



Australian Government
Geoscience Australia



Work Plan

2012-2013

Geoscience Australia

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1. Message from the CEO

Geoscience Australia provides geoscience services and capability to the Australian Government and industry, as well as state and territory governments. The agency delivers a range of products that address very important and significant national issues and contribute to the evidence base for decision makers.

The work that Geoscience Australia undertakes in support of this, and the products and services to be delivered to our stakeholder and client base, are described in this 2012-2013 Work Plan.

Geoscience Australia's work plan was developed to underpin the strategic direction of the Agency, as outlined in Geoscience Australia Strategic Plan 2011-2014. The strategic plan was reviewed and modified last year to better reflect current government priorities and to provide a better stakeholder focus for the Agency's activities.

Geoscience Australia went through significant changes to its operating environment during 2011-12 with a restructure of the agency that included a significant realignment of the three science divisions to better reflect current government priorities and provide improved stakeholder focus for the Agency's activities. The Agency recruited several new senior people to fill key leadership roles established through this reorganisation, ensuring it is positioned to harness the opportunities offered by this new structure.

In 2012-13 Geoscience Australia is well positioned to face the many new challenges the Agency will encounter as it responds to the priorities of the Government and needs of the community. Geoscience Australia will continue to build upon the expertise and capability this Agency has already established.

A handwritten signature in black ink, appearing to read 'Chris Pigram'. The signature is fluid and cursive, with the first name 'Chris' and the last name 'Pigram' clearly distinguishable.

Chris Pigram
Chief Executive Officer

2. Strategic Intent

Objective

Geoscience Australia assists the Government and the community it serves to make appropriate and informed decisions about the use of resources, and also the management of the environment, community safety and protection of critical infrastructure. This is done by undertaking geoscientific research and maintaining, developing and allowing, and encouraging access to our fundamental geoscientific data.

Vision

Geoscience Australia is custodian of the geographic and geological data and knowledge of the nation. We create, maintain and disseminate geographic and geological knowledge for the future well-being of all Australians.

Mission

Meeting the geoscience needs of the nation to build Australia's future.

Valued Behaviours

Geoscience Australia's outcomes are achieved through the valued behaviours of:

Influence

We use geoscientific information and knowledge to inform evidence-based decision making.

Excellence

We strive for excellence and improvement in every activity and in the quality of services.

Capability

We seek innovation in work practices, tools and technology to continue to build the capability of the Agency and its staff.

Accountability

We take ownership of work results and responsibility for personal actions and for outcomes.

3. About Geoscience Australia

Geoscience Australia

Geoscience Australia is a prescribed agency under the *Financial Management and Accountability Act 1997* and is within the Resources, Energy and Tourism portfolio.

Geoscience Australia studies Earth processes, is the Government's technical advisor on all aspects of geoscience and is the custodian of the geographical, geophysical and geological data and knowledge of the nation.

The outcome of Geoscience Australia's work is an enhanced potential for the Australian community to obtain economic, social and environmental benefits through the application of world class research and the timely distribution of data and other information.

Geoscience Australia assists the Government and the community it serves to make appropriate and informed decisions about the use of resources, and the management of the environment and community safety. This is done by undertaking applied geoscientific research and maintaining, developing and encouraging access to the agency's fundamental geoscientific data.

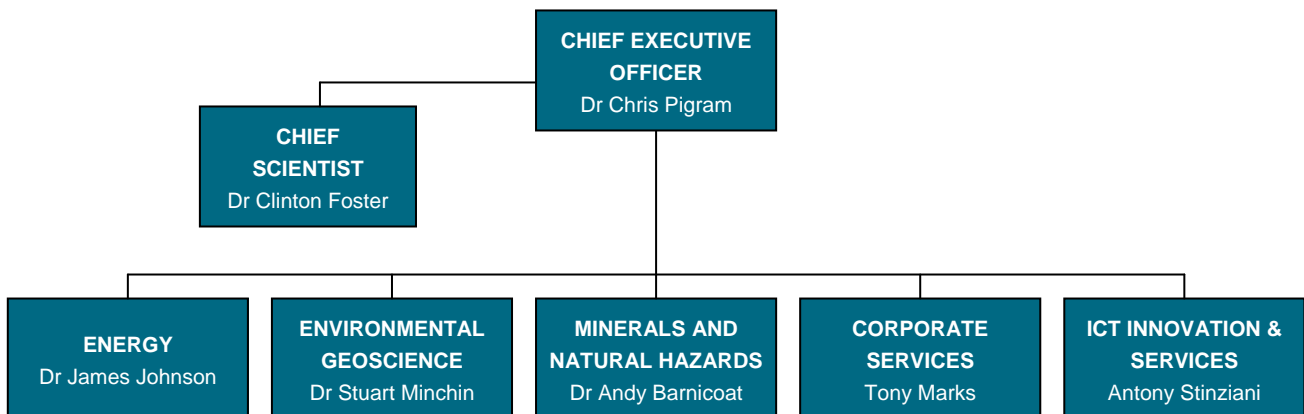
Stakeholders

Geoscience Australia's external stakeholders include:

