



Federal Agency for  
Cartography and Geodesy



# United Nations Global Geodetic Centre of Excellence

## The New UN Entity for Geodesy

Dostal, Jan<sup>1</sup>; Zaccheddu Pier-Giorgio<sup>1</sup>;  
Bouman, Johannes<sup>1</sup>; Jørgensen, Anne<sup>2</sup>

<sup>1</sup>Federal Agency for Cartography and Geodesy, Germany

<sup>2</sup>Kartverket, Norway

May 24 2023

EUREF Symposium 2023 - Gothenburg



# Agenda



United Nations  
Global Geodetic Centre of Excellence

- UN-GGCE has been opened!
- The journey towards UN-GGCE
- What is UN-GGCE about?
- How does UN-GGCE fit in the geodetic landscape?
- Where are we now?

# UN-GGCE Venue at UN Campus in Bonn 29th – 31th March



- UN-GGCE Opening Ceremony
- Meetings of UN-GGCE
  - International Advisory Committee
  - Steering Committee
- Meeting of UN-GGIM Subcommittee on Geodesy

---

Representatives from:

United Nations, UN-Organisations, National Governments, Geodetic Institutions and organizations, Geodetic Experts, Geoscience Experts

Photo: ©BKG





# The red ribbon for UN-GGCE has been cut



Photo: ©BKG

## Opening remarks:

- State Secretary Germany  
*Mrs. Juliane Seifert*
- UNSG's Special Envoy for Ocean and UN-GGIM Global Geodesy Ambassador  
*Mr. Peter Thomson*
- State Secretary Norway  
*Mrs. Kjersti Bjørnstad*
- Director UN SD (ECOSOC)  
*Mr. Stefan Schweinfest*
- Mayoress City of Bonn  
*Mrs. Melanie Grabow*
- President BKG  
*Mr. Paul Becker*
- Ambassador and Head of UN Campus Liaison Office  
*Mr. Rainer Lassig*



# United Nations Global Geodesy Ambassador applaud the establishment of the UN-GGCE in Bonn:

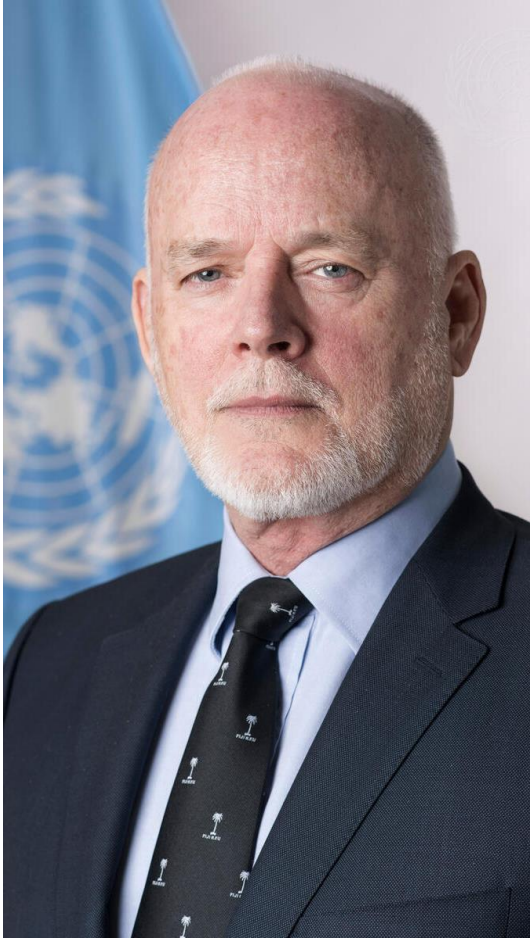
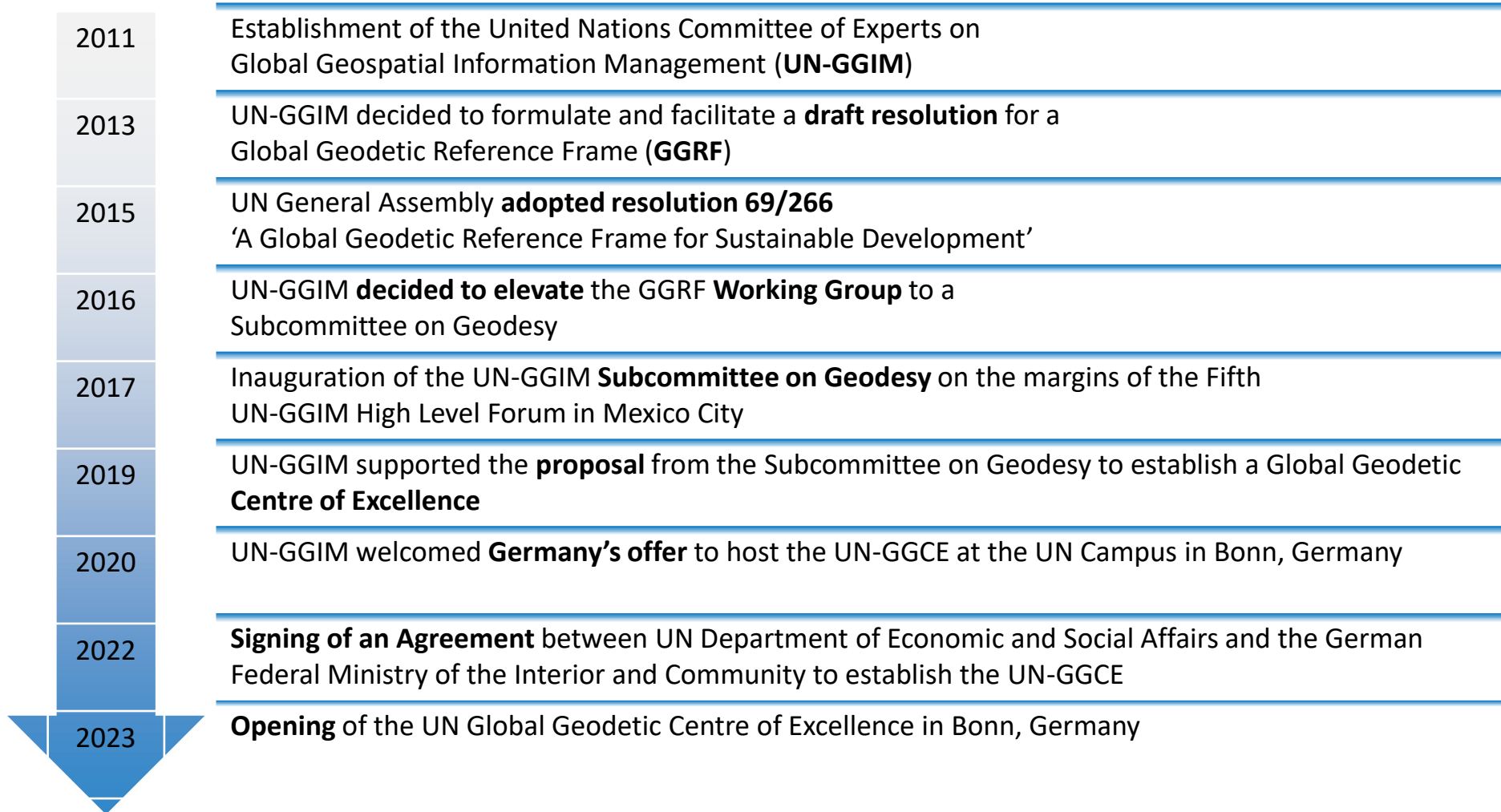


