Australian Government
Geoscience Australia

Geoscience Australia

CORPORATE PLAN

2020-21

August 2020

Contents

1. Introduction

1.1 Chief Executive Officer's foreword

Geoscience Australia is the national public sector geoscience organisation. Our purpose is to be the trusted source of information on Australia's geology and geography for government, industry and community decision making. Our work covers the Australian landmass, marine jurisdiction and territories in Antarctica.

Since 1910, geoscience has played an important role in Australia's prosperity and safety. The nation's first national topographic mapping program was driven by the need to defend Australia's people and develop our regional areas. In later years, systematic mapping of the nation's geology to understand our resource endowment and drive new discoveries has underpinned our successful economy.

We continue to deliver data of enduring value and advice that helps government, industry and the community to address challenges and enhance opportunities facing Australia now and into the future.

This 2020-21 Corporate Plan sets out the work program of the organisation over the next four years, identifying the areas we will impact and how we'll measure our success. This Corporate Plan is designed to propel us to our ten-year targets outlined in our Strategy 2028. I encourage you to look at this strategy to see our vision for the future.

1.2 Statement of preparation

As the accountable authority of Geoscience Australia, I am pleased to present our 2020-21 Corporate Plan covering the four-year period to 2023-24, as required under section 35(1)(b) of the *Public Governance, Performance and Accountability Act 2013*.

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Dr James Johnson

Chief Executive Officer

28 August 2020

2. Strategic Direction

2.1 Purpose

Geoscience Australia is the national public sector geoscience organisation. Our purpose is to be the trusted source of information on Australia's geology and geography for government, industry and community decision making, and contribute to a safer, more prosperous and well-informed Australia.

Geoscience Australia supports evidence-based decisions through information, advice and services for a strong economy, resilient society and sustainable environment.

2.2 Strategic Priorities and Objectives

Geoscience Australia's work aligns with the Australian Government's Science and Research Priorities and supports global and domestic initiatives. It impacts six key areas:

- **Building Australia's resource wealth**—to maximise benefits from our mineral and energy resources, now and into the future
- **Ensuring Australia's community safety**—to strengthen our resilience to the impact of hazards
- **Securing Australia's water resources**—to optimise and sustain the use of our water resources
- **Managing Australia's marine jurisdictions**—to support sustainable use of our marine environment
- **Creating a location-enabled Australia**—to use detailed and fundamental geographic location information to develop our nation
- **Enabling an informed Australia**—to equip government, industry and community with geoscience data and information to make informed decisions for our nation.

3. Strategic Priorities and Performance Criteria

Geoscience Australia's work program impacts six key areas of society. For each area, the environmental context, the role of the organisation, our key work activities and how we'll measure success is described.

Geoscience Australia's performance will be assessed using a number of qualitative and quantitative measures to communicate a comprehensive view of performance that will be presented in the organisation's annual performance statements.

3.1 Building Australia's resources wealth

Environment

Australia's mineral and energy resources are a major contributor to the nation's wealth, economically and socially. Understanding Australia's available resources is a prerequisite for formulating sound policies on resources and land access.

Australia has a significant advantage in the production of resource commodities over other nations stemming from the rich and diverse mineral and energy endowment, the high quality regional-scale geoscience information that lowers the risks of exploration, advanced exploration, mining and processing technologies, a skilled workforce, generally favourable physical environments, relatively stable economic conditions, an enabling and robust legislative framework and low sovereign risk.

Our Role

Geoscience Australia supports the responsible development of a diverse resources sector in Australia's low-carbon economy.

10 year targets

- We will map and understand Australia's energy resources, reversing Australia's increasing dependence on oil imports, and increase domestic gas supplies.
- We will stimulate mineral exploration investment, including critical minerals, to open up new producing provinces with mineral endowment worth over $100b.
- We will support the establishment of commercial carbon capture and storage and hydrogen industries to ensure Australia meets its greenhouse gas emission reduction targets.
- We will provide geoscience information to support new mineral and energy exploration technologies and drive new discoveries.

Key activities

During the next four years we will continue our work in delivering pre-competitive information that underpins the establishment of new energy producing provinces in onshore and offshore Australia and stimulates mineral exploration investment in greenfield (unexplored) regions of Australia. This work enhances our understanding of Australia's mineral and energy resource potential and significantly lowers the technical risk for private sector exploration investment.

