REPORT TO THE INTERNATIONAL CARTOGRAPHIC ASSOCIATION GENERAL ASSEMBLY CAPE TOWN2023

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Mapping Science Institute Australia

The Mapping Sciences Institute, Australia, is an incorporated company representing Australian cartographers and geographic information technologists. Its forerunner, the Australian Institute of Cartographers, was formed in 1952 and the name-change was registered in 1995. The purpose of the change of name was to recognize the emergence of the disparate disciplines involved in the management of geospatial information.

Mapping sciences are defined as those disciplines that deal with acquisition, management and communication of geospatial information and the MSIA promotes the theory, practice and understanding of all facets of these sciences through the collegiate expertise of its members. Membership is available to all persons engaged in the mapping sciences, admitted at grades commensurate with relevant academic qualifications and experience.

Management of the MSIA is effected at national level through the National Council which comprises a President, Secretary, Treasurer and Chairman of an Executive Committee, together with representatives from the States. MSIA is financially accountable to the Australian Securities and Investments Commission and in this regard, the Treasurer, Secretary and Chairman are the Company Directors. All office-bearers serve in an honorary capacity.

National Council

President: John McCormack. President 2020 - 2023 Chair of Executive: Les Isdale – 2020 2023 Secretary: Patrick Killoran Treasurer: John McCormack Promotion & Management: John McCormack Membership: Alan Unkles Heritage: Trevor Menzies Research & Scholarship: David Fraser Journal of Spatial Science: Graeme Wright 1994- 2022, Dr Robert Odolinski 2023 International: Graeme Wright 2019 2023 News newsletter: Les Isdale , John McCormack Webmaster: Shane Oates Barbara Petchenik Children's Map Competition: John McCormack 2019 2023 ICA CARTOGRAPHY newsletter: David Fraser

Council 2019 - 2023 NSW Division: Michael Turner NSW Division : Colin Mitford Queensland Division: Les Isdale Queensland Division: Patrick Killoran Northern Territory Division: Trevor Menzies Includes office bearers

National Contact details: Mapping Sciences Institute, Australia GPO Box 1817 Brisbane QLD 4001 Email: national.secretary@mappingsciences.org.au

Australia's ICA Commitment

Honorary Professor William Cartwright AM Honarary Fellow, Mapping Sciences Institute, Australia President ICA 2007–2011. Immediate ICA Past-President ICA 2011 - 2014 ICA representative and Chair, Joint Board of Geospatial Information Societies 2011-2014. Editor – International Journal of Cartography Member, Commission on Art and Cartogaphy

Dr David Fraser

Honorary Fellow, Mapping Sciences Institute, Australia Editor, eCARTO online newsletter for the ICA Publication Committee Member, Commission on Education and Training Member, Commission on Early Warning and Crises Management

Dr Amy Griffin

Chair, Commission on Cognitive Issues in Geographic Information Visualization

Ron Furness Chair, Commission on Marine Cartography

Australian Cartography

National Mapping

ANZLIC – the Spatial Information Council is the peak intergovernmental organisation providing leadership in the collection, management and use of spatial information in Australia and New Zealand. It comprises, as equal partners, senior officials from Australian, state and territory governments and the New Zealand Government.

'In April 2014, ANZLIC—The Spatial Information Council published the latest update to the Foundational Spatial Data Framework (FSDF) at

http://www.anzlic.gov.au/foundation_spatial_data_framework. The aim is to provide public access to datasets with 'a national coverage of the best available, most current, authoritative source of

foundation spatial data which is standardised and quality controlled'. The Intergovernmental Committee on Surveying and Mapping (ICSM) is a standing committee of ANZLIC and performs a key role in implementing the national spatial policy through the delivery of the FSDF'. 1

Extract from

1. The Australian and New Zealand Foundation Spatial Data Framework: Making common foundation spatial data ubiquitous across Australia and New Zealand Edition 2 – April 2014 http://www.anzlic.gov.au/__data/assets/pdf_file/0017/47321/FSDF_Booklet_edition_2_web.pdf

Key agencies that act as data theme sponsors for the FSDF include the Bureau of Meteorology, Australian Bureau of Statistics, and the Department of Communications, assisted by Geoscience Australia.

Geoscience Australia is the Australian Government's national geoscience agency that acts as technical advisor on all aspects of geoscience as well as custodian of the geographical (and geological) data and knowledge of the nation.

'It is a key player in the development and implementation of the FSDF, managing 16 of the 36 datasets, including datasets for positioning services, elevation and bathymetry, place names, earth observation, surface water, transport, maritime boundaries and land cover. This custodianship role aligns with Geoscience Australia's mandate for the provision of fundamental geographic information.'

'Geoscience Australia is responsible for Australia's contribution to the Global Geodetic Reference Frame (GGRF), upon which global positioning system (GPS) applications are based. The Global Geodetic Reference Frame is reliant on cooperation and contributions from many countries. Geoscience Australia is supporting a process initiated by the United Nations Committee of Experts on Global Geospatial Information Management to strengthen international cooperation, infrastructure investment and data sharing, with the aim of refining the GGRF. The use of positioning technologies yields efficiencies in many industries, including agriculture, mining, transport, engineering and land administration; it also underpins a number of global monitoring sciences, including the monitoring of sea level rise.'