Photo: UN Photo/Mark Garten

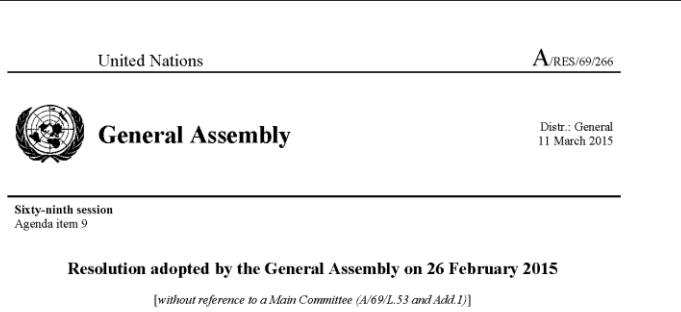
*“This is a decisive step taken in the spirit of the 2015 UN resolution and I’m confident it will result in the enhancement of multilateral cooperation in the development of a more sustainable global geodetic reference frame.”*

His Excellency Ambassador Peter Thomson,  
UN Secretary General’s Special Envoy for the Ocean and  
UN-GGIM Global Geodesy Ambassador

# The journey towards UN-GGCE



# Documents / Links



69/266.

The Commission  
Reaffirms  
Reaffirms  
endorsed the  
Space and  
improve the  
other activities  
compatibility  
Navigation  
Reaffirms  
endorsed the  
Development  
implementation  
coordinated  
integrated  
and sharing  
other sources  
Reaffirms  
outcome document  
entitled "The  
the importance  
geospatial  
project operations  
Noting  
which the  
Information

<sup>1</sup> Adopted by  
(UNISPACE)  
<sup>2</sup> Report of the  
2002 (United Nations)

15-02936 (E)



Federal Agency  
for Cartography

FINAL DRAFT FOR ENDORSEMENT

UNITED NATIONS COMMITTEE OF EXPERTS ON GLOBAL GEOSPATIAL  
INFORMATION MANAGEMENT

---

**Subcommittee on Geodesy**

---

Version: 29 July 2021 E/C.20/2021/7/Add.2

**Position Paper on  
Sustaining the Global Geodetic Reference Frame**

**A plan to help achieve the long-term accuracy and accessibility of the Global  
Geodetic Reference Frame**

FINAL DRAFT FOR ENDORSEMENT

UNITED NATIONS COMMITTEE OF EXPERTS ON GLOBAL GEOSPATIAL  
INFORMATION MANAGEMENT

---

**Subcommittee on Geodesy**

---

Version: 29 July 2021 E/C.20/2021/7/Add.3

**Concept Paper on Establishing a Global Geodetic  
Centre of Excellence**

- Resolution A/RES/69/266  
[https://ggim.un.org/documents/A\\_RES\\_69\\_266\\_E.pdf](https://ggim.un.org/documents/A_RES_69_266_E.pdf)
- Position Paper on GGRF  
[E-C.20-2021-7-Add-2 Position Paper on Sustaining the GGRF 29Jul2021.pdf \(un.org\)](https://ggim.un.org/documents/E-C.20-2021-7-Add-2_Position_Paper_on_Sustaining_the_GGRF_29Jul2021.pdf)
- Concept Paper on UN-GGCE  
[E-C.20-2021-7-Add 3 Concept Paper on GGCE 29Jul2021.pdf \(un.org\)](https://ggim.un.org/documents/E-C.20-2021-7-Add-3_Concept_Paper_on_GGCE_29Jul2021.pdf)
- Link to the Web page of UN-GGIM and UN-GGCE  
<https://ggim.un.org/UNGGCE/>

# UN-GGCE's overarching goal

## Objective

- To support, within available resources, the implementation of General Assembly resolution 69/266 'A Global Geodetic Reference Frame for Sustainable Development'.
- 

## Mission

- To assist Member States and geodetic organisations coordinate and collaborate to sustain, enhance, access and utilise the Global Geodetic Reference Frame.