- federal, state and local government agencies
- minerals, petroleum and energy industries
- emergency service organisations
- environmental protection agencies
- civil and environmental planners and resource managers
- law enforcement agencies
- the Australian Defence Force
- telecommunications agencies
- distributors of remotely sensed data, maps and mapping products
- research and educational groups
- indigenous communities
- organisations and individuals engaged in outdoor recreational activities.

Organisational Structure

The Agency is structured into five business lines, whose Chiefs report directly to the CEO and form the Executive Board, together with the Chief Scientist and CFO. The business lines include three science divisions, Corporate Services and ICT Innovation and Services.



ENERGY DIVISION

The Energy Division's role is to build and map the national geological framework to assist with petroleum and energy exploration and development. In addition, the Division provides geoscience input in Australia's aid agenda in partnership with AusAID.

The Energy Division will fulfil these roles by:

- Providing national and regional scale pre-competitive geoscience information to stimulate exploration for both conventional and unconventional petroleum resources, and geothermal energy.
- Implementing the National CO₂ Infrastructure Plan, in partnership with the Department of Resources, Energy and Tourism (RET), by assessing the suitability of Australia's sedimentary basins for the storage of greenhouse gases, evaluating technologies for baseline atmospheric monitoring and storage verification.
- Maintaining and building databases and publishing information on Australia's energy resources.
- Being responsible for the receipt, archiving, management and provision of access to data submitted under the *Offshore Petroleum and Greenhouse Gas Storage Act 2006* and its predecessor legislation.
- Providing technical advice with respect to the *Offshore Petroleum and Greenhouse Gas Storage Act 2006*.
- Supporting the annual acreage release for petroleum exploration in the offshore jurisdiction.
- Promoting exploration opportunities.
- Providing technical advice on geothermal energy.
- Managing and developing the relationship with AusAID for aid projects in the region that require geoscience technical input.

ENVIRONMENTAL GEOSCIENCE DIVISION

The role of the Environmental Geoscience Division is to meet the Government's need for geoscience information to inform decision making across a range of environmental issues including groundwater, the coastal zone, Australia's marine jurisdiction, and climate change. Importantly, the Division also provides the key data and information about the geographies of Australia. Activities that fulfil these roles include:

- Provision of regular environmental geoscience advice to government on Australia's maritime boundaries, marine and coastal environmental planning and management, groundwater management and the Australian Antarctic Territory.
- Maintain, add to and improve access to key national spatial datasets including for the marine and coastal environment, Earth observations from space, surface hydrology, the built environment and elevation.
- Delivery of the National Earth Observation from Space and National Positioning Infrastructure plans to government to underpin the development of a National Policy for Strengthening Australia's Use of Space.
- Establish continuity of Earth observation through acquisition, scheduling, and repatriation of data from selected satellites.
- Delivery of an integrated program of work to support the assessment of coal seam gas and coal mining developments on groundwater resources.
- Undertake natural hazard impact modelling and coastal vulnerability assessments for communities in Australia and the Pacific Islands.
- Establish improved operational support to Australian Government agencies during natural disasters.
- Undertake marine surveys to map and characterise the seabed as part of integrated assessments of offshore basins for potential storage of CO₂ and to support management of marine protected areas.

MINERALS AND NATURAL HAZARDS DIVISION

Minerals and Natural Hazards Division provides advice and information to the Government in the areas of responsible resource development, community safety and national geoscience infrastructure. This role includes:

- Acquisition and stewardship of geoscientific data and information including geophysical surveys and geochronology acquired on behalf of the States and the Northern Territory.
- Mineral exploration investment promotional work undertaken collaboratively with the State and Northern Territory Geological Surveys.
- Contributing through the Joint Australian Tsunami Warning Centre in providing risk information on other hazards such as earthquakes, floods and landslides, and the impacts associated with them based on exposure and vulnerability knowledge.
- Maintaining the geodetic reference frame and responsibility for the acquisition of satellite, seismic, geomagnetic and geodetic data.

CORPORATE AND ICT SERVICES

Geoscience Australia's Corporate Services and ICT Innovation and Services will continue to provide a wide range of capabilities, ensuring the Agency has an efficient suite of business structures and systems in place to ensure the successful achievement of Agency outcomes.

