



Australian Government
Geoscience Australia

GEOSCIENCE AUSTRALIA

>> STRATEGIC PLAN

>> 2011-
2014





>> VALUED BEHAVIOURS

INFLUENCE

Use our geoscientific information and knowledge to inform evidence-based decision making.

CAPABILITY

Seek innovation in work practices, tools and technology to continue to build the capability of our people and organisation.

EXCELLENCE

Strive for excellence and improvement in everything that we do and in the quality of the services we provide.

ACCOUNTABILITY

Ownership of work results, personal actions and being answerable for outcomes.

Internally, our work program is managed and delivered by three science divisions supported by two enabling services branches.

>> ABOUT US

Geoscience Australia is a prescribed agency within the Resources, Energy and Tourism portfolio, and our Minister is the Hon Martin Ferguson AM MP.

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

Major trends that influence Geoscience Australia's priorities include economic growth in the region, population growth in Australia and the surrounding region, the impact of natural hazards, climate change, the availability and efficient use of energy, water and other resources, pressure to reduce carbon dioxide emissions in order to mitigate growth in global greenhouse gas levels and regional stability.

The outcome of our work is an enhanced potential for the Australian community to obtain economic, social and environmental benefits through the application of first class research and information.

GOVERNMENT OUTCOME

Informed government, industry and community decisions on the economic, social and environmental management of the nation's natural resources through enabling access to geoscientific and spatial information.

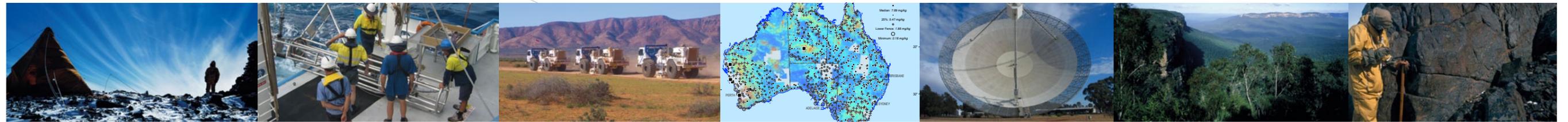
MISSION

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

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.

