



IAG Scientific Assembly 2025: Geodesy for a changing environment

Symposium G11: Geodesy for Society: Data Management, Policy Networking and Public Engagement

Conveners: Martin Sehnal, Szabolcs Rózsa

This symposium highlights the essential role of communication, governance, and education in advancing geodetic science and its societal impact. With its important contributions to areas such as climate monitoring, disaster mitigation, and navigation, geodesy must engage diverse stakeholders to make its relevance to Earth sciences and society more visible. This symposium will focus on three main areas:

- Effective data management: Exploring innovative approaches to sharing geodetic data and fostering collaboration between researchers and industry professionals within and beyond geodesy. Discussions will focus on tools that enhance data accessibility, streamline integration, and promote stakeholder engagement to provide evidence of the impact of geodesy across various sectors.
- Science-policy networking: Strengthening the presence of geodesy in the policy arena by exploring strategies to raise its profile in policy making. This includes advocating for increased funding and fostering stronger connections between geodesists and government organisations to ensure that geodetic science is effectively represented in decision-making processes.
- Public engagement: Focus on communication, education, and outreach to engage broader audiences and inspire the next generation of geodesists. Case studies of successful collaborations will provide valuable insights into effective knowledge transfer and strategies for improving public engagement with geodetic science.

By bringing together experts from research, education, and industry, this symposium aims to promote best practices that will ensure the continued growth and recognition of the societal impact of geodesy.

G11-1: Data Management, Dissemination of Results, and Stakeholder Networking

Conveners: Anna Riddell, Roger Fraser, Markus Bradke, Taylor Yates

Geodesy has evolved from a niche area of scientific inquiry into a crucial source of data, models, and products that significantly impact various geoscience fields such as hydrology, oceanography, geodynamics, climate research, and atmospheric studies, as well as supporting the application of precise positioning across industry and society. The advent of new sensors and satellite missions promises enhanced spatial and temporal resolution, paving the way for operational geodetic data applications in meteorological research, early warning systems, and extreme event management. Given this context, effective management of the vast amounts of geodetic information is paramount.

Proper recording, referencing, and documentation are essential to increase visibility and facilitate the use of geodetic data by other scientific domains and stakeholders. Currently, many geodetic products remain underrepresented and lack the recognition they deserve regarding their quality and significance. This session invites contributions focused on both existing and planned activities related to the management of geodetic data and products. Topics of interest include:

- Global and regional dataset archiving and organization
- Strategies for dissemination of open geodetic products
- User requirement surveys and their findings to assess the quality and impact of geodetic data
- Efforts for integrating geodetic data into operational services
- Initiatives aimed at engaging with global, regional, and national stakeholders

By promoting the visibility and acknowledgment of geodesy-related products, this session aims to enhance collaboration across scientific fields and strengthen stakeholder networks, ultimately contributing to the broader societal benefits derived from geodetic research.

G11-2: Geodesy at the Intersection of Science and Policy

Conveners: Allison Craddock, Basara Miyahara

Our Earth is a living, breathing planet that is constantly changing, and our precise position on this changing planet creates a common language that translates so much about our existence into meaningful knowledge. While almost everyone uses geodesy in some way, very few people understand the science and infrastructure that goes into providing positioning and gravity data reliably and sustainably enough to fuel trusted Earth intelligence. One of the most pressing challenges for geodesy is therefore to communicate its value and raise awareness of the 'everyday geodesy' on which modern society relies.

Raising awareness is key to securing sustainable investment in geodesy, and there has been significant activity within networks of geodesy stakeholder organisations and international bodies to recognise the diverse contributions of geodesy to science and society. In particular, this facilitates the understanding and appreciation of geodesy in a way that engages not only technical users but also policy makers.

This session welcomes presentations on

- Effective communication, advocacy and political efforts to increase the visibility and sustainability of geodesy in the policy arena.
- Use cases of successful funding proposals/campaigns, especially those that bridge the science-policy interface.
- Examples of transdisciplinary collaborations with geodesy stakeholder networks providing a scientific basis for policy decisions.

G11-3: Communication, Education and Outreach in Geodesy

Conveners: Martin Sehnal, Szabolcs Rózsa, Öykü Koç, Sujata Dhar

Advancing geodesy can be achieved by engaging diverse audiences, as they bring different perspectives. Therefore, effective communication, education and outreach are needed to convey the societal impact of geodesy. This session seeks contributions that highlight innovative approaches to disseminating geodetic knowledge, fostering educational initiatives, and enhancing public engagement. Topics may include novel teaching methods, outreach programmes that bridge the gap between geodesy, other Geosciences and the public, and the integration of digital tools for more effective knowledge transfer. Case studies on collaborations with educators, policy makers, or other stakeholders that help explain complex geodetic concepts to non-experts are particularly welcome. This session also aims to explore how recent technological advances and digital platforms are shaping communication and education efforts. Special attention will be given to the challenges of capacity development, in particular how to ensure new generations of geodesists and how to engage a wider, non-specialist audience with geodesy. Contributors are invited to share practical insights, successful examples and lessons learned in promoting geodesy in academia, industry and society.