 827	30.7%
2023	3 261	20 946	15.6%	11 264	29.0%

The total amount spent on research grants has declined from R1.5 billion in 2019 to R1.3 billion in 2023 (14% decline). This includes expenditure on strategic instruments, such the South African Research Chairs Initiative (SARChI) and Centres of Excellence (CoEs), and expenditure on research grants, but excludes grants for equipment, travel and mobility, and grant-holder linked students.

Expenditure on research grants has increased over the period under review from R431.7 million in 2020 (the lowest allocation during the period, largely due to COVID-19) to R519.2 million in 2024. As shown in Figure 5, allocations have fluctuated annually, reaching a pinnacle in 2023 of R585 million. The number of grants allocated in 2024 is the lowest across the period, dropping below 3 000 for the first time to 2 878. This is a 4% decline from 2020. The key reason for the decline is the change in average grant value from R143 806 in 2020 to R180 419 in 2024. From 2023, both the number of grants and the grant value have declined due to the decrease in the amount of available funding.

2. Staff data is taken from HEMIS. Data for 2024 are not yet available. Data has been updated based on the latest HEMIS figures available, which included changes to the proportion of staff with a Doctorate in historic data.



**Figure 5: NRF Research Grant Expenditure Per Annum (2020 to 2024) <sup>3</sup>**

Figure 5 also shows an overall decline in the investment in SARChI and CoEs (R748.9 million to R620.4 million), with some annual fluctuations. This is largely due to a number of strategic investments coming to the end of their funding period. Since the launch of SARChI, a total of 288 Research Chairs have been awarded to 23 universities and national research facilities across various scientific disciplines. Data at the end of 2024 indicate that 199 of these Chairs have been filled by institutions and 197 are fully operational. A total of 89 Chairs have exited the system, with five rescinded and 84 phased out or concluding their funding periods of 10 and 15 years respectively.

Combined annual expenditure on research (Table 2) was R1.386 billion in 2024, only slightly below the peak of R1.424 billion in 2021. This reflects the NRF’s continued commitment to support research, despite economic constraints. Over the years, efforts have been made to diversify the demography of these grant holders and to direct funding to under-represented research areas of national importance and strategic interest. This strategy has borne fruit, with some examples of the [societal impact of research](#) available on the NRF website.

### Research and researcher funding by field

The NRF funds researchers across all research fields (Table 2). In 2024, the four fields that received the highest proportion of funds were the biological sciences (15%), health sciences (15%), physical sciences (13%), and social sciences (11%). These categories were the same throughout the period under review although the proportion of funding to the biological sciences has declined to ensure a more balanced approach with other fields.

3. Excluding grants for THRIP, Equipment, SARChI and Centres of Excellence.



Of concern is the low support (2% and less) in national priority areas or areas of critical importance for South Africa’s development as identified in national policy documents. This includes mathematical sciences, technologies and applied sciences, and information and computer sciences. Given the growing focus on artificial intelligence globally, the NRF aims to grow research and a sustainable cohort of researchers in these areas through support for postgraduate students and emerging researchers. A positive development in this regard is that engineering sciences was the fifth highest field for NRF-funded Emerging Researchers in 2024, although a greater focus on other critical skills areas at this level of development is still required to develop high-level research skills.

