

# Council for Geoscience Annual Performance Plan 2022/23

Presentation to the Portfolio Committee on Mineral Resources and Energy  
03 May 2022 (Virtual meeting)



**mineral resources  
& energy**

Department:  
Minerals Resources and Energy  
REPUBLIC OF SOUTH AFRICA

*A proud entity of the Department of Mineral Resources and Energy*



**Council for Geoscience**

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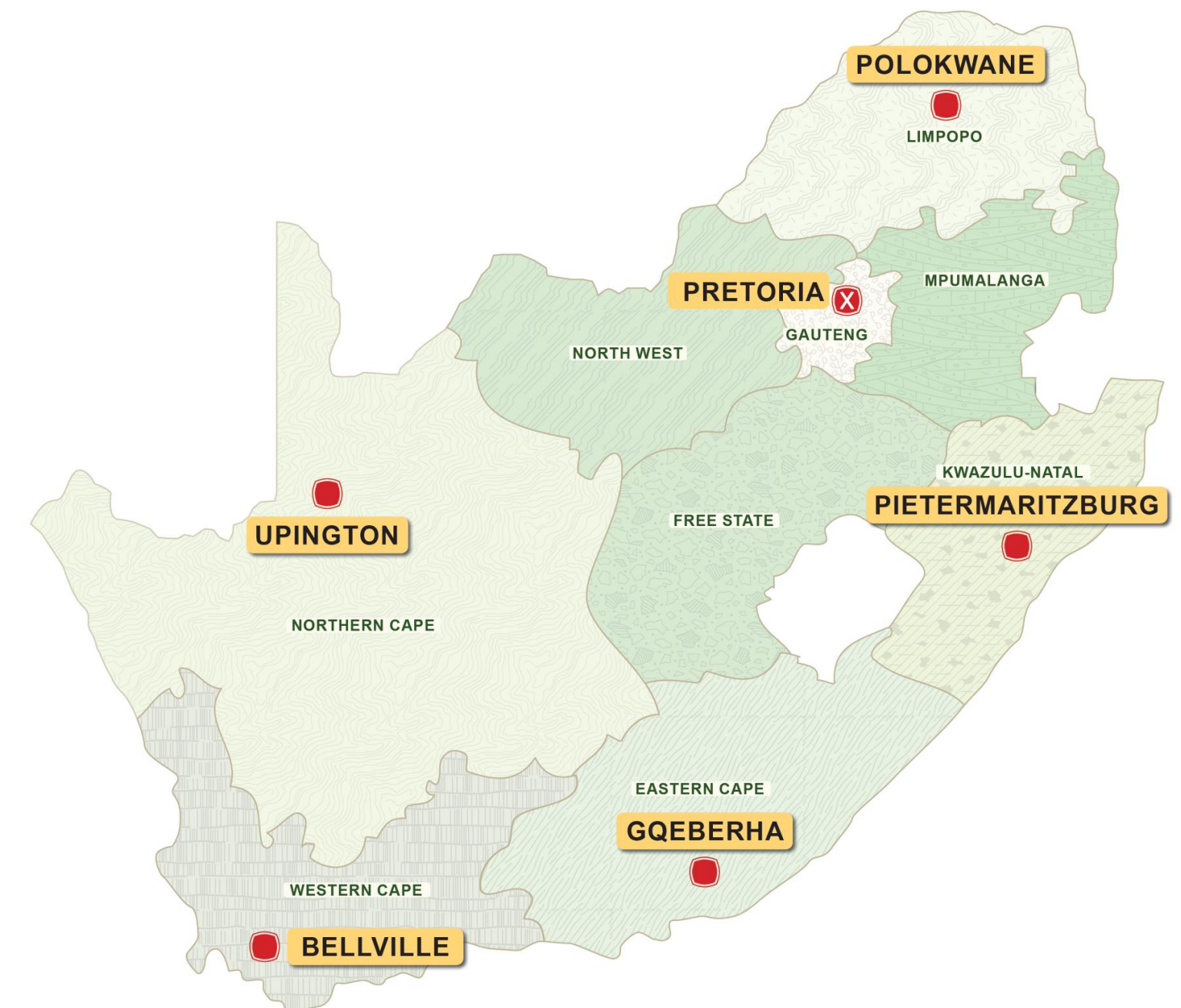
# Outline

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1. Introduction
2. Strategic Outlook
3. Geoscience Technical Programme 2022/23
4. Annual Performance Plan 2022/23
  - a) Balanced Scorecard
  - b) Finances
  - c) Human Resources
5. Stakeholder Engagement Programme
6. Scientific Prowess
7. Concluding Remarks

# About the Council for Geoscience

- The Council for Geoscience (CGS) is one of the National Science Councils of South Africa.
- The CGS is the legal successor of the Geological Survey of South Africa, which was formed in **1912** by the amalgamation of 3 former Surveys, the oldest of which - the Geological Commission of the Cape of Good Hope - was founded in 1895.
- The **Geoscience Act, Act 100 of 1993**, as amended, established the CGS in its present form.
- The CGS is listed as a **Schedule 3A Public Entity** in terms of the Public Finance Management Act (**PFMA**) (Act No. 1 of 1999).



Location of the six CGS regional offices



# CGS Strategic Focus



## Vision

A prosperous and transformed society enabled by geoscience solutions

## Mission



- Providing integrated, systematic and thematic maps and conducting research on the onshore and offshore geology of South Africa, as mandated, to:
- Facilitate mineral, energy and agricultural development;
  - Contribute to the assessment and sustainable management of mineral, geohydrological and geoenvironmental resources;
- Support infrastructure development.
- Discharging the mandate in a manner that supports transformation and national developmental imperatives.



## Values

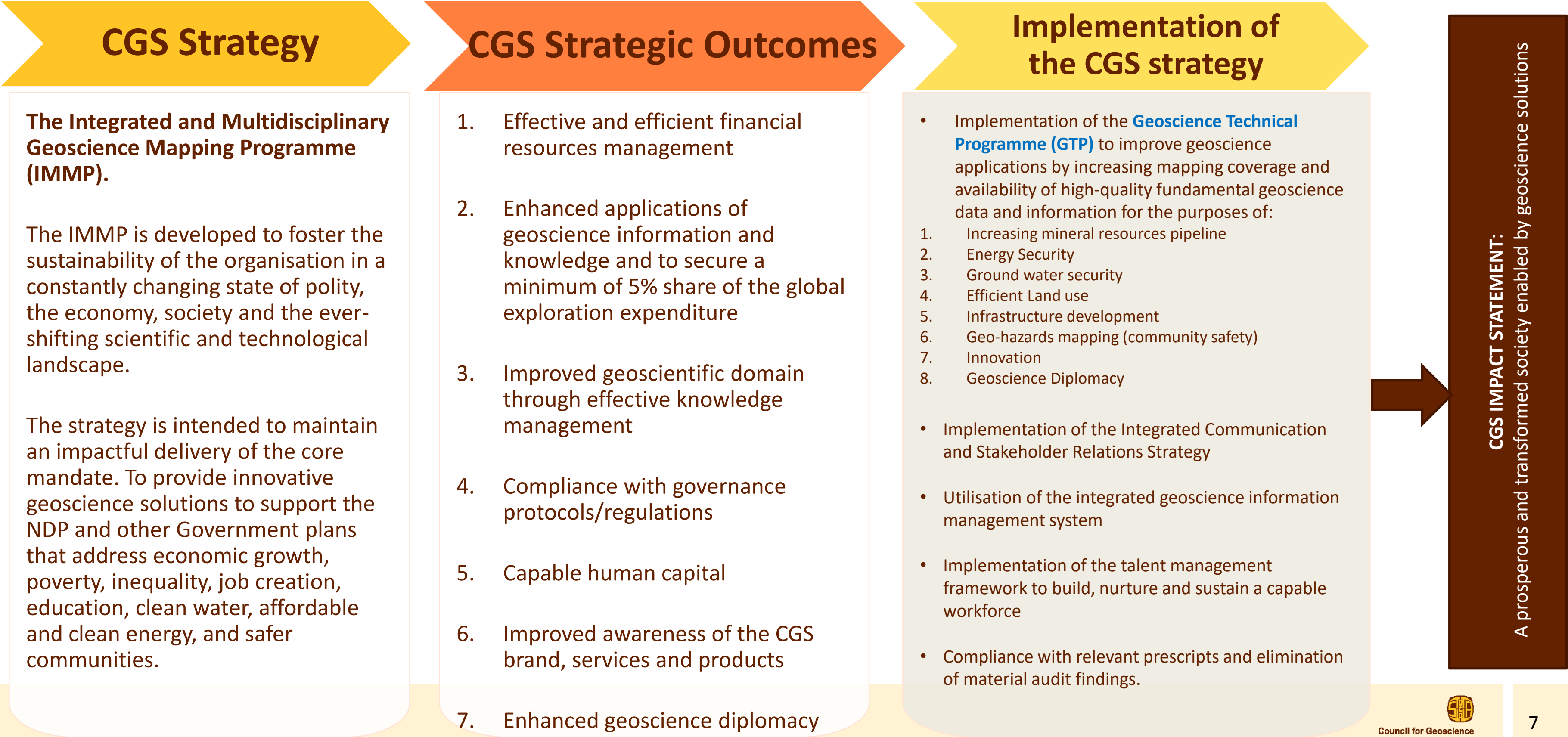
- Innovation
- Diversity
- Excellence
- Accountability
  - Learning
- Safety, Health, and Environment
  - Transparency

# Strategic Outlook



# A summary of the CGS's Strategy

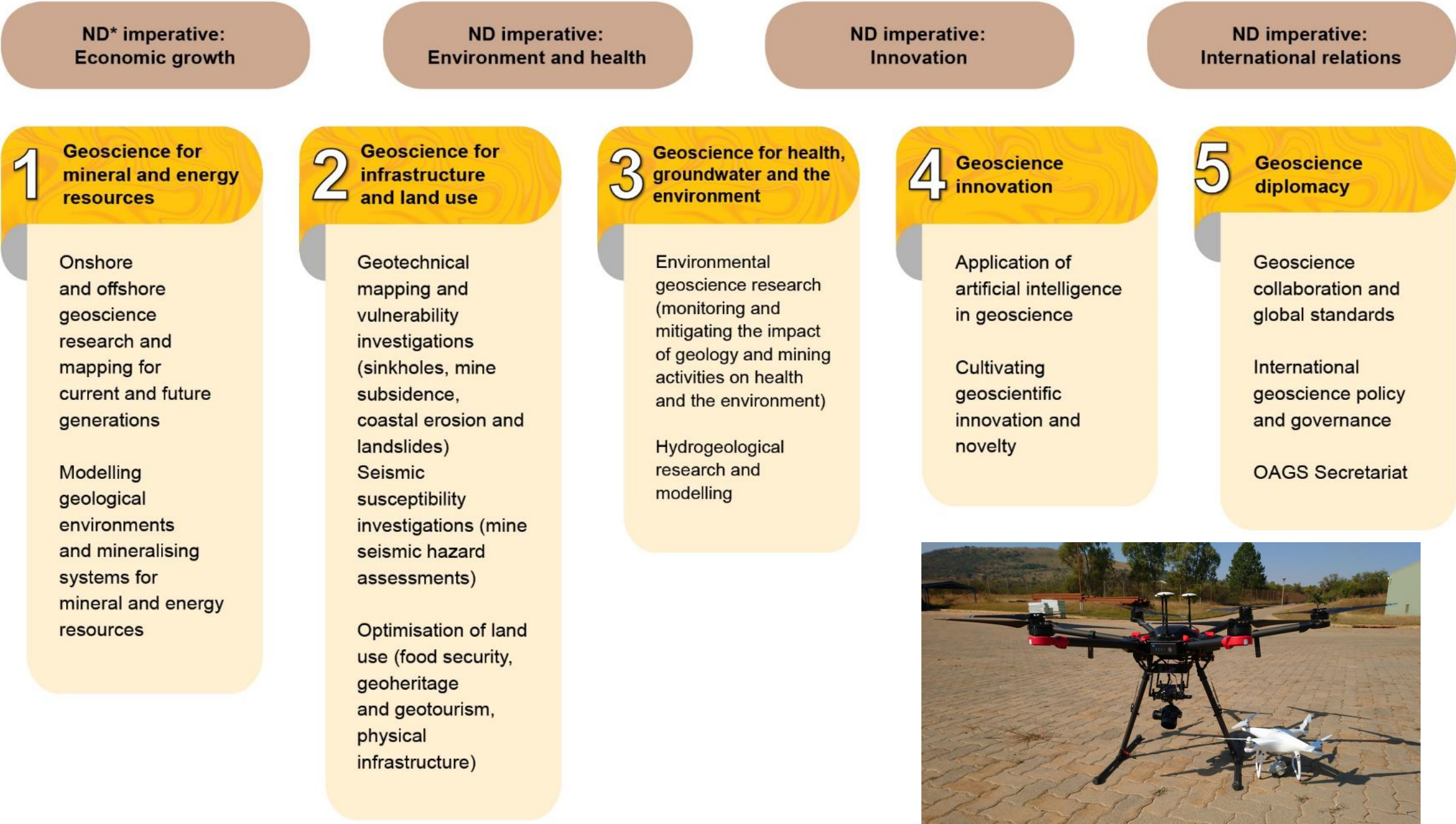
Alignment with the **NDP 2030**, the **MTSF 2019 – 2024** and its **revised version of 2021**, the MTSF Priorities: **Priority 1**: A capable, ethical and developmental state, **Priority 3**: Education, skills and health, **Priority 2**: Economic transformation and job creation; **Priority 5**: Spatial integration, human settlements and local government; **Priority 6**: Social cohesion and safe communities; **Priority 7**: A better Africa and World, the **South African Economic Reconstruction and Recovery Plan** as well as the **Exploration Strategy for the Mining Industry of South Africa**.





# The Integrated Multidisciplinary Geoscience Mapping Programme (IMMP)

## INTEGRATED AND MULTIDISCIPLINARY GEOSCIENCE MAPPING PROGRAMME: 2018–2021 MATRIX



CUSTODIANSHIP OF ALL GEOSCIENTIFIC INFORMATION IN SOUTH AFRICA

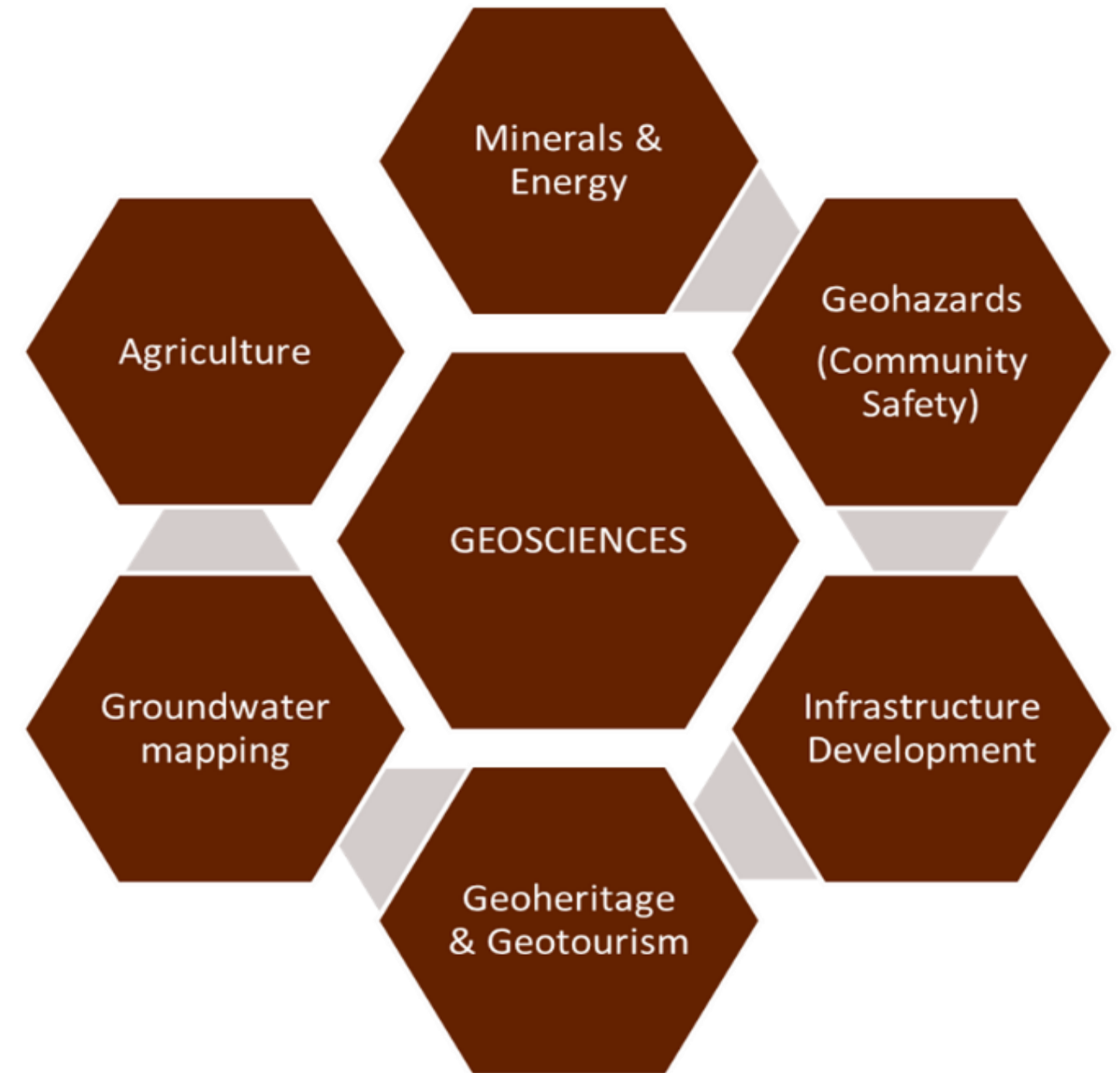


# **CGS Geoscience Technical Programme (GTP) for 2022/2023**



# Key Outcomes of the 2022/2023 GTP

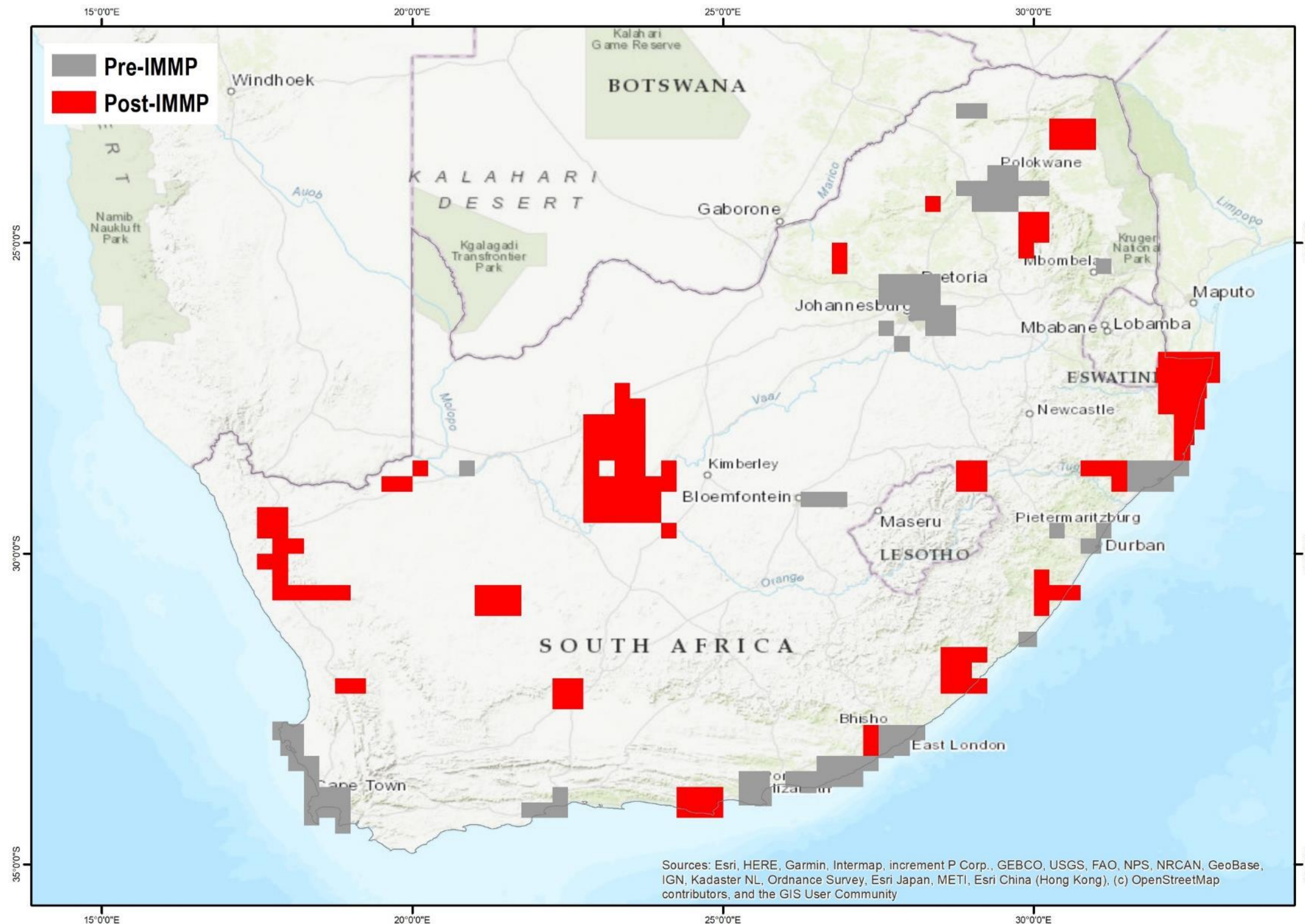
- 1. South Africa becomes an attractive destination for investment in the minerals resources sector, resulting from:**
  - a. Mineral delineation of at least
    - i. Copper prospects
    - ii. Nickel/cobalt prospects
    - iii. Lithium prospects
    - iv. Gold prospects.
- 2. South Africa's water and environmental systems are characterised and mapped in a nationally consistent way, resulting from:**
  - a. Regional groundwater and environmental assessments (including climate change) in key basins
  - b. National map of groundwater systems that integrate available geoscience data and emerging technologies.
- 3. Geohazards/land use/risk management:**
  - a. Products and services that deliver actionable information on community safety, land use and infrastructure development in collaboration with a range of sectors/entities.
- 4. Development of a healthy pipeline of long-term innovative projects.**
- 5. Contribution towards accelerated economic reconstruction and recovery.**



Key thematic areas of the GTP

# Geoscience for minerals and energy resources projects

# Onshore Geoscience Mapping Project



**Project Aims:** To collect and publish fundamental 1:50 000-scale onshore geoscience maps detailing lithology, structure, geochemistry, geochronology, geophysics, boreholes, and etc.

**FY2022/23 Activities:** Geoscience mapping in areas that correlate closely with associated key thematic areas, including those dedicated to mineralising systems, water and environmental research as well as land use and infrastructure development. Focus areas include:

- ❖ Namaqualand and Griqualand West, in the **Northern Cape Province**
- ❖ Cedarberg region in the **Western Cape Province**
- ❖ Mthatha in the **Eastern Cape Province**
- ❖ Tugela region between the **Free State** and **KwaZulu-Natal Provinces**
- ❖ The Bushveld Complex region around **Limpopo, Mpumalanga, and North West Provinces**
- ❖ Basin analyses across the Karoo and Cape Basins.

**Progress:** the onshore map coverage at a scale of 1:50 000 has increased from **below 5%** to **10.7%** at the end of FY2021/22.

