

Second Meeting of the UN-GGCE International Advisory Committee &

Fourth Plenary Meeting of the Subcommittee on Geodesy

18-21 March 2024





Stronger. Together

Monday, 18 March	Location: UN Campus, Langer Eugen Building, 23rd Floor, Room 2312
9:00 – 9:30 am	Arrival and entry to the building
	2 nd meeting of the UN-GGCE: International Advisory Committee (UN-GGIM Subcommittee on Geodesy Members are welcome to observe)
9:30 – 10:15 am	Welcome and introductions Mr Stefan Schweinfest (Director, UN Statistics Division/DESA) Mr Albert Momo (co-Chair UN-GGCE IAC) Organization of the meeting Mr Albert Momo (co-Chair UN-GGCE IAC) Mr Nicholas Brown (Head of Office UN-GGCE) Outline of the agenda Overview of desired outcomes from the meeting Operating Plan of the UN-GGCE Mr Albert Momo (co-Chair UN-GGCE IAC) Mr Nicholas Brown (Head of Office UN-GGCE) Presentation of the work undertaken so far by UN-GGCE Operating model and reporting lines of the UN-GGCE Operating plan of the UN-GGCE for 2024 and 2025 Obiscussion with IAC members on operating plan and priorities of the UN-GGCE
10:15 – 10:20 am	Outcome: Seek consensus on the UN-GGCE operational plan and priorities for 2024 and 2025
10:20 – 10:30 am	Group photo
10:30 – 11:00 am	Morning Tea



Date	Morning	Afternoon
Monday, 18 March	2 nd meeting of the UN-GGCE: International Advisory Committee	Joint UN-GGCE, UN-GGCE: IAC, Subcommittee on Geodesy workshop on Global Geodesy Needs Assessment
Tuesday, 19 March	Joint UN-GGCE, UN-GGCE: IAC, Subcommittee on Geodesy workshop on Global Geodesy Needs Assessment	2 nd meeting of the UN-GGCE: International Advisory Committee
Wednesday, 20 March	4 th plenary meeting of the Subcommittee on Geodesy (including members of UN-GGCE: IAC who are not members of the Subcommittee)	4 th plenary meeting of the Subcommittee on Geodesy (including members of UN-GGCE: IAC who are not members of the Subcommittee)
Thursday, 21 March 4 th plenary meeting of the Subcommittee on Geodesy (include members of UN-GGCE: IAC who a not members of the Subcommittee)		4 th plenary meeting of the Subcommittee on Geodesy (including members of UN-GGCE: IAC who are not members of the Subcommittee) Second Meeting of the UN-GGCE Steering Committee



1. Operationalize

- UN-GGCE Head of Office started on (07 Oct 2023)
- First Consultation Meeting (16-17 Oct 2023) with UN-GGCE team members
 - The Team
 - Ms. Anne Jørgensen
 - Ms. Sarah Kowal
 - Mr Jan Dostal
 - Mr Nicholas Brown
 - Mr José Rodríguez
- Meeting with the International Advisory Committee (15 November 2023)
- The UN-GGCE Strategy and Operating Plan (11 December 2023)



2. Sustain

- UN-GGCE currently has funding until end of 2025
- German State Secretary 11 January 2024
 - "Who else is contributing?"
- Funding from Germany
- Secondment from Norway
- Secondment from Spain
- France and Germany government meeting 14 December 2023
 - Secondment from France
- Partners of the UN-GGCE document
- Discussions with Member States and Partner organizations on further contributions



3. Evidence

- UN-GGCE has five focus areas
 - Evidence
 - Resources
 - Governance
 - Capacity
 - Awareness
- We think improving evidence will drive improvement in the other focus areas
- "Hidden Risk: How a lack of resilience in the global geodesy supply chain poses risk to critical infrastructure and national economies"



