



## Fourth Plenary Meeting of the UN-GGIM Subcommittee on Geodesy 20 – 21 March 2024

Conference Room LE 2312, 23rd Floor, Langer Eugen Building UN Campus,  
Platz der Vereinten Nationen 1, 53113 Bonn, Germany

### SUMMARY NOTES

#### Preamble

The fourth plenary meeting of the UN-GGIM Subcommittee on Geodesy (SCoG) was hosted by the United Nations Global Geodetic Centre of Excellence (UN-GGCE) at the United Nations Campus in Bonn from 20 to 21 March 2024. The meeting was attended by representatives from 19 Member States from across all five UN regions, and three participants from international and regional organizations, geodetic research institutions and relevant stakeholders.

The participants also contributed to the two-day meeting and workshop on the Global Geodesy Needs Assessment together with the UN-GGCE International Advisory Committee from 18 to 19 March (see separate summary and presentations: [UN-GGCE meetings](#))

#### Welcome, introduction and organization of work

Co-chair of the SCoG, Johannes Bouman, Germany, welcomed the participants and introduced the agenda. He expressed that he was impressed with the accomplishments of the UN-GGCE in the short amount of time it has been operating and reiterated the great value that the UN-GGCE is providing.

#### Aligning the work program of the SCoG and the UN-GGCE Strategy and operating plan

Co-chair of the SCoG, Fernand Bale, Cote d'Ivoire, presented the role of the SCoG and described the need to avoid duplication of what is done by the UN-GGCE and what is done by the SCoG. He also stressed that the role of the SCoG is critical to increase recognition of geodesy within governments.

Fernand Bale went through the SCoG Terms of Reference, in particular Objective 1.1.: to implement the United Nations General Assembly resolution, 69/266, entitled 'A Global Geodetic Reference Frame for Sustainable Development' through coordination and collaboration; and Objective 1.2.: to assist and guide the UN-GGCE in the development of its work plan and provide access to scientific and operational expertise.

UN-GGCE Head of Office, Nick Brown, presented the UN-GGCE operating model and described the role of the UN-GGCE is to work with a broad range of stakeholders including Member State governments, UN regional committees, UN functional groups and partner organizations. Nick Brown mentioned that the focus of stakeholder engagement will change over time depending on our short, medium and long-term goals.

The participants welcomed the role of the UN-GGCE as a coordinator at a global level and also noted that a lot of work must be done by Member States. The role of the Member States and regions are to amplify the message and bring feedback to the UN-GGCE.

Co-chair of the Subcommittee, Johannes Bouman, summarized the discussion and expressed that the goals of the UN-GGCE and the SCoG are in the same direction and that they have complementary



roles. The next action for the SCoG is to look at its work program to avoid duplication of work. The SCoG Bureau will start this work and share the findings with all SCoG members.

#### **UN-GGIM regional geodesy working groups update**

The UN-GGIM regions each have a working group / community of interest with a focus on geodesy. In the meeting the regional geodesy working group chairs reported on updates from their regions. The opportunity to be involved in the UN-GGCE planned workshops on capacity building and reference frames were also discussed.

*Arab States by Abdullah AlQahtani/ Saudi Arabia:* The Arab States are working on a roadmap to implement the Arabic reference frame; ARABREF. The challenge is how to best encourage Member States to share their data. In the meeting the International Association of Geodesy (IAG) agreed to help the Arab States to make progress with this. The UN-GGCE is also planning capacity development workshop to demonstrate the benefits of data sharing, and Nick Brown of offered to design a workshop with the Arab States.

*Europe by Jeffrey Verbeurgt/ Belgium:* UN-GGIM: Europe has decided to translate its Geodetic Reference Frame (GRF) Working Group into a GRF Community on Interest after the Working Group on GRF has not active in the past few years. The UN-GGCE 'Listening Tour' session in Europe brought several new members to the new GRF Community of Interest. The community is discussing a draft strategy related to the region's needs with emphasis on the lack of geodesists, enhanced training and raising awareness. The GRF Community of Interest are also working to collaborate with the existing EUREF working group to avoid duplication of effort.