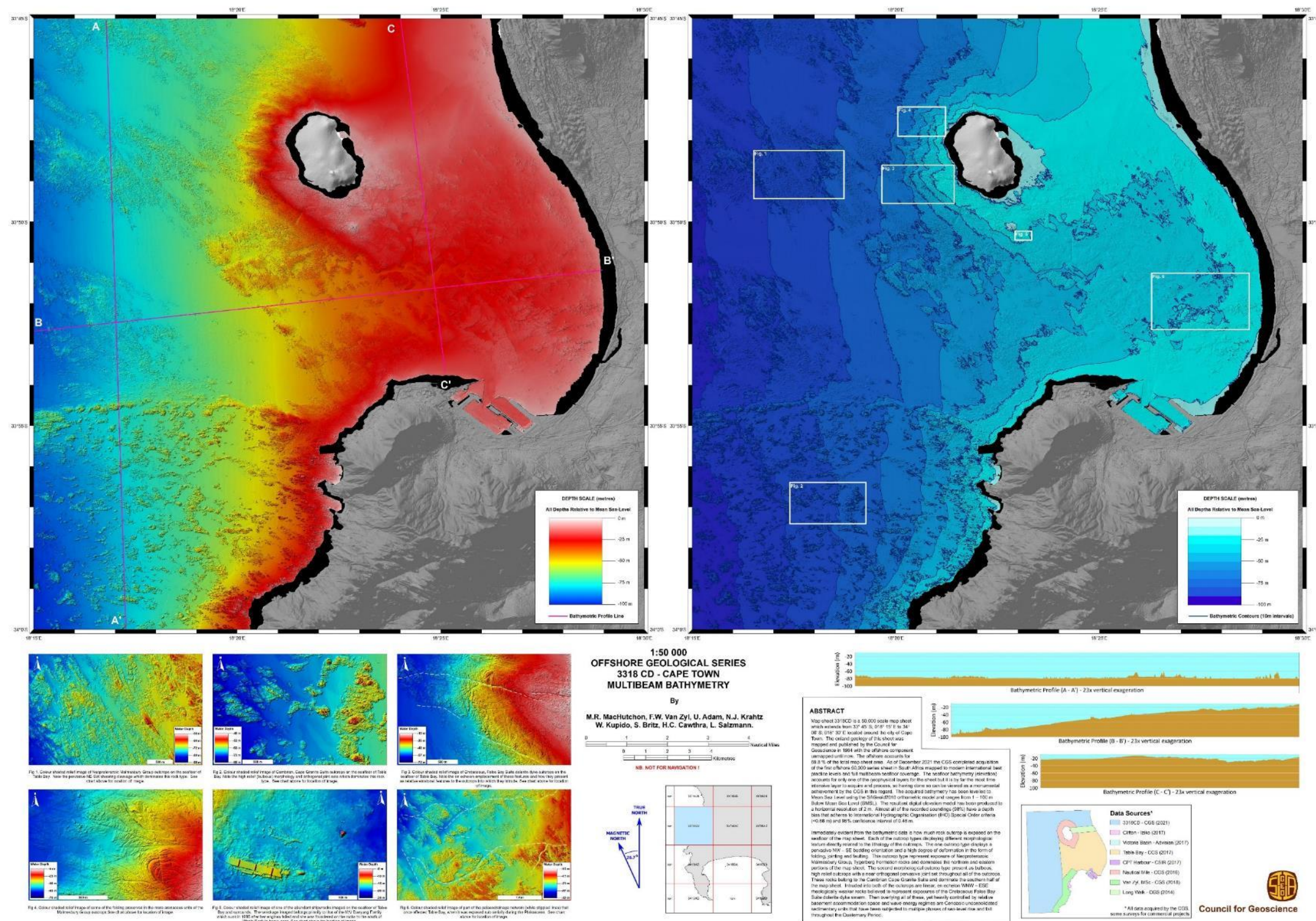


# Offshore Geoscience Mapping Project

**Project Aims:** To collect and publish fundamental offshore geoscience maps that covers South Africa's entire Exclusive Economic Zone (EEZ), which is subdivided into the near-shore and the continental shelf and the deep marine. This project is critical as it will contribute significantly towards planning and development of critical infrastructure to support South Africa's economical growth.

**FY2022/23 Activities:** Offshore geoscience mapping in the False Bay regions of the Western Cape Province and finalisation of the data processing of the Table Bay Geoscience Map.

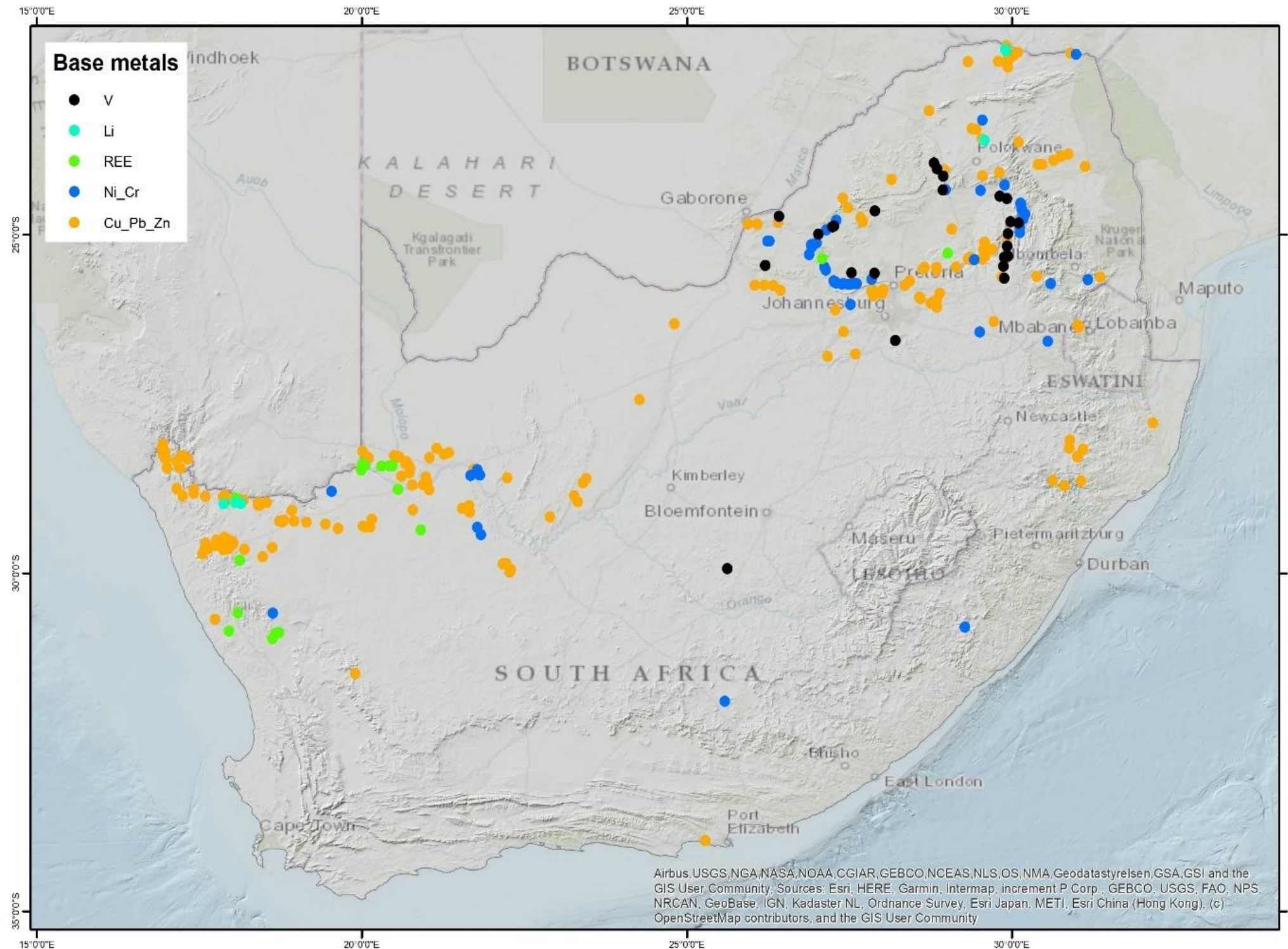
**Progress:** Geoscience Map of the Mossel Bay have been published in FY2020/21 (contributing to the 0.05% offshore map coverage) and the Table Bay offshore map sheet data collection was completed in FY 2021/22.



**Map of 1:50 000 Offshore Geological series of Table Bay Multibeam Bathymetry**



# Base metal mapping project



**Project Aims:** To undertake fundamental research on various types of magmatic and hydrothermal base metal, and similar, deposits in South Africa. These include metals deemed critical to batteries and electro-voltaic systems such as copper-lead-zinc, nickel-chrome, lithium; vanadium and REE

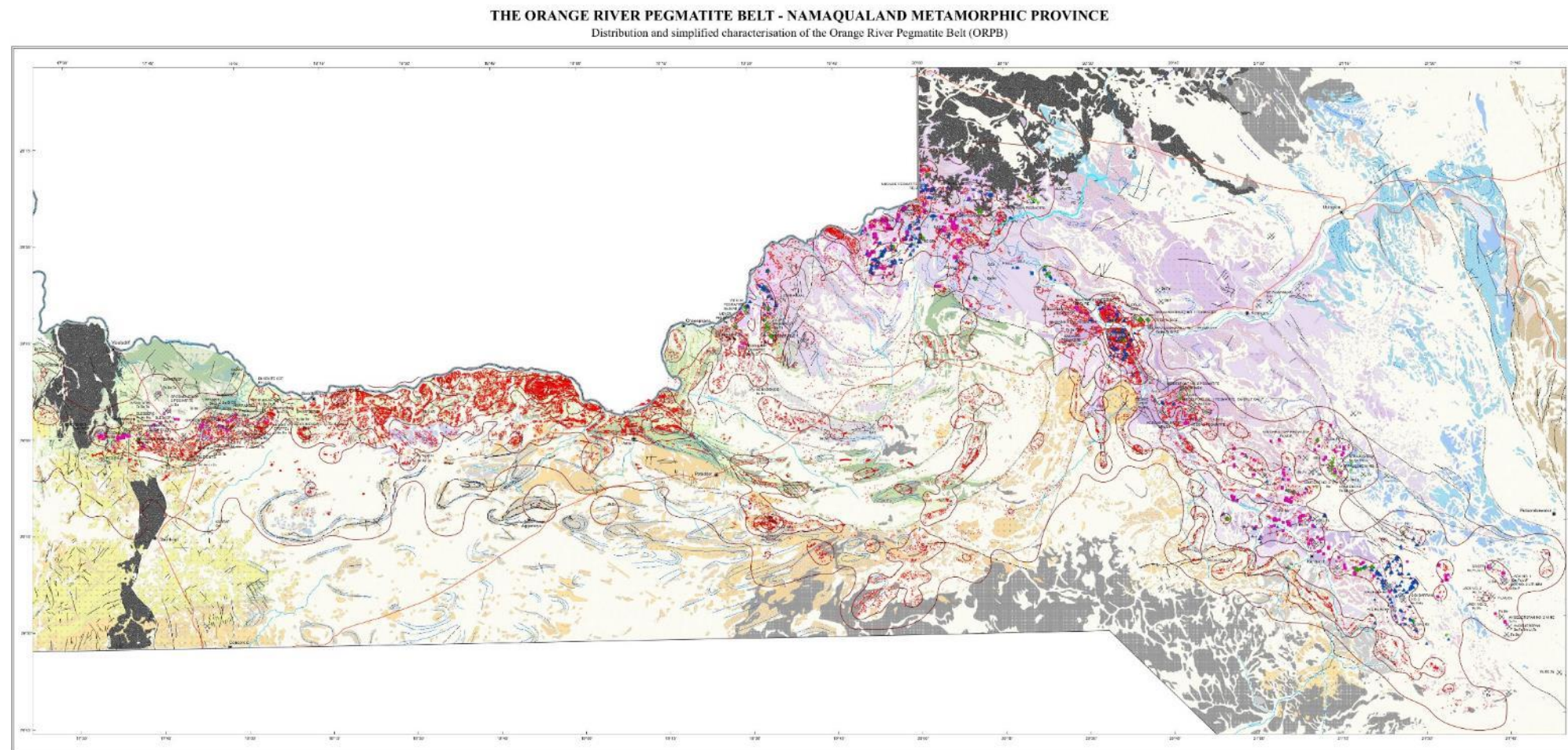
**Activities:** Geoscience research focus areas in:

- SEDEX-style mineralisation in Namaqualand
- Li-REE-F-style mineralisation in Namaqualand and the Bushveld Complex
- Ni-Cu-Co-style mineralisation in Namaqualand and the Insizwa Complex
- REE mineralisation in coal seams.



# Base metal mapping project (Progress)

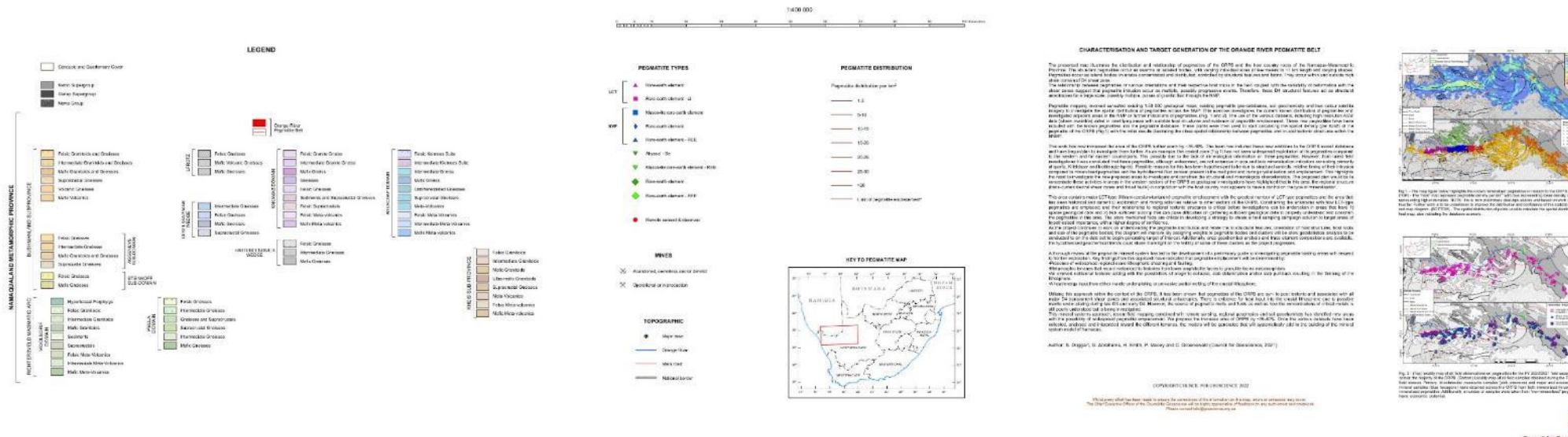
## Expansion of the pegmatite belt in the Northern Cape Province



- 1:50 000 geoscience mapping has shown an estimated increase of 67% of the Orange River Pegmatite Belt, which may host significant Li and REE deposits

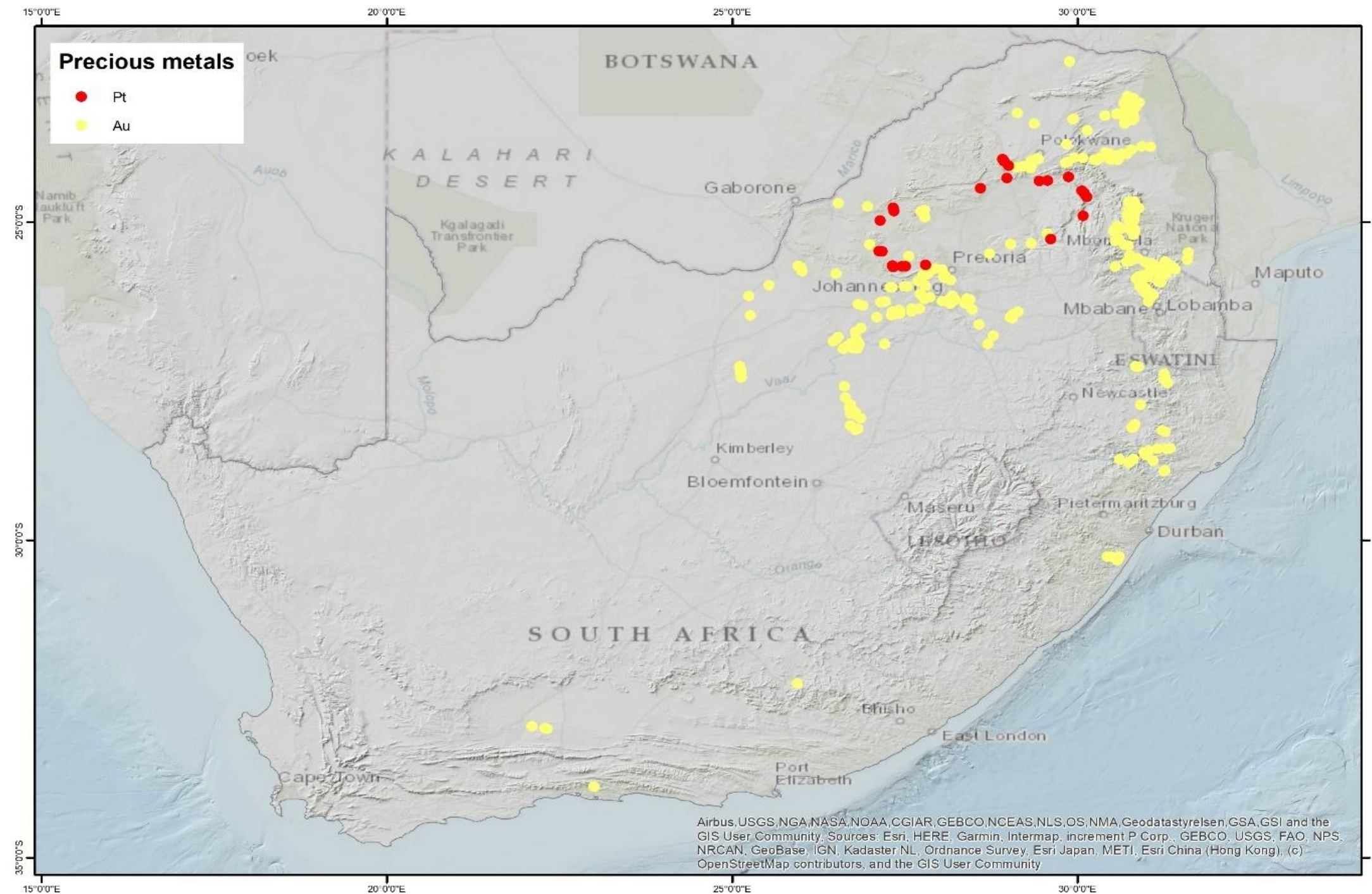
- Much needed intervention for the battery industry

- A **new pegmatite distribution map** was completed in FY2021/22.





# Precious metal mapping Project



**Project Aims:** To undertake fundamental research on various types of magmatic and hydrothermal precious metal, and similar, deposits in South Africa e.g. gold, silver and the platinum group of metals.

## Focus areas:

- Hydrothermal Au-mineralisation in the Giyani Greenstone Belt
- Placer and hydrothermal Au-mineralisation in and around the Witwatersrand Basin.



# Precious metal mapping Project (Progress)

## Giyani Greenstone Belt – Drilling of the Identified Potential Mineral Targets

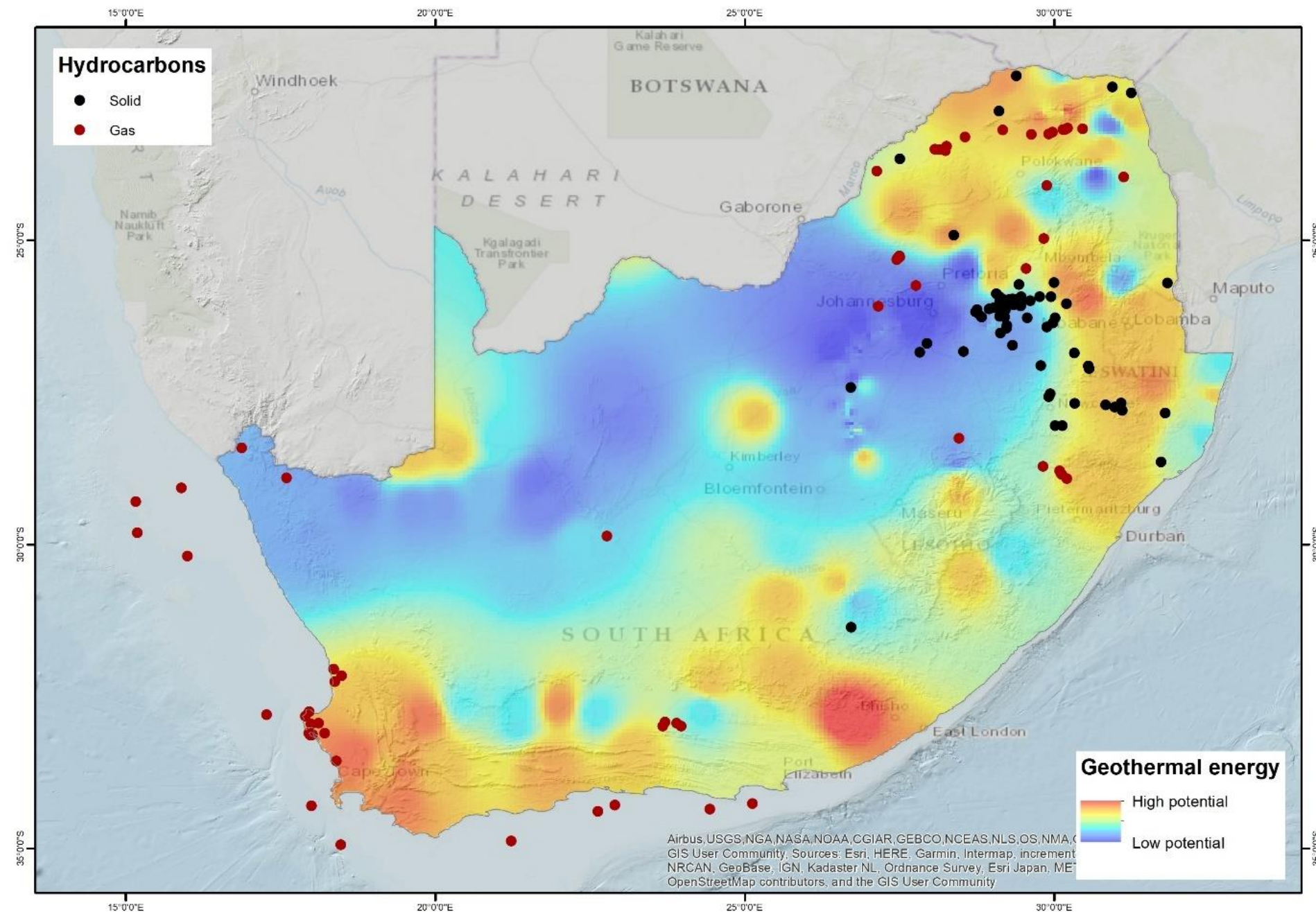
### HIGHLIGHTS

- Integrated mapping of Au targets are complete;
- Geotechnical and hydrogeological studies have also been undertaken;
- Mineral potential targets were defined and currently being drilled





# The Just Transition Project



Overview of geothermal energy hotspots and hydrocarbon occurrences around South Africa

**Project Aims:** To undertake fundamental research and development towards ensuring South Africa's energy security and enabling a transition towards a **low-carbon economy**. The project includes focus areas of alternative energy sources, e.g. geothermal, uranium, and various hydrocarbon systems.