4. 1st Joint Development Plan for Global Geodesy

- Objective: Plan to sustain the global geodesy supply chain supported by Member States and Partners
- Requirement: the plan is guided by Member States and Partner needs

•	Second Consultation Meeting	(15-18 Nov 2023)	
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"Listening World Tour" IAG x2 (28 Nov 2023)

"Listening World Tour" Americas (29 Nov 2023)

• "Listening World Tour" Asia-Pacific (31 Jan 2024)

• "Listening World Tour" Arab States (4-8 Feb 2024)

• "Listening World Tour" Europe (16 Feb 2024)

• "Listening World Tour" FIG, IHO, ISO x2 (20 Feb 2024)

• "Listening World Tour" Africa (27 Feb 2024)

- Over 500 people from 110 Member States
- Draft user Needs Assessment to be discussed this week
- Draft content for 1st Joint Development Plan for Global Geodesy to be developed this week



1st Joint Development Plan for Global Geodesy (due July 2024)

- Review Needs Assessment this week
- UN-GGCE to develop updated draft of Needs Assessment (end of March)
- Circulate updated draft to all Member States and Partners and seek feedback (mid April)
- Finalize Needs Assessment (end of April)
- Publish and communicate the Needs Assessment



1st Joint Development Plan for Global Geodesy (due July 2024)

- Draft Development Plan actions this week
- Prioritize Development Plan actions this week
- Provide as background document to 14th session of UN-GGIM Committee of Experts (3rd week of July)



Expert Consultation meeting on Strengthening the Global Geodesy Supply Chain (April 22-23)

- This workshop will bring representatives from Member State civilian science, defense and policy agencies together to:
 - 1. Introduce the global geodesy supply chain and explain why it is vital for national economies and the operation of critical infrastructure.
 - 2. Discuss the weaknesses in the global geodesy supply chain and the threat to our use of space from a civilian and defense perspective.
 - 3. Discuss pathways and actions to address weaknesses in the global geodesy supply chain in the short, medium and long-term.



"Hidden Risk" report (end May 2024)

- Circulate revised draft to IAC (end April)
- Feedback due (mid May)
- Incorporate feedback, publish and communicate (end May)
- Provide as background document to 14th session of UN-GGIM Committee of Experts (3rd week of July)



Policy briefs (economic and climate change)

- UN styled policy briefs aimed at government officials
- One based on the Hidden Risk report (released with the Hidden Risk report)
- One based on the importance of geodesy for climate change



Partners of the UN-GGCE (end May 2024)

- Circulate revised draft to IAC (end April)
- Feedback due (mid May)
- Incorporate feedback, publish and communicate (end May)
- Provide as background document to 14th session of UN-GGIM Committee of Experts (3rd week of July)



Webinars on modern Geospatial Reference System (May 2024 – August 2024)

- 1. Why is a modern Geospatial Reference System important
- 2. Static datum
- 3. Time dependent reference frame and transformation parameters
- 4. Height