We will collaborate with state and territory governments to promote Australia's resource exploration and investment opportunities to national and international markets.

Our work supports evidence-based policy and decision making that underpins the long-term sustainability of Australia's resource sector, helping to safeguard our future economic prosperity.

A key focus will be meeting the objectives and vision of the second phase of the Exploring for the Future program. This will deliver new data and information on the potential mineral, energy and groundwater resources in underexplored regions throughout Australia and will support the creation of jobs and economic development for years to come.

Objective	Measure	Targets			
		2020-2021	2021-2022	2022-2023	2023-2024
1. Increase Australia's attractiveness as an exploration destination	• Deliver freely available pre-competitive geoscience data and open file data access	• 15 datasets and products are publicly released each year			
	• Deliver independent information and technical advice	• Annual publication of Australia's mineral and energy resource assessments • Annual commodity reviews completed and released • Annual national and international promotion of Australia's resources investment opportunities			

	• New exploration investment commitment attributed to Geoscience Australia's pre-competitive geoscience programs	• Continued tenement/permit uptake in areas supported by our pre-competitive data and science • Provision of geological data and reports to support the Australian Government's annual Offshore Petroleum Acreage Release
2. Mapping Australia's resource base to support more diverse exploration investment and driving new resource discoveries	• Progressively map and characterise Australia's energy resource potential by capturing key geological information and identifying knowledge gaps	• Six basins over four years with one to two basins delivered each year in the form of a basin inventory
	• Increase the diversity of commodities being explored in Australia, including critical minerals	• Year on year expansion of the level and type of commodity data being accessed
	• Provide technical advice supporting commercial carbon capture and storage and hydrogen industries, legislative, regulatory requirements and policy initiatives related to Australia's resource sector	• By 2024 industry is utilising Geoscience Australia data to identify and assess CO_2 storage as part of a resource investment strategy • Geology and geospatial products are publicly released to support emerging hydrogen industry
3. Increase the use of diverse geoscience datasets, ideas and technologies	• Increase diversity of users of our resources data, publications and mapping tools	• Year on year increase in diversity of users
	• Annual increase in the access and use of the Geoscience Australia portal	• Year on year increase in use of portal

3.2 Supporting Australia's community safety

Environment

The impact of disasters on Australia's economy, environment and society can be significant and includes loss of life, loss of property and infrastructure, disruption to business and disruption to our livelihoods. Our cities and regional centres, and their supporting infrastructure, are expanding as populations grow. This increases our exposure and vulnerability to hazards. The forecast cost of disasters is expected to increase with our growing population and valuable assets expanding into areas vulnerable to hazards and a changing climate.

To be better prepared, and to make informed decisions to reduce disaster risk, Australia depends on availability of hazard, vulnerability and exposure information.

Our Role

Geoscience Australia provides disaster risk information to help Australians understand the consequences of hazard events, contributing more resilient communities now and in the future.

10 year targets

- We will reduce the impact of disasters for all Australians.
- We will provide nationally consistent data, information and advice to enable informed decisions on preparedness and response to the impact of hazards.
- We will advance our understanding of Australia's hazards and vulnerability of the built environment to support mitigation and reduce the cost of disasters.
- We will provide ongoing real-time monitoring, analysis and advice on significant earthquakes and potentially tsunamigenic earthquakes to help safeguard Australian and Indian Ocean communities.

Key activities

Over the next four years Geoscience Australia will work to ensure that disaster risk management is underpinned by trusted geoscientific data and modern, reliable infrastructure.

Our national capability will support evidence-based decisions to prepare for and respond to hazard events and to reduce the impact of disasters. We will develop and deliver national scale data and information for understanding disaster risk, so that the impact of disasters can be reduced and to inform where and how our future communities and supporting infrastructures are built. Our work supports all levels of government in implementing key initiatives of the National Disaster Risk Reduction Framework.

Our National Earthquake Alerts Centre (NEAC) will provide 24 hour, 7 days per week monitoring, analysis and alerting of significant earthquakes to the emergency management sector and the public. NEAC also provides rapid notifications of overseas earthquakes with the potential to generate tsunami as a key component of the Joint Australian Tsunami Warning Centre operated in partnership with the Bureau of Meteorology.