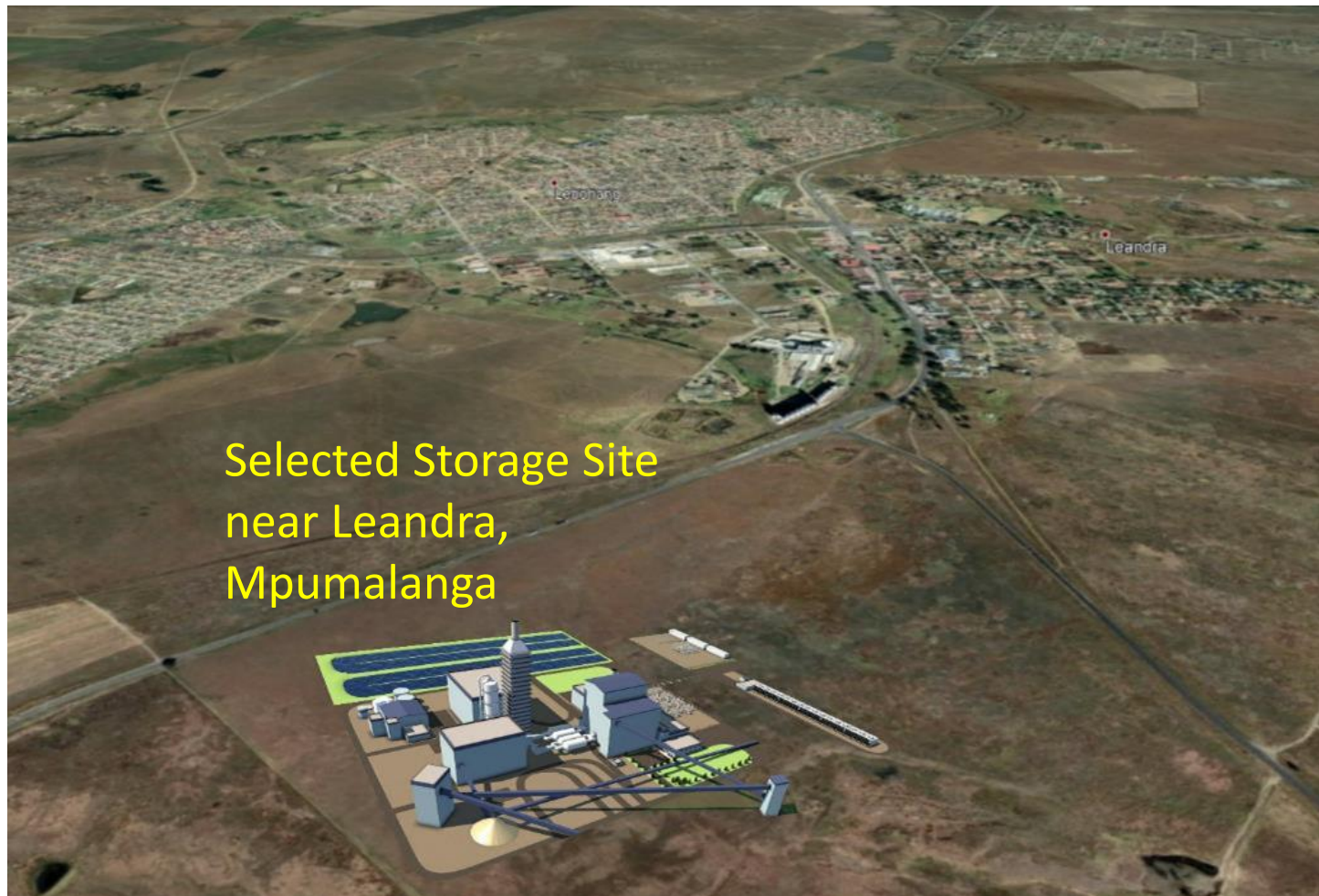
The key project areas include:

- Geothermal energy potential of South Africa
- Molteno coalfield.



# Carbon Capture Utilisation and Storage Project

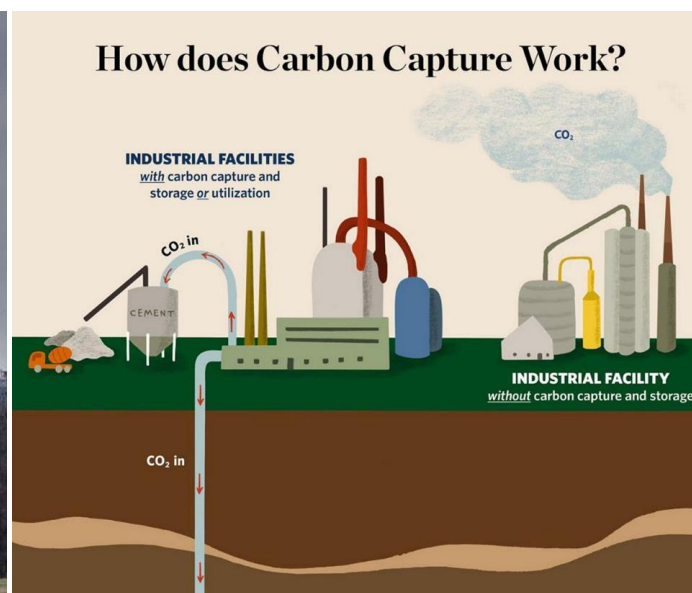
## Towards Just Transition to a low carbon economy- CGS's contribution to the ERRP



**Project Aims:** To research, develop, and implement CCUS technologies in South Africa as well as developing a revised CCUS potential map.

**Progress:** FY2021/22 CGS secured a state-owned piece of land to develop the proposed pilot plant (near Leandra, Mpumalanga, close to the major CO<sub>2</sub> emission sources (e.g. Coal-fired power stations, SECUNDA petro-chemical plant))

The site selection was supported by a Basic Assessment Report and detailed structure, seismic and subsurface geological characterisation. Samples collected from existing boreholes were also analysed for their mineralogical, petrological, geochemical, and importantly, their reservoir properties. Preliminary results indicated the presence of adequately porous and extensive sequences (for storage). Research will focus on seismic studies and borehole drilling to further define the identified sequences.



### New materials

- Carbon fiber
- Carbon nanotubes and fullerenes
- Graphene



### Construction Materials

- Cement and concrete
- Asphalt
- Aggregate
- Timber/super hardwood



### Agriculture & food

- Algae-based food or animal feed
- Microbial fertilizer
- Biochar, bio-pesticides, bio-cosmetics

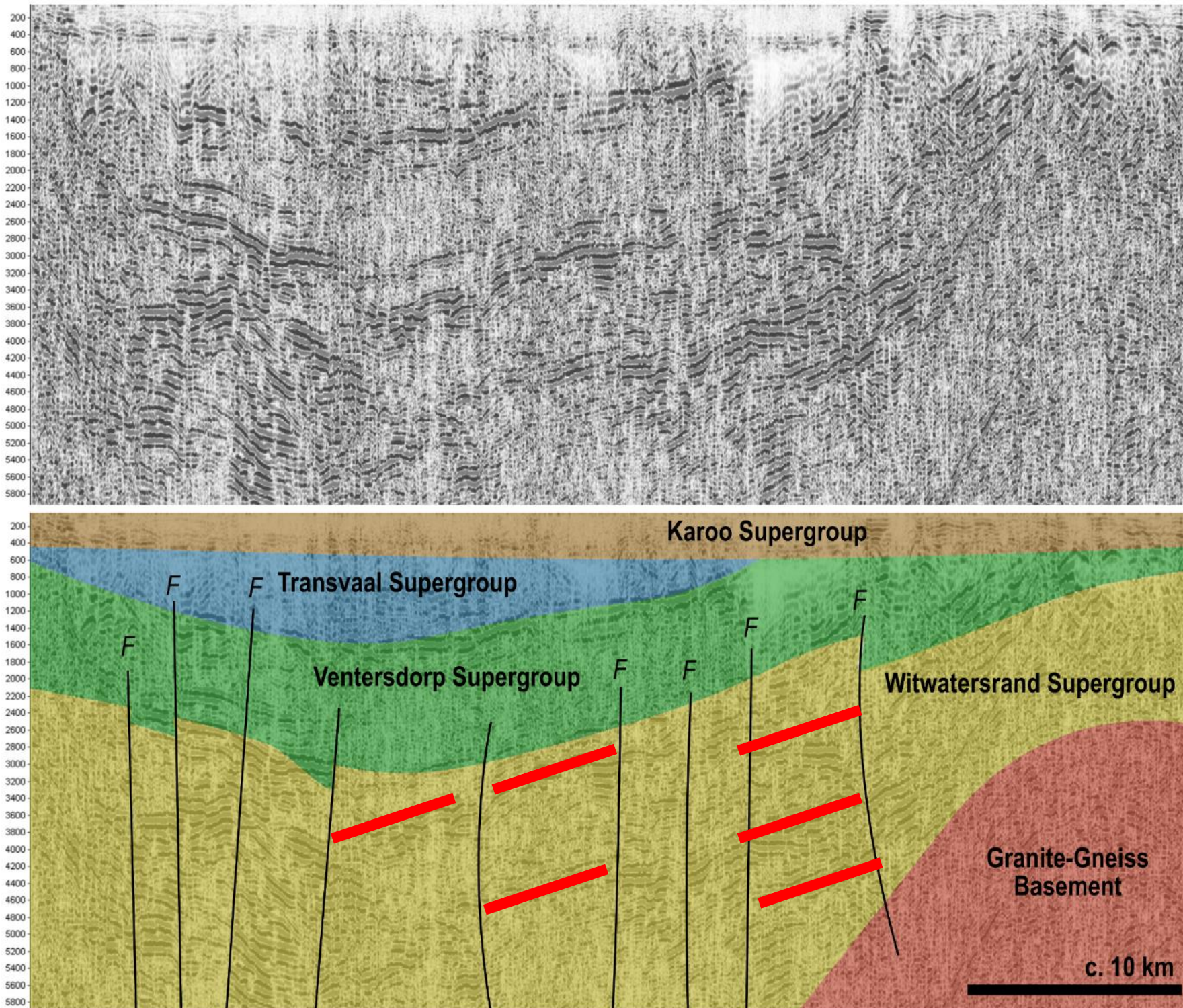


### Chemicals

- Preservatives (formic acid)
- Medicinal
- Antifreeze (ethylene glycol)
- Carbon black
- Many more



# Gold prospects in Mpumalanga Province (from the CCUS project)



- Subsurface interpretation of Witwatersrand Basin architecture using data from the CGS National Core Library has shown extension of goldfields within the Mpumalanga Province
- An opportunity to characterise unexplored gold deposits
- Red lines show potential gold-bearing reefs on a 2D legacy seismic reflection line.

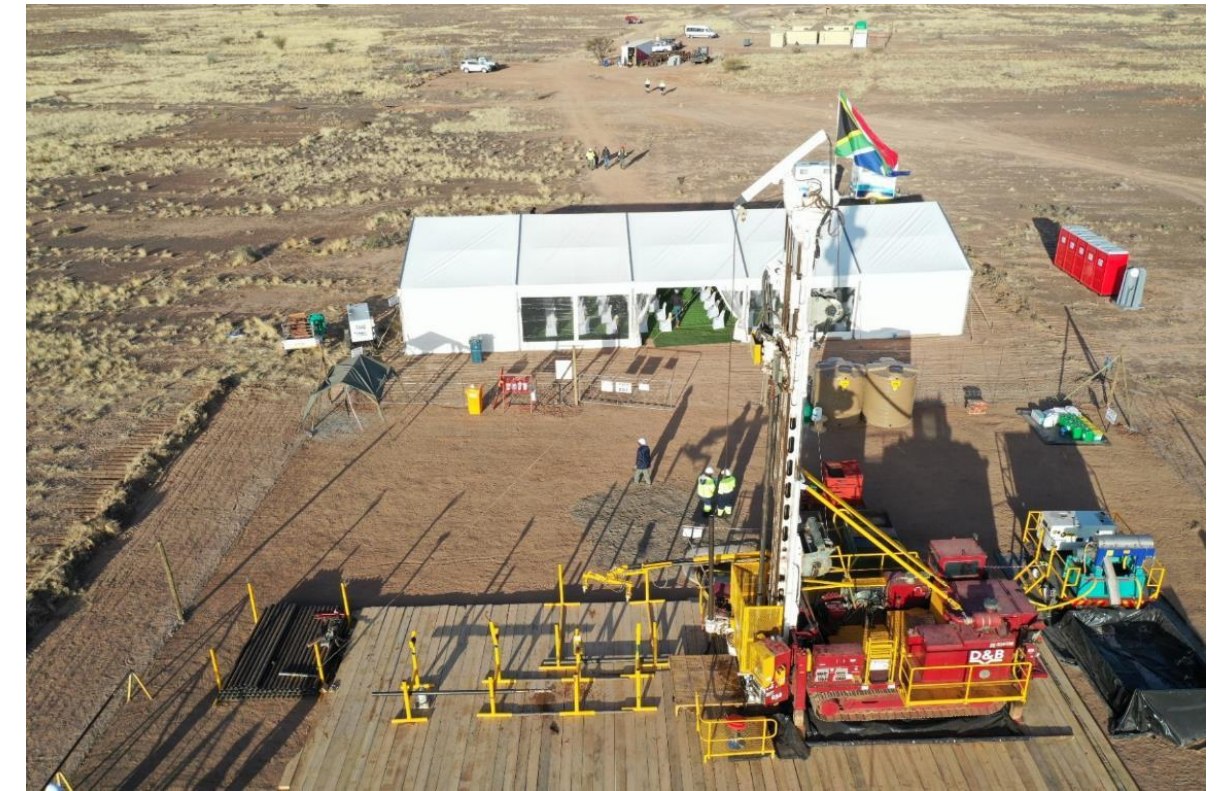


# Karoo Deep Drilling (KDD) and Environmental Baseline Project

**Project aims:** To develop a geo-environmental baseline model to inform regulations for possible shale gas exploration and exploitation in the southern Karoo.

**Progress:**

- The 2021/22 financial year saw the completion of the KDD project, including the complete and successful site abandonment of the drilling site.
- A final drilling depth of 2,978 meters was reached in October 2021 in the lowermost sequence of the Karoo Supergroup.
- The core has been transported and largely scanned with the hyperspectral scanner at the National Core Library.
- Gas analyses have also been ascertained and highlight the occurrence of natural gas.



# Geoscience for infrastructure and land-use projects

# Infrastructure and land-use projects

Contribution towards accelerated Economic Reconstruction and Recovery as well as the District Development Model

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The Projects are aimed to:

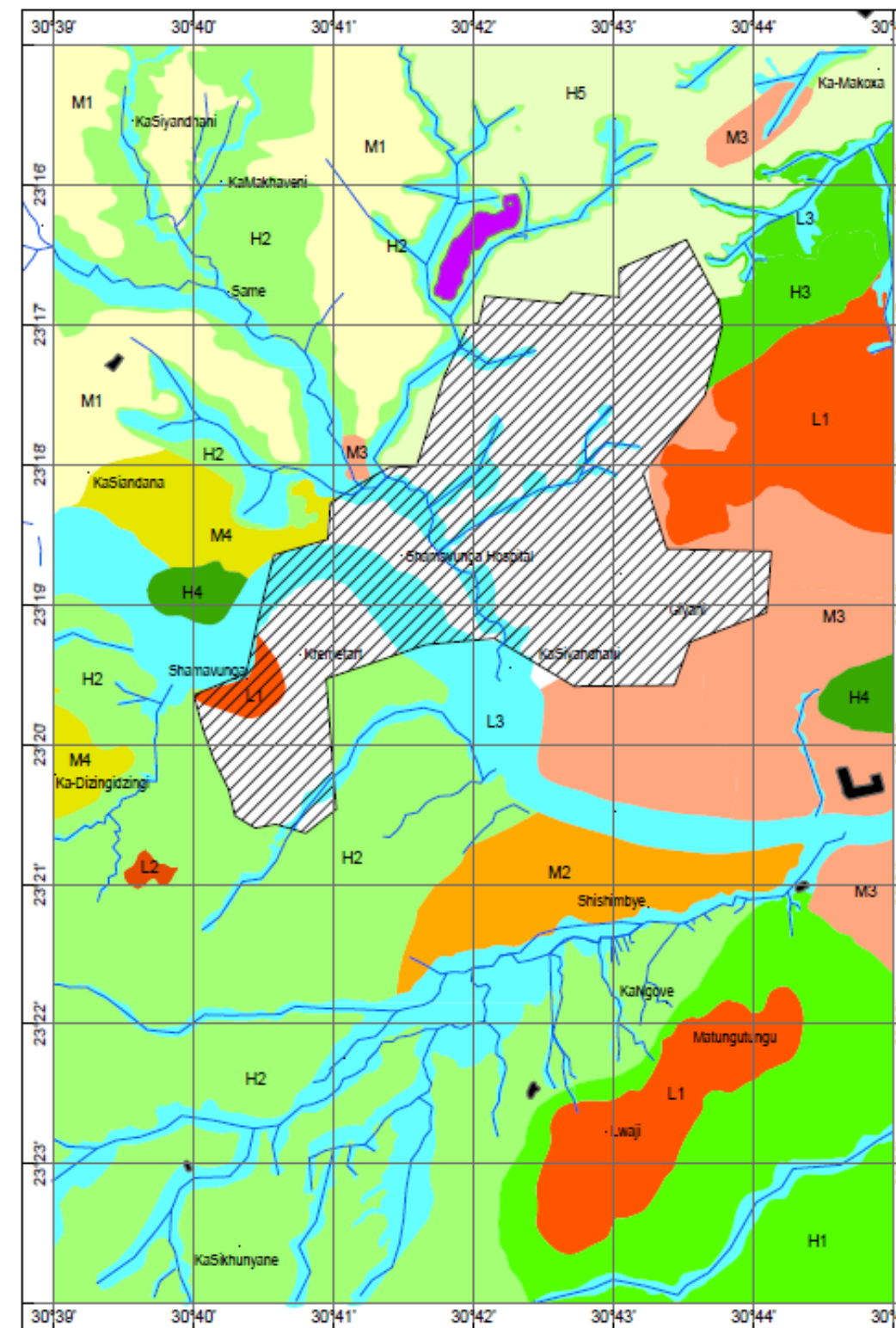
- Support safe and judicious development of land by assessing **ground stability**
- Evaluate **appropriate land-use** in line with development suitability prior to development
- Contribute towards the **community safety** (in terms of geohazards), and
- Pro-active **distaste management** and response readiness
- Assess **building materials** to support **infrastructure development**



# National Geohazards Mapping Programme

Mapping of geohazards across South Africa at various scales to support investment decision making, infrastructure and land-use planning and construction, and community safety, in line with the **District Development Model**, focussing on:

- Seismic risk of the City of Johannesburg
- Dolomitic land and sinkhole formation mapping
- Landslide susceptibility mapping
- Geotechnical mapping to support development planning



High development suitability

Moderate development suitability

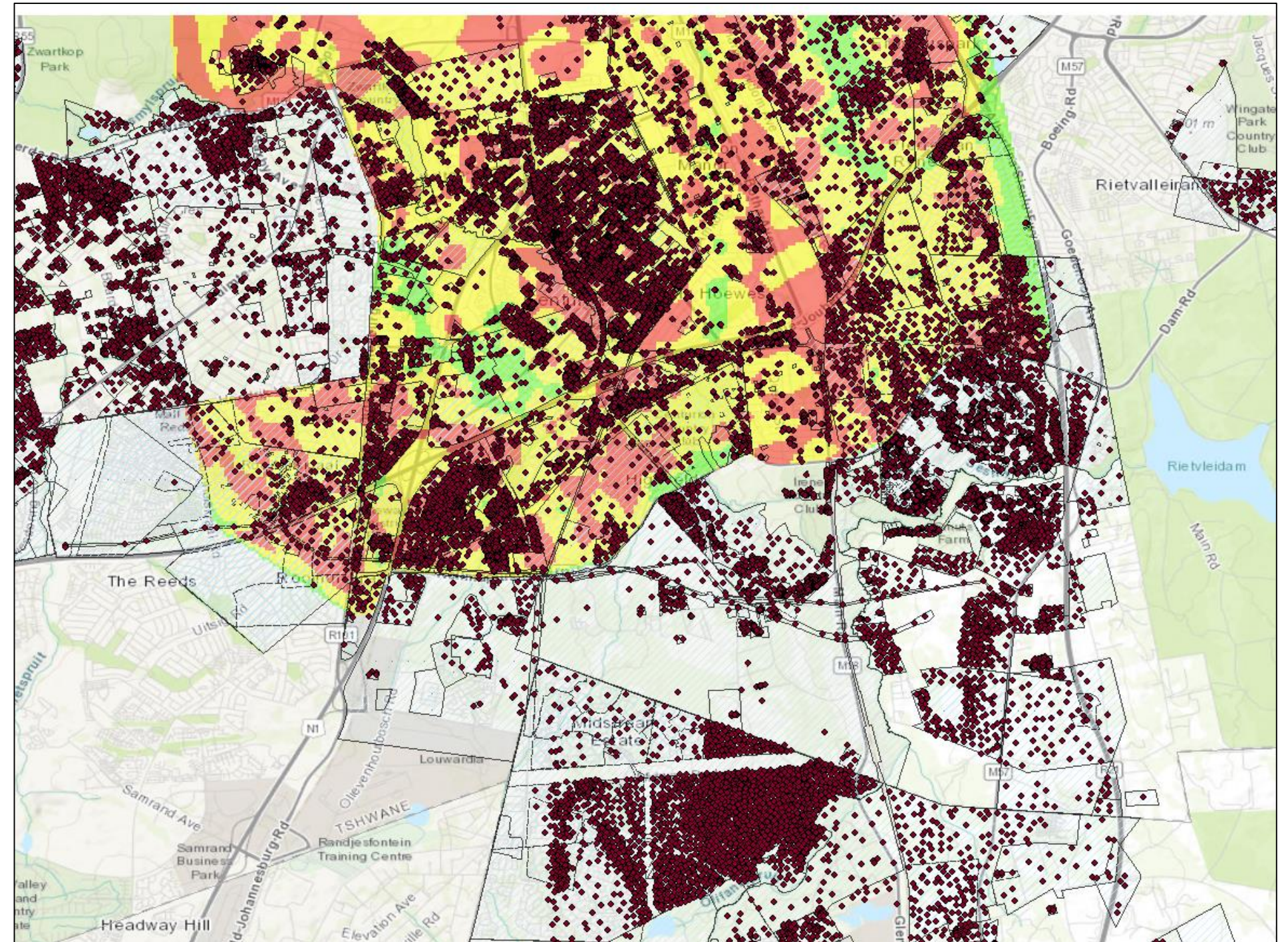
Low development suitability

Above: Development suitability geotechnical map of the Giyani Region



# National Dolomite Report Reviews

- Mandatory statutory function of the CGS to support judicious land use and development on dolomitic land
- The CGS will continue to review submitted technical reports, Site Development Plans (i.e. town planning layouts), and co-signing of NHBRC B4 certificates in support of enrolment
- Since 2008, CGS reviewed **4780 developments** on dolomite to facilitate safe development



*Extract of the National Dolomite Database and extent of dolomitic land across the Pretoria region*