Corporate Services

Corporate Services delivers core components of the Agency's work plan, including:

- Promotion of products and services
- Delivery of products to clients
- Stewardship of key information assets including the Agency's product catalogue
- Promotion of the benefits of geoscience to the community, and delivery of education services for students

Corporate Services also provides core financial, human resources, planning and governance management functions.

ICT Innovation and Services

The Agency's mission to meet *the geoscience needs of the nation to build Australia's future* – depends on ICT for the acquisition, management, communication and long term stewardship of geoscientific data, information and knowledge. Geoscience Australia's strategies are enabled by and depend on ICT for delivery.

The key roles of ICT Innovation and Services are to:

- Develop and sustain Geoscience Australia's ICT capability to support its strategic and operational objectives;
- Enable Geoscience Australia to adapt to the changing needs of its broadening stakeholder community; and
- Improve Geoscience Australia's workforce productivity.

4. Business Environment and Key Drivers

In developing the Agency's work plan for 2012-13, Geoscience Australia is responding to the Government's priorities in servicing the needs of the nation and growing public expectations for geoscience information and access to data. Geoscience Australia's work plan also addresses areas of improvement highlighted in the Geoscience Australia Strategic Review.

In 2010-11 the Government commissioned a Strategic Review of Geoscience Australia to examine the alignment of the Agency's products and services with government priorities and the adequacy and options for ongoing funding in a fiscally constrained environment; and also to evaluate the role and capability of the Agency in the broader geoscientific community.

Overall, the outcome of the Review determined that the work of Geoscience Australia underpinned Government policies and serviced the Government's interest in facilitating development of community owned resources.

The recommendations of the Review also suggested a number of measures to achieve higher valued outcomes from the services and capabilities available from Geoscience Australia. This includes, for example, ongoing investment in pre-competitive geoscience to sustain Australia's resources pipeline; a planning and performance framework that ensures the Agency's work is effective in meeting Government priorities; and an understanding of the long term economic impact from the Agency's work to help quantify the results Geoscience Australia contributes to or delivers. While Geoscience Australia's 2012-13 Work Plan incorporates the outcomes of the Strategic Review it was also developed in consideration of the major trends influencing Government priorities, including:

- increasing demand for mineral and petroleum resources
- the availability and efficient use of energy, water and other resources
- requirements for pre-competitive onshore and offshore exploration data
- economic growth in the South East Asia region
- population growth in Australia and the surrounding region
- the impact of natural hazards (earthquakes, floods, cyclones)
- climate change
- pressure to reduce CO₂ and other greenhouse gas emissions.

Internally, Geoscience Australia continues to implement change to improve business systems and processes to achieve greater efficiencies and business performance.

The exponential increase in the volume of scientific data generated drives demand for increasingly sophisticated systems to archive, deliver, and provide access to users. This year's work plan will start to address essential areas of data management including storage, specialised scientific and spatial applications, network bandwidth, tools and infrastructure to support delivery of products and services. A full description of Geoscience Australia's Work Plan detailing the Agency's products and services to be delivered in 2012-13 can be found in section 6 of this document.

5. Geoscience Australia's Collaborative Framework

Geoscience Australia works in partnership and collaboration with other government agencies and industry bodies through various agreements, forums and professional associations.

Geoscience Australia has a number of Collaborative Head Agreements with counterpart agencies. The Collaborative Head Agreement establishes the broad parameters for collaboration and associated terms and conditions under which work is undertaken.

Geoscience Australia also has agreements to work in partnership and collaboration with a number of State Government Agencies, International Agencies and research groups.

The table on the following page illustrates Geoscience Australia's main partner agencies for collaborative work and the strategic area in which work is undertaken.

Industry Peak Bodies

Geoscience Australia also works closely with a range of industry peak bodies in the geoscience and spatial information fields. These include:

- Association of Mining and Exploration Companies (AMEC)
- Mineral Council of Australia (MCA)
- Australian Petroleum Production and Exploration Association (APPEA)
- Australian Geothermal Energy Group (AGEG)
- International Map Trade Association (IMTA)