We will also continue to support the Australian Government implementation of the Comprehensive Nuclear-Test-Ban Treaty through ongoing monitoring, detection and analysis of suspected nuclear weapon tests.

Geoscience Australia provides access to the International Charter: Space and Major Disasters as well as the European Copernicus Emergency Management Service. In addition, Geoscience Australia operates DEA Hotspots which provides disaster managers and the public with information on the possible location of fires as detected by satellites.

We will publish updates on the exposure of Australia's people, businesses and infrastructure through the Australian Exposure Information Platform. We will continue to manage EM-LINK as the authoritative national catalogue of all spatial data. These systems will continue to be easy to use by anyone who is planning for, responding to, or recovering from the impacts of disasters.

Objective	Measure	Target			
		2020-2021	2021-2022	2022-2023	2023-2024
1. Data on hazard, exposure and vulnerability for all decision makers that is findable, accessible, easy to use, trustworthy and nationally consistent	• Level of exposure data with 5 years currency	• Annual increase of 5 datasets			
	• Hazard, exposure and vulnerability data that is accessible and discoverable	• New or updated data is published and made openly available.			

2. Stronger cross-sector capability development to independently leverage data for disaster risk management	• Geoscience Australia's capability is routinely used in decision-making to enhance understanding of Australia's hazards and built environment vulnerability	• Annual case studies demonstrating use and impact of Geoscience Australia's products and services			
3. Modern operations-grade infrastructure, supported to reliably inform timely decision-making	• Data service systems availability	90%	90%	90%	90%
	• Availability of time-critical systems to support seismic alerting, including nuclear monitoring	98%	98%	98%	98%
	• Timely response to requests for activation of the International Disaster Charter or the Copernicus Emergency Management Service	• Response within 72 hours of a formal request for activation			

3.3 Securing Australia's water resources

Environment

Australia is the driest inhabited continent, which makes water use and management a key challenge. In many parts of Australia, groundwater underpins agriculture, the environment, minerals and energy resource development, and the well-being of regional communities. We need to better understand groundwater in order to properly manage it. Understanding the connection between groundwater and surface water systems and reducing the impact of development on groundwater supply and quality are critical to our water security and regional development.

Our Role

Geoscience Australia supports the fair sharing of Australia's water resources for a strong economy, resilient society and sustainable environment. We aspire to identify the location, quantity and quality of Australia's groundwater resources to support sustainable water management.

10 year targets

- We will deliver a complete map of Australia's groundwater system with estimated resource volumes
- We will collaborate to deliver a complete understanding of the national surface and groundwater resources
- We will deliver regional assessments of groundwater resources in priority areas
- We will provide data, information and advice on groundwater systems to inform the sustainable management of these resources by government, industry and communities
- We will develop new technologies that support the discovery of new groundwater resources.

Key activities

Geoscience Australia provides authoritative, independent information and advice to the Australian Government and other stakeholders on groundwater resources, processes and impacts. This work delivers new geoscience data and assessments of the nature, size and status of accessible groundwater resources across Australia.

A key focus over the next four years will be delivering the second phase of the Exploring for the Future program, including:

- providing data, information and advice on groundwater systems in an accessible manner.
- developing an improved knowledge base of the regional hydrogeology and groundwater characteristics of the key regional aquifers and interaction with shallow and surface water systems.
- developing new technologies including the development of new methods, tools, process automations, and data standards.
- characterising the location and multi-temporal dynamics of Australia's surface water, wetlands and groundwater dependent ecosystems.

These new geoscientific data and information informs the sustainable management and responsible development of groundwater resources and provides transparent, evidence-based technical advice in support of Australian Government priorities.

Objective	Measure	Target			
		2020-2021	2021-2022	2022-2023	2023-2024
1. Progressively characterise Australia's water systems	• Develop a geoscientific framework for Australian water systems to prioritise future studies and inform the development of a basin inventory	• Develop framework and progressively develop a basin inventory capturing key geological information controlling groundwater systems and identifying knowledge gaps with a target of two per year			
	• Deliver nationally consistent data and information to characterise Australia's water resources	• 10% annual increase in water systems characterised			
	• Integration of multidisciplinary datasets to improve understanding of Australia's water systems	• Year on year progressive increase in the number of data types being used to inform water management decision making.			

