

# UN-GGIM: Europe

## GRF – Geodetic Reference Frame



UN-GGIM  
EUROPE

UNITED NATIONS  
COMMITTEE OF EXPERTS ON  
GLOBAL GEOSPATIAL  
INFORMATION MANAGEMENT

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SCoG unofficial  
meeting in Vienna  
04/2018



# Global Geodetic Reference Frame

- The UN Committee of Experts on Global Geospatial Information Management (UN-GGIM) decided in July 2013 to formulate and facilitate a draft resolution for a Global Geodetic Reference Frame.
- The United Nations General Assembly adopted resolution 69/266 on a Global Geodetic Reference Frame for Sustainable Development in February 2015. Total of 53 Member States sponsored the resolution.





# UN Resolution on GGRF

## UN General Assembly urges the sharing of geospatial data to benefit People and Planet

- To ensure development and sustainability of the GGRF
- To enhance global and multilateral cooperation
- To provide technical and knowledge-based assistance for developing countries in need
- To promote open sharing of geodetic data, standards and conventions
- To commit the Member States to improving and maintaining geodetic infrastructure (out of currently used “best-effort” maintenance of geodetic infrastructure)
- To develop outreach programmes



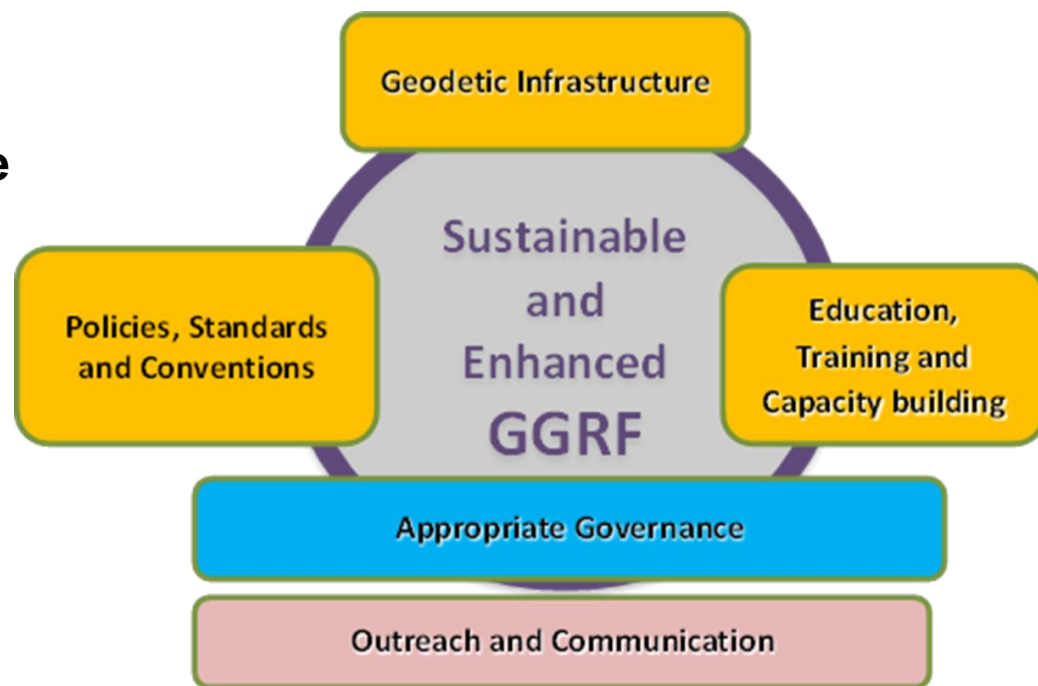
# Subcommittee on Geodesy (SCoG)

- At the UN-GGIM 6<sup>th</sup> session in New York in August 2016, the UN-GGIM endorsed the GGRF Roadmap and decided to establish a permanent sub-committee on geodesy.
  - Given task: to create a position paper to define the appropriate governance arrangements
- The UN-GGIM at its 7<sup>th</sup> session in August 2017 adopted decision, in which it
  - a) endorsed the formal establishment and composition of the **UN GGIM Subcommittee on Geodesy (SCoG)**,
  - b) agreed with the proposed terms of reference and transition plan, and
  - c) encouraged Regional Committees of UN-GGIM to come forward with nominations, if yet to do so, particularly from developing countries.



# Subcommittee on Geodesy, SCoG

- SCoG provides an intergovernmental forum for cooperation on issues relating to the maintenance, sustainability and enhancement of the GGRF
- The SCoG **will work closely with the Regional UN-GGIM geodesy working groups, the national geodetic agencies and the global geodetic community**
- An ongoing role is in the **provision of geodetic expertise** to the UN-GGIM and the broader intergovernmental community, especially relating to the Sustainable Development Goals, but also to hazards, the environment, peace and security, and economic development.