'Geoscience Australia has implemented new capabilities in data stewardship to improve and encourage the discovery, access, interoperability and use of science data. Geoscience Australia has focused on improving data standards and governance; developing innovative data-sharing tools; and making data openly accessible via web services, to maximise the uptake and use of authoritative geoscience data by government, industry, research and the public. Geoscience Australia data can now be discovered and accessed online via a wide range of institutional and community portals, including data.gov. au and FIND (find.ga.gov.au), a search portal launched by Geoscience Australia in 2014 to improve discovery and access to Australian Government spatial data. Geoscience Australia has partnered with the Department of Communications and National ICT Australia to develop the National Map (<u>http://nationalmap.gov.au/</u>), which is an interactive online map designed to help members of the public to use data available from Geoscience Australia, the Bureau of Meteorology, other government agencies and science institutions, and state and territory government agencies.'

To demonstrate Australia's continuing commitment to a national framework Geoscience Australia's Key Strategies for providing Geographical Information over the last 4 years are listed below;

Strategic Priorities and Performance Criteria

Geoscience Australia's work program is delivered through six key strategic priority areas. Each priority area outlines the role of the organisation, the desired outcomes to be achieved, and the core work activities and capabilities.

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 statement. Performance measures will include assessment against key work deliverables, key performance indicators and case studies.

Key Performance Indicators	2018-	2019-	2020-	2021-
	2019	2020	2021	2022
Geoscience Australia's foundation spatial data products, including authoritative representations of Australia's maritime boundaries and topography, are updated and/or accessible through interactive mapping platforms	75%	80%	85%	90%
Geoscience Australia's spatial data products meet the requirements of relevant legislation and policy implementation	100%	100%	100%	100%
Delivery of Surface Reflectance product from initial receipt of satellite data	< 90	< 30	< 14	< 7
	days	days	days	days

Extracted from

Geoscience Australia website: <u>http://www.ga.gov.au/about/what-we-do/role/providing-fundamental-geographicinformation</u>

State Mapping

In support of the FSDF and as a consequence of the rapid development and availability of new technologies for spatial data delivery, there has be a large focus on investment at the state and territory government levels at online spatial data delivery systems. This includes spatial data directories and web mapping applications. Below is a just a selected subset of state government systems that have been released recently.

State Government	
system	Link
New South Wales - Land & Property Information - NSW GLOBE	http://globe.six.nsw.gov.au/ https://spatial.nsw.gov.au/news/nsw- spatial-collaboration-portal/
Queensland portal – Queensland Globe QSpatial data delivery	https://www.business.qld.gov.au/business/support-tools- grants/services/mapping-data-imagery/queensland-globe https://qldspatial.information.qld.gov.au/catalogue/custom/index.page
Western Australia - Open Data	https://data.wa.gov.au

Tasmania - Land Information System - the LIST	https://www.thelist.tas.gov.au/app/content/home
Victoria – Vicmap	https://services.land.vic.gov.au/landchannel/content/productcatalogue
South Australia - Location SA Viewer	http://www.location.sa.gov.au/

Spatial Data Catalogue Projects

Government system	Link
Geoscience Australia	http://www.ga.gov.au/
New South Wales Spatial Data Catalogue portal	https://portal.spatial.nsw.gov.au/portal/apps/sites/#/ home.page
Queensland Spatial data Catalogue - QSpatial	https://qldspatial.information.qld.gov.au/catalogue/custom/index.page
Western Australia – Open data	https://data.wa.gov.au/
Victoria – open data directory	https://www.data.vic.gov.au/
Northern Territory – Spatial Data download	https://depws.nt.gov.au/land-resource-management/info- systems/natural-resource-maps/spatial-data-requests
Tasmania - open data	https://thelist.tas.gov.au/app/content/data
South Australia – Data SA	https://data.sa.gov.au/

Australia Government Mapping Organisations

Commonwealth agencies <u>Geoscience Australia (GA)</u> <u>Australian Centre for Remote Sensing (ACRES)</u> <u>Australian Hydrographic Service</u> <u>Defence Imagery & Geospatial Organisation (DIGO)</u> <u>Australian Antarctic Division</u> Intergovernmental Committee on Surveying and Mapping (ICSM)

State and Territory agencies

Each State and Territory has an administrative body responsible for land administration. Use google search as the administrative body names change regularly.

Australia – Events 2019-2022

An indicative selection:

- Annual Mapping Seminar, MSIA New South Wales Division
- Annual RMIT University Geospatial Students Association Dinner
- ANZMapS conference, 2020, National Library
- Brisbane's GIS Day, 2020 2022
- ESRI Australia conference Brisbane, Sydney and Melbourne 2020-2022
- GeoCart'2020 and 2022 jointly organized by the New Zealand Cartographic Society and the Australian and New Zealand Map Society
- MSIA Mapping Sciences professional development seminar, Ultimo, 2020
- LOCATE Conference 2020 2022

Some specifics:

Conferences

Locate conference

The annual **Locate Conference** is Australia & New Zealand's leading Spatial event consolidating the top Australian spatial industry events. It provides a central meeting point for industry, government and academia in one of the fastest growing industries. Locate Conference Series is designed to energise the location industry, inspire both producers and consumers of location information, and drive greater awareness, adoption and innovation. An integral part of this conference is the **Research@Locate**, which brings-together Australian researchers working in the geospatial sciences.