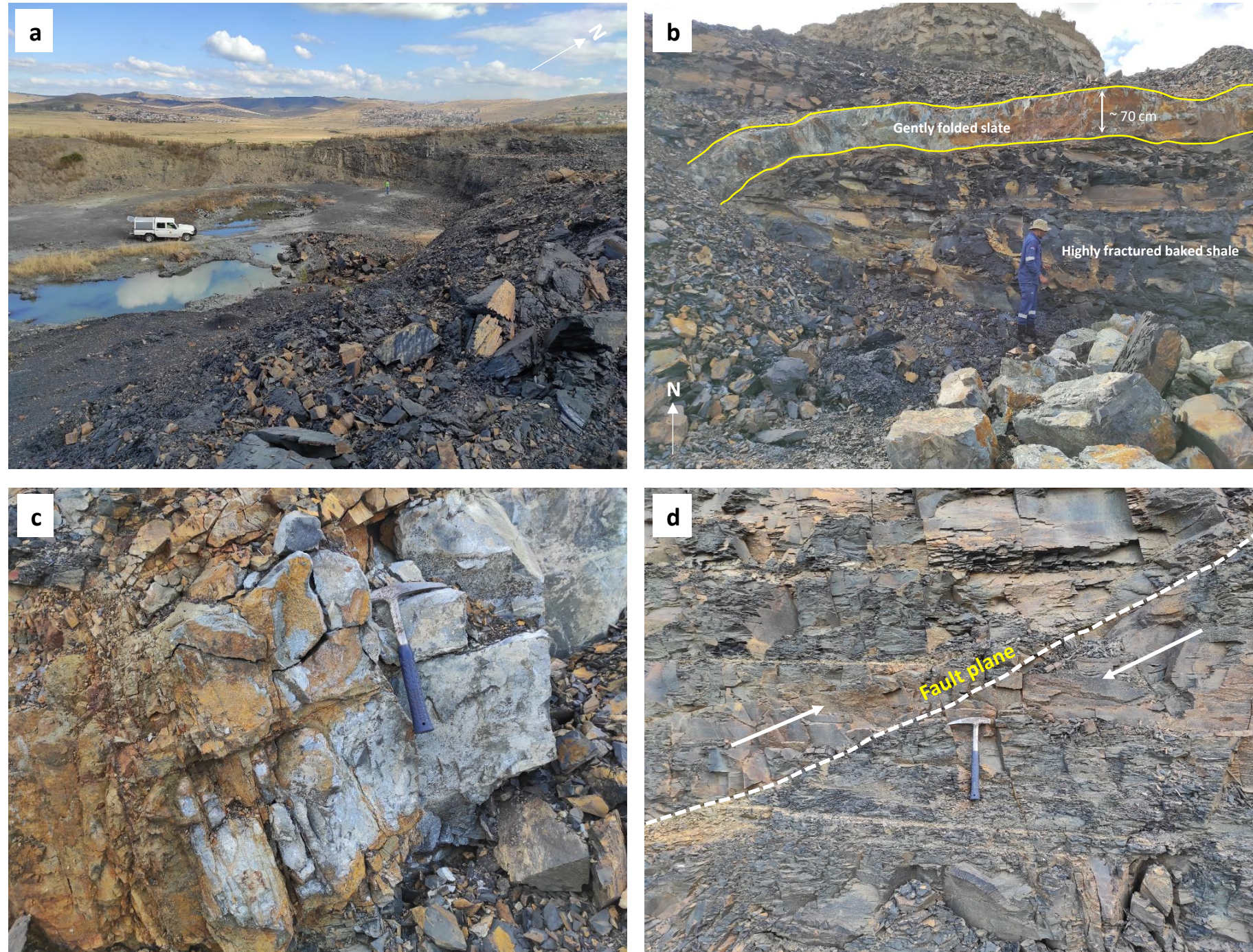
# Seismic Hazard Analyses – Koeberg Nuclear Power Station



- Koeberg Nuclear Power Station long term operation (LTO) license lapses mid-2024
- CGS is undertaking work in support of renewal of LTO – meeting National Nuclear Regulator’s requirements:
  - **Tsunami Source Model**
  - **Probabilistic Seismic Hazard Assessment (PSHA) study:**
    - Baseline PSHA to support application to extent LTO
    - Enhanced SSHAC Level 2 PSHA



# Construction materials for infrastructure development



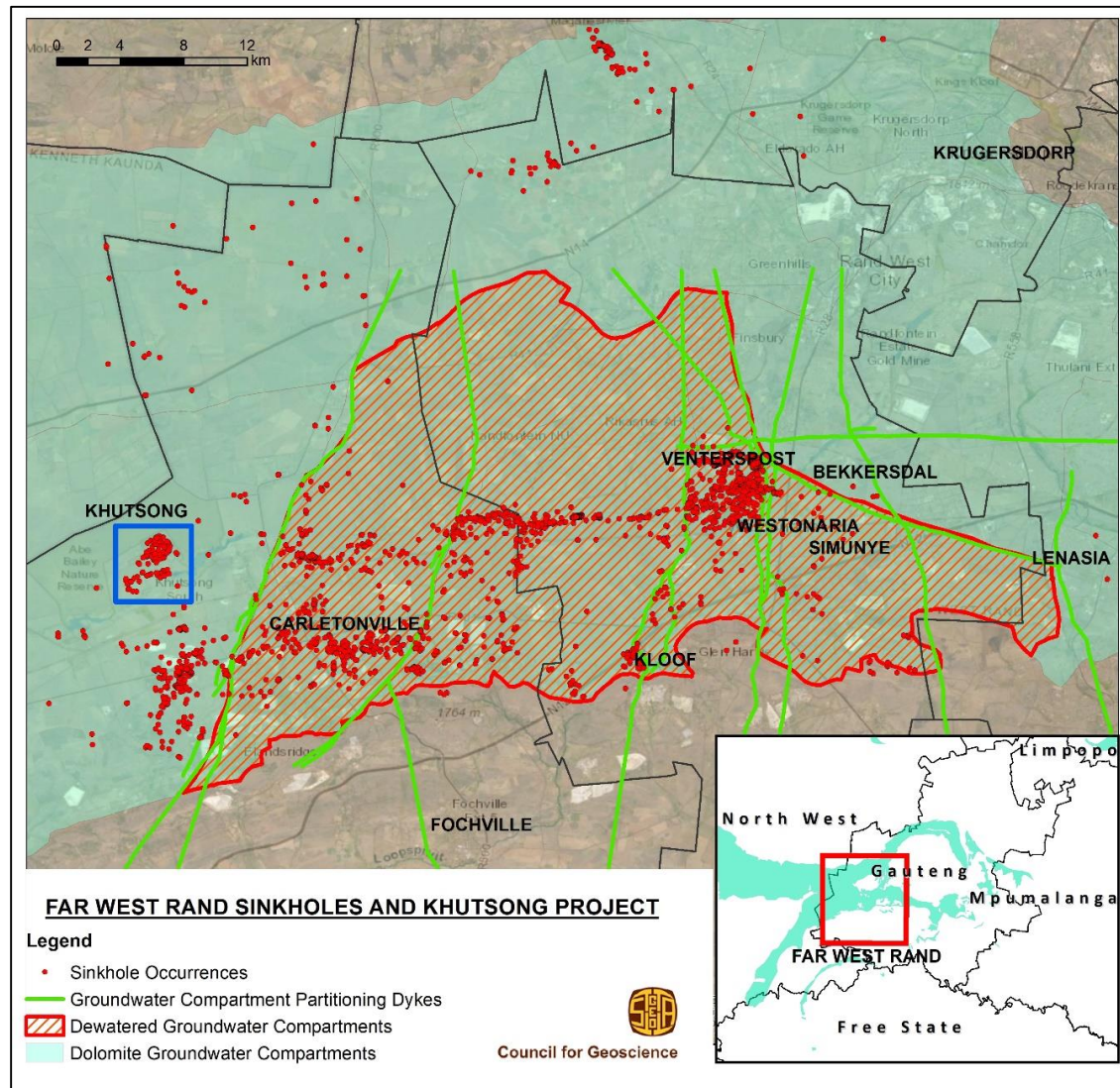
- **Aggregate mapping** across Southern KZN Province to delineate potential for hard rock material as aggregates in road and rail construction, and cement manufacturing industries
- Project focussed on Strategic Infrastructure Project #2 (Gauteng-Free State-Durban logistical and industrial corridor) region and adjacent areas
- Preliminary **national map of basalt fibre resources** has been produced in the FY2020/21



# Other Infrastructure and Land-Use Projects

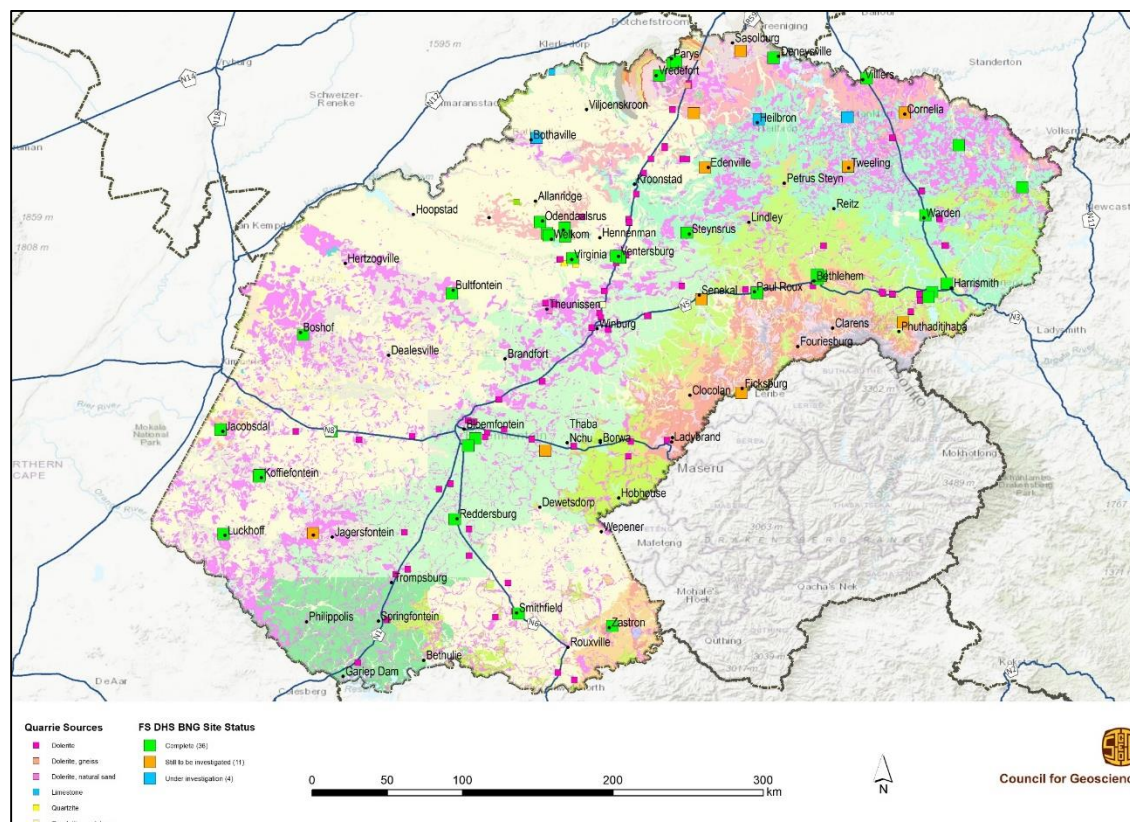
## 1. Housing Development Agency – Khutsong ground stability risk assessments

- Dolomite risk assessments across the Khutsong Area (near Carletonville, Gauteng), in support of resettling households on high risk dolomitic ground and to identify safe land for resettlement.



## 2. Free State Department of Human Settlements – Housing development geotechnical Investigations

- Geotechnical investigations of 51 towns across the Free State Province for housing development on behalf of the Free State Department of Human Settlements to support safe human settlement project deployment



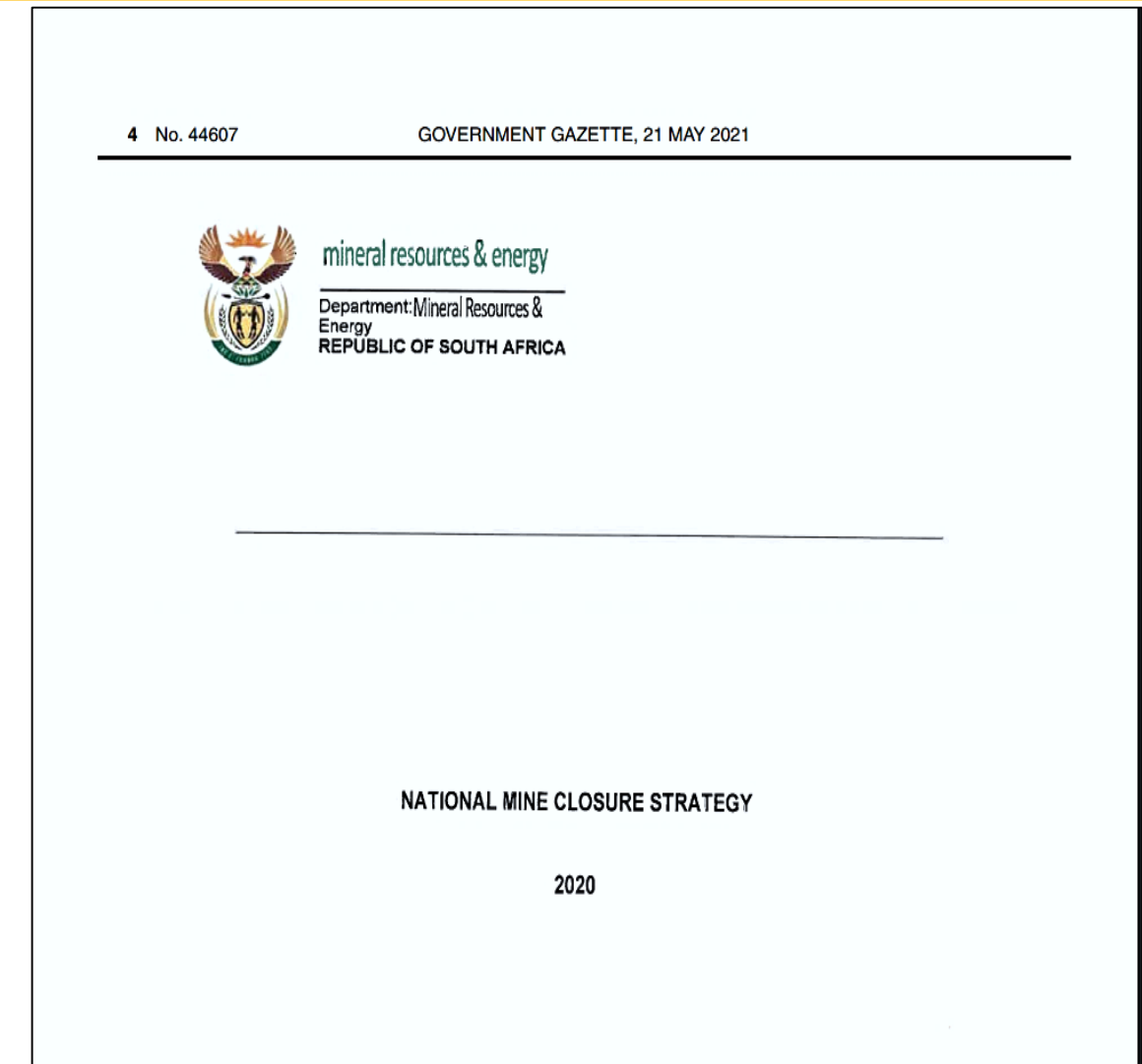


# Geoscience for health, groundwater and the environment



# Mine Water and Legacy Mines Projects

- The CGS is continuing to support the DMRE in developing mitigation strategies that will lead to the sustainable management of mine water and legacy mines in South Africa.
- The activities include (but not limited to);
  1. Development and implementation of the National Mine Closure Strategy
  2. Water ingress control measures
  3. Passive treatment of mine water
  4. Integrated monitoring environment related to legacy mines
    - a. Air quality
    - b. Ground stability
    - c. Geochemistry
  5. Exploration of coexistence between biodiversity and mining
    - a. Risk Mapping related to support, present and future mining
    - b. Co-existence portal



## Progress:

- National Mine Closure Strategy is completed and was gazetted in May 2021
- Consultations are ongoing
- The implementation is in work in progress



# Passive treatment of mine water



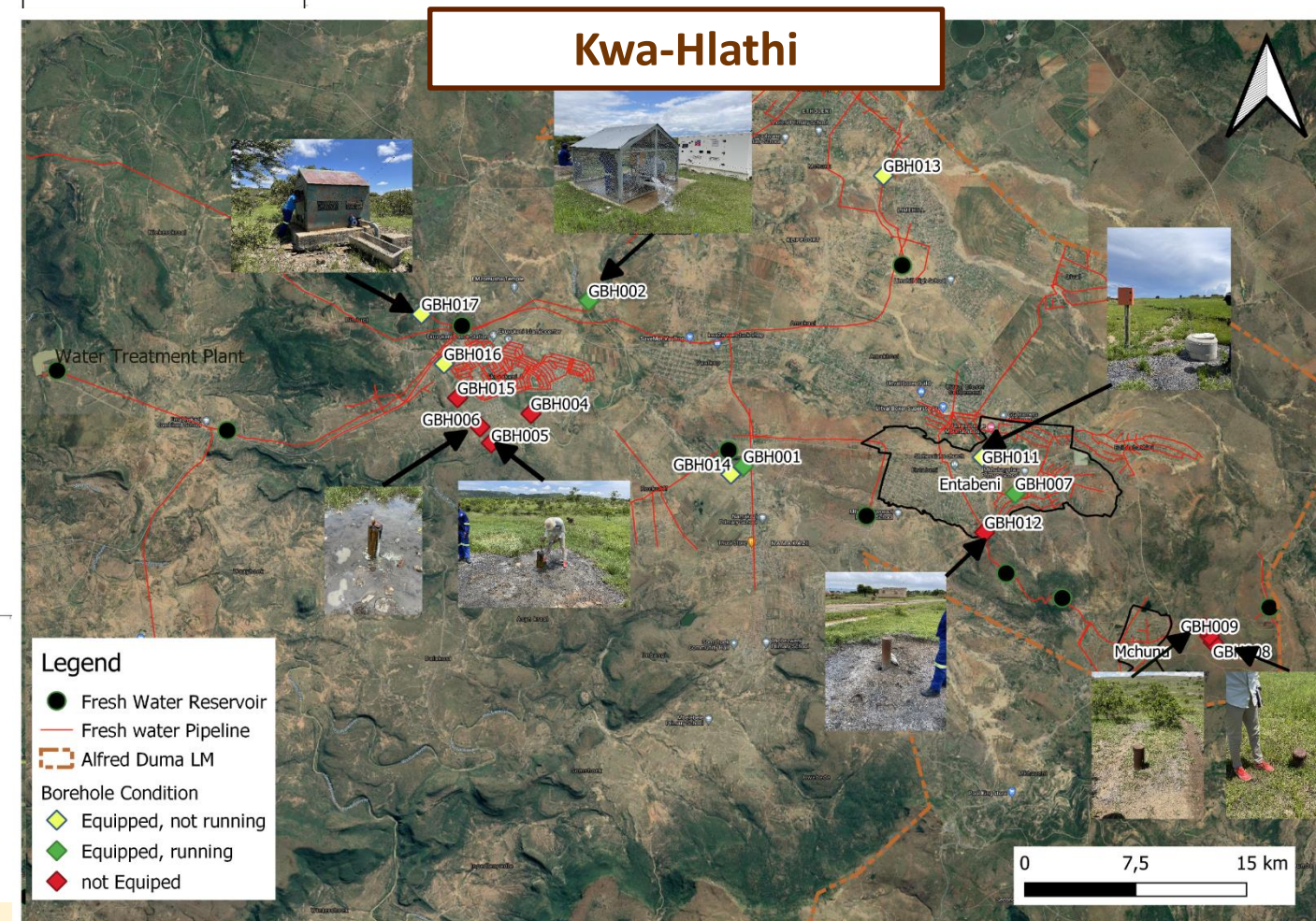
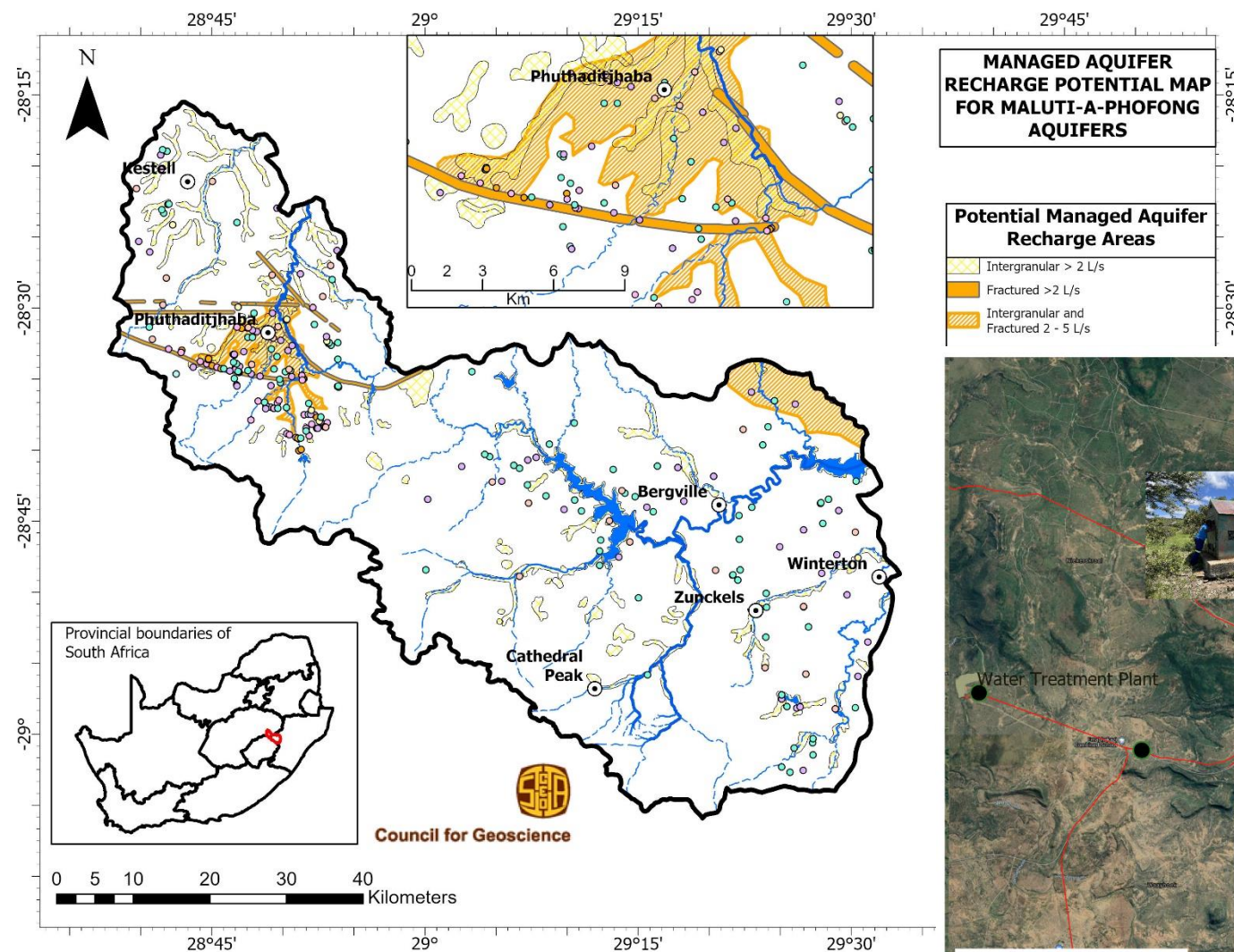
## Progress:

- Construction of the passive treatment pilot plant was completed in the FY2020/21
- First year (FY2021/22) of monitoring passive treatment system shows improvement in the water treated water quality.
- Initial results show increase of pH, and reduction of metals such as Fe and Al.