Geoscience Australia's Partner Organisations

Category	Partner Agency	Responsible Resource Development	Cleaner and Low Emissions Energy Technology	Community Safety	Improving Marine Planning and Protection	National Geoscience Infrastructure	National Geoscience Capability	Externally Funded Initiatives	Promotion and Presence
Commonwealth Collaborate Head Agreements	Airservices Australia						✓		
	AusAID							✓	
	Australian Institute of Marine Science (AIMS)	✓	✓						
	Attorney General's Department			✓	✓				
	Bureau of Meteorology (BoM) - DSEWPaC Portfolio			✓	✓			✓	
	Commonwealth Scientific and Industrial Research Organisation (CSIRO)						✓		
	Department of Climate Change and Energy Efficiency			✓				✓	
	Department of Defence - Defence Imagery and Geospatial Organisation			✓					
	Department of Foreign Affairs and Trade (DFAT)			✓					
	Department of Sustainability, Environment, Water, Populations and Communities (DSEWPaC)	✓			✓		✓		
	Department of Resources Energy and Tourism (RET)	✓	✓				✓		
	Murray Darling Basin Authority (MDBA) – DSEWPaC Portfolio							✓	
	Australian Ocean Data Centre Joint Facility (AODCJF)						✓		
State Government and International Committee Agreements	Geological Survey of NSW (NSW Trade and Investment)	✓							
	Geological Survey of WA (Department of Minerals and Petroleum)	✓							
	Mineral Resources Tasmania	✓							
	Northern Territory Geological Survey	✓							
	Geological Survey of QLD (Department of Natural Resources and Mines)	✓							

Category	Partner Agency	Responsible Resource Development	Cleaner and Low Emissions Energy Technology	Community Safety	Improving Marine Planning and Protection	National Geoscience Infrastructure	National Geoscience Capability	Externally Funded Initiatives	Promotion and Presence
	Geological Survey of SA (Department of Manufacturing, Innovation, Trade, Resources and Energy)	✓							
	Geological Survey of VIC (Department of Primary Industries)	✓							
	Australia New Zealand Land Information Council (ANZLIC)			✓	✓	✓	✓		
	Intergovernmental Committee on Surveying and Mapping (ICSM)			✓	✓	✓	✓		
International Agency Agreements	British Geological Survey	✓	✓			✓			
	Canada Geological Survey	✓	✓	✓		✓			
	Chinese Geological Survey								
	Chinese Ministry of Science and Technology		✓						
	National Aeronautics and Space Administration (NASA)						✓		
	United States Geological Survey	✓	✓	✓		✓			
	New Zealand Institute of Geological and Nuclear Sciences Ltd	✓	✓	✓		✓			
Research Collaboration	AuScope	✓				✓	✓		
	Bureau of Meteorology (BoM)		✓			✓	✓		
	Commonwealth Scientific and Industrial Research Organisation (CSIRO)	✓	✓		✓				
	Cooperative Research Centres (CRC's)	✓	✓			✓			
	National and International Universities	✓	✓	✓	✓	✓	✓		
	National Environmental Research Program (NERP)				✓				

6. 2012-2013 Work Plan

Geoscience Australia's Deliverables by Strategy

This section of the report details Geoscience Australia's Deliverables (Products and Services) against each of the high level Strategic Areas.

6.1 Responsible Resource Development

Strategy	Objectives	Deliverables (Products and Services)	Description
Responsible Resource Development	Maximise long term benefits from Australia's resources	Groundwater advice on coal seam gas developments	Provision of independent groundwater management advice in relation to coal seam gas mining developments and their potential impact on groundwater resources.
		Geoscience assessments to support coal seam gas and coal mining decisions	Provision of integrated assessments, groundwater data, maps and models to support evidence-based decision making by government on the management of coal seam gas and coal mining activities.
	Attract and influence successful exploration	Geological datasets, maps interpretations and reports	Delivery of a new edition of the 1:1 million scale surface geology of Australia, a first edition national regolith map of Australia, digital coverage of Australian geological provinces and a map of Neodymium isotope signatures. Maintenance and development of geological datasets, maps and interpretations of the geological evolution of the Australian continent.
		Australian Fundamental Gravity Network	Support, maintenance and delivery of the Australian gravity reference datum.
		Deep Exploration Technologies Cooperative Research Centre (DET CRC) project work	Integration of geophysical and petrophysical data and production of constrained geophysical models for the DET CRC data integration and mineralisation targeting project.
		Seismic and magnetotelluric data, models and interpretations	Onshore seismic and magnetotelluric data acquisition, processing, data analysis, interpretation and data management services in Western Australia.
		3D geological and geophysical models	Delivery of a 3D geological and geophysical package in Western Australia.
		Geochronology data and reports	Provide a geochronological (age) and isotopic analytical service to GA and State and Northern Territory surveys. Service includes processing samples, separating mineral grains, and preparing mounts for analysis. Maintain an in-house SHRIMP-IIe ion probe and scanning electron microscope facility. Manage geochronological and isotopic data systems via migration and uploading of existing data.
		Assessment of petroleum prospectivity of the Browse Basin	Undertake a regional sequence stratigraphic, structural framework and petroleum systems study of the Browse Basin to support an assessment of the petroleum prospectivity.
		Mineral exploration investment promotion	Participate in and coordinate a series of Team Australia international mineral exploration investment seminars and conference booths in partnership with State and Northern Territory geological surveys and mines departments. Support coordination, with participating State and Northern Territory geological surveys, of national mineral exploration promotion events attended by Geoscience Australia.