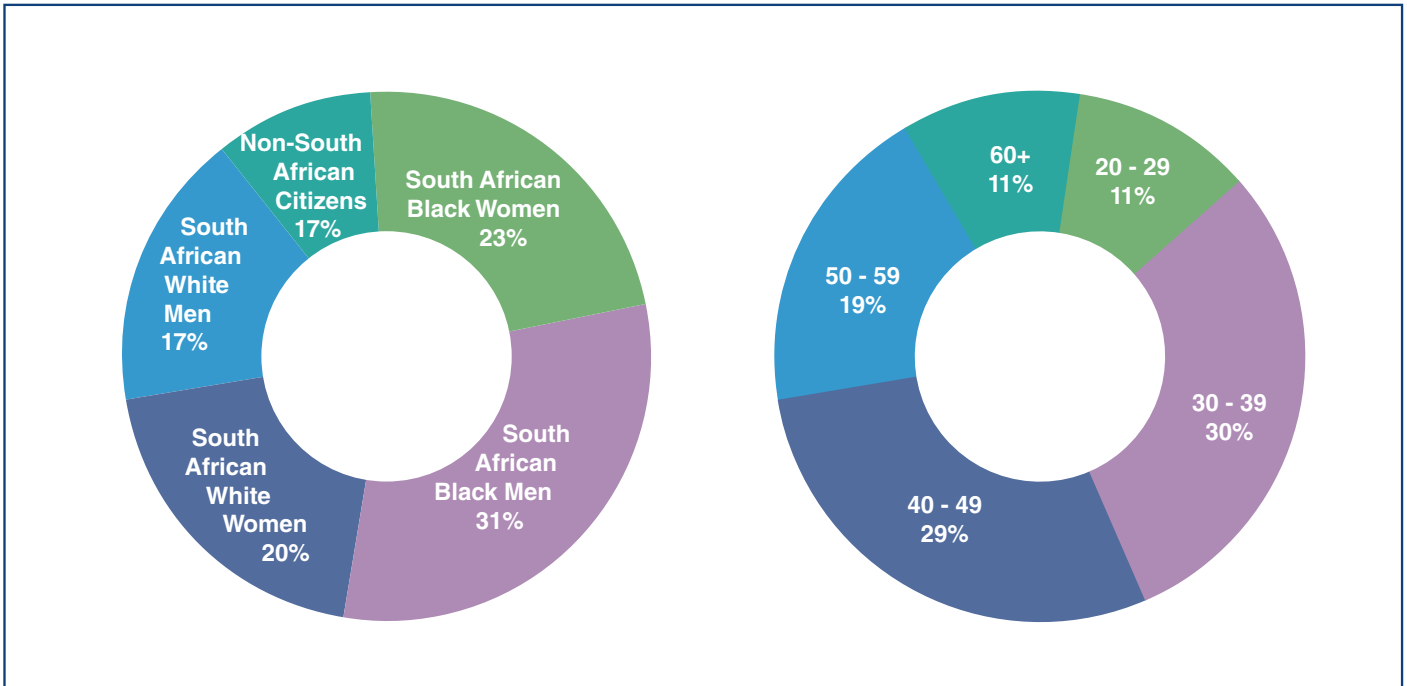
**Table 2: NRF Research investment by field (2020 to 2024)**

Research Field	2020	2021	2022	2023	2024
Biological sciences	19%	19%	18%	17%	15%
Health Sciences	14%	16%	15%	15%	15%
Physical sciences	10%	11%	10%	9%	13%
Social Sciences	12%	12%	12%	13%	11%
Earth and marine sciences	8%	7%	8%	8%	9%
Chemical sciences	8%	9%	8%	8%	8%
Engineering sciences	7%	6%	5%	7%	8%
Humanities	5%	4%	5%	5%	6%
Agricultural sciences	5%	4%	5%	6%	4%
Economic sciences	2%	2%	3%	2%	3%
Law	2%	2%	3%	2%	2%
Technologies and applied sciences	4%	4%	4%	2%	2%
Mathematical sciences	3%	3%	2%	2%	2%
Arts	1%	1%	1%	1%	1%
Information and Computer science	1%	1%	1%	1%	1%
<b>Grand Total</b>	<b>R1. 204 billion</b>	<b>R1. 424 billion</b>	<b>R1. 305 billion</b>	<b>R1. 296 billion</b>	<b>R1. 386 billion</b>

## Research output by NRF-funded researchers: Journal articles

To show the impact of transformation initiatives, the NRF targets publications in Web of Science journals by a diverse cohort of researchers (Figure 6). In 2024, 90% of publications by NRF-funded authors were by South African authors (91% in 2023). Of these, 53% were by Black South African authors, compared to 52% in 2023. The proportion by Black women grew from 21% to 23%, while those by Black men remained constant at 31%. South African women contributed 42% (compared to 41% in 2023). These numbers cannot be compared directly to the proportion of funded researchers as articles are extracted for three years post funding and are produced by researchers and postgraduate students. Nonetheless, the NRF-funded researcher demographics for 2023 aligns closely with publication demographics.

The age distribution of NRF-funded authors in the Web of Science shows a balance, with the highest percentage of authors in the categories 30 to 39 (30%) and 40 to 49 years old (29%).



**Figure 6: Demographic and Age Distribution of all NRF-Funded Authors in WoS in 2024**

**Conclusion**

Researcher funding is core to the NRF’s mandate as it leads to increased research productivity (with potential for impact and national development) and ensures the development of a sustainable future cohort of researchers and supervisors. Over the period under review, the NRF demonstrated a clear and consistent commitment to transformation by increasing support for Black and/or women researchers, including postdoctoral fellows. The data reflects a positive trajectory in the representation of historically disadvantaged groups in the research ecosystem. This upward trend is particularly significant given the broader context of constrained funding and strategic shifts in grant allocation. The increase suggests that transformation-focused programmes, such as Thuthuka, BAAP, and the DSI-NRF Postgraduate Student Funding Policy are yielding tangible results. While the total number of researchers supported has declined slightly due to funding not increasing at the same rate as grant values, the NRF continues to invest significantly in research support. To grow researcher funding, the NRF continues to peruse investment through partnerships, local and international.