# Groundwater assessment for future mining and water security

- Artificial intelligence, hydrogeological modelling and other techniques have been used to assess the groundwater status for future mining and water security



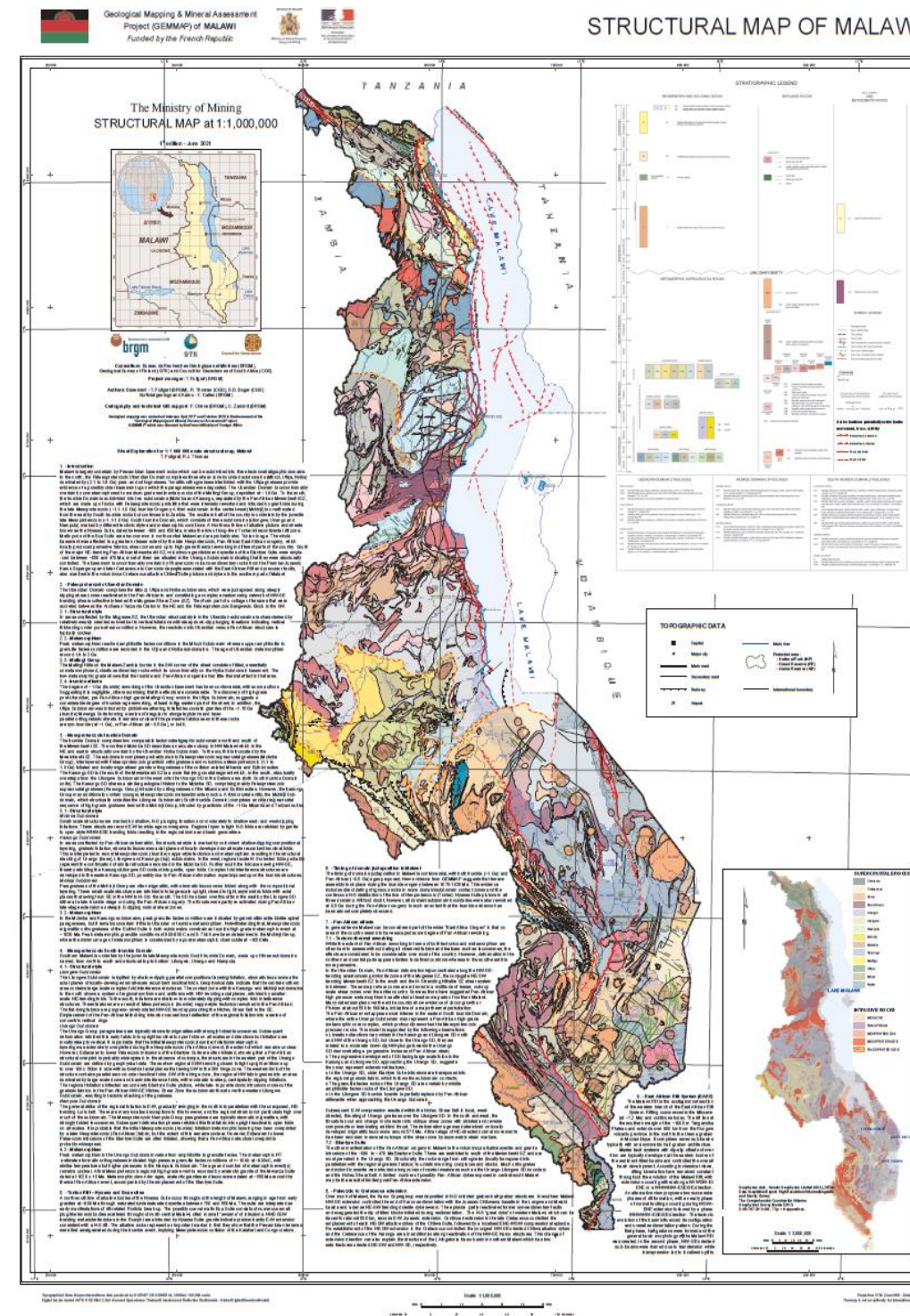
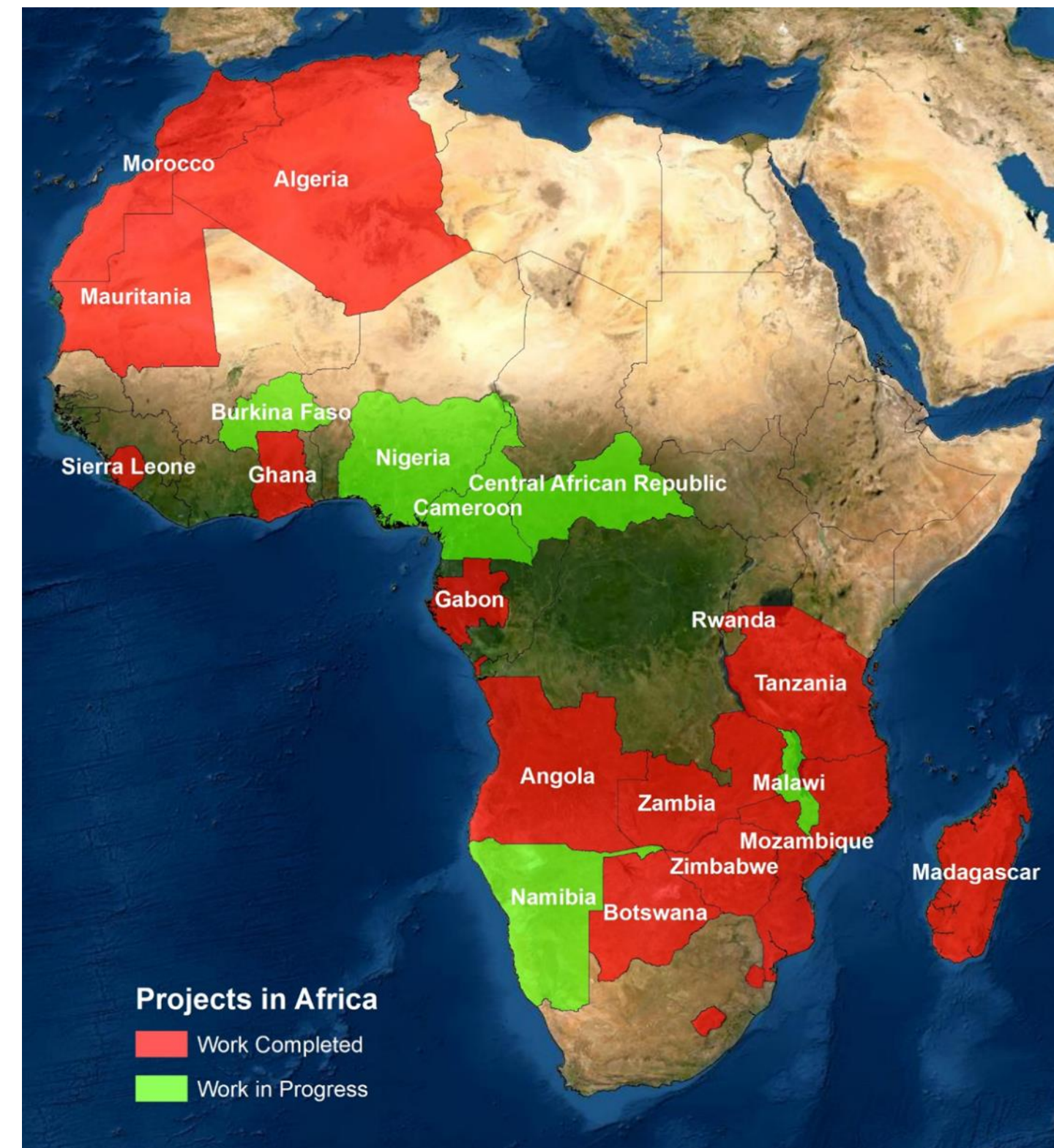


# Geoscience diplomacy projects



# African footprint of the CGS and Current Projects/Activities

“for a Better Africa and the World”



## Footprint over 19 African Countries

- **Geoscience Mapping** (e.g. geochemical, geological, geophysical, seismological, metallogenic, hydrological and mineral resource assessment)
- **Institutional Reform**
- **Map Compilation and Production** (GIS, Cartography)
- **Supervision of World Bank Projects**

## Activities for FY2022/2023:

- Finalising the geological mapping project in **Malawi**
- Processing and interpretation of the airborne geophysical data collected for the Ministry of Mines in the **Kingdom of Eswatini** as well as the finalisation of the integrated report
- Expanding the geological mapping in **Namibia** (until 2022)
- Engaging with **Central African Republic** and the **Democratic Republic of Congo** as part geoscientific collaborations



# **Annual Performance Plan 2022/23**

## **(Corporate Scorecard)**





# Programme 1: Financial sustainability

**Purpose:** To ensure effective and efficient delivery of financial management services, to secure funding from the exploitation of collaborative activities and partnerships as well as to generate grant funding.

Outcome	MTSF Priorities	Outputs	Output indicators	Estimated performance	MTEF period			
				2021/22	2022/23	2023/24	2024/25	
Effective and efficient financial resources management	1. A Capable, ethical and developmental state	Audited financial reports	1. Percentage of overhead costs to total costs	≤66%	66%	66%	66%	
		Audited financial reports	2. Percentage of personnel costs to total costs	≤70%	70%	70%	70%	
		Audited financial reports	3. Revenue from collaborative activities/partnerships	R33m	R122.3m	R130.2m	R142.4m	
		Audited financial reports	4. Grant revenue	R373.2m	R355.7m	R559.4m	R675.6m	



# Programme 2: Organisational effectiveness and efficiency

**Purpose:** To develop and implement effective and compliant policies, procedures and business processes in support of the CGS integrated service- delivery model, adhere to best practice to achieve sustainable governance as well as to provide and operate flexible, expandable and secure ICT solutions.

Outcome		Outputs	Output indicators	Estimated performance	MTEF period		
				2021/22	2022/23	2023/24	2024/25
Effective and efficient financial resources management  and  Compliance with governance protocols/regulations	1. A Capable, ethical and developmental state	Audited annual report	5. Number of audit qualifications	0	0	0	0
		Audited annual report	6. Percentage of total Procurement spend on goods and services from Small, Medium and Micro Enterprises (QSE and EME's) in terms of PPPFA of 2017	30%	35%	40%	45%
		Availability report	7. Availability of key enterprise services	99%	99%	99%	99%



# Programme 3: An empowered, transformed, motivated and capacitated workforce

**Purpose:** To attract and retain highly skilled scientific personnel in the geoscience industry, To build capacity in respect of geoscientific, administrative and managerial/leadership skills while also developing innovative products, systems and services, To promote and invest in human resources transformation and diversity.

Outcome		Outputs	Output indicators	Estimated performance	MTEF period			
				2021/22	2022/23	2023/24	2024/25	
Capable human capital	1. A Capable, ethical and developmental state  3. Education, skills and health	Human Resources Reports	8. Percentage of scientific staff with Masters or Doctoral degrees	≥35%	40%	42%	45%	
		Human Resources Reports	9. Percentage of training expenditure to leviabile amount of payroll	≥1%	1%	1%	1%	
		Human Resources Reports	10. Staff turnover rate	≤10%	10%	10%	10%	
		Human Resources Reports	11. Percentage of staff living with disability	≥1.5%	1.6%	1.8%	1.9%	



# Programme 3: An empowered, transformed, motivated and capacitated workforce, continued

**Purpose:** To attract and retain highly skilled scientific personnel in the geoscience industry, To build capacity in respect of geoscientific, administrative and managerial/leadership skills while also developing innovative products, systems and services, To promote and invest in human resources transformation and diversity.

Outcome		Outputs	Output indicators	Estimated performance	MTEF period			
				2021/22	2022/23	2023/24	2024/25	
Capable human capital	1. A Capable, ethical and developmental state	Human Resources Reports	12. EE Stats, Scientific cohort (Female representation)	44%	46%	48%	48%	
		Human Resources Reports	13. EE-Stats, Senior management (Female representation)	New Measure	50%	53%	55%	
	3. Education, skills and health	Human Resources Reports	14. EE Stats, Top management (Female representation)	20%	40%	40%	40%	



# Programme 4: Delivery of the mandate

**Programme 4 Purpose:** Execute the integrated and multidisciplinary geoscience mapping programme

Outcome	MTSF Priorities	Outputs	Output indicators	Estimated performance	MTEF period		
				2021/22	2022/23	2023/24	2024/25
<b>Enhanced applications of geoscience information and knowledge and to secure a minimum of 5% share of the global exploration expenditure</b>  <b>&amp;</b>  <b>Enhanced geoscience diplomacy</b>	<b>2. Economic transformation and job creation</b>	Onshore geoscience maps	14. Onshore geoscience map coverage	9.5%	12%	14%	16%
		Offshore geoscience maps	15. Offshore geoscience map coverage	0.3%	0.2%	0.3%	0.6%
	<b>5. Spatial integration, human settlements and local government</b>	Value-added geoscience outputs such as integrated reports, 3D models, innovative solutions, mineral systems and emplacement models.	16. Applied geoscience outputs for minerals and energy	4	6	6	8
	<b>6. Social cohesion and safe communities</b>	Value-added geoscience outputs such as integrated reports and 3D models, innovative solutions.	17. Applied geoscience outputs for infrastructure, land use, health, groundwater and the environment	5	6	6	8
	<b>7. A better Africa and World</b>						



# Programme 5: Advisory, stakeholder engagement and knowledge management

**Purpose:** To improve stakeholder relations through collaborations with strategically aligned institutions, the private sector and the general public.

Outcome	MTSF Priorities	Outputs	Output indicators	Estimated performance	MTEF period		
				2021/22	2022/23	2023/24	2024/25
Enhanced applications of geoscience information and knowledge and to secure a minimum of 5% share of the global exploration expenditure and  Enhanced geoscience diplomacy	2. Economic transformation and job creation	Media articles	19. Number of articles published on media platforms	24	28	32	32
		Stakeholder survey report	20. Stakeholder satisfaction level	70%	70%	70%	70%
	5. Spatial integration, human settlements and local government	Peer-reviewed articles published in scientific journals, book chapters and edited volumes.	21. Number of peer-reviewed articles published	30	32	34	40
	6. Social cohesion and safe communities	Examples: memoirs, bulletins, books and atlases.	22. Number of CGS publications	8	8	10	12
	7. A better Africa and World	Examples: abstracts, extended abstracts and conference papers and keynotes, etc.	23. Number of papers published in a conference proceedings	25	70	40	55



# Finances (Budgets for 2022/23)





# 2022 MTEF Final allocation letter

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- On 8 February 2022, the final 2022 MTEF allocation letter was received with **confirmed additional funding allocations** of R500m (R0 in 2022/23; R200m in 2023/24 and R300m in 2024/25).
- The additional allocations are to be used for the geoscience activities which includes the **onshore and offshore map coverage in support of the National Exploration Strategy**.
- This means that the implementation of economic recovery onshore and offshore mapping projects in the CGS will be accelerated to accelerated to augment contribution towards the South African Economic Reconstruction and Recovery Plan.
- A **special thank you and appreciation to the PPC, Minister of Mineral Resources and Energy, DMRE and National Treasury** for their continued support and availing additional resources to execute the National Exploration Strategy.

# Budget Implications over the MTEF

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- Technical adjustments were implemented on the MTEF projects where funding for the Rehabilitation of derelict and ownerless mines and the Water Ingress Solutions was moved to commercial revenue to align to the DMRE's budget classifications in compliance with the National Treasury budget classification circular.
- The outsourcing of these MTEF projects will be based on either a contract between the DMRE and CGS or a normal open tender process.



# Financial Information



# Budget FY2021/22 – FY2024/25

Income/Funding Model					
Income (Rands)	2021/22 Budget x 1000		2022/23 Budget x 1000	2023/24 Budget x 1000	2024/25 Budget x 1000
Government grant - Baseline	196 104		207 946	204 982	214 188
Government grant – Baseline Increase Geological Mapping	128 000		147 815	154 476	161 414
Government grant – Baseline Increase Geoscience activities including onshore and offshore map coverage	—		—	200 000**	300 000**
Government grant - MTEF	159 476*		—	—	—
CCUS Project	81 818		—	—	—
Sales and contracts	32 210		***122 317	***130 188	***142 441
Sundry income	4 276		4 490	4 714	4 950
TOTAL INCOME - A	601 884		482 568	694 360	822 993
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# Budget FY2021/22 – FY2024/25

Expenditure (Rands)	2021/22 Budget x 1000	2022/23 Budget x 1000	2023/24 Budget x 1000	2024/25 Budget x 1000
Personnel costs	316 946	342 117	378 065	408 065
Bursaries and Training	4 481	4 930	5 423	5 965
Commercial project costs	14 495	55 043	58 585	64 098
Overheads and operating costs	222 045	63 478	225 287	322 865
SUBTOTAL - B	557 967	465 568	667 360	800 993
SURPLUS(LOSS) A-B	-	-	-	-
Budgeted Capital Expenditure (vehicles; equipments;etc)	43 917	17 000	27 000	22 000
TOTAL EXPENDITURE	601 884	482 568	694 360	822 993

# Link between the Budget and Strategic Programmes

CGS Strategic Programmes	2021/22 Budget x1000	2022/23 Budget x1000	2023/24 Budget x1000	2024/25 Budget X1000
Programme 1: Financial Sustainability	67 038	53 749	55 062	58 252
Programme 2: Organisational effectiveness and efficiency	105 260	84 394	86 456	91 464
Programme 3: An empowered, transformed, motivated and capacitated workforce	15 011	12 035	12 329	13 043
Programme 4: Delivery of Mandate	398 457	319 467	527 274	646 229
Programme 5: Advisory, Stakeholder Engagement & Knowledge Management	16 118	12 923	13 239	14 005
<b>Total Budget</b>	<b>601 884</b>	<b>482 568</b>	<b>694 360</b>	<b>822 993</b>



# Analysis of Government Grant Allocations from FY2021/22 to FY2024/25

ITEM	2021/22	2022/23	2023/24	2024/25
Baseline allocation	R196.1m	R207.9m	R204.9m	R214.2m
Water Ingress Project	R30.7m	* —	* —	* —
Rehabilitation of D&O Mines (Research Portion)	R22.3m	* —	* —	* —
Baseline Increase : Baseline Increase Geoscience activities including onshore and offshore map coverage	—	—	R200.0m	R300.0m
Baseline Increase : Geological Mapping for Exploration of Mining	R128.0m	R147.8m	R154.5m	R161.4m
<b>Total Government Grant (2022 MTEF DMR Final Allocation letter 8 February 2022)</b>	<b>R377.1m</b>	<b>R355.7m</b>	<b>R559.4m</b>	<b>R428.0m</b>

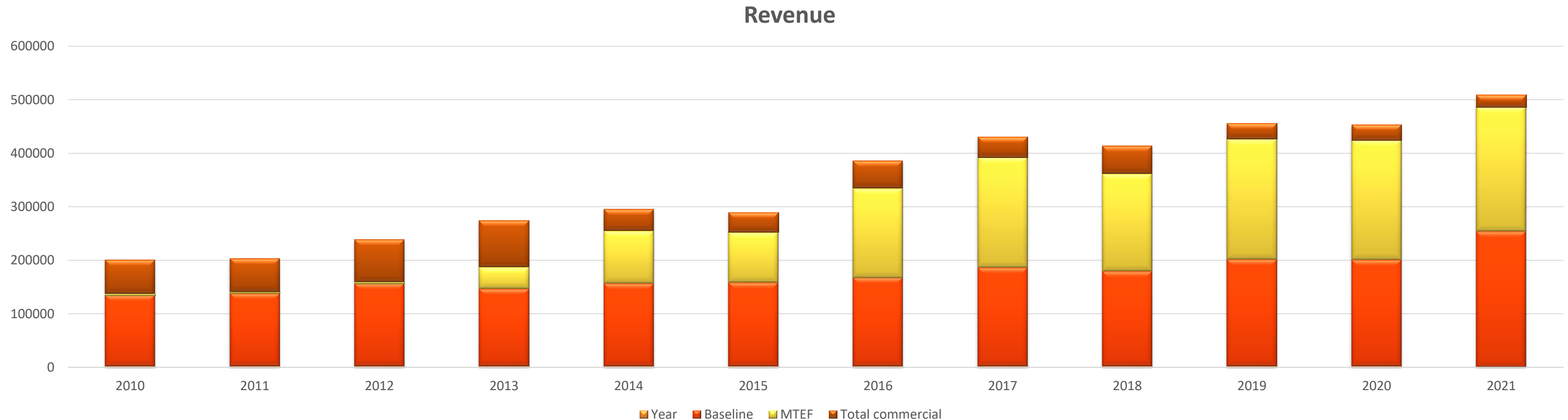
\*Technical adjustments implemented in the 2022 MTET projects where funding was moved to commercial revenue to align to the DMRE's budget classifications.

# Financial Sustainability Assessment



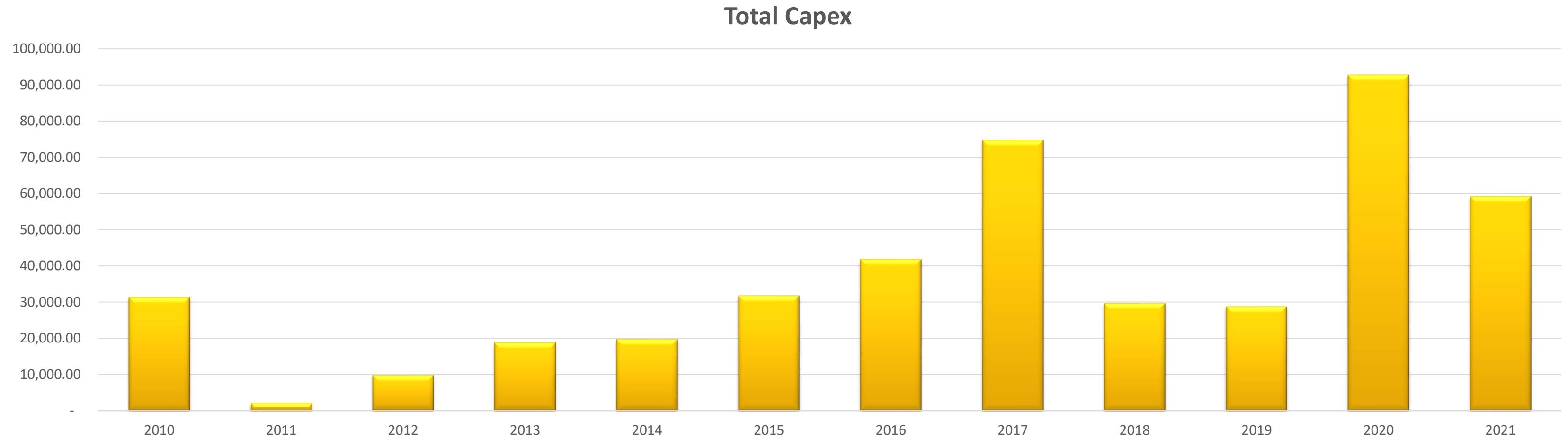


# Financial Sustainability



- The Government grant consists of the baseline grant funding for the MTEF.
- Baseline grant funding of R463.7m has been allocated for Geological mapping for exploration of mining over the MTEF.
- **Additional baseline allocations of R500m has been allocated for the geoscience activities over the MTEF.**
- Technical adjustments were implemented on the MTEF projects where funding for the Rehabilitation of derelict and ownerless mines and the Water Ingress Solutions was moved to commercial revenue to align to the DMRE's budget classification.
- CGS secured the Development of Carbon Capture Storage Project with the World Bank.