Strategy	Objectives	Deliverables (Products and Services)	Description
		Mineral systems maps and reports	Deliver reports of mineral potential assessments for selected commodities (eg nickel, platinum group elements, chromium, uranium, lithium, vanadium) in salt lakes and mafic-ultramafic rocks of Australia.
		Acreage release and petroleum prospectivity products and promotion	Plan, scope and compile technical reports and datasets that support the 2013 release of offshore petroleum exploration areas. Promote Australia as an attractive exploration destination both nationally and internationally. Assess, refine and update Australian timescales and biozonation. Prepare petroleum geology inventory of frontier offshore basins.
		Energy technical advice	Provision of technical advice on petroleum exploration, development and production to assist RET Resources Division in administration of offshore petroleum activities under the Offshore Petroleum and Greenhouse Gas Storage Act 2006. Provision of technical advice (in conjunction with RET) to the Australian Taxation Office for the purposes of the Excise Tariff Act 1921 and the Petroleum Resource Rent Tax Assessment Act 1987.
		Resource assessment of onshore hydrocarbons	Provide systematic assessments of Australia's undiscovered unconventional hydrocarbon resource. Investigate the conventional hydrocarbon prospectivity of frontier onshore basins. Acquire and interpret geological, geochemical and geophysical data from onshore sedimentary basins to underpin resource assessments and prospectivity studies. Provide technical advice regarding the location, geological setting and extent of the unconventional hydrocarbon resources in Australia's onshore basins.
		Australian Energy Resource Assessment 2nd Edition	Undertake assessment of Australia's energy resources and publication of the Australian Energy Resource Assessment (AERA) 2nd Edition.
		Groundwater advice for mining developments	Provision of groundwater management advice, and groundwater data, maps and models in relation to mining and other extractive industry developments.
		Mineral technical advice and resource assessment	Scientific and technical advice on mineral resources, exploration and mine development. Australian representation at OECD/NEA-IAEA Uranium Group. Assessment of Australia's mineral resources and publication of AIMR. Maintain OZMIN and Mines Atlas.

6.2 Cleaner and Low Emissions Energy Technology

Strategy	Objectives	Deliverables (Products and Services)	Description
Cleaner and Low Emissions Energy Technology	Support Government to develop and implement policy	Strategic geological studies for the CO ₂ CRC	In partnership with the CO ₂ CRC undertake a number of collaborative studies to reduce uncertainties in relation to the geological storage of CO ₂ . Conduct experimental and modelling studies to assess rock mechanical behaviour and fluid-rock interactions under CO ₂ storage conditions.
		Greenhouse gas technical advice	Provision of technical advice on greenhouse gas matters to assist RET Clean Energy Division in developing a regulatory regime for greenhouse gas storage.
		Greenhouse gas monitoring technical advice	Develop techniques to quantify greenhouse gas emission sources and demonstrate best practice for baseline atmospheric monitoring of greenhouse gases for geological storage sites.
		International Carbon Capture and Storage (CCS) advice and engagement	Provide support for the RET Clean Energy Division engagement in international CCS forums and management of the China-Australia Geological Storage project (CAGS).
		Assessment of CO ₂ storage prospectivity of offshore basins	Acquisition, processing and interpretation of new geoscience data to support the assessment of the CO ₂ geological storage potential of the Browse, Vlaming and Gippsland Basins as part of the National CO ₂ Infrastructure Plan. Conduct other geological and geochemical analyses and technical studies as required to support the assessment.
		Program management of onshore CO ₂ storage project	Program management of onshore CO ₂ storage projects as part of the National CO ₂ Infrastructure Plan and National Low Emission Coal Initiative programs.
		CO ₂ Infrastructure project	Develop the capability for a National CO ₂ Transport and Storage Infrastructure Assessment that will be a key input to ensuring the safe and secure transport, injection and storage of CO ₂ .
		Assessment of CO ₂ storage prospectivity in the Bonaparte Basin	Acquisition, processing and interpretation of new geoscience data to support the assessment of CO ₂ geological storage potential of the Bonaparte Basin as part of the National Low Emission Coal Initiative.
	Support the nation to plan for an energy secure future	Geothermal energy advice and promotion	Assist in development of the geothermal industry, including provision of technical advice to the Government, international promotion and contributing to development of industry and research communities.
		Geological framework for geothermal resources	Apply a systematic framework to advance understanding of the distribution of factors required for geothermal plays. This information underpins investment decisions by government and industry.

