

SOUTH AFRICAN NATIONAL SURVEY OF
RESEARCH AND EXPERIMENTAL DEVELOPMENT

KEY SECTOR RESULTS AND TRENDS

GOVERNMENT SECTOR R&D
AT A GLANCE 2020/21



In 2020/21 government institutions spent R2.238 billion on R&D in South Africa. The majority of this R&D was in applied research to address the developmental challenges in the country. Agricultural science was the dominant research field, but government continued to intensify research in environment-related policy priority areas. Investment in medical and health sciences R&D almost doubled in 2020/21, possibly in response to the COVID-19 pandemic.

FACT SHEET NO. 44



Science and Innovation
Statistics South Africa



HSRC
Human Sciences
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THE BIG PICTURE



South Africa's **gross domestic product (GDP)** in **2020/21** was **R 5 521.075 BILLION**



In **2020/21**, **0.61%** of **GDP** was spent on **R&D**



Real gross domestic expenditure on R&D (GERD) grew from



to a maximum of **R 34.328 BILLION** in 2017/18

Since 2017/18 it has **decreased each year** to a low of

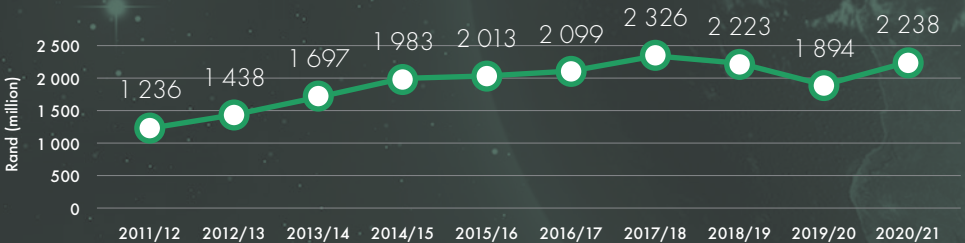


R&D SPENDING PATTERNS

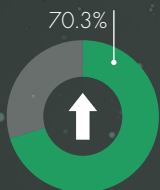


R&D expenditure by government (excluding higher education and science councils) increased from 2011/12 to 2017/18 but declined thereafter due to budgetary constraints. The most recent estimate in 2020/21 showed an increase.

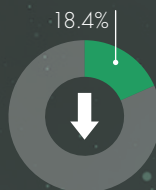
Government expenditure on R&D (2011/12 to 2020/21)



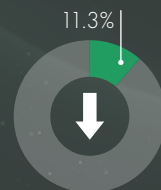
Applied research in the government sector increased from 65.6% in 2019/20 to 70.3% in 2020/21, with the remainder being basic research (18.4%) and experimental research (11.3%).



Applied research

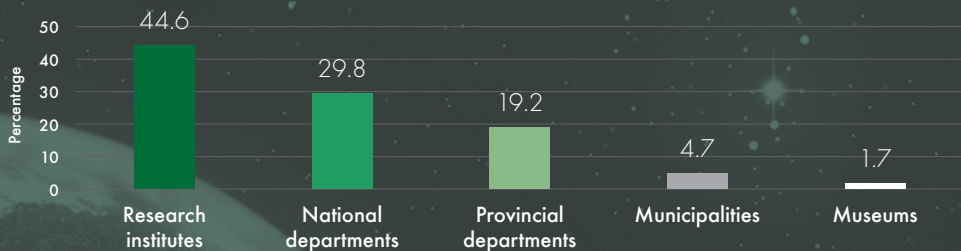


Basic research

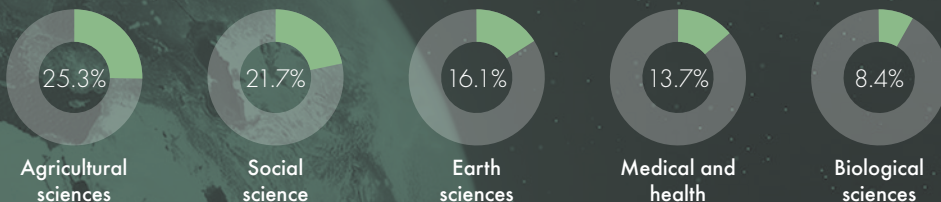


Experimental development research

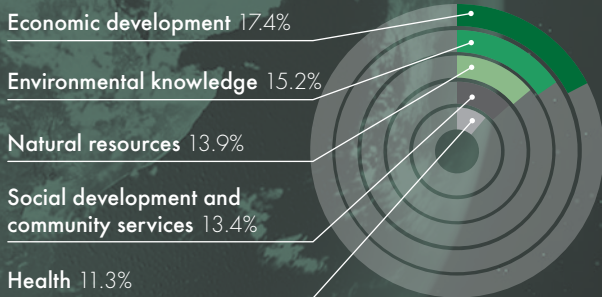
Government R&D spending disaggregated by institution:



The majority of R&D was invested in the following research fields:



The areas benefitting the most from government R&D were:



The government's research on environment-related areas of interest is continuously growing, amounting to

R552 MILLION up from **R110 MILLION**
in 2020/21 in 2011/12



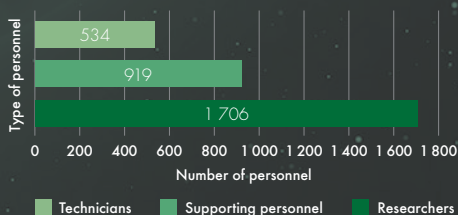
R&D PERSONNEL



3 159
R&D PERSONNEL
in 2020/21



The government sector had:



The share of women researchers in 2020/21 was

55.2%



in the government sector

BEHIND THE NUMBERS

The annual South African National Survey of Research and Experimental Development (R&D Survey) is conducted by the Centre for Science, Technology and Innovation Indicators (CeSTII) at the Human Sciences Research Council (HSRC), on behalf of the Department of Science and Innovation (DSI). R&D statistics are collected in terms of the Statistics Act No. 6 of 1999, and are quality assured by Statistics South Africa. Data collected through the Survey, and its historic data series, helps to inform decision-makers on investment planning, policy-making, advocacy, and research in South Africa. Data also adds to benchmarking and performance comparisons with our international counterparts.

Access previous survey reports:

<https://hsrc.ac.za/divisions/centre-for-science-technology-and-innovation-indicators/>

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