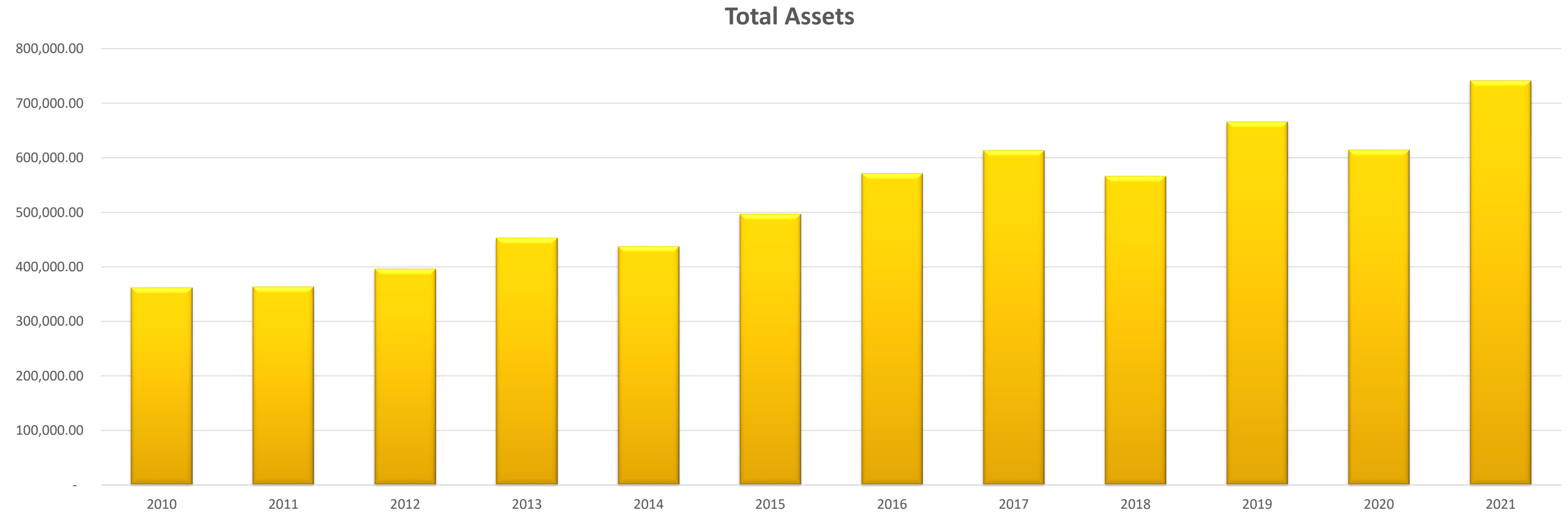
# Financial Sustainability, continued



- A capital renewal plan is developed annually to address the infrastructure requirements.
- In 2020, additional funding was spent in respect of lab infrastructure and implementation of an ERP system.
- **The aging research infrastructure of the CGS is of great concern to the organisation and attention is given to the replacement of infrastructure.**

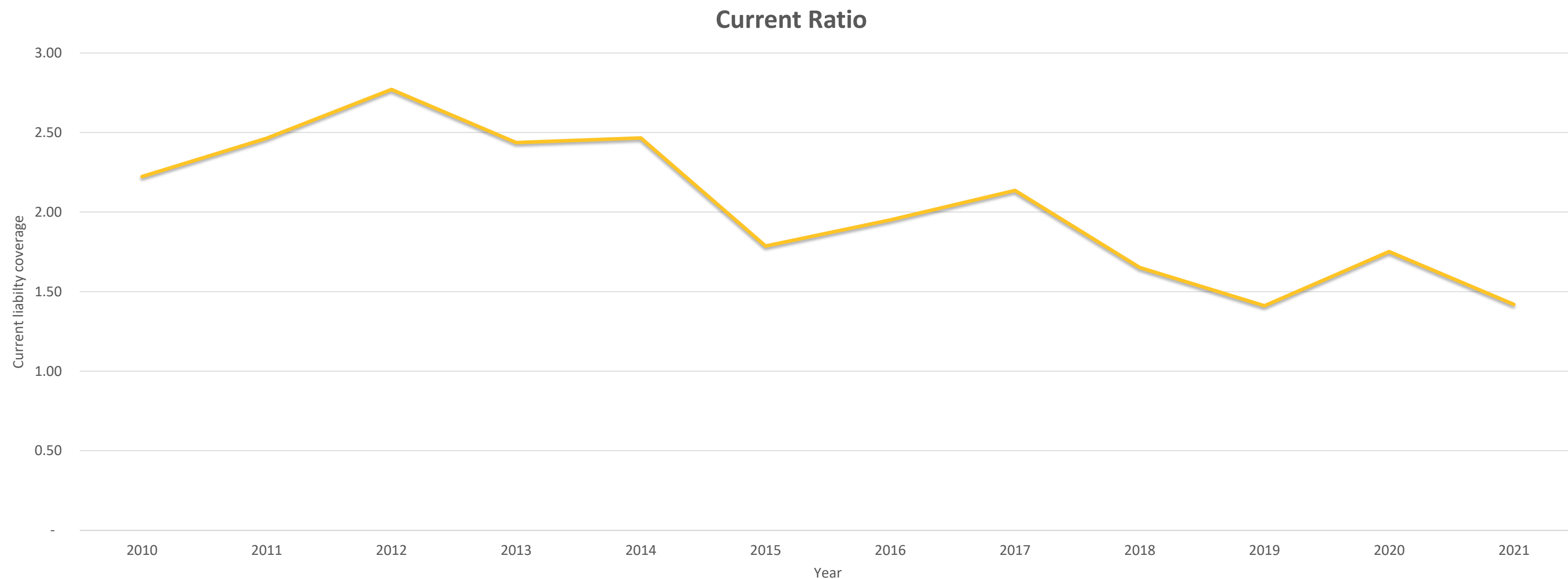


# Financial Sustainability, continued



- A steady balance sheet position has been maintained over the last 12 years and total assets have increased by an average of 7% over the period.

# Financial Sustainability, continued



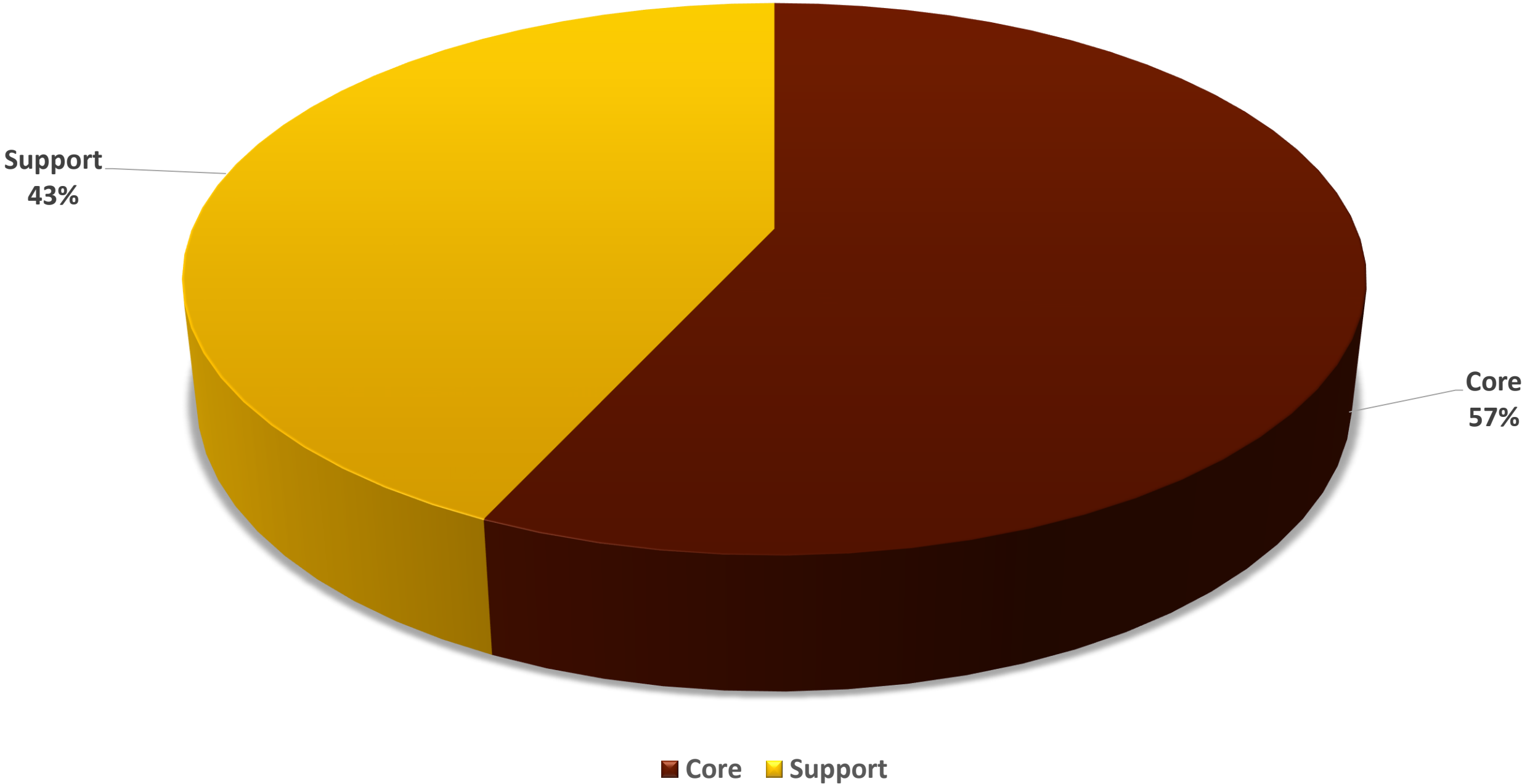
- The current ratio is at 1.4:1.0.
- The CGS is in good financial standing over the next MTEF meaning that the CGS will meet its current financial obligations as they become due.



# Human Resources

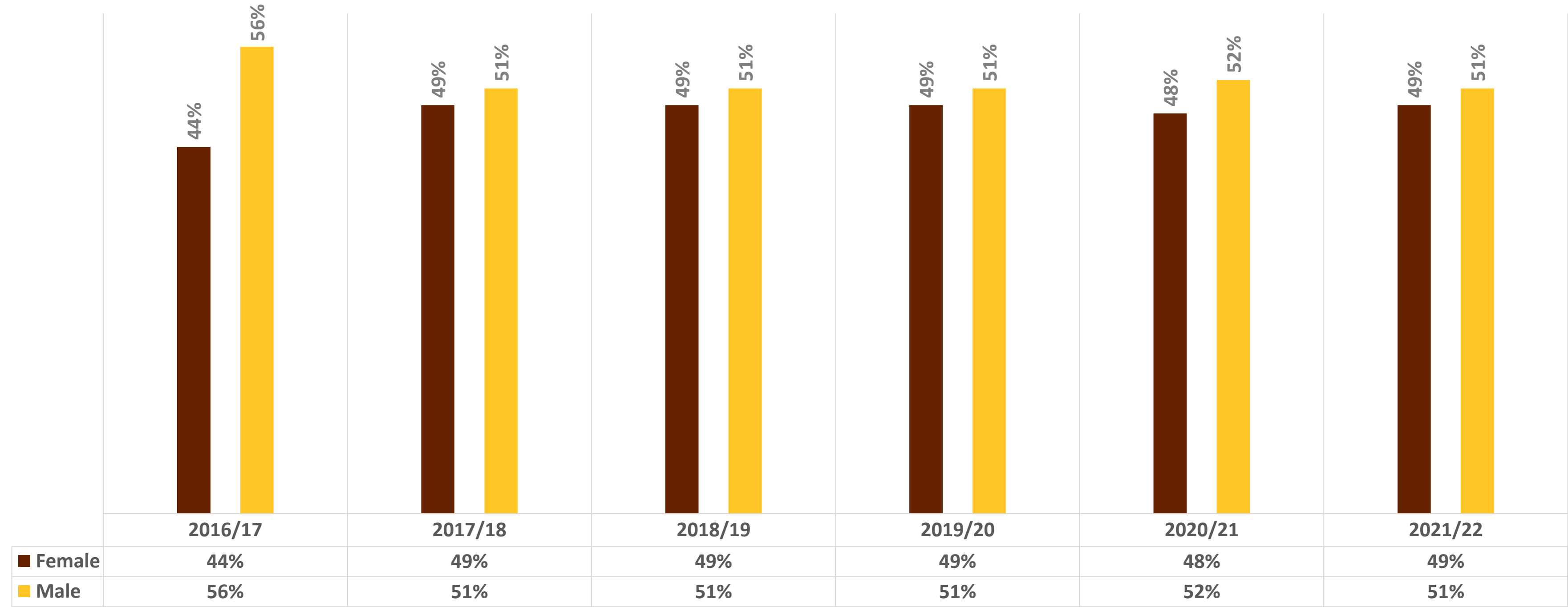


# Ratio of Core Staff vs Support Staff

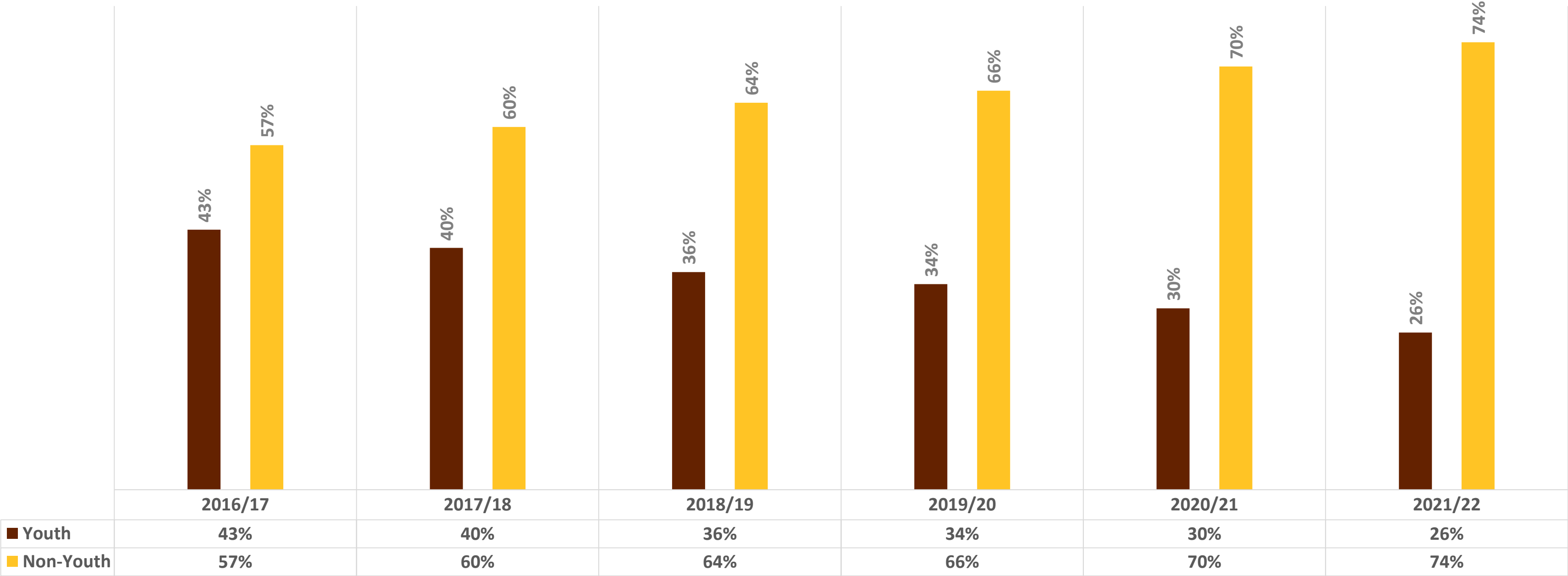




# 6 Year Gender Breakdown - Female versus Male



# 6 Year Staff Headcount Distribution: Youth versus Non-Youth

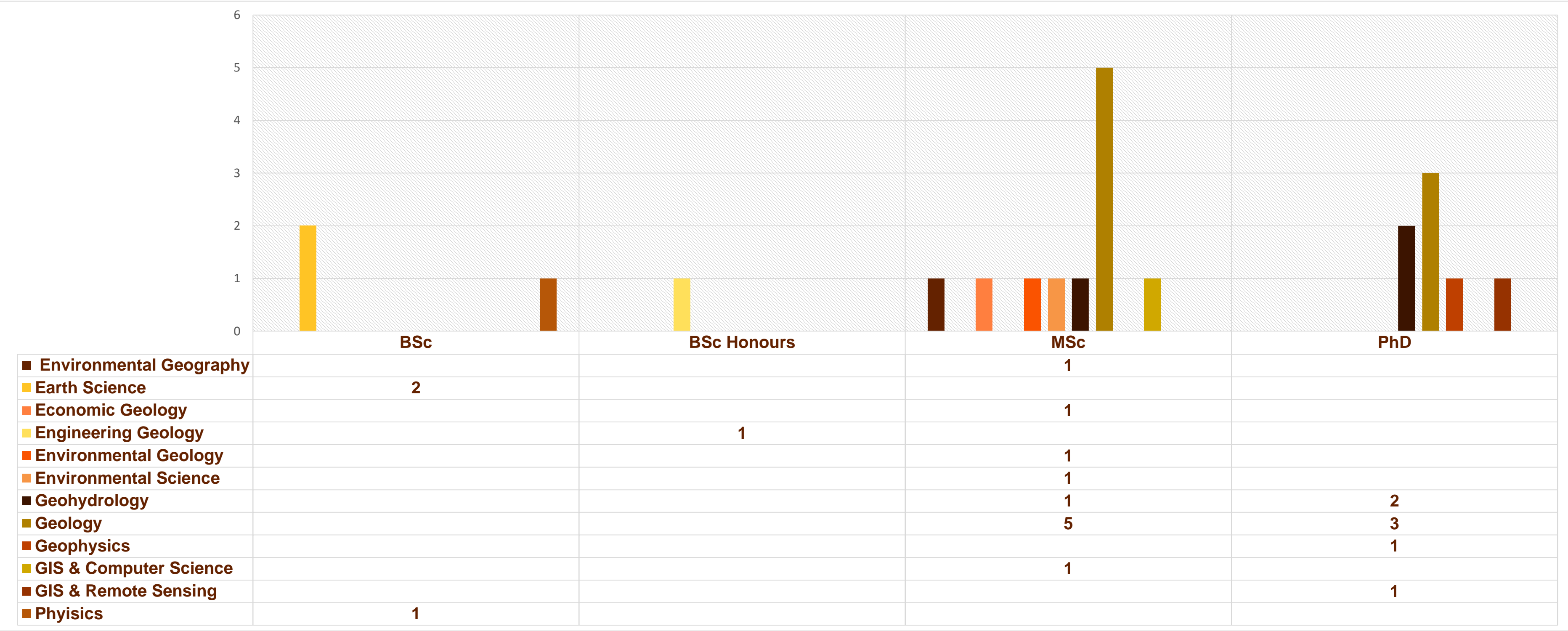




# Full-Time Bursary Programme

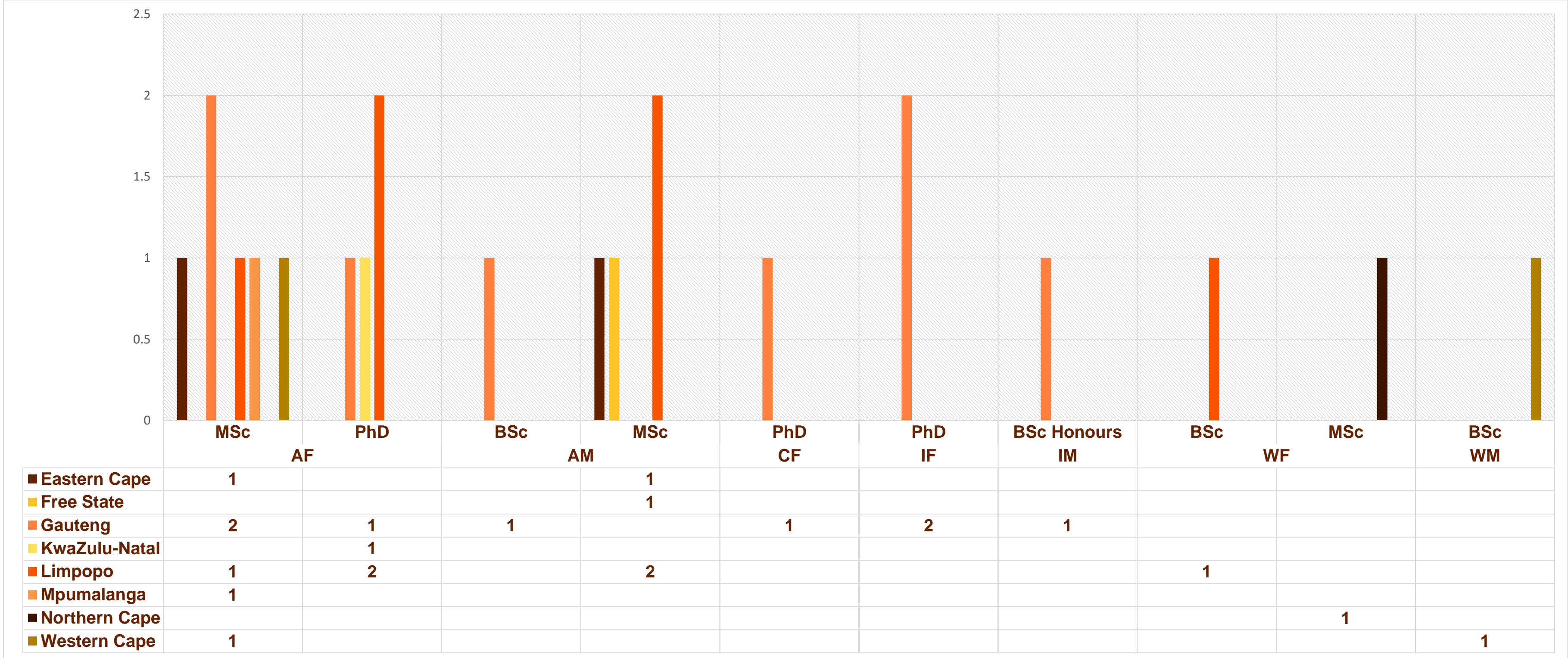
Race & Gender		PhD	MSc	BSc Hons	BSc	Totals
African	Female	5	6	0	0	11
	Male	0	4	0	1	5
Coloured	Female	0	0	0	0	0
	Male	0	0	0	0	0
Indian	Female	2	0	0	0	2
	Male	0	0	0	1	1
White	Female	0	1	0	1	2
	Male	0	0	0	1	1
Totals		7	11	0	4	22