*Africa by SCoG's Co-chair Fernand Bale/ Cote d'Ivoire on behalf of Aslam Parker/ South Africa:* The AFREF Working Group has not functioned since 2018 and the Member States are trying to find ways to revise the working group. The major problems identified in Africa are the range of different datums used, lack of capacity and lack of awareness. Better coordination between African Member States to reorganize efforts were solutions mentioned in the meeting.

*Asia-Pacific by Basara Miyahara, Japan:* UN-GGIM: Asia Pacific's Working Group 1 on Geodetic Reference Framework is an active working group aiming to improve access to the global geodetic reference frame through development of the regional geodetic reference frame; the Asia-Pacific Reference Frame, APREF.

*Americas by Sergio Cimbalò, Argentina and Dan Roman, USA:* UN-GGIM: Americas Working Group on Geodesy is coordinated by SIRGAS president Gustavo Caubarrere, Uruguay. The working group is working to incorporate all countries into SIRGAS, the geodetic reference frame for the Americas.

#### **UN-GGIM Subcommittee on Geodesy Partners update**

International Association of Geodesy (IAG), International Federation of Surveyors (FIG) and NASA are all partners of the SCoG. In the meeting their representatives presented updates, focus areas and upcoming events of interest for the SCoG.

*FIG – International Federation of Surveyors, by Ryan Keenan:* Knowledge transfer is one of the main FIG activities. FIG members have been involved in the UN-GGCE Listening World Tour and have also contributed to regional sessions. At the upcoming FIG working week in Ghana in May, FIG Commission 5 convenes one session for policy makers. An update on the "Reference Frame in Practice Manual" will be released in three languages.



*NASA by Stephen Merkowitz:* NASA appreciated the work the UN-GGCE has done. Stephen noted that to achieve the goals of NASA's existing and new missions there is a significant dependence on geodetic infrastructure; and a lot of the existing infrastructure is old. NASA is working to enhance its VLBI and SLR networks in the coming years. NASA is also involved in the work on geodetic collocation in space, outreach, training and VLBI training schools.

*IAG – International Association of Geodesy, by Richard Gross:* The IAG is planning an annual update on the International Terrestrial Reference Frame (ITRF), which will reduce errors. This is necessary to do to improve stability of the reference frame. Some SCoG members were concerned with the impacts on limited capacity available in countries to achieve this plan and asked how much extra effort it takes to produce the ITRF every year instead of the every ~5 years. According to the IAG there will be some extra work, but the IAG Services are all supportive of the proposed strategy.

#### **Business of the Subcommittee – Working Groups, Bureau, and Co-chairs**

The SCoG selected Basara Miyahara, Japan as new member of the SCoG Bureau after Canada's Bureau member Calvin Klatt resigned in January 2024. He was unanimously elected. The SCoG Bureau now has regional representation from all regions.

Current working groups and plans were also discussed, including a suggestion to dissolve two working groups (on needs assessment and state of geodesy report, which actions are executed by the UN-GGCE). The capacity and training working group will continue, led by Dan Roman, USA.

#### **Regional reference frames**

The theme was introduced by Zuheir Altamimi, France, who presented on what regional reference frames are, how they are connected to the ITRF, and why they are needed. The regional reference frames are intended to densify the ITRF and provide a bridge between the international frame and national datums.

Zuheir explained the importance of having IGS stations in countries, which automatically creates the link to the ITRF. IGS products is the way to have universal access to the ITRF. Altamimi stressed that both Africa and Arab States need to make progress on this.

#### **Summary and close**

Co-chair Johannes Bouman summarised the two days meeting and the discussions, including the role of the SCoG and its interaction with UN-GGCE. Johannes thanked the UN-GGCE team in preparing both the IAC meeting and the Subcommittee meeting and reminded SCoG members to stay engaged with the finalisation of the Global Geodesy Needs Assessment and the creation of the 1<sup>st</sup> Joint Development Plan on Global Geodesy.