UN GGIM Subcommittee on Geodesy Education, Training, and Capacity Building Working Group
2019 Activity Summary

Report to the United Nations International Committee on GNSS
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United Nations General Assembly Resolution 2015: Global Geodetic Reference Frames for Sustainable Development
UN GGIM Subcommittee on Geodesy
Working toward an accurate, sustainable and accessible
Global Geodetic Reference Frame
to support science and society
Road Map VISION
An accurate, sustainable and accessible Global Geodetic Reference Frame to support science and society

Sustainable and Enhanced GGRF

Geodetic Infrastructure

Policies, Standards and Conventions

Education, Training and Capacity building

Appropriate Governance

Outreach and Communication

Graphic courtesy of Gary Johnston/ UN GGIM SCoG
“A global reference frame is key if you want to be able to compare data from all continents; and to empower scientists from all parts of the world – to really give precise information, to make the planet a better place.”

– Erik Solheim, Executive Director
United Nations Environment Programme
SCoG Education, Training, and Capacity Building

Current situation

• Utilisation of the GGRF helps build a foundation for a country’s development and sustainability. A lack of geodetic skills blocks this utilisation. Hence, **a lack of geodetic competence and capability hinders a Member States [geodetic] development and sustainability**

• The skills required to install and operate geodetic instruments, and analyse the data, are very specific and mastered by only a small number of people worldwide

• The aforementioned skillsets are not generally taught in mainstream higher education programs

• Some countries have geodetic capability, but only in small numbers of people, resulting in reduced capacity to contribute to the GGRF

• Other countries have neither capability nor capacity

• IAG and FIG currently offer some capability development activities
2019 Focus: Capacity Building through International Cooperation

- Geodetic capacity assessment and gap analysis
- Ongoing identification of existing capacity building resources and enabling discovery and intuitive interoperability
- Regionally-focused capacity building workshops
- Special sessions at large international conferences and workshops (FIG, IGS, and IAG collaborations)
- Cross-linkages to Sendai Framework for Disaster Risk Reduction and Sustainable Development Goals (SDGs)
- Nomenclature standardization and framework organization in alignment with the UN GGIM-World Bank Integrated Geospatial Information Framework
Why do we need this Framework?

“Everything happens somewhere”

- Increasing recognition that spatial information is fundamental to good decision making.
- To maximise the use of our spatial data, there is a need to:
  1. standardise how we talk about spatial data;
  2. identify gaps and develop ‘fit for purpose’ plans; and
  3. improve the quality, accuracy, interoperability and accessibility of spatial data.
- The Integrated Geospatial Information Framework aims to help achieve these goals.
UN GGIM-World Bank
Integrated Geospatial Information Framework

- 9 strategic pathways
- 3 main areas of influence:
  - governance;
  - technology; and
  - people.
- Seek to maximise the geospatial information by making it available and accessible to governments, community, businesses, academia, and civil societies innovate, co-create and develop new products, services, and applications that deliver new knowledge for evidence-based policy and decision-making.
This strategic pathway establishes **enduring capacity building programs and education systems** so that geospatial information management and entrepreneurship can be sustained in the longer term.

The objective is to **raise awareness and develop and strengthen the skills, instincts, abilities, processes and resources** that organizations and communities require to utilize geospatial information for decision-making.
Identify gaps and develop ‘fit for purpose’ plans

- Identify critical gaps in spatial data infrastructure and describe them in a standardised way.
  - This can be used to support applications for assistance (e.g. World Bank).

- Developing countries can compare their IGIF to developed countries IGIF and develop a plan for further development.
  - This plan can be tailored to individual country’s situations and circumstances.

Slide courtesy of Nick Brown, Geoscience Australia
The overall structure shows the four key elements, guiding principles, actions and interrelated actions; and the tools provided to support the achievement of these outcomes. 

Next Steps

• Continue targeted participation at workshops and conferences
  • Present results of Geodetic Capacity Survey at FIG Working Week, May 2020 in Amsterdam, Netherlands
  • Organize or support Capacity Building sessions at ICG workshops and other events
• Develop a “geodesy thematic layer” identifying various potential geodetic elements that can be used in developing an IGIF Action Plan
• Work with countries currently in the pilot project cohort of IGIF Action Plan applications
For more Information and to download newsletters and other resources prepared by the Subcommittee on Geodesy:

GGIM.un.org
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