# Relation to geodetic organizations

- SCoG pursues the implementation of the GGRF Roadmap in cooperation with the International Association of Geodesy (IAG) and the International Federation of Surveyors (FIG)
- IAG plays an important role by being the main actor in developing the GGRF science plan as recommended in the road map.
- Closer interaction between the SCoG and IAG is necessary to realise the UN GGRF resolution and the roadmap.
- **EUREF**, the IAG Reference Frame Sub Commission 1.3a for Europe is the regional entity in Europe to fulfill these demands and being the natural partner on regional level.



# European participation on the SCoG

- The members of the SCoG count experts from 40 Member States **nominated by the UN-GGIM regions.**
- At the regional level, the UN-GGIM regional entities (Africa, Americas, Arab States, **Europe** and Asia-Pacific) and the IAG regional components (AFREF- Africa, APREF-Asia-Pacific, **EUREF-Europe**, NAREF-North America, SIRGAS- Latin America and the Caribbean and SCAR-Antarctica) make partially coordinated contributions.
- Countries representing Europe in SCoG (9): Belgium, Finland, France, Germany, Moldova, Norway, Russia, Spain, UK





# EUREF

## Reference Frame Sub Commission 1.3a for Europe

- The **IAG Sub-commission EUREF** is composed of representatives from European nations, annual symposium (plenary) and the Governing Board (GB)
- The **GB** is composed of members elected by the plenary, members in charge of special tasks and ex-officio members. Governance of EUREF activities and policy.
- Provides all of its products and services on the “best effort” basis and **free of charge** to the public



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# EUREF as a regional entity

- Europe is more developed in terms of geodetic infrastructures and geodetic Core Sites than many other parts of the world
- IAG Subcommittee EUREF is responsible for geodetic reference frames in Europe, running the permanent GNSS network which is the basis of European reference frame and link to the global frame
- EUREF has a liaison to many European or global organizations;
  - Partners: EUPOS, Eurogeographics, EUMETNET, CEGRN
  - Collaborations: IAG Services and working groups, ICG, FIG (Com.5), Wegener, ...
- National Mapping and Cadastre Authorities of 35 European Countries are participants in the Plenary of EUREF and 130 organizations in Europe are participating in the work of EUREF



# EUREF

- Develop the EUREF Permanent GNSS Network (**EPN**) for the maintenance of the European Reference Frame, as contribution to the ITRF and as infrastructure to support other relevant projects, e.g. European initiatives related to Galileo
- Voluntary federation of over 100 self-funding agencies, universities, and research institutions in more than 35 European countries with more than 200 GNSS permanent stations
- Promote the adoption of the reference systems defined by EUREF (ETRS89 and EVRS) in the European countries and European-wide organizations involved in geo-referencing activities.
- Improve the Unified European Levelling Network (UELN) by extending it to all European countries



**UN GA Resolution on GGRF**

**UN Member  
States**

**UN- GGIM**

**UN- GGIM:  
Europe**

**Sub-committee  
on geodesy**

**GRF-  
Europe**

**Other regional  
GRF groups**

**IAG  
FIG**

**EUREF**

**Other European  
georeferencing  
organisations**

**GLOBAL**

**REGIONAL**

Policy making level  
Expert level





# GRF - Europe and EUREF

- New ToR and action plans of SCoG
- Regional representation in SCoG exists with its new structure
- 2017-18 there have been several discussions on the relations between GRF – Europe and EUREF, both in UN GGIM: Europe ExC and EUREF GB
- Goals:
  - to avoid duplication,
  - to take into account the already existing status and role of EUREF in Europe,
  - to organize the activities in most effective way
- Issues
  - Not all European countries within EUREF
  - EUREF structure may not be suitable for fully integration of GRF – Europe
  - Current structure of GRF – Europe not sufficient and not “SCoG compliant”



# GRF – Europe Structure (plan)

- Currently an “ad-hoc” group with members from Finland, France, Germany, Greece, Norway, Sweden, and Switzerland
- European membership in SCoG is not taken into account
- Current position paper (from 2016-17) does not reflect the global development and SCoG plans
- GRF – Europe is formed by the European representatives in SCoG
- A possibility to invite additional members (e.g. georeferencing organizations)
- To fulfil the SCoG ToR and implementation plan with close connection to geodetic entities, the chair of EUREF should be the chair of GRF – Europe and a member in the UN GGIM: Europe ExC (proposal)
- Tasks and structure will follow directly from the ToR of SCoG



# GRF – Europe actions and next steps

- Chair of GRF – Europe will participate the UN GGIM 8<sup>th</sup> session in New York 1-3.8.2018; adoption of the ToR of the SCoG
- Formalizing the new structure and composition of GRF – Europe (UN GGIM: Europe ExC)
- Adopting the relations and EUREF participation in EUREF GB
- Writing the new position paper and action plan based on SCoG ToR and roadmap
- Organizing with EUREF the first regional education event within EUREF Symposium in Tallinn Estonia 05/2019 (a 1-day tutorial on an actual geodetic topic)