## Vision

- To help develop an accurate, accessible and sustainable Global Geodetic Reference Frame to support science and society and global development.

## Strategy

- To assist Member States fill some of the critical capability and capacity gaps across the five focus areas.

(from Concept paper on Establishing GGCE)



# Focus Areas of UN-GGCE

- Enhance global cooperation and coordination
- Strengthen geodetic infrastructure
- Assist Member States in line with standards, policies and conventions
- Support education, training and capacity building
- Improve communication and raise awareness



Picture: Erich Westendarp (Pixabay)

# Fundamental to sustainable development



## Assisting countries by

- Support 2030 Agenda for **Sustainable Development Goals (SDG)**
- Facilitate **access** to GGRF across the world
- Facilitate **participation on development** and maintenance of GGRF
- Facilitate **education and training** in respect to geodetic knowhow and technology
- Raise funds and support the **funding** for joint projects
- Facilitate technical assistance, especially for **developing countries**



TRANSFORMING OUR WORLD:



THE 2030 AGENDA FOR  
SUSTAINABLE DEVELOPMENT



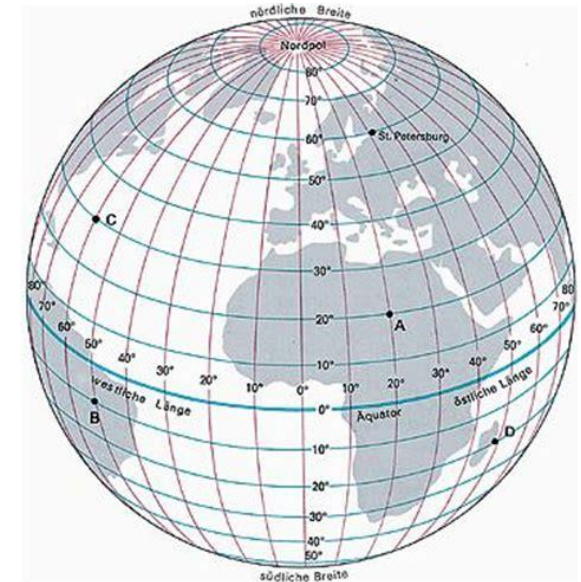
# Global Geodetic Reference Frame - GGRF

## Definition

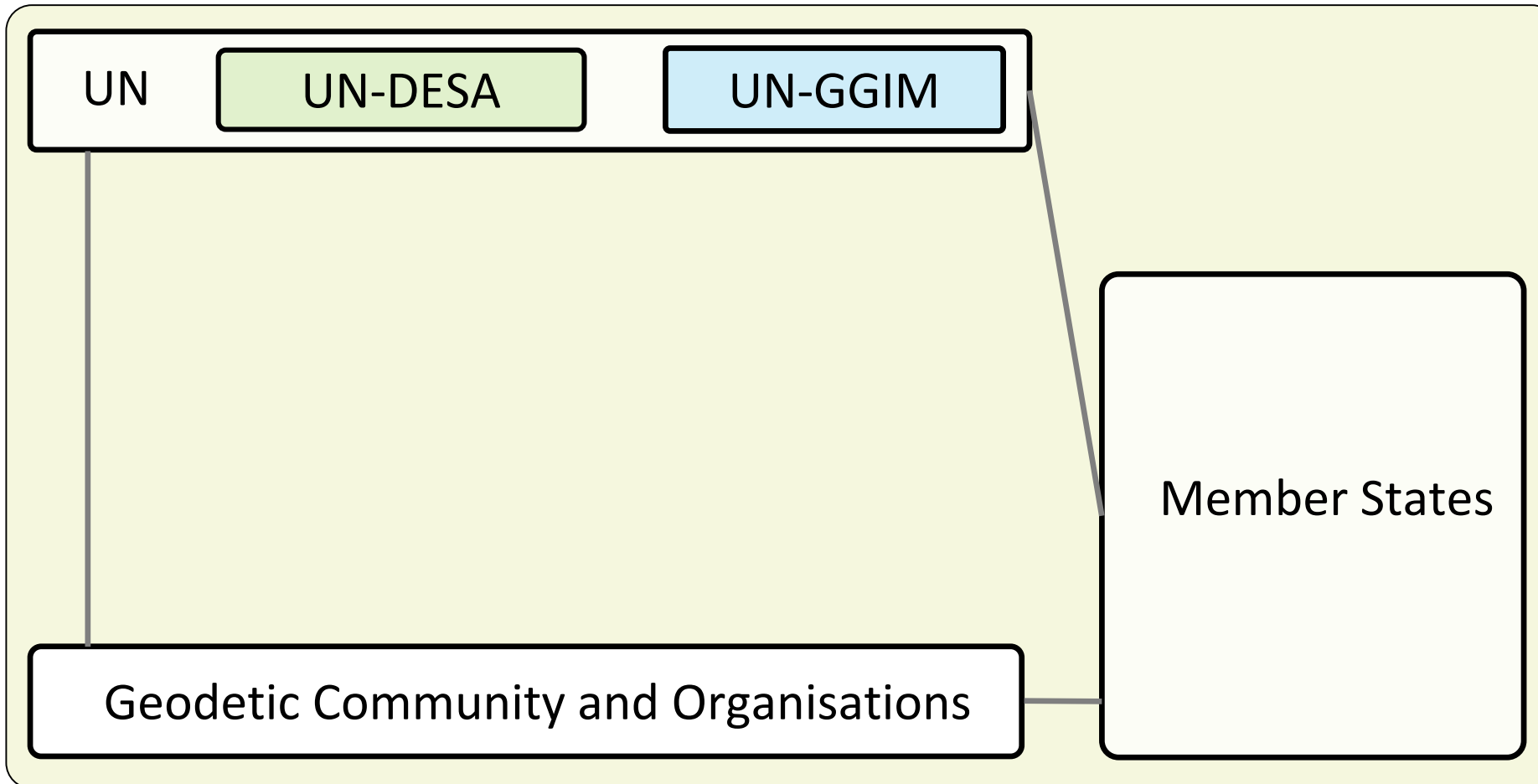
The Global Geodetic Reference Frame (GGRF) is the authoritative, reliable, high accuracy and global spatial **referencing infrastructure**. The GGRF includes the **celestial and terrestrial reference frame products**, the infrastructure used to create it, and the **data, analysis and product generation systems**. The GGRF also includes **gravimetric** observations, products and **height** systems, which underpin measurements of elevation.