Joint conference

For a number of years the Australian and New Zealand Map Society (ANZMapS) and MSIA have cooperated in the organisation of a bi-annual conference event. In 2018 the Mapping Sciences Institute, Australia decided to offer sponsorship to the New Zealand Cartographic Society for their Geocart 2018 conference and ANZMapS were also involved in this conference. It was very beneficial to all and a closer agreement on collaboration was established.

Exhibitions

Mapping, National Library Australia

The National Library has presented a number of exhibitions on maps over the last few years some virtually. See https://nla.gov.au for more information.

Barbara Petchenik Children's World Map Competition Australian Exhibition 2023

The MSIA is once again participating in the Barbara Petchenik Children Map Drawing competition. The competition is still open at this time and we hope to receive some entries even though the competition is running over the Christmas break which is not a good time for attracting student involvement.

https://mappingsciences.org.au/barbara-petchenik-childrens-map-competition-2023/

Competitions and Awards

Indicative selection:

- Annual MSIA David McInnes Memorial Prize to the best student in Cartography, year 3, at RMIT University
- Annual MSIA/ANZMaps Patricia Alonzo Memorial Prize, RMIT University
- Mapping Sciences Institute, Australia, student prize at QUT
- Annual SSSI Prize to Geospatial Sciences student, RMIT University
- Australian entries in the Barbara Petchenik Childrens' Map Competition, ICC2017 Washington D.C., USA and ICC2019, Tokyo, Japan.
- GIS People, a Brisbane-based high-tech start-up company, won the title of Information Technology Champion at the Australian Small Business Champion Awards.
- ESRI Prize for Spatial Information Systems

Publications

The Journal of Spatial Science is a joint publication for members of the MSIA as well as the SSSI. Members of the SSSI receive the Journal only in online format via the Taylor & Francis website which also provides access to a substantial catalogue of back issues for CARTOGRAPHY to 1957.

The Journal of Spatial Science (TJSS) is a peer-reviewed journal in the Mapping Sciences that is published three times per year by Taylor & Francis (T&F). TJSS is a publication of The Mapping Sciences Institute, Australia (MSIA) and Surveying & Spatial Sciences Institute (SSSI) which publishes papers contributed by members of both MSIA and SSSI, and also contributors from across the world. These are original peer review Research and Review Papers contributing to the theory and practice of the mapping sciences representing new ideas and improvements on existing approaches to old problems. The Journal also publishes Professional Papers that describe aspects of professional practise and implementation of techniques related to cartography, geodesy, geographic information science, hydrography, photogrammetry, remote sensing or surveying. This provides an opportunity for professionals and practitioners to inform the world of their business and industry innovations.

Selection:

Cartography – Australian edition of ECarto online newsletter MSI-News: Newsletter of the Mapping Sciences Institute, Australia Map Matters: the newsletter of the Australia on the Map Division of the Australasian Hydrographic Society.

Position magazine – Australian magazine of surveying, mapping and geoinformation

Online Resources Spatial Source <u>http://www.spatialsource.com.au/</u>

Map Library Collections Online

National Library of Australia Map Collection

Online Map Collections: State Library of New South Wales State Library of Victoria State Library of Queensland State Library of Western Australia State Library of South Australia State Library of Tasmania

Academic Institutions teaching GIS Cartography related courses

Australian Defence Force Academy (UNSW) **Charles Sturt University Faculty of Science Curtin University** Flinders University - Adelaide Queensland University of Technology **RMIT University RMIT TAFE** The University of Melbourne University of New South Wales University of Newcastle University of Queensland - Brisbane University of Southern Queensland - Toowoomba University of Tasmania University of Western Australia - Perth TAFE NSW **TAFE** Tasmania

Educatedu List of Geography and Cartography programs in Australia – <u>http://www.educaedu.com.au/geography-and-cartography</u>

Cartography related professional institutes

Mapping Sciences Institute, Australia Surveying and Spatial Sciences Institute Australian and New Zealand Map Society Australasian Hydrographic Society

Other Australian Geography Teachers Association Destination Spatial Intergovernmental Committee on Surveying and Mapping Australian Spatial Information Education and Research Association Map-Librarians

Australia Private Mapping Organisations

Representative selection only: <u>1Spatial Australia</u> <u>AAM</u>

GIS People Pty Ltd. Hema Maps NextByte Technologies Pvt Ltd Spatial Vision UBD / Gregorys / Explore Australia Westprint Heritage Maps World Wide Maps

Further information can be found at the Spatial Source Online Industry Directory https://directory.spatialsource.com.au/listing/