2. Enable productive and sustainable management decisions and practices for government and businesses	• Products, advice and services from our programs, such as Digital Earth Australia and Exploring for the Future, are utilised and support governments and businesses	• Case studies demonstrating use and impact of Geoscience Australia's products and services in supporting sustainable water management decisions

3.4 Managing Australia's marine jurisdictions

Environment

Australia's marine jurisdiction is about double the size of Australia's land mass and 4 per cent of the world's oceans. With increasing global demand for energy, food and security, activity within our marine jurisdiction is becoming increasingly important to our economy. Effective and efficient management of this precious environment relies on baseline mapping, understanding of marine resources and assets, and the ability to measure change over time.

Our Role

Geoscience Australia supports the effective, efficient and sustainable management of the marine environment through the provision geoscience data, information and authoritative advice.

10 year targets

- We will map and understand Australia's seabed to support sustainable management of our marine assets and support rapid growth of Australia's Blue Economy to $100b per year
- We will deliver coastal landform data to inform management of the coastal zone and build resilience to the impacts of a changing climate
- We will use geoscientific data to define Australia's maritime boundaries and underpin the legal and regulatory authority for our marine jurisdiction.

Key activities

Geoscience Australia will lead the development and delivery of the information required to support rapid growth and sustainability of Australia's Blue Economy.

We will do this by extracting greater value from Australia's investments in offshore geoscientific data by improving the availability of national marine geoscience data, and implementing secure and robust infrastructure to publish that data, particularly to support a secure jurisdiction, promote offshore economic activity, and development of fundamental geoscience knowledge to inform sustainable management of marine and coastal areas, including Australia's Antarctic Territory.

We will deliver a stable data framework of the maritime boundaries and regulatory zones for Australia's marine jurisdiction. Our data framework will contain high value, highly reliable data that will be easy to access. It will maximise the efficiency of offshore administration, provide greater certainty for offshore industries, and make planning easier. We will provide technical advice relating to Law of the Sea, to support Australian Government domestic and foreign policy positions.

Objective	Measures	Target			
		2020-2021	2021-2022	2022-2023	2023-2024
1. Data describing Australia's maritime boundaries, the sea floor, and the coastal zone is discoverable, accessible, easy to use, trustworthy and nationally consistent.	• Make available new seabed data, updated maritime boundaries and other spatial information	• New data acquired and made available			
2. Provide operational, modernised, reliable national spatial data infrastructure that quickly and easily supports decision-making	• Availability of marine information to support marine planning and administration	90% uptime	90% uptime	90% uptime	90% uptime
3. Develop capability to enable businesses to be more productive and profitable and governments to make informed decisions	• Geoscience Australia's capability from activities such as Digital Earth Australia and AusSeabed is routinely utilised and supports governments and businesses in decision-making	• Annual case studies demonstrating use and impact of Geoscience Australia's products and services			

3.5 Creating a location-enabled Australia

Environment

Australia has a vast and rich landscape. Geographic data provides the nation with a complex view of the country's landscape through time. Geoscience data and information are a significant national resource with enduring value for the Australian community. Knowing when and where events and activities occur is essential for government, industry, researchers, and the community to make decisions and improve economic, environmental and social outcomes for Australia.

Our Role

Geoscience Australia provides trusted fundamental geographic information and advice to support evidence-based decision making.

10 year targets

- We will deliver positioning accuracy of 10 cm across Australia, and enable 3 cm accuracy in mobile phone range, adding at least $200m annually to the Australian economy over the next 30 years
- We will deliver a satellite data platform that supports better-practice Government environmental decisions, helps Australian businesses to use satellite data and underpins the contribution of over $5b annually to the Australian economy by the rapidly growing geospatial sector
- We will contribute to environmental forecasting capabilities that support better management of Australia's natural resources
- We will provide trusted information on Australian geography that is accurate and easy to use, for everyone, everywhere
- We will underpin faster, cheaper and smarter approaches to decision-making and location-based activities through integrating digital mapping, satellite data, and real-time precise positioning.

Key activities

In the 2018-19 Budget, the Australian Government committed $224.9 million over four years for to improve Australia's positioning information. Under the Positioning Australia program, we will continue our work to deliver more accurate and reliable positioning in real-time. This means Australians will have access to positioning data with an accuracy of 10 cm across Australia and 3 cm accuracy in areas within mobile phone range.