## Purpose

- Foundation for evidence-based policies and decision makers
- Underpins management of nationally integrated geospatial information
- Used to monitor the dynamic Earth
- Used for social, environmental and economic initiatives
- Monitoring the progress of the Agenda for Sustainable Development



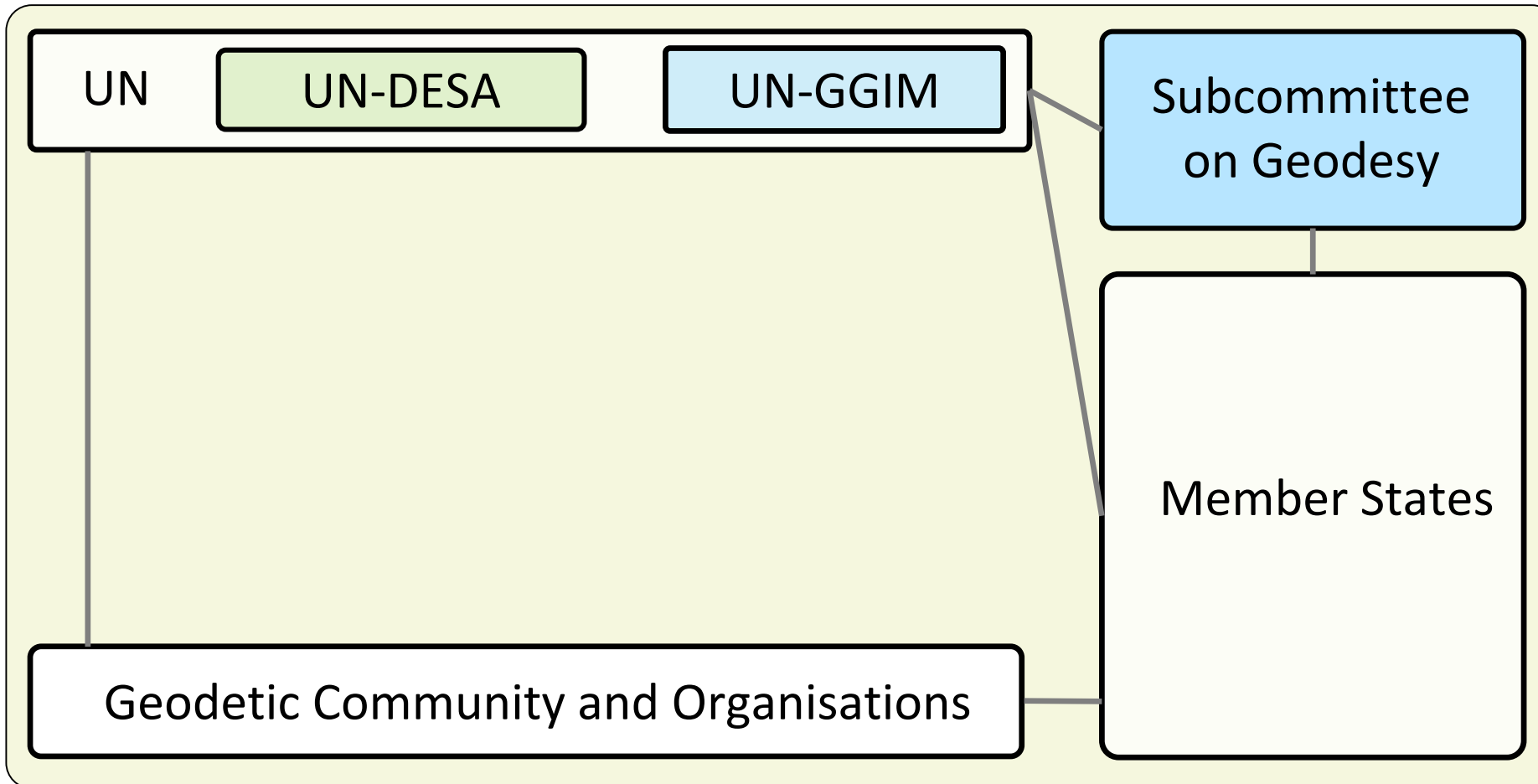
# UN-GGCE Landscape: Structure and Relations