# Full-Time Bursary Programme: Qualification and Field of Studies

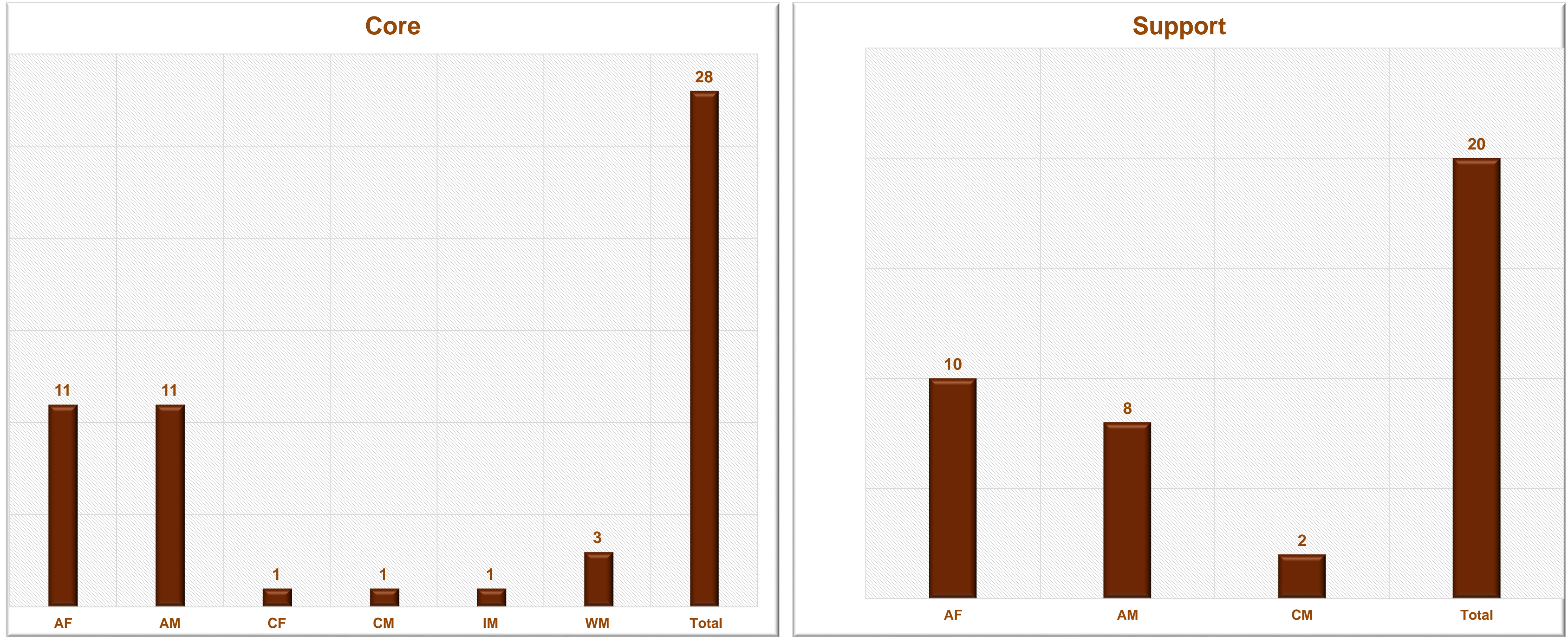




# Full-Time Bursary Programme: Province

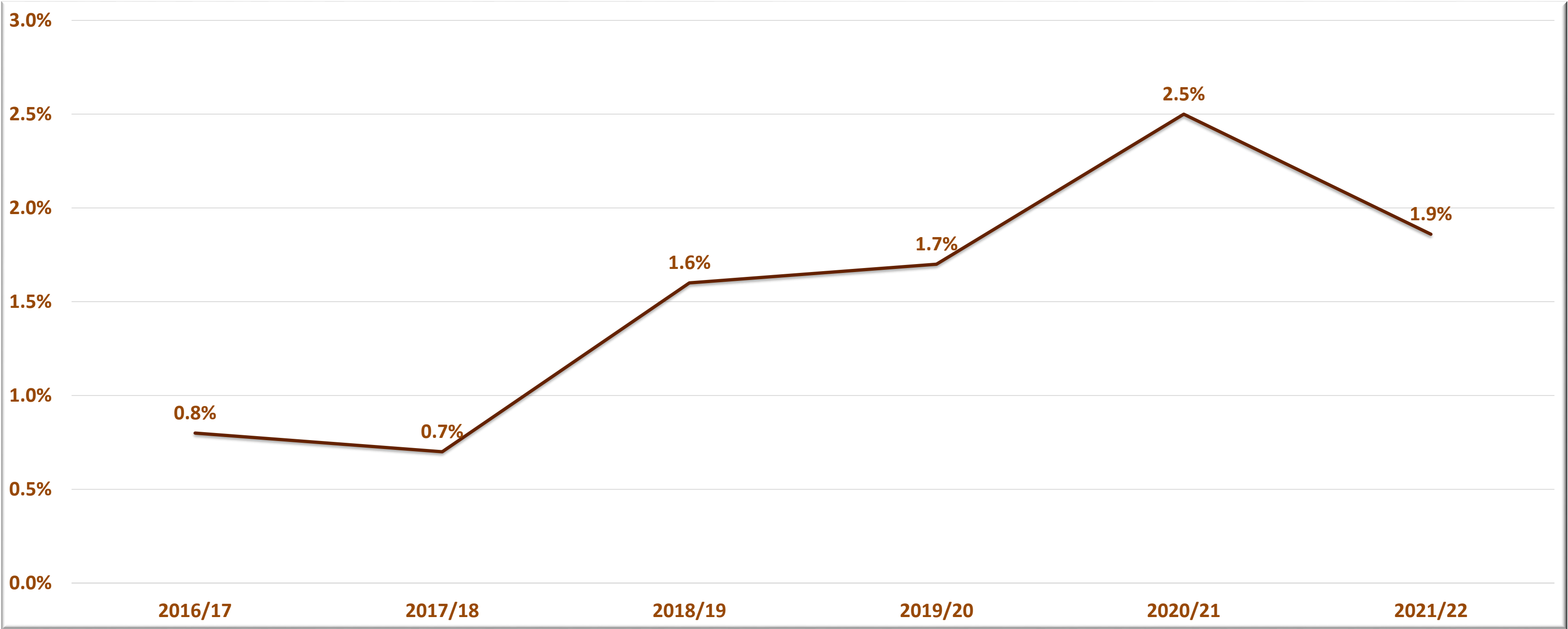


# Internship: Core vs Support by Race and Gender

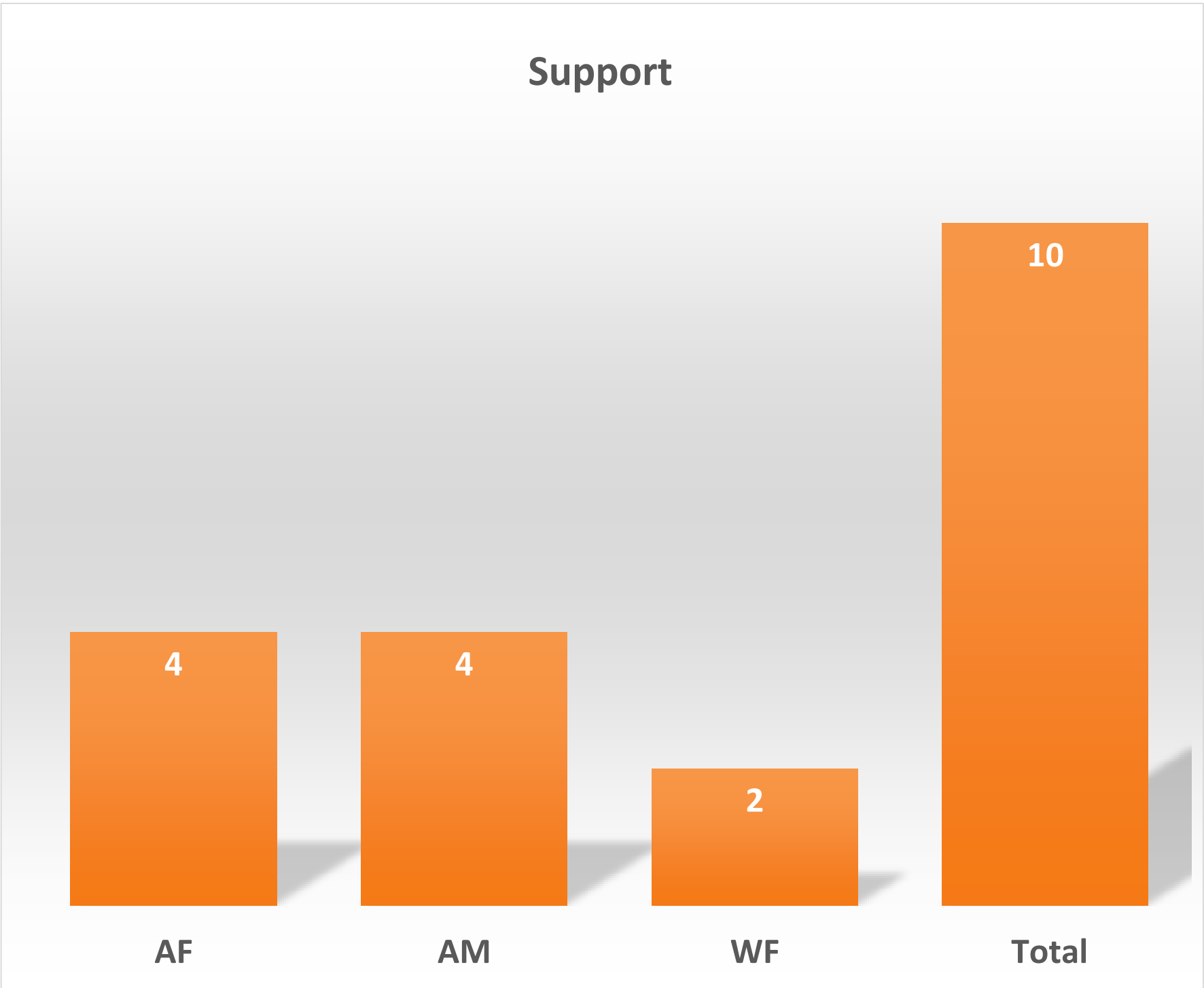
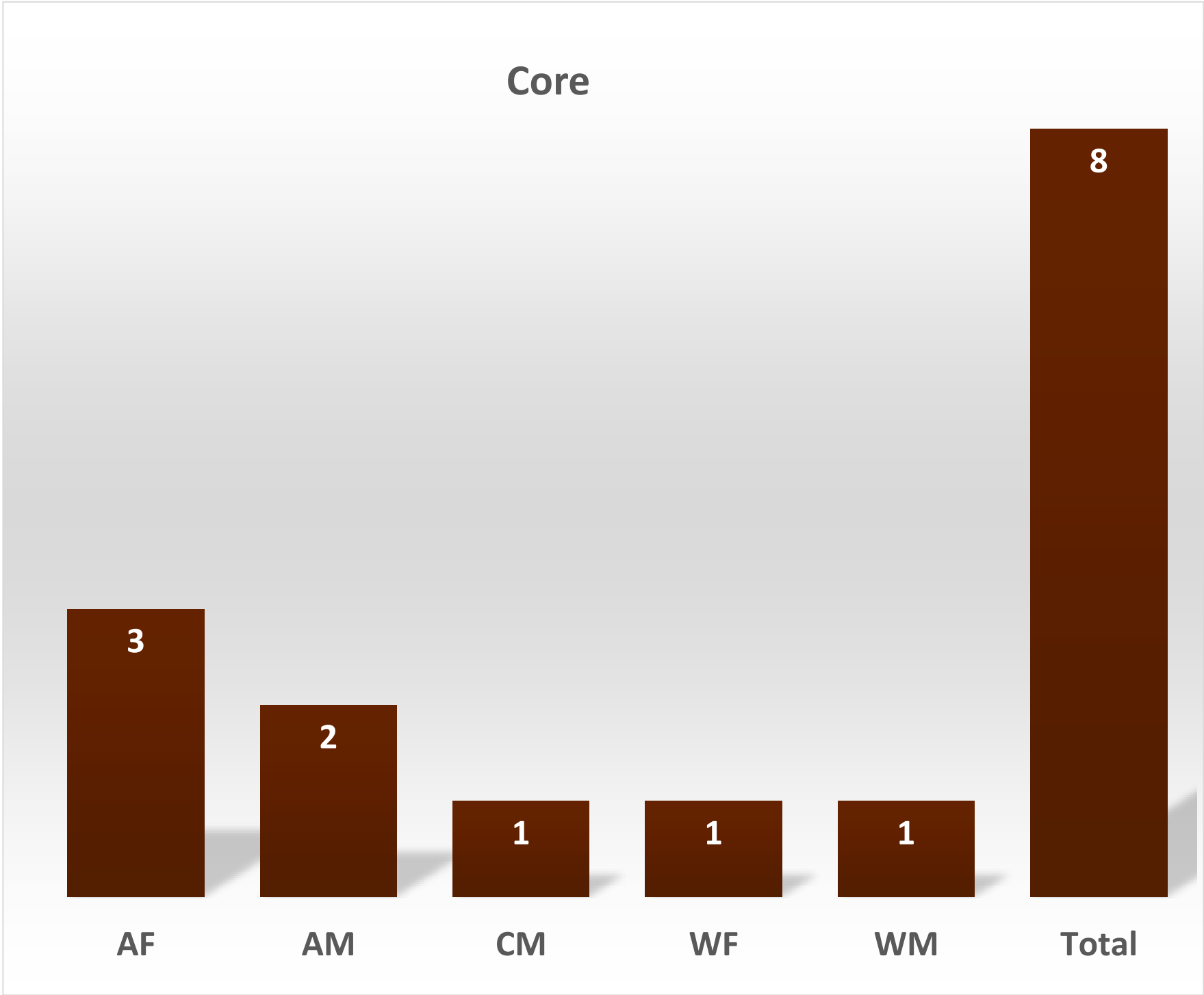




# Staff Living with Disabilities



# Senior Management Staff



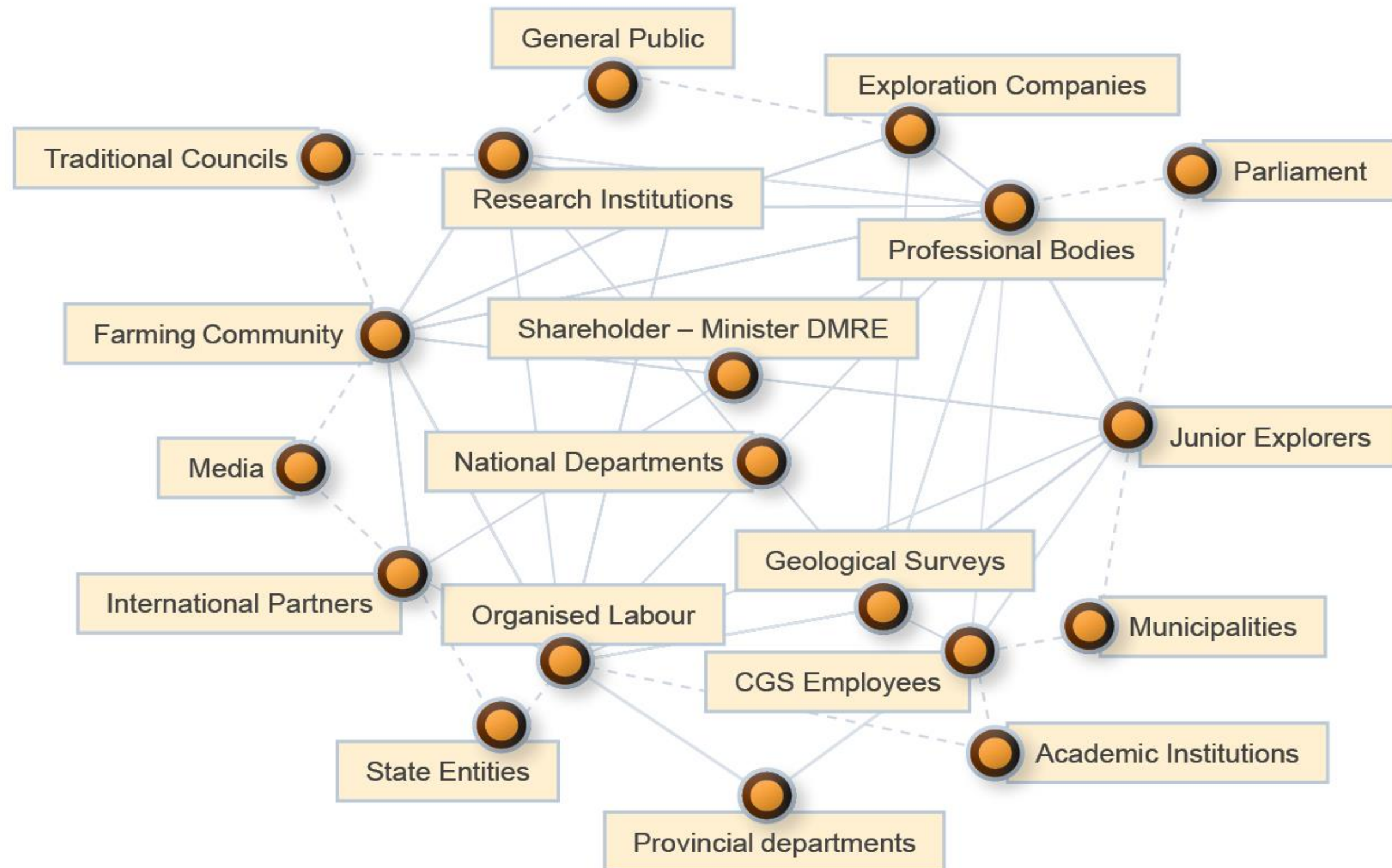
Senior Management (Female representation): 56%



# Stakeholder Engagement Programme



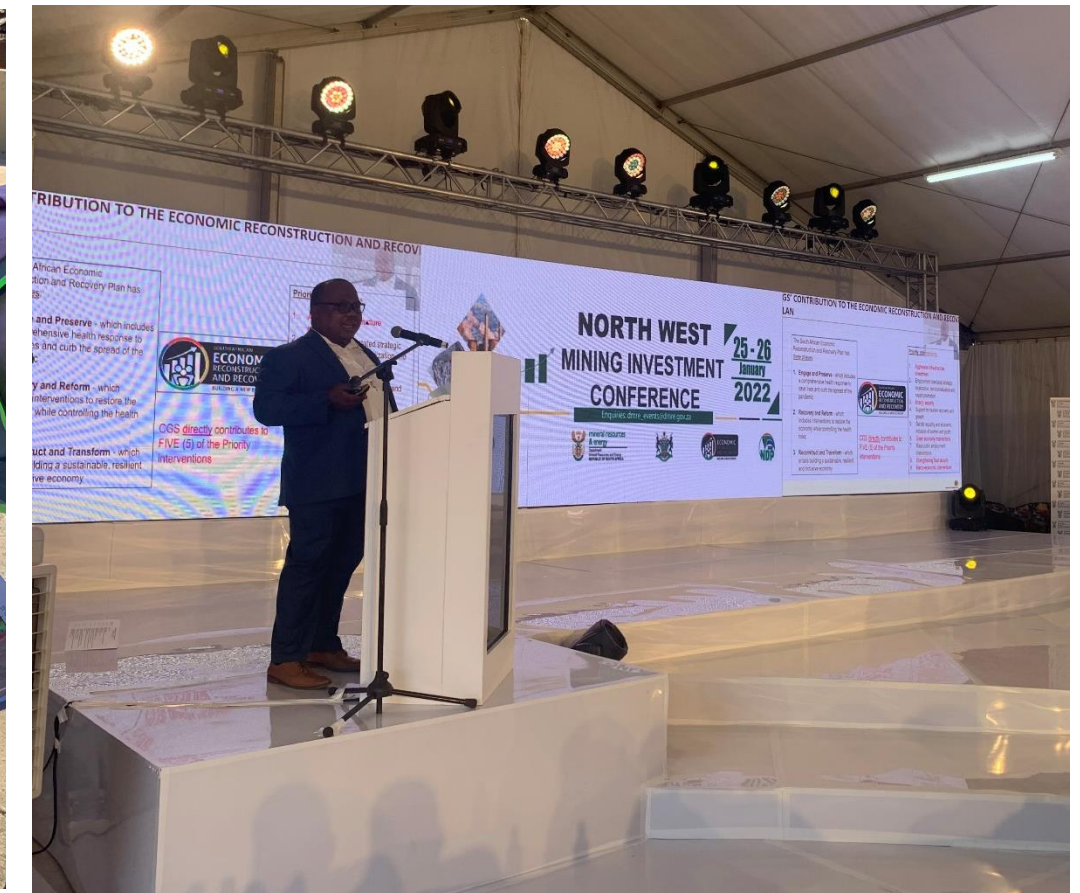
# CGS Stakeholder Representation





# Stakeholder Engagement Activities

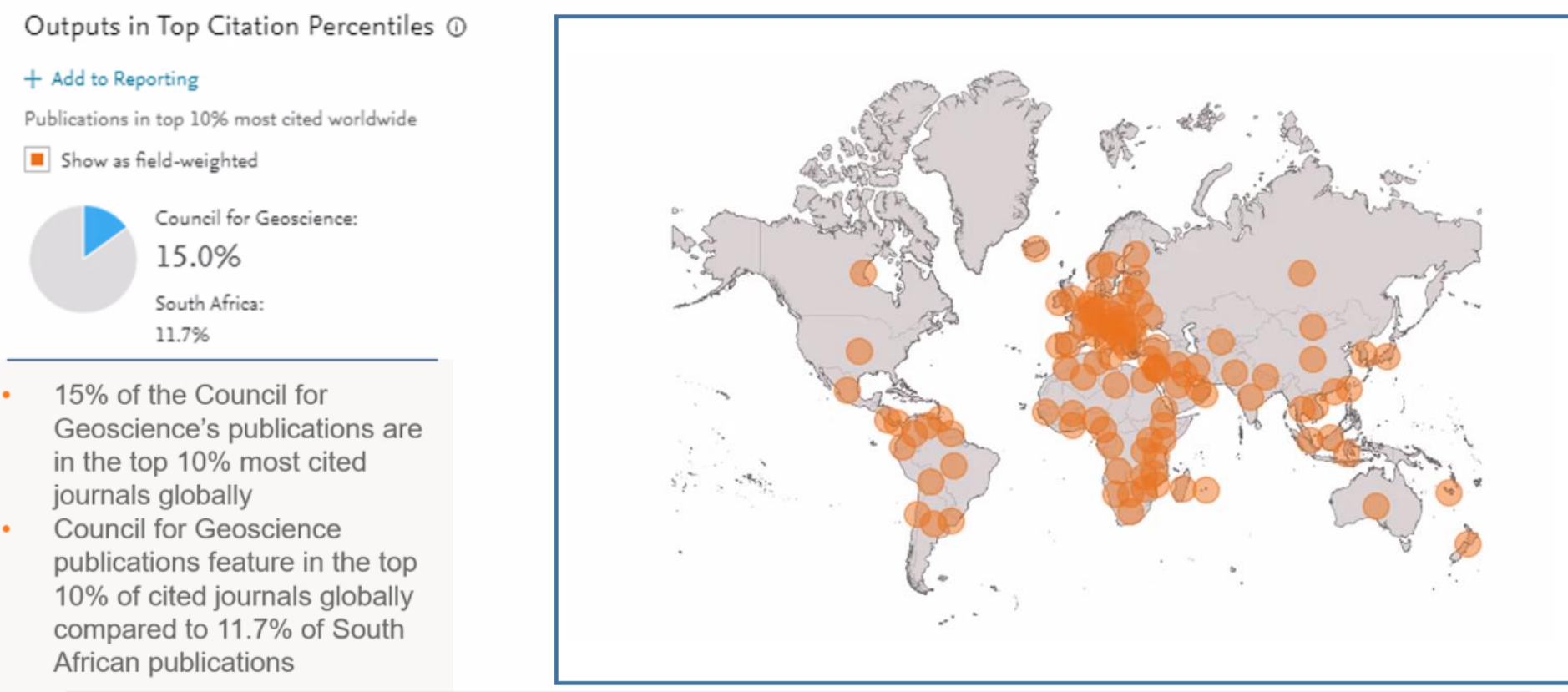
- The CGS holds introductory and iterative meetings with a myriad of stakeholders to enable implementation of its mandate (taking science to the people). The engagements take place pre-, during and post-implementation of geoscientific projects.