To support this work we will be extending our national positioning infrastructure, building upon our global navigation satellite system ground station network and ground-based observations, develop world-class positioning analyses products and establish a satellite-based augmentation system.

We will continue delivering decision-ready satellite data products and services that can be used by Australian governments, businesses and individuals to make more informed decisions about the management and use of Australia's natural resources. This initiative, under our Digital Earth Australia program, translates satellite imagery into evidence of how Australia's land and water bodies change over time. We will leverage this work to Australia's broader benefit through our Digital Earth Africa program, which will support outcomes for the Department of Foreign Affairs and Trade and promote Australia's methods and leadership internationally, and we will engage with emerging national research infrastructure proposals for environmental prediction.

We will lead a coalition of government partners to more efficiently operate key systems in the nation's spatial data infrastructure such as NationalMap and Elvis, and to improve the useability of location information across government and business through the Location Index roadmap. We will collaborate with the Department of Defence, ANZLIC the Spatial Information Council and the Intergovernmental Committee on Surveying & Mapping to make data defined in the Foundation Spatial Data Framework up-to-date and easy to access. We will continue to deliver the national topographic mapping program and increase access to the Commonwealth's historic aerial photography archive.

Geoscience Australia will facilitate faster, cheaper and smarter approaches to decision-making and location-based activities. We will work with our coalition of government and industry partners to find emerging opportunities to apply the integration of digital mapping, satellite data, and real-time precise positioning, for business growth and data-driven policy formulation and tracking.

Objective	Measures	Target			
		2020-2021	2021-2022	2022-2023	2023-2024
1. Reliable, findable, usable, fit-for-purpose and nationally consistent datasets that describe Australia's geography	• Number of foundation spatial datasets with a currency of 10 years	• Increase of 5 datasets per year			

2. Infrastructure enabling timely and easy access to national spatial data and information for improved decision-making	• Positioning data service system availability	99% uptime	99% uptime	99% uptime	99% uptime
	• Data availability from the national positioning infrastructure networks	95% uptime	95% uptime	95% uptime	95% uptime
	• Build the infrastructure and systems to deliver trusted and 10cm accuracy positioning service across Australia and its maritime zones	-	Initial operational capability	Initial operational capability	Full operational capability
	• Build the infrastructure and systems to deliver 3-5cm accuracy of positioning services for areas with mobile phone coverage across the continent	Increase of 100 stations	Increase of 100 stations	100% coverage	100% coverage
	• Improvements to foundation spatial dataset supply chains.	• Annual case studies demonstrating positive peer review and feedback on improvements to foundation spatial data			
3. Develop multiple or integrated location-based capabilities to enable businesses to be more productive and profitable and governments to make informed decisions	• Geoscience Australia's capability is routinely utilised in decision-making	• Annual case studies demonstrating incorporation of Geoscience Australia's capability in business operations and government decision making			
	• Build demand for and support the development of an Australian Environmental Futures concept	• Support the development of an Australian Environmental Futures concept for consideration as an NCRIS funded facility			

3.6 Enabling an informed Australia

Environment

Geoscientific data and physical collections have enduring value. It is essential that these data and collections are collected correctly and can be easily understood and accessed by everyone. Data are acquired from platforms including satellites, observatories and laboratory instruments. Data and samples can be integrated to build models of our continent, our Antarctic and island territories and surrounding oceans.

Our Role

Geoscience Australia delivers world-class, trusted data, platforms and expertise to support high-impact geoscience, transparent evidence-based decisions and social licence to operate.

10 year target

- We will build and operate infrastructure to measure and monitor our environment
- We will be the authoritative custodian of geoscientific data and physical collections for the benefit of all Australians
- We will work to ensure all teachers are equipped with knowledge and resources to increase the participation of future generations in science, technology, engineering and mathematics
- We will provide national and international leadership in geoscientific and open source data, resulting in consistent, accessible and useable data across all areas of geoscience
- We will achieve a ten-fold increase in engagement with stakeholders across Geoscience Australia's digital platforms.