GGRF User: Society, Science, Economy, Transport,  
Environment, Politics, Private Sector, Mapping Agencies

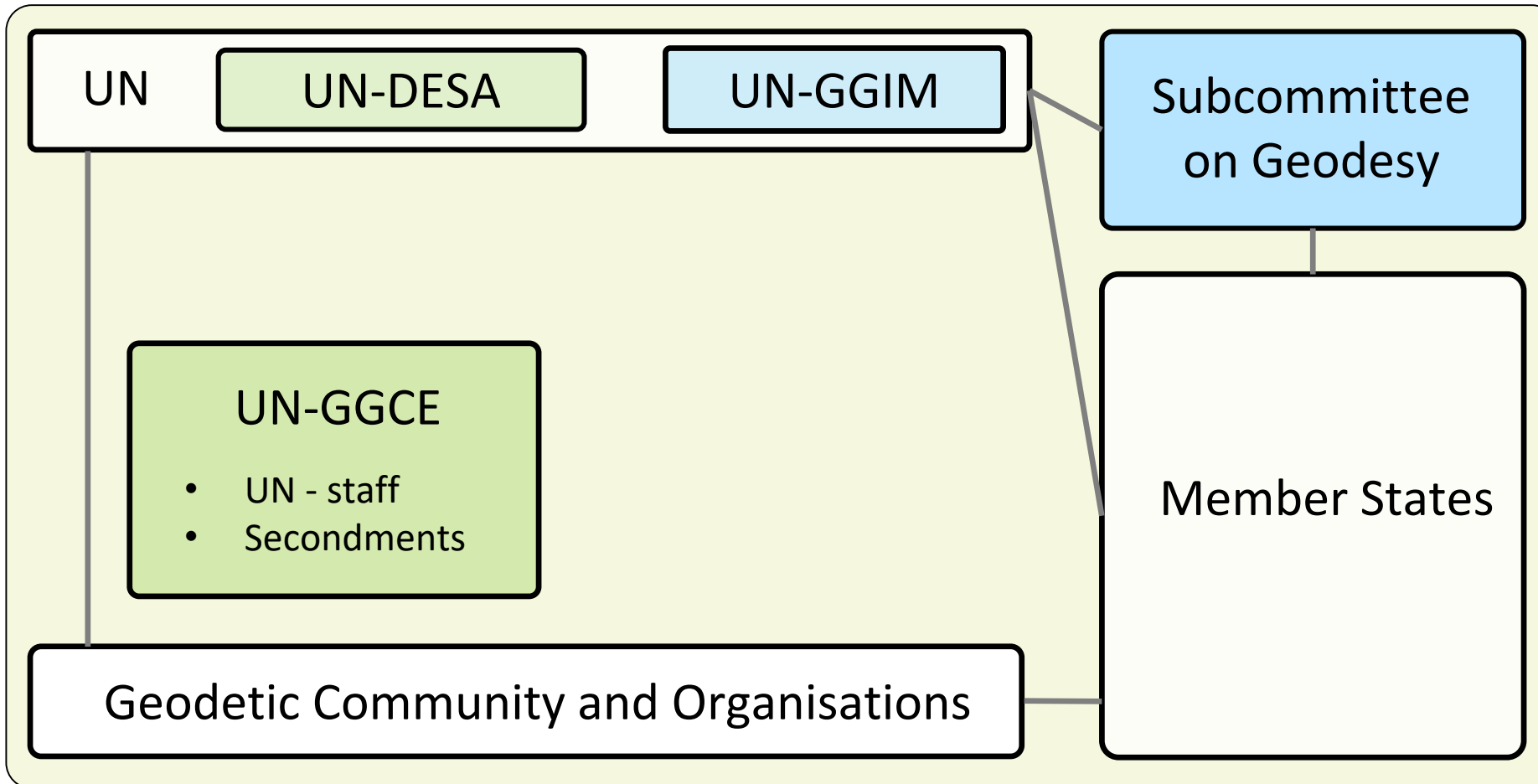


# UN-GGCE Landscape: Structure and Relations



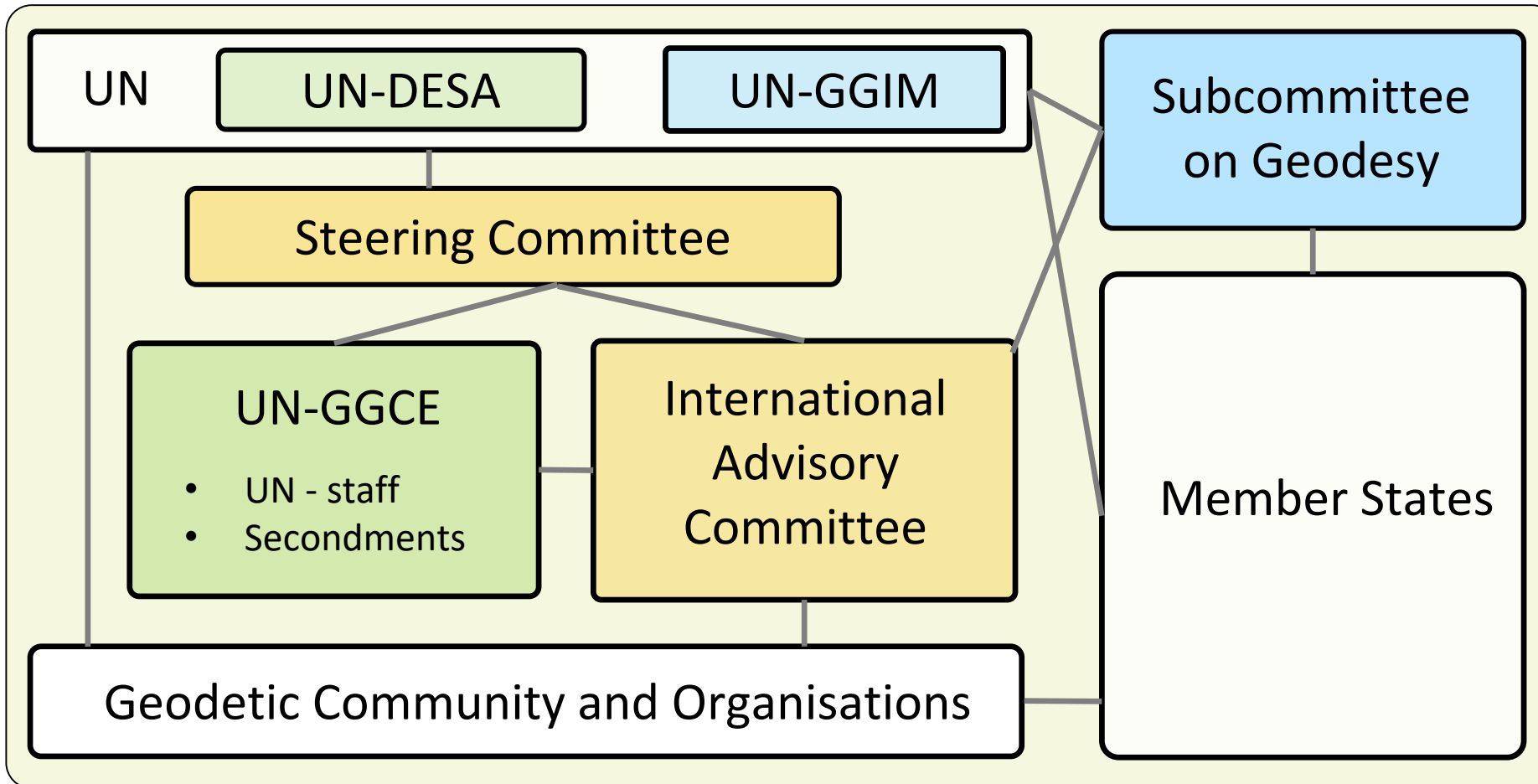
GGRF User: Society, Science, Economy, Transport,  
Environment, Politics, Private Sector, Mapping Agencies