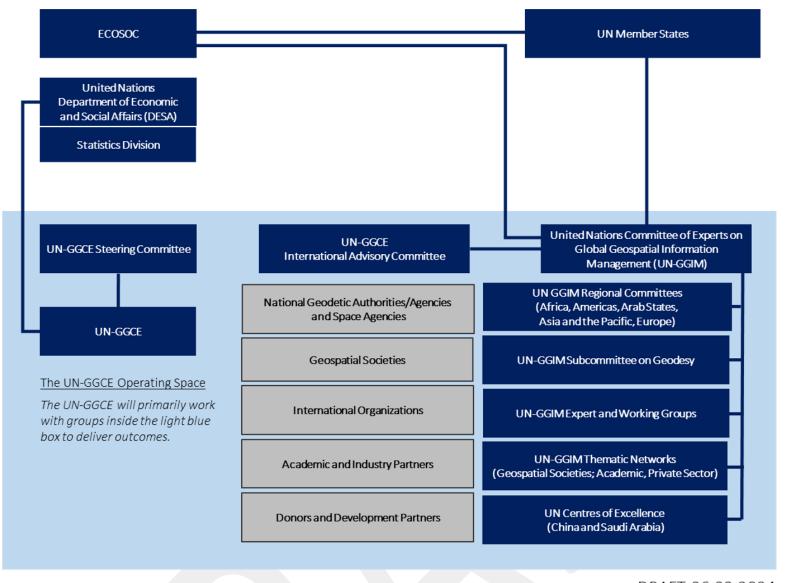


Capacity Development Workshops, Bonn (August 2024 – June 2025)

- The purpose of the workshops is to bring representatives from Member States to Bonn, Germany and focus on the geodetic needs of their region and country.
- UN-GGCE encourages Partners to participate in the meetings
- Five workshops will be run for Member States from regions of Africa, Americas, Arab States,
 Asia-Pacific and Europe.
- The UN-GGCE has funding available to pay for Member State representatives flights, accommodation and per diem for the workshop.
- The workshops will each be one week-long (Monday to Friday).



UN-GGCE Operating Model





Monday, 18 March	Location: UN Campus, Langer Eugen Building, 23rd Floor, Room 2312
9:00 – 9:30 am	Arrival and entry to the building
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9:30 – 10:15 am	Welcome and introductions Mr Stefan Schweinfest (Director, UN Statistics Division/DESA) Mr Albert Momo (co-Chair UN-GGCE IAC) Organization of the meeting Mr Albert Momo (co-Chair UN-GGCE IAC) Mr Nicholas Brown (Head of Office UN-GGCE) Outline of the agenda Overview of desired outcomes from the meeting Operating Plan of the UN-GGCE Mr Albert Momo (co-Chair UN-GGCE IAC) Mr Nicholas Brown (Head of Office UN-GGCE) Presentation of the work undertaken so far by UN-GGCE Operating model and reporting lines of the UN-GGCE Operating plan of the UN-GGCE for 2024 and 2025 Obiscussion with IAC members on operating plan and priorities of the UN-GGCE
10:15 – 10:20 am	Outcome: Seek consensus on the UN-GGCE operational plan and priorities for 2024 and 2025
10:20 – 10:30 am	Group photo
10:30 – 11:00 am	Morning Tea



Joint UN-GGCE, UN-GGCE: IAC, Subcommittee on Geodesy workshop on Global Geodesy Needs Assessment	
11:00 – 11:15 am	Presentation of the draft Global Geodesy Needs Assessment Mr Albert Momo (co-Chair UN-GGCE IAC) Mr Nicholas Brown (Head of Office UN-GGCE) Overview of the method used to perform the Global Geodesy Needs Assessment process Summary of findings from a global and regional perspective Discussion
11:15 am – 12:25 am	Breakout session 1: Global Geodesy Needs Assessment - Evidence • Mr Albert Momo (co-Chair UN-GGCE IAC) • Mr Nicholas Brown (Head of Office UN-GGCE)
	 Quite time (15 mins): Each person reads the Evidence focus area information in the draft Global Geodesy Needs Assessment document and makes personal notes Group allocation (5 mins): People will be put in groups Discuss and document (35 mins):
	 Each group will discuss the Evidence focus area of the Global Geodesy Needs Assessment. Scribe to add information or comments to the Needs Assessment, but don't remove any information Add information relating to gaps and options for improvement Report (15 mins): Group representative to report back to the whole group
12:25 – 12:30 pm	Outcome: Word document from each group sent to Nicholas.Brown@un.org and Focus Area in the title.



Global Geodesy Needs Assessment

- To sustain and enhance the global geodesy supply chain, the UN-GGCE together with Member States and Partners are developing a Global Geodesy Development Plan
- Five focus areas: evidence, resources, governance, capacity, and awareness.
- To guide the content, pathways, and actions of the Joint Development Plan for Global Geodesy, the UN-GGCE undertook a Global Geodesy Needs Assessment to better understand the current status and desired future state of the components of the global geodesy supply chain in Member State countries, regions and globally.