Key activities

Geoscience Australia will continue to equip government, industry and community with geoscience data and information to make informed decisions for our nation. Over the next four years, we will focus on:

- Delivering consistent, accessible and useable data across all areas of geoscience (nationally and internationally)
- Being the authoritative custodian of, and provide meaningful access to, geoscientific data and physical collections.
- Actively engage and partner with our stakeholders in the development and delivery of fit-for-purpose quality information, products, services and education material

Objective	Measures	Target			
		2020-21	2021-2022	2022-2023	2023-2024
1. Deliver high quality, transparent, reproducible data, information and science that is relevant to users	• Increased inclusion of appropriate measures of certainty and accuracy in our data products	• Annual increase in data products containing supplementary information of data certainty, accuracy and quality			
	• Create fit-for-purpose and quality data products that strive to incorporate FAIR principles (findable, accessible, interoperable and reusable), leading practice and national and international standards	• Annual case studies providing examples of fit-for-purpose and quality data products			
	• Increased use of Geoscience Australia's capability and engagement of stakeholders in our products and services • Develop and hone tools to measure and baseline digital engagement with stakeholders	• Annual case studies demonstrating breadth of capability in supporting users and in government decision making • Use this baseline to measure the number of unique users and hits to track progress towards a ten-fold increase in engagement on digital platforms			
2. Ensure everyone can easily access data that is ready to use	• Delivery and management of offshore petroleum data according to Offshore Petroleum & Greenhouse Gas Storage Act 2006 requirements	95%	95%	95%	95%

	• Our ground based satellite stations and observatories continue to capture data of national and international significance	• Ongoing management and operation of satellite stations and observatories to support delivery of data
3. Develop and maintain Earth science resources and programs for teachers	• New teaching resources developed with increased downloads of these resources • Coordinate teacher professional development programs with increased attendees at these programs • Engage with teachers via school visits and virtual classrooms • Collated feedback from teachers on program, school visits, and virtual classrooms via questionnaires • Engage with remote, rural, and indigenous schools	• Develop 15 new resources for teachers (e.g. activity sheets, fact sheets, videos, webinars), including both curriculum-based and general interest to enable teachers to inspire and educate students • Lead a teacher professional development event each year • Produce a bimonthly newsletter to Australian education community to ensure discoverability of our content • Produce a scoping report for engagement of remote, rural and indigenous schools, underpinned by classroom experiences at trial schools.
4. Be a trusted global leader in the delivery of geoscientific data	• Establish collaborative agreements with public-funded research organisations in Australia and internationally	• Collaborative agreements established
5. Support infrastructure to Measure and Monitor the Environment	• Develop towards best practice land access training and processes for our field station infrastructure • Maintain appropriate field stations to support new and ongoing geoscience data requirements	• All land access stakeholders and agreements are identified, effectively managed and maintained, including plans for the establishment of new stations as well as possible future de-commissioning of individual stations. • Develop and deliver staff training courses and workshops to support land and marine access, particularly for our field stations • Annually maintained or improved confidence for field station data across the nation

4. Key programs

Geoscience Australia's key activities are managed through internal work programs. Key programs that have included specific budget measures are detailed below.

Exploring for the Future

- Exploring for the Future Exploring was a four-year (2016-2020), $100 million program that improved understanding of the resource potential in northern Australia and generated industry investment that will lead to sustainable economic development into the future.
- Following the success of the first phase of the Exploring for the Future program, the Australian Government announced in June 2020 an additional investment of $125 million over four years to expand the program nationwide. This second phase of work will deliver new data and information on the potential mineral, energy and groundwater resources in underexplored regions throughout Australia and will support the creation of jobs and economic development for years to come.
- The program will also continue to support Australia's environmental outcomes, ensuring the management of groundwater resources is underpinned by scientific evidence, communities have access to groundwater resources, and there is increased investment in sustainable agriculture. Geoscience Australia will continue to deliver new geoscience data, knowledge and decision support tools that support increased industry investment and sustainable economic development to a wider range of stakeholders.