# UN-GGCE Landscape: Structure and Relations



GGRF User: Society, Science, Economy, Transport,  
Environment, Politics, Private Sector, Mapping Agencies

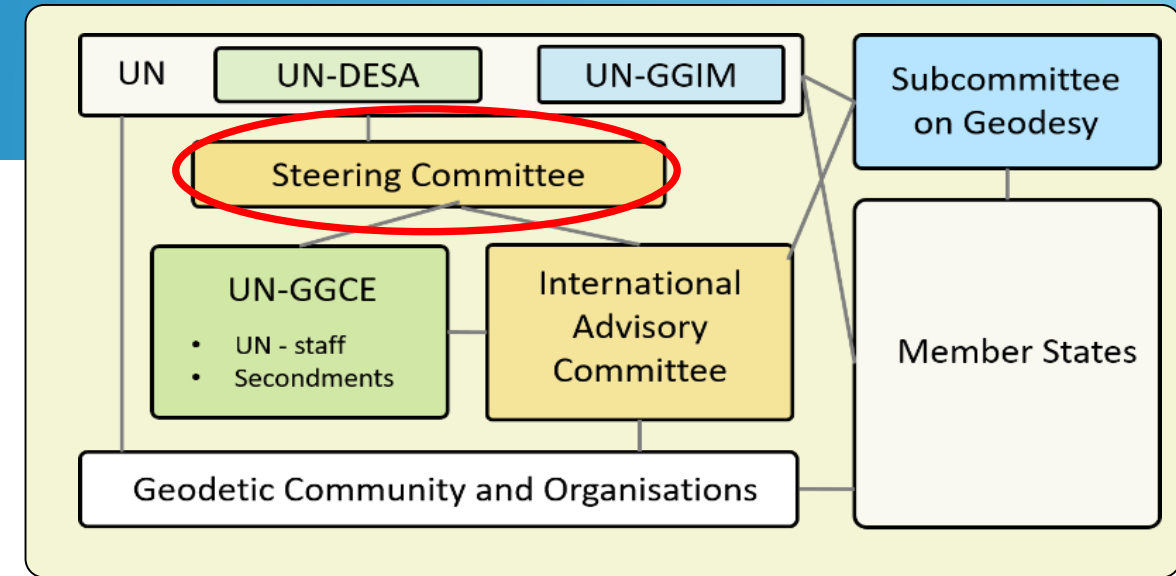
# UN-GGCE Landscape: Structure and Relations



GGRF User: Society, Science, Economy, Transport,  
Environment, Politics, Private Sector, Mapping Agencies