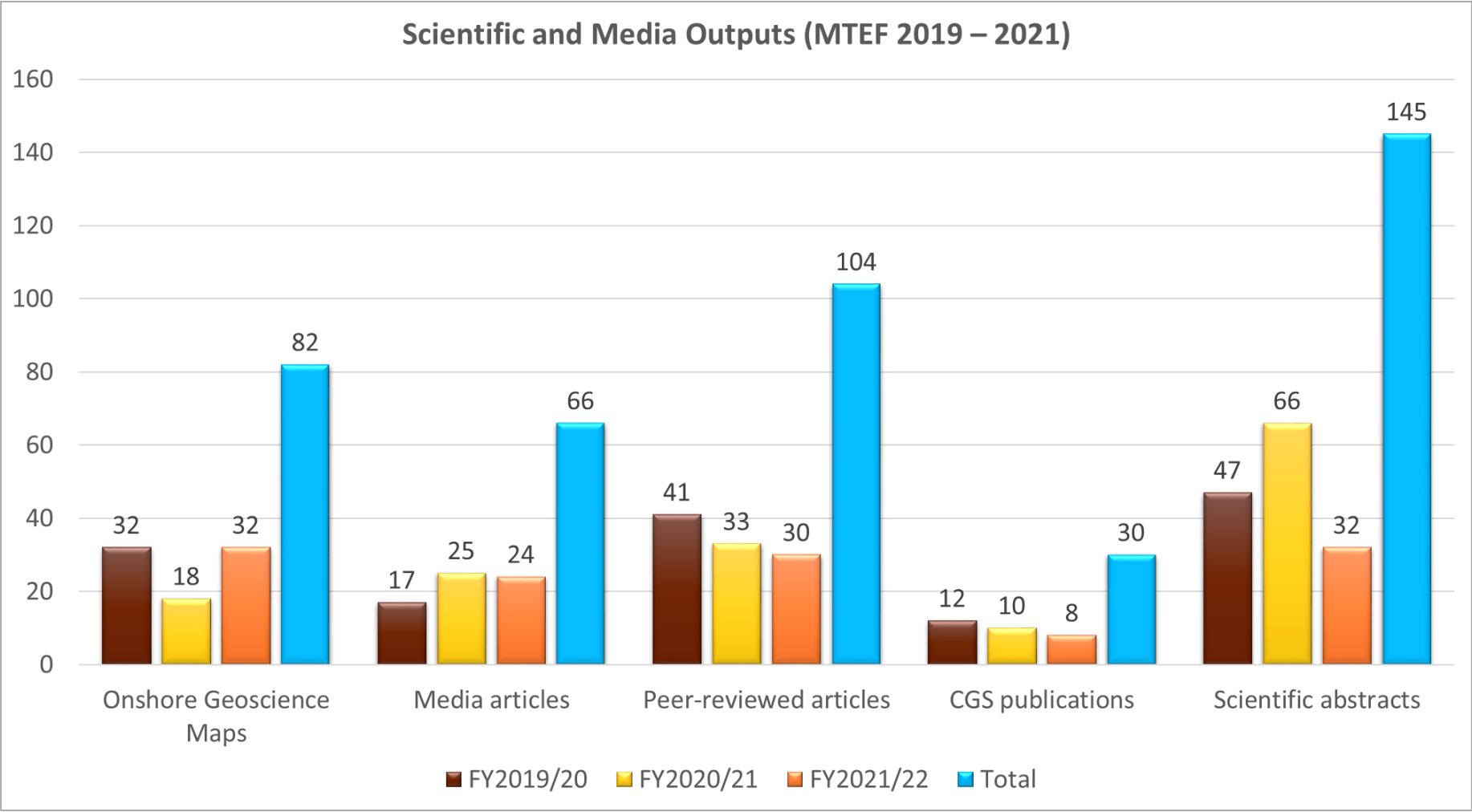


# Scientific Outputs

The Council for Geoscience produces top quality research with international collaborators

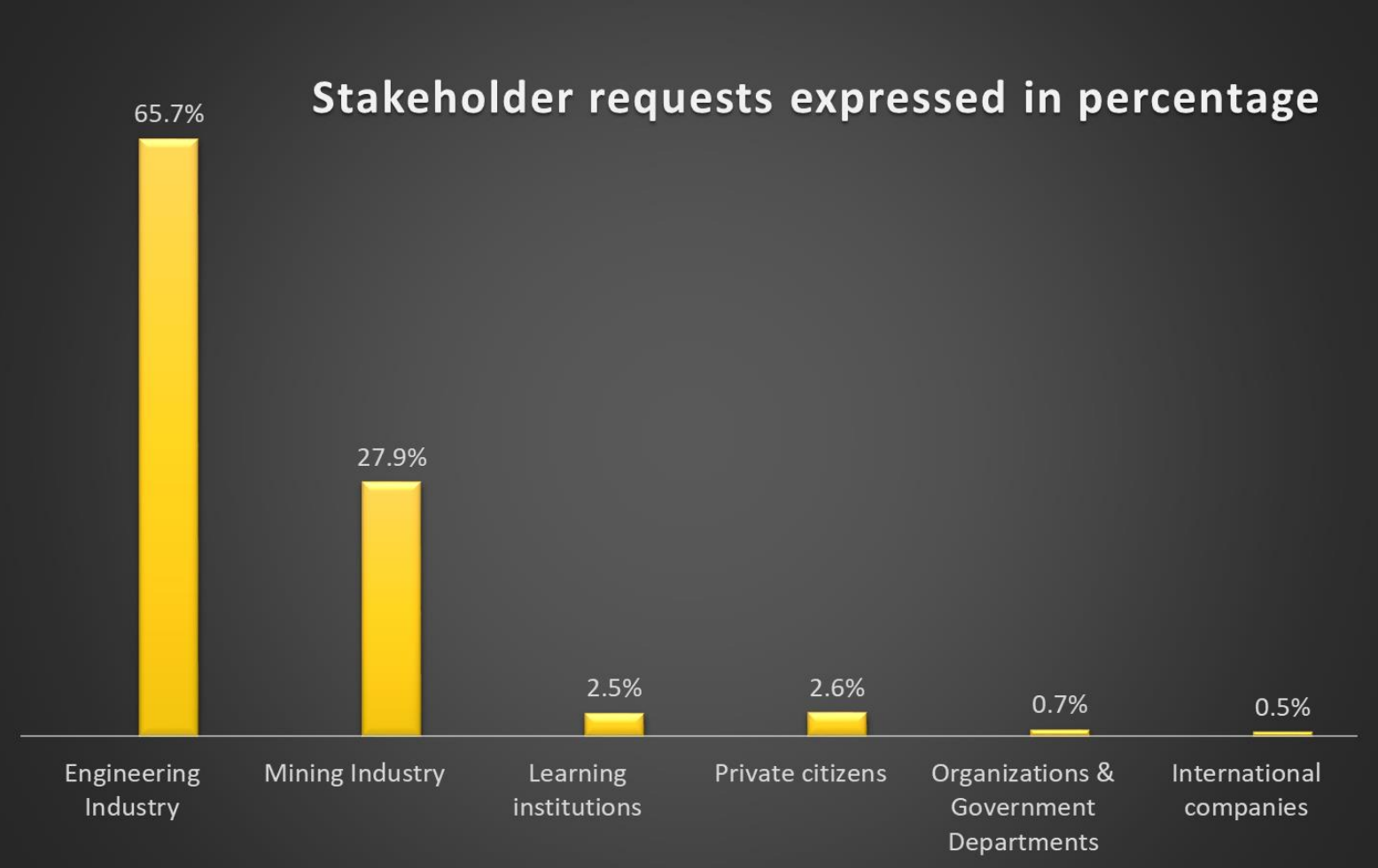


Source: Elsevier publishing company, 2021

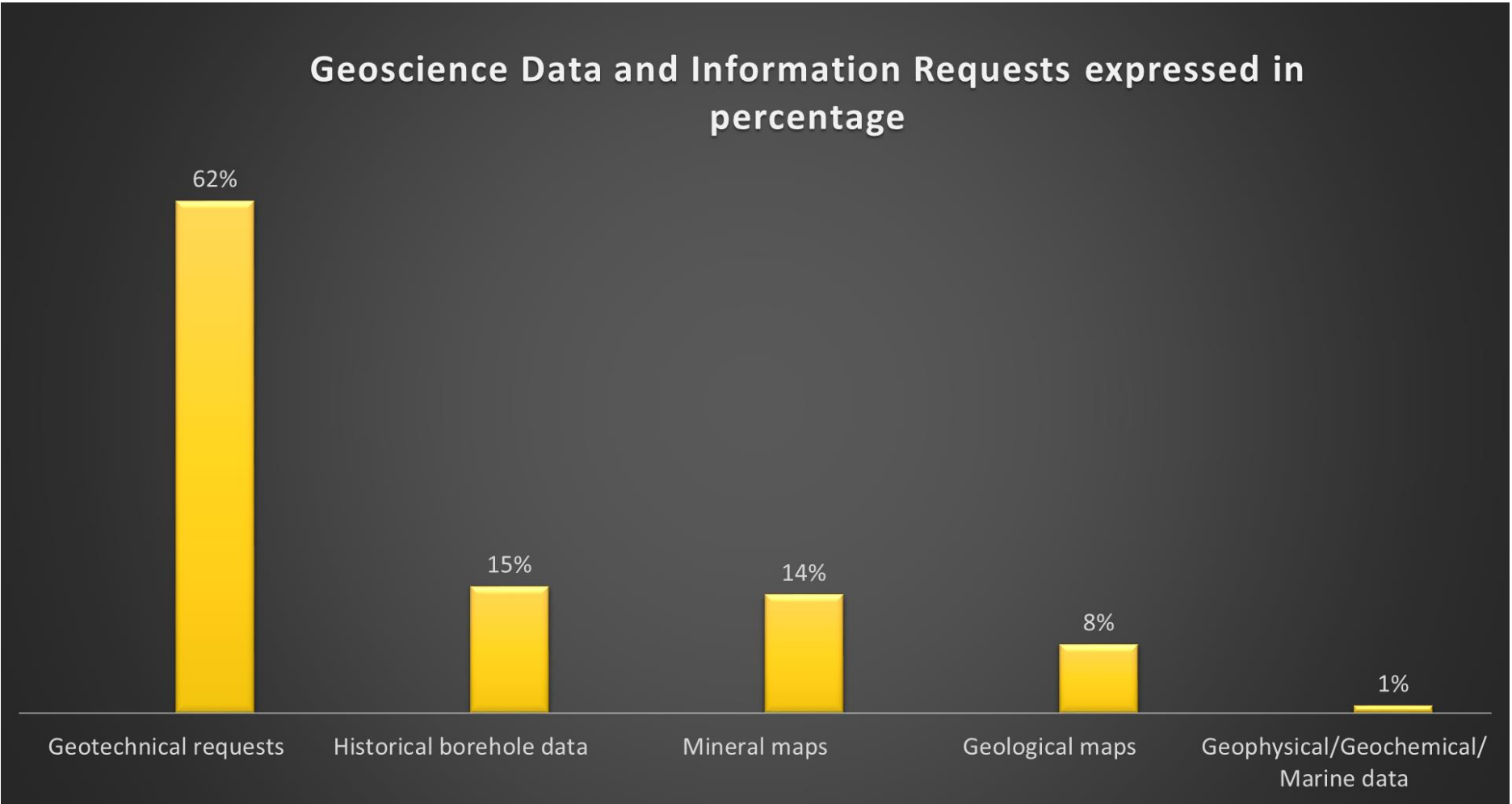




# Highlights on Data and Information Requests

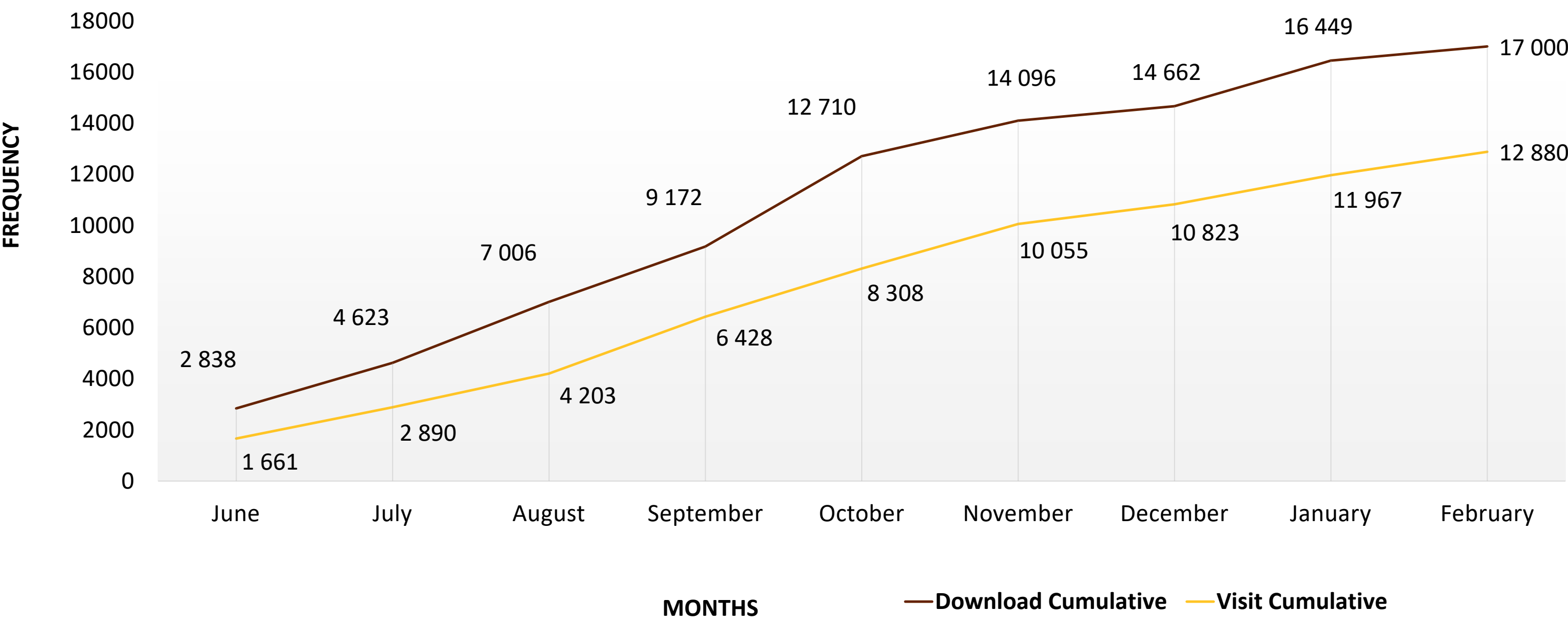


Statistics retrieved from [info@geosciences.org.za](mailto:info@geosciences.org.za)  
(from January 2020 – March 2022)



# Highlights on Data and Information Requests, continued

Geoscience Data Portal Monthly User Activities Statistics (from June 2021 – March 2022)





# Updates: 110 years Celebration of Geoscience Excellence (Mega Geoscience Summit)

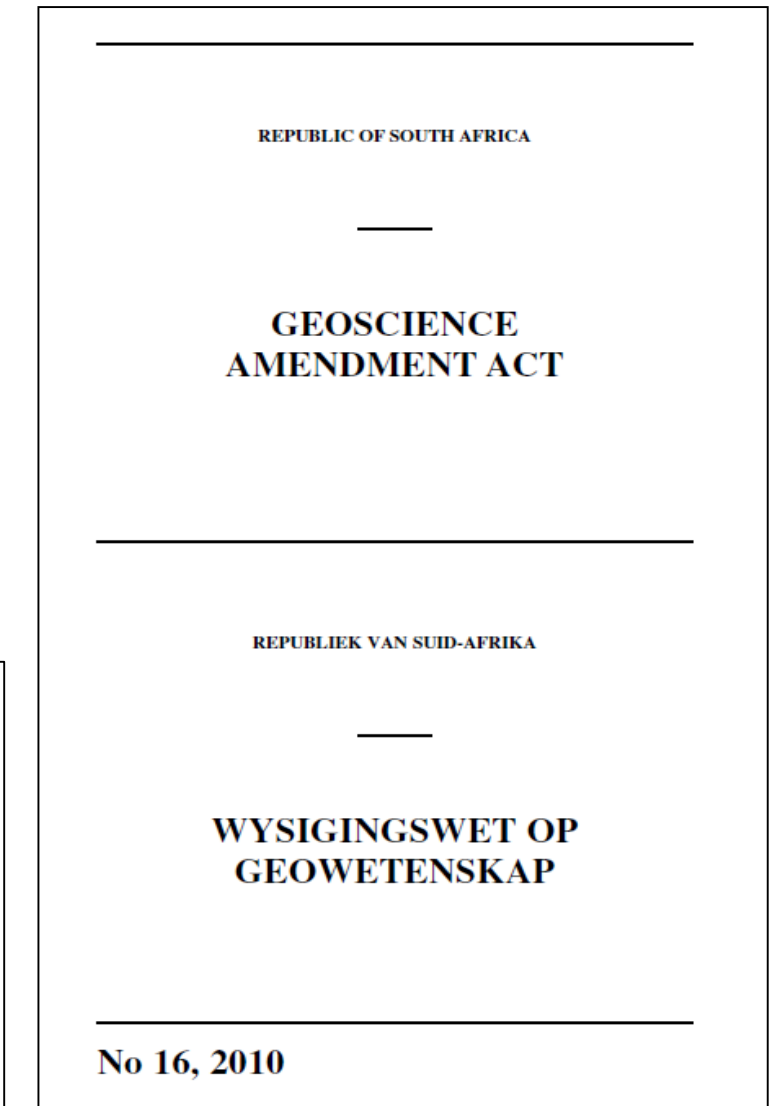
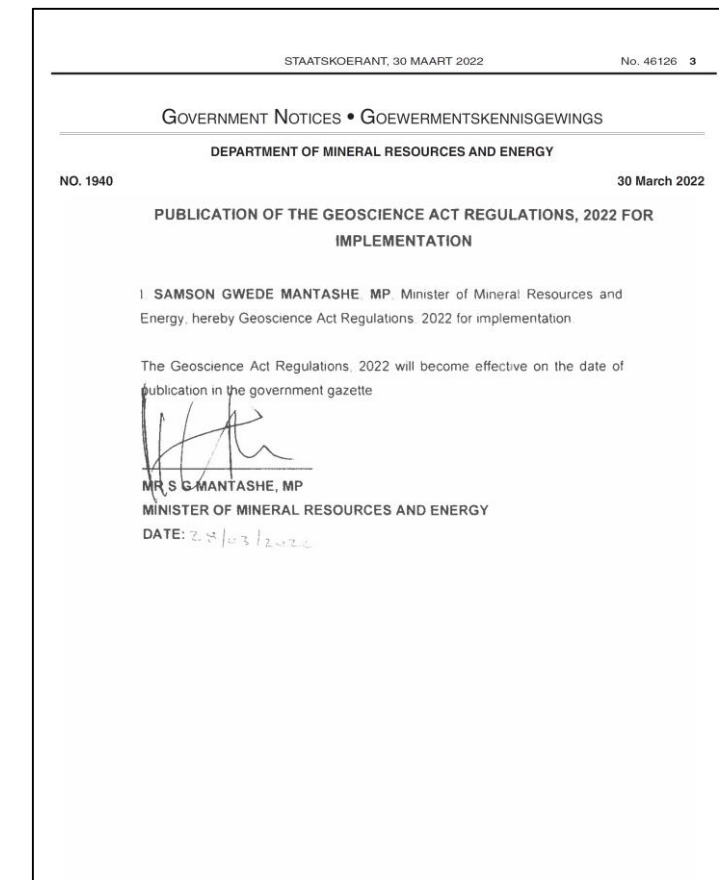
- The CGS plans to host a mega geoscience summit in **October 2022** to celebrate its existence for **110 years**
- The summit will focussed on showcasing the geoscientific contributions by the CGS
- The summit will attract a wide range of stakeholders and geoscientists nationally and internationally for an exciting technical programme and field excursions

## Some of the CGS key achievements:

- ❑ The contribution to human development through the use of over 200 high-quality geological maps and numerous high quality reports which are available to boost investor confidence and for judicious land use
- ❑ The direct and indirect contributions of data and information led to the opening of several mines locally and in Africa
- ❑ The CGS has been a trusted advisor to DMRE and the general public on geoscientific subject matters such as seismicity, mineral mapping, geohazards, etc.
- ❑ As the Secretariat of the OAGS, the CGS has a decent footprint in over 21 African countries (e.g. executing geoscience mapping, institutional reform, map compilation, etc.).

# Updates on Legislative Matters

- Geoscience Act Regulations, 2022 were published for implementation after an extensive stakeholder consultations and response to public comments from the gazetted Draft Geoscience Act Regulations.
- Implementation of these regulations will commence in the next financial year.



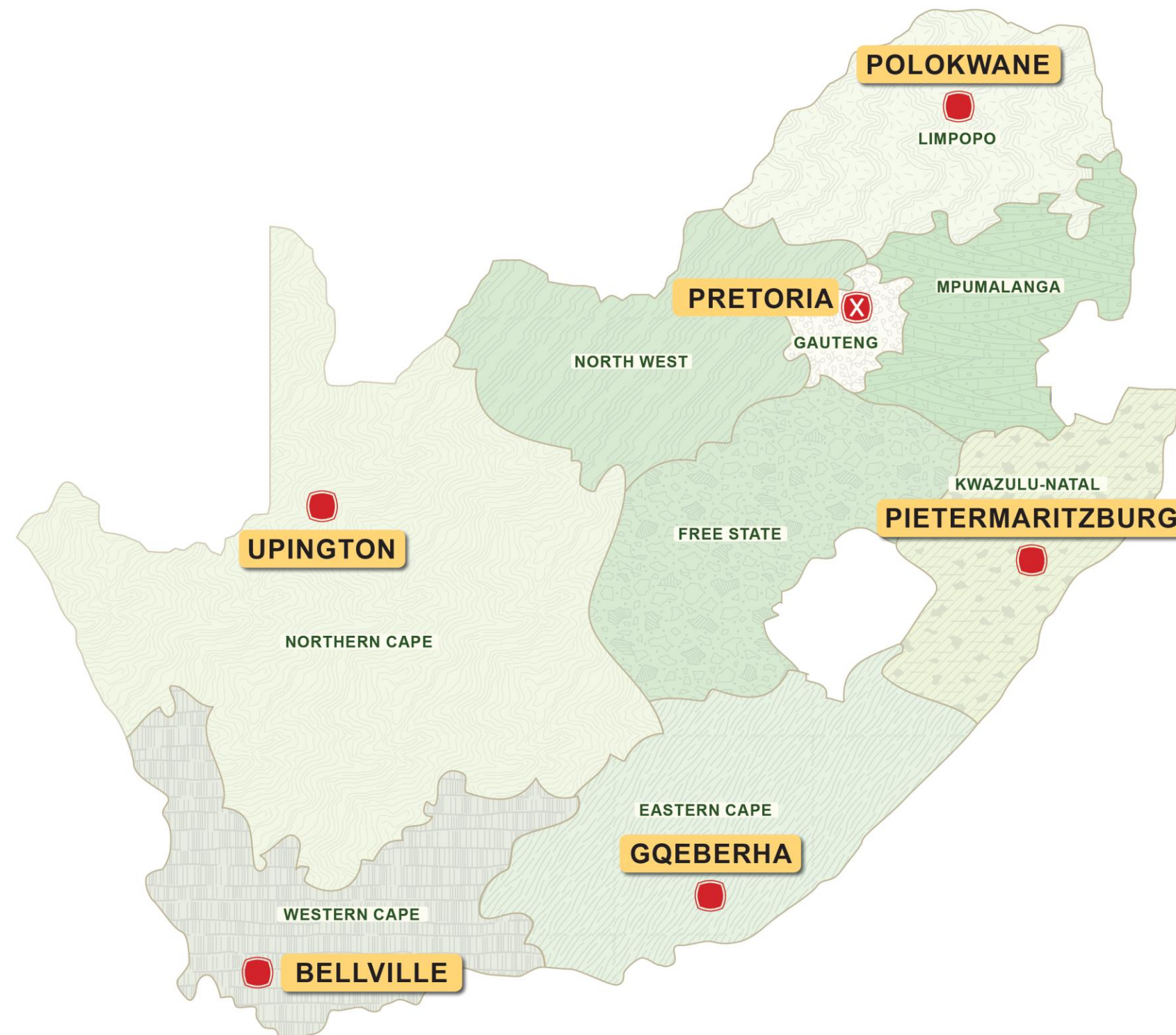


# Concluding Remarks

## ***“CGS Vision and Impact Statement: A prosperous and transformed society enabled by geoscience solutions”***

- Systematic expansion of the geoscience mapping programme is beginning to yield desirable results, enabling identification of mineral targets that are being prioritised to optimise the contribution of geosciences to the “South Africa’s Economic Reconstruction and Recovery Plan”
- The APP of the current year has been aligned with the appropriated budget
- Alternative commercial activities are being explored to augment the financial sustainability of the organisation in a medium to long term using the “*first mover principle*” advantage in developing and applying innovative geoscience products for both commercial and knowledge purposes
- Continue implementation of a purposeful programme to invest in creating a critical mass of young, diversified and World Class geoscientists
- Continue collaborations with strategic partners (E.g. Geoscience community, AEMFC, CEF, MINTEK, PASA & PPP) and stakeholders to implement programmes
- Seek baseline appropriation stability to enable medium to long term planning and sustainability of the organisation

# THANK YOU



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