Positioning Australia

- The Positioning Australia program will deliver more accurate, reliable positioning in real time across Australia and New Zealand and their maritime zones. The program is building a national satellite positioning capability that all Australians can access, including in remote areas without mobile phone or Internet coverage. This will meet the growing need for position and navigation information across industries. The program will contribute to the enhancement of the Global Geodetic Reference Frame, and improve Australia's Geospatial Reference System.
- In support of this work, the Australian Government has committed $224.9 million over four years for improved GPS through the 2018-19 Budget. This includes $160.9 million to develop a Satellite-Based Augmentation System and a further $64 million to upgrade Australia's ground network of Global Navigation Satellite System (GNSS) sites through the National Positioning Infrastructure Capability (NPIC). Through this investment, the Positioning Australia program will build the infrastructure and systems to deliver highly-trusted 10 cm accuracy of positioning services across Australia and its maritime zones, and 3-5 cm accuracy of position services for areas with mobile phone coverage. New open source software and data analysis capabilities will further allow Australians to improve existing technologies and to generate new location-enabled innovations.

Digital Earth Australia

- The Digital Earth Australia (DEA) program provides decision-ready satellite data products and services that can be used by Australian governments, businesses and individuals to make more informed decisions about the management and use of Australia's natural resources.
- This program translates satellite imagery into evidence of how Australia's land and water bodies change over time and delivers it in ways that benefit the user most, that is, openly-accessible, routine, robust, of high-quality and in unprecedented detail. This information helps governments and industry better understand soil and coastal erosion, the impact of land management practices, deforestation, urban development, and water quality and availability.

5. Financial Management

Geoscience Australia is committed to meeting whole-of-government priorities and ensuring the provision of services is as efficient and well-targeted as possible. In this context, Geoscience Australia is improving operational efficiencies, reducing administrative overheads and delivering services within a governance framework that demonstrates the benefits and value of the organisation's work.

Geoscience Australia's revenue and expenses for the forward estimates period to 2022-23 are detailed in table 4.1.

Table 4.1 – Comprehensive income statement

GEOSCIENCE AUSTRALIA: Comprehensive income statement (source: 2019-20 Portfolio Budget Statements)	2020-21 Forward estimate $'000	2021-22 Forward estimate $'000	2022-23 Forward estimate $'000
EXPENSES			
Employee benefits	77,996	77,996	77,996
Suppliers	150,857	151,402	144,075
Depreciation and amortisation	10,189	10,871	10,409
Other expenses	49	49	49
Total expenses	**239,091**	**240,318**	**232,529**
OWN-SOURCE INCOME			
Sale of goods and rendering of services	40,089	40,053	40,053
Other	656	658	660
Total own-source revenue	**40,745**	**40,711**	**40,713**
Net (cost of)/contribution by services	**(198,346)**	**(199,607)**	**(191,816)**
Revenue from Government (Appropriation)	186,272	187,610	181,064
Total comprehensive income/(loss)	**(12,074)**	**(11,997)**	**(10,752)**

6. Geoscience Australia Overview

Geoscience Australia is a non-corporate Commonwealth entity within the Industry, Science, Energy and Resources portfolio.

Stakeholders and Partnerships

Geoscience Australia works in partnership with governments, industry, publicly funded research organisations and academia to provide specialist expertise and information to support the delivery of Australian Government services.

Our collaboration with Australian Government, non-government, and international partner organisations is highly successful, with 91 per cent of stakeholders either satisfied or extremely satisfied with our overall performance.

Employees

Geoscience Australia has a highly educated and skilled workforce, spanning a number of specialist areas, including:

- Geoscientists such as geologists, geophysicists, geochronologists and geochemists
- Spatial professionals such as cartographers, surveyors and remote sensing experts
- Data management professionals
- Educators and science communicators
- ICT specialists including experts in high performance data and computing, mathematics, engineers, graphic designers
- Corporate and management professionals including human resource, finance and communication specialists.

Geoscience Australia has an average staffing level cap of 600. Results of the last Australian Public Service Employee Census provided results of a highly satisfied, motivated, experienced and qualified workforce.

Information Communications Technology

Geoscience Australia's digital investment will drive and enable high-impact science, leading to more accurate and robust insights, and better decisions about Australia's resources, land and marine environments, spatial enablement and community safety.

Geoscience Australia's Digital Strategy 2019 – 2022 is available at http://www.ga.gov.au/about/corporate-documents.

Risk Management

The management of risk within the organisation is in accordance with the *Public Governance, Performance and Accountability Act 2013* and the Commonwealth Risk Management Framework and is consistent with AS/NZS ISO 31000:2009 Risk management – Principles and guidelines.

Geoscience Australia undertakes periodic risk workshops and reviews on risk management. The effective application of risk management improves decision making and facilitates better outcomes for the Australian Government.