# Steering Committee (SC)

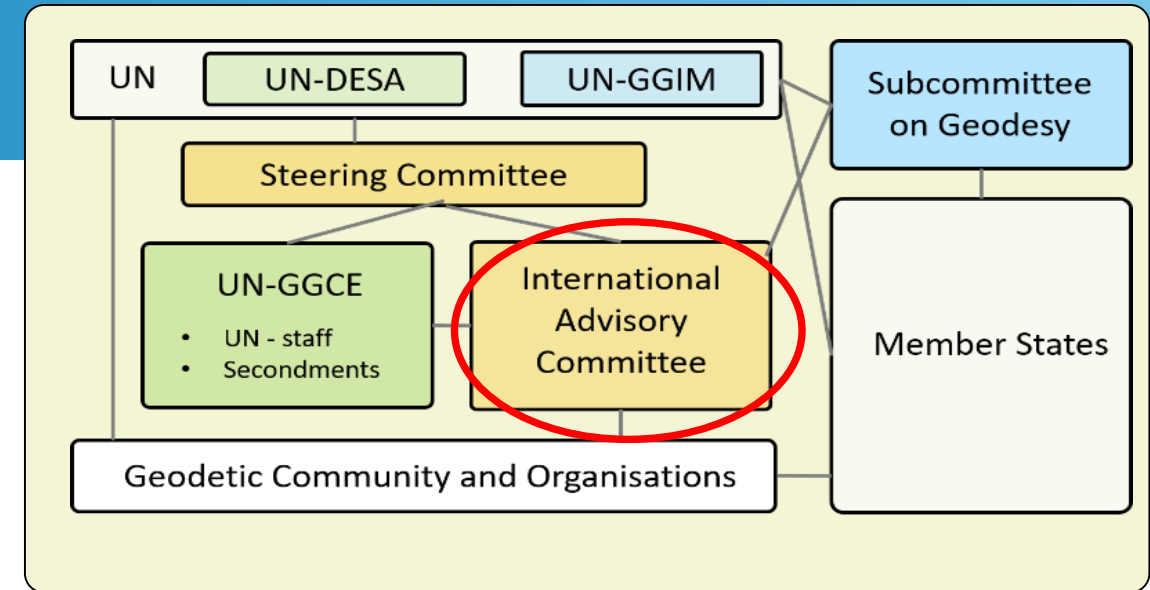
- **Purpose: Strategic advice on the Centre's annual work plan, its implementation, and the reporting of the budget**
- **Composition** of the Committee
  - 6 members
  - Representatives from:
    - UN-DESA (3)
    - Hosting Country – Germany (3)
- Annual meeting





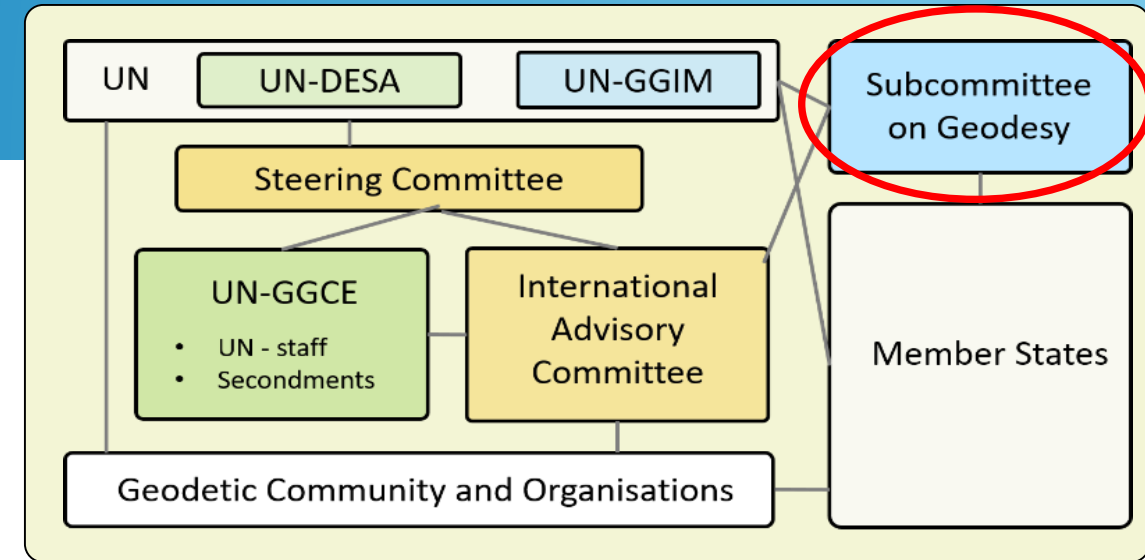
# International Advisory Committee (IAC)

- **Purpose:** guidance and advice on the substantive annual program of work of the Centre in consultation with the Head of the Centre.
- **Term of Reference** – adopted
- Annual **in-person meeting**
- **Composition** of the Committee
  - Currently 20 members
  - Membership: max. two consecutive 2 years terms
  - Representatives from:
    - Geodetic and GGRF Stakeholders (IAG,FIG,...); Geographical Regions; Interdisciplinary Fields; Space Agencies; Private Sector
  - Co-Chairs
    - Ms. Ingrid Vanden Berghe (UN-GGIM, National Geographic Institute, Belgium) – one year term
    - Mr. Albert Momo (Private Sector, Trimble)