>> OUR PLAN FOR SUCCESS



STRATEGY	RESPONSIBLE RESOURCE DEVELOPMENT			CLEANER AND LOW EMISSIONS ENERGY TECHNOLOGY		COMMUNITY SAFETY		IMPROVING MARINE PLANNING AND PROTECTION	NATIONAL GEOSCIENCE INFRASTRUCTURE			NATIONAL GEOSCIENCE CAPABILITY				
SUB STRATEGIES	Maintaining Australia's share of global resource markets	Developing our gas resources	Coal seam gas water issues	Geothermal	Carbon Capture and Storage	Effective Emergency Response	Mitigate Impact of Natural Hazards	Marine Bioregional Planning	Spatial Infrastructure	Geophysical Observatory Network	Laboratories	Information Stewardship	Spatial Data Framework			
GA's STRATEGY — PRIORITY 1	Attract and influence successful exploration		Maximise long-term benefits from Australia's resources					Provision and maintenance of nationally important geoscience infrastructure			Increase the uptake of geoscience information					
GA's STRATEGY — PRIORITY 2				Support the nation to plan for an energy secure future			Support Australia to react to emergencies effectively	Reduce the threat that natural hazards pose to the national interest	Maximise long term benefits of Australia's resources		Provision and maintenance of nationally important geoscience infrastructure		Link information to location			
GA's STRATEGY — PRIORITY 3				Support Governments to develop and implement policy												
GA's ROLE	Identify areas likely to deliver successful exploration outcomes	Characterise and monitor water resources		Integrated assessment of the energy sources available to Australia		Support for the management of the mineral and energy resource industries		Notification of events that may require response	Assessment of potential natural hazard impacts	Support for Australia's claims to territories and resources		Maintain the Geodetic Reference Frame	Maintain seismic stations and related communications infrastructure	Provision of analysis on pre-competitive collection samples	Maintain our data and collections	Provision of frameworks for consistent determination of position
	Promote Australia as an attractive destination for exploration	Support for management of the mineral and energy resource industries						Projection of future development and likely impact of events	Assessment of natural hazard probability and severity	Characterisation of seafloor and coastal habitats and biodiversity		Maintain fit for purpose Earth observation groundstations and communications infrastructure	Maintain geomagnetic stations and related communications infrastructure	Provision of analysis on palaeo samples	Improve accessibility of the data, information and assets we hold	Enable legal traceability of position in Australia
	Improve information available to support exploration							Maps and images to support response actions	Identification of assets exposed to natural hazards			Maintain geodetic stations and related communications infrastructure	Provision of analysis on water samples	Promote adoption of standards for data and information interoperability	Enable access to fundamental public good geographic information	
	Integrated assessment of the energy sources available to Australia							Assessment of disaster impact to support response	Facilitate natural hazard avoidance and mitigation			Enable high performance computing	Provision of analysis on sediment samples	Delivery of high performance geoscience data		
	Increase understanding of the fundamental geology of Australia							Support international efforts	Build others capability to manage natural hazard impact							
KEY DELIVERABLES	Support for acreage release process	Groundwater data, models and maps		Geothermal energy estimates, models and maps		CO ₂ Infrastructure Plan		Support for tsunami warnings [ATWS]	Natural hazard risk maps and models	Coastal and marine data and maps		Assets, equipment and infrastructure are fit for purpose to ensure capture and acquisition of essential GA spatial data	Assets, equipment and infrastructure are fit for purpose to ensure capture and acquisition of essential GA geophysical data	Assets, equipment and infrastructure are fit for purpose to complete analysis of samples to support key GA deliverables	Pre-competitive resources collections and data (Repository)	Geographic data and maps— APS200
	Promotion of minerals and petroleum prospectivity	Advice on environmental (groundwater) impact of resource development		Advice on potential geothermal resources, technologies and scientific analysis		Data and reports on Bonaparte Basin for suitability of CCS opportunities		Nuclear Monitoring	Vulnerability models and information	Advice on environmental marine and coastal impact from resource development		Assets, tools and infrastructure can support high performance computing		Access to, and use of geoscience information	Geodetic Data	
	Technical advice on minerals and petroleum exploration and exploitation					Advice on CCS		Remote fire warnings [Sentinel]	Impact models and risk assessments	Advice on Australia's Maritime Limits					Vulnerability, exposure and natural hazard data	
	New pre-competitive minerals and petroleum data							Maps and imagery for Defence	Post-disaster advice, analysis, models and reports					Advice on External Territories		
CAPABILITIES																
ICT AND CORPORATE SERVICES	The enabling services branches provide critical support for the delivery of Geoscience Australia's outputs.															

Building the Geoscience Knowledge of the Nation



>> STAKEHOLDERS

Geoscience Australia's external stakeholders include:

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

>> GEOSCIENCE AUSTRALIA'S ROLE



Geoscience Australia exists to meet the geoscience information needs of the Australian Government. Our mission is to use geoscientific information and knowledge for the economic, social and environmental benefit of Australia. Our current emphasis is in three main areas: the future energy and resource base of the economy; providing geoscience input to a range of environmental issues; and contributing to community safety through research into natural hazards and their impact on society.

A major focus is the provision of pre-competitive geoscience information in support of and to facilitate energy and mineral exploration (both onshore and offshore Australia), and the provision of advice to the Australian Government on mineral and energy resource related issues. We undertake research for application to future clean energy supplies including carbon capture and storage

and geothermal energy. Groundwater research is also a major focus because of its strategic importance to a number of national issues.

Geoscience Australia is also responsible for mapping, modelling and monitoring changes to the Earth and advising how these changes may affect Australian society. This work includes national observatory functions that monitor earthquakes and the Earth's magnetic field and national geodetic reference frame for positioning applications. Geoscience Australia undertakes national scale topographic mapping, earth observation, and coastal and marine research to address the impacts of natural disasters, the potential impacts of climate change and change in the environment.