Global Geodesy Needs Assessment

- Nine UN-GGCE Listening World Tour sessions, held in 2023 and 2024
 - Two sessions with IAG (28 Nov 2023)
 - UN-GGIM Americas (29 Nov 2023)
 - UN-GGIM Asia-Pacific (31 Jan 2024)
 - UN-GGIM Arab States (4-8 Feb 2024)
 - UN-GGIM Europe (16 Feb 2024)
 - Two sessions with FIG, IHO, ISO TC/211 (20 Feb 2024)
 - UN-GGIM Africa (27 Feb 2024)
- UN-GGCE in person Expert Consultation Sessions, held in November and December 2023 (including representatives from all five UN-GGIM regions and partners).
- Hidden Risk: How the lack of resilience in the global geodesy supply chain could have catastrophic impacts on critical infrastructure and national economies. Background report for decision-makers. DRAFT report provided by UN-GGCE, February 2024.

- UN-GGIM Subcommittee on Geodesy: Global Surveys on Geodetic Reference Frame Competency Surveys (2018 and 2021)
- UN-GGIM Subcommittee on Geodesy: Geodetic Infrastructure Working Group Questionnaire (March 2020)
- UN-GGIM Subcommittee on Geodesy Position Paper on Sustaining the Global Geodetic Reference Frame, tabled at the 11th session of UN-GGIM Committee of Experts (2021)
- UN-GGIM Subcommittee on Geodesy Work Plan, tabled at the 9th session of UNGGIM Committee of Experts (2019)



Joint UN-GGCE, UN-GGCE: IAC, Subcommittee on Geodesy workshop on Global Geodesy Needs Assessment		
11:00 - 11:15 am 11:15 am - 12:25 am	Presentation of the draft Global Geodesy Needs Assessment Mr Albert Momo (co-Chair UN-GGCE IAC) Mr Nicholas Brown (Head of Office UN-GGCE) Overview of the method used to perform the Global Geodesy Needs Assessment process Summary of findings from a global and regional perspective Discussion Breakout session 1: Global Geodesy Needs Assessment - Evidence Mr Albert Momo (co-Chair UN-GGCE IAC) Mr Nicholas Brown (Head of Office UN-GGCE) Quiet time (15 mins): Each person reads the Evidence focus area information in the draft Global Geodesy Needs Assessment document and makes personal notes Group allocation (5 mins): People will be put in groups Discuss and document (35 mins): Each group will discuss the Evidence focus area of the Global Geodesy Needs Assessment. Scribe to add information or comments to the Needs Assessment, but don't remove any information Add information relating to gaps and options for improvement Report (15 mins): Group representative to report back to the whole group	
12:25 – 12:30 pm	Outcome: Word document from each group sent to Nicholas.Brown@un.org and Focus Area in the title.	
12:30 – 1:30 pm	Lunch	



EVIDENCE FOCUS AREA – WORKSHOP TABLE

Current State: The importance of geodesy is poorly understood by decision makers.

Desired Future State: The importance of geodesy is better understood by decision makers.

CURRENT STATE OBSERVATIONS	GAPS AND ACTIONS	SUGGESTIONS FOR FUTURE STATE	PRIORITY (Must, Should, Could, Would)
There is a lack of evidence which describes the importance of geodesy to decision makers and countries citizens.	Dedicated resources to produce the content Expertise to produce the content	Quantified economic evidence; Business cases; stories / case studies, described in lay person terms which shows the importance of the global geodesy supply	
There is a lack of evidence which provides a direct link between investment in the global geodesy supply chain and societal, environmental and economic benefits.	Communications expertise to translate complex information into lay person language Dedicated resources to personalize global evidence information to fit the priorities of the country / decision maker.	chain relating to government priorities such as land management, digital twin, construction, health services, climate change, natural disasters and reduce poverty. Develop a 'pyramid' of key messages outlining benefits of and critical dependencies on the global geodesy supply chain, where messages at the top of the pyramid are applicable to all, and subsequent messages are tailored depending upon the user segment A comprehensive report showing how geodesy supports national priorities across Member States can be used by Member States to 'cherry pick' the	
		Member States to 'cherry pick' the topics that may hold national significance	