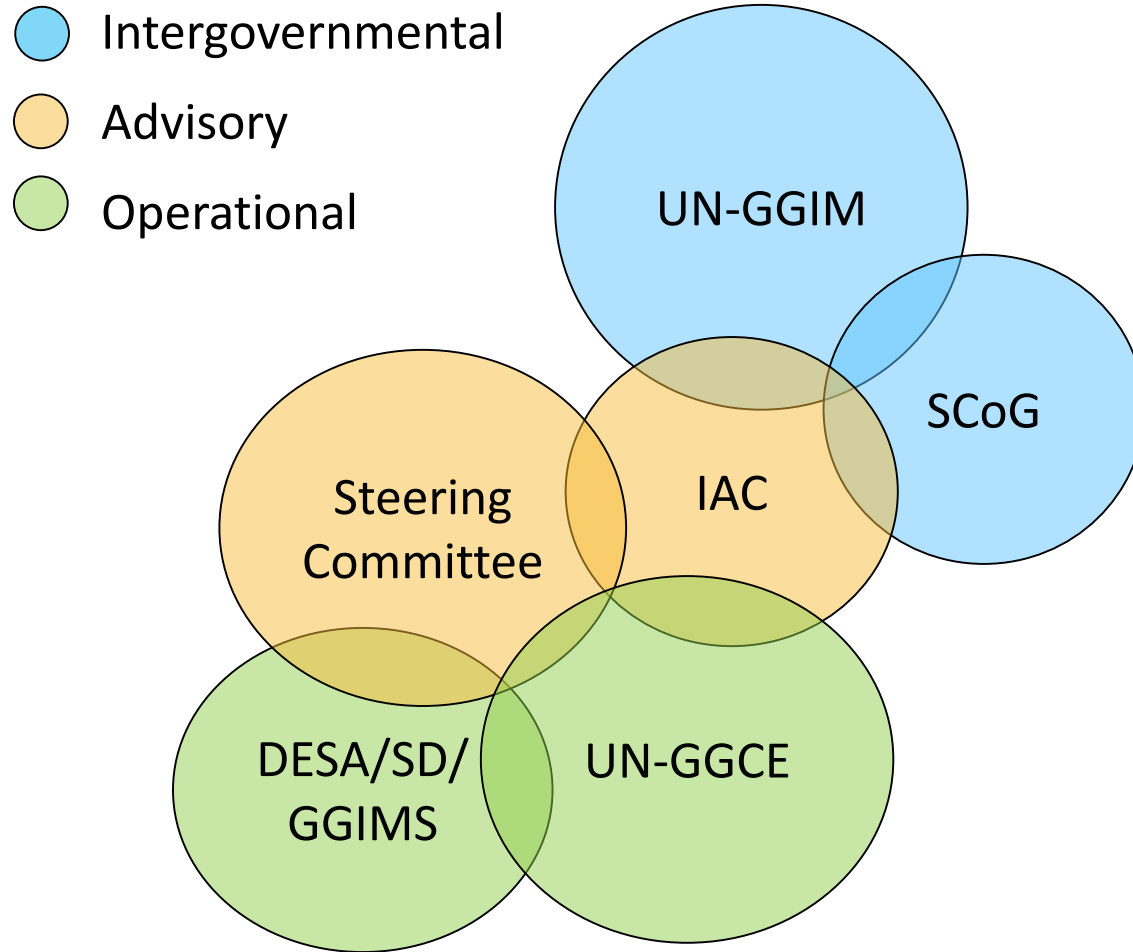


# Subcommittee on Geodesy (SCoG)

- Approx. 40 **members** representing MS (Regional Committees)
- Additionally **partners** as members: IAG, FIG, IUGG, ISO, NASA, ICG
- **Co-Chairs:**
  - Nicholas Brown (Geoscience Australia)
  - Fernand Bale (Geographic and Digital Information Center of Cote d'Ivoire)
- **Bureau:** Abdullah AlQahtani (Saudi Arabia), Calvin Klatt (Canada), Sergio Cimbaro (Argentina), Johannes Bouman (Germany), Zuheir Altamimi (France), Laila Løvhøiden (Norway), Dan Roman (USA)
- New **working groups** on:
  - Global Geodesy Needs Assessment (Zuheir Altamimi)
  - State of Geodesy Report (Laila Løvhøiden)
  - Capacity and Education (Dan Roman) – former ETCB WG



# Constellation of the different bodies in relations



Source: Chee Hai TEO

- The SCoG formally reports to UN-GGIM, and to no other body.
- The UN-GGCE does not report directly to UN-GGIM.
- The IAC reports the work of the UN-GGCE to the SC and into UN-GGIM.
- The SC does not report to UN-GGIM. It oversees the IAC and the UN-GGCE.
- DESA/SD provides oversight for the SC and the UN-GGCE, but not the IAC.
- UN-GGCE program requests to the SCoG are fed through the IAC, which includes members of the SCoG.
- The SCoG may provide program guidance to the UN-GGCE, but through the IAC.

# UN-GGCE - Where are we heading / Tasks

- 1) Global Geodesy Needs Assessment
- 2) State of Geodesy Report
- 3) Global Geodesy Development Plan
- 4) Global Coordination, Coherence, and Partnership
- 5) Awareness Raising and Advocacy
- 6) Improving National Contributions to the GGRF
- 7) Communication and Knowledge Management



# UN-GGCE - Where are we now/ staff



UN Campus Bonn; Source: Press office of the city of Bonn

## **UN Staff** - Selection process ongoing

- Head
- Deputy
- Administrative assistance
- Geodesy professional

## **Secondments**

- Germany: physical two - from 1 September 2023
- Norway: virtual one for two years - from 1 Mai 2023
- France and Spain: virtual - consideration



Federal Agency for  
Cartography and Geodesy



# Thank you for your kind attention!

Bundesamt für Kartographie und Geodäsie  
Stab International  
Richard-Strauss-Allee 11  
60598 Frankfurt am Main

Jan Dostal  
[jan.dostal@bkg.bund.de](mailto:jan.dostal@bkg.bund.de)  
[www.bkg.bund.de](http://www.bkg.bund.de)  
Phone +49 69 6333 – 496

Photo: UN Bonn



© UN Bonn Volker Lannert