6.3 Community Safety

Strategy	Objectives	Deliverables (Products and Services)	Description
Community Safety	Support Australia to react to emergencies effectively	Department of Defence products and data services	Provision of mapping products and services to the Department of Defence on behalf of the Defence Imagery and Geospatial Organisation.
		Nuclear monitoring, technical advice and support	Monitoring and assessment for suspected nuclear explosions worldwide, and provision of technical advice and support to Australian Government under obligations to the Comprehensive Nuclear-Test-Ban Treaty (CTBT). Stage 1 of the planned Davis Base infrasound station in Antarctica will be commenced.
		Australian bushfire hot-spots information	Provide bushfire hot-spots data to emergency services, government agencies and the public via the Sentinel web site; web services and data feeds, based on automated analysis of data received using GA capabilities from MODIS, NPP and other satellites.
		Joint Australian Tsunami Warning Centre and earthquake advice	Develop, maintain and operate the Geoscience Australia component of the Joint Australian Tsunami Warning Centre. Actively participate in the Intergovernmental Coordination Groups of the Indian Ocean and Pacific Ocean Tsunami Warning and Mitigation Systems, Intergovernmental Oceanographic Commission, UNESCO. Monitor seismic information in real time, record and alert earthquake solutions to AGD, validate earthquake solutions, and publish earthquake and solutions on the web. Monitor and respond to public earthquake felt reports.
	Reduce the threat that natural hazards pose to the national interest	Natural hazard impact and risk assessments	Undertake natural hazard risk assessments and analysis to support the Australian and State Governments in the requirements from the COAG National Strategy for Disaster Resilience. Develop knowledge on exposure and vulnerability indicators for assessing natural hazard impact in a consistent and comparable manner.
		Australian Emergency Management products and services	Maps, imagery and advice for agencies responding to climate hazard emergencies including provision of technical and mapping support, situational awareness, impact assessment and risk maps based on hazard modelling and advice to the Crisis Coordination Centre (Attorney- General's Department) and State Emergency Services.
		Climate hazard risk models	Development of hazard and risk models for natural climate-driven hazards. Provision of advice on the methodology used to build models and on their deployment to a range of government, industry, research and academia stakeholders.
		Natural hazard risk and impact models	Development of risk and impact modelling tools, capabilities and information for earthquake, local scale hydrological and landslide hazards. Development of the free and open-source software hydrodynamic modelling ANUGA for flood, storm surge inundation and debris flow and the free and open-source earthquake risk modelling software, EQRM. Collaborate with international stakeholders to enhance earthquake risk modelling through GA's strategic partnership with the Global Earthquake Model (GEM).
		National flood risk information	Updating of the Australian flood studies database, launch of a new flood risk website and commence development of national flood guidelines.

Strategy	Objectives	Deliverables (Products and Services)	Description
		Disaster impact assessments and advice	The establishment of a modelling capability for plume and blast impact cost assessment for the Australian Reinsurance Pool Corporation. Open source release of the Field Data Analysis Tool (FiDAT) which enables a range of data sources to be reviewed and used for impact assessments.
		Vulnerability models	Development of vulnerability models for buildings exposed to severe hazards and threat such as earthquake, tsunami, volcanic ash, severe wind, flood and storm surge. Applying vulnerability models for regional risk reduction activities for neighbouring countries and globally through the Global Earthquake Model Foundation (GEM).

6.4 Improving Marine Planning and Protection

Strategy	Objectives	Deliverables (Products and Services)	Description
Improving Marine Planning and Protection	Maximise long term benefits of Australia's resources	Australian maritime boundaries advice	Advice to the Australian Government on territorial claims and boundaries.
		Marine estate advice and information	Provision of marine environmental geoscience advice, information and data to inform responsible resource development and environmental management in the marine estate. This includes advice on technical issues related to national marine science policy, and national marine science infrastructure and capability.
		Australian marine biodiversity information	Provision of information to Government on the spatial patterns of marine biodiversity and key ecosystem processes that influence these patterns to better inform environmental management of Commonwealth Marine Reserves.