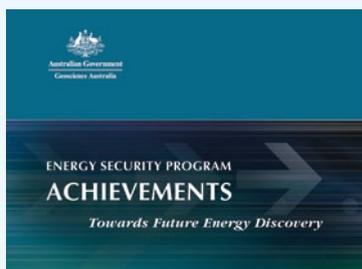
Geoscience Australia also partners with AusAID to bring our capabilities to the region.

>> OTHER INITIATIVES

STRATEGY	EXTERNALLY FUNDED INITIATIVES			PROMOTION AND PRESENCE
SUB STRATEGIES	Restoring long-term health of the Murray-Darling Basin	Tackling climate change	Ensuring effective overseas development aid	Build the geoscience capability of the Nation
GA's STRATEGY — PRIORITY 1				Support innovation in the research community
GA's STRATEGY — PRIORITY 2				
GA's STRATEGY — PRIORITY 3	Maximise long-term benefits from Australia's resources	Reduce the threat that hazards pose to the national interest	Support international efforts	
GA's ROLE	Acquisition, analysis and modelling of groundwater data		Support for AusAID in regional response and capability development	Promote geoscience activities
	Acquisition of topographical and remote sensed data	Acquisition, analysis and modelling of remote sensed landcover data	Build capability for others to manage natural hazard impact	Increase presence of geoscience in education and training
	Characterisation and monitoring of groundwater resources	Acquisition of climate related data	Participation in regional risk and natural hazard programs	Improve community awareness of geoscience and it's benefits
		Analysis of effects of climate change on existing natural hazard and risk maps and models	Acquisition, analysis and modelling of international natural hazard related data	
KEY DELIVERABLES	Groundwater data, models and maps		Sea level monitoring SW Pacific	Open Day
	Landcover data, models and maps		Disaster risk reduction (AIFDR, Philippines, PNG, Rabaul)	Education Centre
	Advice on methods for managing water resources	Climate related risk and natural hazard data, models and maps		Research committees, forums and workshops
		Remote sensed data to support national and international climate change initiatives		
	Topographic Data			
CAPABILITIES				
ICT AND CORPORATE SERVICES	Costs fully recovered if no direct benefits accrue to Geoscience Australia			

>> RECENT ACHIEVEMENTS

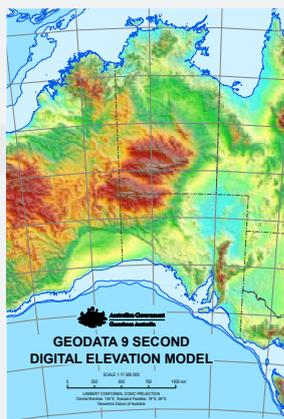
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Energy Security Program

The five year Energy Security Program was completed in June 2011. Key achievements were:

- > expenditure of more than \$600 million offshore in the first three-year term of permits and additional onshore exploration expenditure estimated to be in excess of \$300 million
- > discovery of a world-class source rock in the Bight Basin, which has led to the largest work program bid ever received for frontier basin exploration in Australia
- > discovery of the Millungera Basin in north Queensland, which has potential for petroleum, geothermal and other resources.



2

Australian Hydrological Geospatial Fabric program

Geoscience Australia, in partnership with the Bureau of Meteorology, CSIRO and the Australian National University, have released the following national foundation datasets:

- > national surface hydrography layer (AusHydro1) at 1:250 000 with topological connectivity and directional flow paths
- > digital elevation model—derived stream network at 1:250 000 for modelling
- > national catchment boundaries derived from the 9-second digital elevation model
- > national derived 1-second digital elevation model products.



3

Strategic Review of Geoscience Australia

A strategic review of Geoscience Australia found that it was a valued whole of government agency that provided important input into a range of significant national challenges and policy issues. The review found no overlap or duplication among Geoscience Australia's activities.