6.5 National Geoscience Infrastructure

Strategy	Objectives	Deliverables (Products and Services)	Description
National Geoscience Infrastructure	Provision and maintenance of nationally important geoscience infrastructure	GA Laboratory services	Provision of timely, high-quality geochemical data, analytical technique development and advice to GA projects and external collaborative partners including State and Territory Geological Surveys. Maintenance of GA's national geochemical databases.
		National Earth Observation from Space - Infrastructure Plan (NEOS-IP)	Develop and deliver to the Minister and to DIISRTE a strategic infrastructure plan for the national Earth observation infrastructure according to terms of reference provided and considering the needs and requirements of State, Commonwealth and international agencies.
		Earth observation ground station infrastructure	Maintain and operate the Earth observation ground infrastructure including routine maintenance and incremental improvements to these systems and planning for strategic improvements.
		Operational geodetic network	Management of the geospatial component of the AuScope initiative, including collation of progress reports and financial reports from participating agencies. Implementation of the AuScope Australian Geophysical Observing System which is funded under the Education Infrastructure Fund.

6.6 National Geoscience Capability

Strategy	Objectives	Deliverables (Products and Services)	Description
National Geoscience Capability	Increase the uptake of geoscience information	Information management and ICT support for Energy Division	Supply appropriate project management, analysis, development and GIS support staff for Energy Division and GA Corporate ICT projects. Provision of strategic ICT and IM advice to the Chief of Division, Divisional Management Board, Chief Information Officer and divisional business areas.
		Australian marine and coastal geoscience data	Steward for marine and coastal geoscience data to support management of Australia's marine estate. This includes maintenance of existing data, acquisition of new field data and provision of access to these data and derived products. Collaboration with government, industry and international bodies in the development of best practice and standards to support data management and data access.
		Natural hazard risk and impact data and models	Steward for climate hazard models, key input datasets and generated risk datasets. This includes management of these models and data and provision of access to data.
		Australian maritime boundaries data	Steward for maritime boundaries data for Australia's jurisdictional area, in conjunction with Australian Government agencies and State governments. This includes management of existing data, acquisition of new data, definition of boundaries and provision of access to these data.
		Annualised National Landcover Map	Produce automated methodology to deliver annual, or biennial, updates to the 250 metre resolution National Map of Australia's Land Cover as additional data are acquired from the MODIS satellites to

Strategy	Objectives	Deliverables (Products and Services)	Description
			generate temporally coherent information on national land cover dynamics.
		Australian Earth observation data	Steward for the continuous record of Earth observation data for Australia's jurisdictional area. This includes operation of data acquisition, scheduling, data processing systems, and system maintenance. Manage GA Earth observation datasets and provision of access to these data. Collaboration with government, industry and international bodies in development of best practice and standards to support data management and data access.
		Australian groundwater data	Steward for national water resources, groundwater hydrogeology and hydrogeochemistry data and provision of groundwater environmental data to government, industry and the public. This includes management of existing data, acquisition of new data and provision of access to these data and derived national and regional scale products. Collaboration with government, industry and international bodies in development of best practice and standards to support data management and data access.
		Australian built environment data	Steward for built environment and exposure data themes across Australia's jurisdictional area, in conjunction with Australian Government agencies and State governments. This includes management of existing data, acquisition of new data and provision of access to these data.
		Australian elevation data	Steward for national elevation data and the National Elevation Data Framework (NEDF), in conjunction with Australian government agencies and State governments. This includes management of existing data, acquisition of new data and provision of access to these data.
		Australian surface hydrology data	Steward for national surface hydrology data across Australia's jurisdictional area, in conjunction with Australian Government agencies and State governments. This includes management of existing data, acquisition of new data and provision of access to these data.
		National geophysical databases and maps	Maintenance of Geophysical Archive Data Download System (GADDS) and the Airborne Surveys website. Development of a national airborne electromagnetic database as part of the National Airborne Geophysical Database (NAGD). Management of data acquisition for the States and Northern Territory under the National Geoscience Agreement. Research into the development and application of computational methods for geophysical data inversion, and building 3D geology models.
		Information management and ICT support for Minerals and Natural Hazards Division	Advice and support services to Minerals and Natural Hazards Division for information, application system, database and GIS aspects of divisional activities.
		Seismic, hydroacoustic and infrasound data	Deliver continuous seismic data in support of the Australian Tsunami Warning System and seismic, hydroacoustic and infrasound data in support of Australian Government nuclear monitoring commitments under the Comprehensive Nuclear-Test-Ban Treaty (CTBT). Operate and maintain CTBT international monitoring system stations. Deploy aftershock field equipment following significant earthquakes in Australia.
		Geomagnetic data, reference field models and advice	Deliver time-series data, magnetic-field models, information and advice. Associated services include compass, magnetometer and compass swing site calibrations.
		Geological data standards	The development of and provision of advice on geological data standards. Implementation of data standards in the compilation, management and delivery of GA geological data.

Strategy	Objectives	Deliverables (Products and Services)	Description
		Information and data management	Govern, lead and coordinate information and data management activities and practices in GA in line with Government directions and international best practice, protocols and standards.
		Geoscience knowledge, education and promotion	Lead Geoscience Australia's development of fit for purpose, client focused products. Maintain, promote and develop geoscience educational resources and activities (including the Education Centre, Open Day and Outreach). Promote the value of Geoscience Australia's activities, outputs and science program. Provide sales and support services for our products.
		Geophysical Analysis and Data Access Services (GADA)	Delivery of offshore seismic and potential field acquisition, processing, seismic data analysis and data management services to support Energy Division and GA projects. Creation and delivery of GA's annual Acreage Release workstation package and ongoing support of GA's seismic interpretation systems. Delivery of bathymetry and acoustic data acquisition, processing and interpretation and data management services to support Energy Division and GA projects.
		Field and engineering services	Support marine and land surveys and provide technical scientific services to Geoscience Australia. Delivery of engineering design and development services and provision of equipment maintenance.
		National Offshore Petroleum Titles Administrator data management services	Developing processes to manage the National Offshore Petroleum Titles Administrator (NOPTA) data.
		Antarctic geoscience advice	Provision of geoscience advice and products on the Australian Antarctic Territory and adjacent marine jurisdictions in support of Government obligations and commitments under the Antarctic Treaty System.
		Geoscience repository and digital data store	Administer geological and geophysical data submitted under the Offshore Petroleum and Greenhouse Gas Storage Act (2006) as well as GA data and provide access to "open file" geological and geophysical data pre-competitive resources collections and data.
	Link information to location	Geodetic data, reference frames and advice	Delivery of the National Positioning Infrastructure Plan to Government for assessment. Stewardship of geodetic data sets and value added products. Integrated regional and global reference systems including routine contributions to the International GNSS service (IGS), the International Laser Ranging Service (ILRS), and the International Very Long Baseline Interferometry Service (IVS) for inclusion into the International Terrestrial Reference Frame (ITRF) definition. Maintenance of, and improvements to the online GPS service AUSPOS.
		Australian Government mapping products and data services	Production of standard map series and customised mapping products for Australian Government purposes, including the standard 1:250,000 scale mapping series, customised mapping for Australian Government agencies, aeronautical charting, and provision of renewable energy information.
		Optical, Geospatial, Radar and Elevation (OGRE) procurement panel service	Operate the OGRE procurement panel for commercially supplied Earth observation data for use by the Australian Government.
		National framework data	Identification of the initial fundamental spatial themes, datasets and operational custodians to establish a core component of Australia's national spatial data infrastructure; and become part of the evidence used for policy development and impact evaluation, and underpin more efficient and effective service delivery activities.

6.7 Externally Funded Initiatives

Strategy	Objectives	Deliverables (Products and Services)	Description
Externally Funded Initiatives	Support international efforts	Support AusAID in natural hazards risk reduction programs	Implementation and management of GA's partnership with AusAID in international disaster risk reduction programs, including stakeholder engagement. Development of new international disaster risk reduction programs.
		Support AusAID mining for development initiative in developing countries	Capacity building of geoscience information to underpin sustainable mining in developing countries in partnership with AusAID.
		International geoscience program development and coordination	Strategic planning and coordination of Official Development Assistance (ODA) activities within GA through actively engaging resources across the Agency and externally to ensure effectiveness and integrated discipline service delivery.
	Maximise long-term benefits from Australia's resources	Murray-Darling Basin advice	Provision of groundwater management advice, and groundwater data, maps and models in relation to the Murray-Darling Basin.
		Australian water body monitoring system	Conduct a scoping study (Program Brief) detailing technical options, costs, risks, legal considerations and deliver a report with proposals for further action, including subsequent Project Agreements.
	Reduce the threat that hazards pose to the national interest	Commissioned climate hazard impact models, risk assessments and advice	Application of climate hazard models to conduct and deliver impact or risk assessments, on a commissioned work basis.
		Great Artesian Basin water resource assessment	Deliver groundwater management advice, and groundwater data, maps and models in relation to the Great Artesian Basin and potential climate change impacts.
		National carbon accounting scheme data	Provide data to support the DCCEE for national carbon accounting in Australia.
		International Forest Carbon Initiative - Processing Hub	Submit final report to DCCEE on project outcomes. Operate the International Forest Carbon Initiative - Processing Hub as a service for DCCEE.

6.8 Promotion and Presence

Strategy	Objectives	Deliverables (Products and Services)	Description
Promotion and Presence	Support innovation in the research community	Environmental geoscience and spatial information national leadership	Provide national leadership, coordination and promotion of environmental geoscience and spatial information through relevant committees, forums and publications.
		Promote geoscience work and activities	Promote geoscience and its use to stakeholders and industry both nationally and globally.