1:30 – 2:55 pm	 Mr Albert Momo (co-Chair UN-GGCE IAC) Mr Nicholas Brown (Head of Office UN-GGCE) Quiet time (15 mins): Each person reads the Resources focus area information in the draft Global Geodesy Needs Assessment document and makes personal notes Group allocation (5 mins): People will be put in groups Discuss and document (45 mins): Each group will discuss the Resources focus area of the Global Geodesy Needs Assessment. Scribe to add information or comments to the Needs Assessment, but don't remove any information Add information relating to gaps and options for improvement Report (15 mins): Group representative to report back to the whole group
2:55 – 3:00 pm 3:00 – 3:30 pm	Outcome: Word document from each group sent to Nicholas.Brown@un.org and Focus Area in the title. Afternoon Tea



3:30 – 4:55 pm	Breakout session 3: Global Geodesy Needs Assessment - Governance
	Mr Albert Momo (co-Chair UN-GGCE IAC)
	Mr Nicholas Brown (Head of Office UN-GGCE)
	Quiet time (15 mins): Each person reads the Governance focus area information in the draft Global
	Geodesy Needs Assessment document and makes personal notes
	 Group allocation (5 mins): People will be put in groups
	 Discuss and document (45 mins):
	 Each group will discuss the Governance focus area of the Global Geodesy Needs
	Assessment.
	 Scribe to add information or comments to the Needs Assessment, but don't remove any
	information
	 Add information relating to gaps and options for improvement
	 Report (15 mins): Group representative to report back to the whole group
4:55 – 5:00 pm	Outcome: Word document from each group sent to Nicholas.Brown@un.org and Focus Area in the title.
6:30 pm	Dinner - Tuscolo Münsterblick (Gerhard-von-Are-Straße 8, 53111 Bonn)



Tuesday, 19 March	Location: UN Campus, Langer Eugen Building, 23rd Floor, Room 2312
9:00 – 9:30 am	Arrival and entry to the building
	Joint UN-GGCE, UN-GGCE: IAC, Subcommittee on Geodesy workshop on Global Geodesy Needs Assessment
9:30 – 10:40 am	 Breakout session 4: Global Geodesy Needs Assessment – Capacity Mr Albert Momo (co-Chair UN-GGCE IAC) Mr Nicholas Brown (Head of Office UN-GGCE) Quiet time (15 mins): Each person reads the Capacity focus area information in the draft Global Geodesy Needs Assessment document and makes personal notes Group allocation (5 mins): People will be put in groups Discuss and document (35 mins): Each group will discuss the Capacity focus area of the Global Geodesy Needs Assessment. Scribe to add information or comments to the Needs Assessment, but don't remove any information Add information relating to gaps and options for improvement Report (15 mins): Group representative to report back to the whole group
10:40 – 10:45 am 10:45 – 11:15 am	Outcome: Word document from each group sent to Nicholas.Brown@un.org and Focus Area in the title. Morning Tea



11:15 am – 12:25 pm	 Breakout session 5: Global Geodesy Needs Assessment – Awareness Mr Albert Momo (co-Chair UN-GGCE IAC) Mr Nicholas Brown (Head of Office UN-GGCE) Quiet time (15 mins): Each person reads the Awareness focus area information in the draft Global Geodesy Needs Assessment document and makes personal notes Group allocation (5 mins): People will be put in groups Discuss and document (35 mins): Each group will discuss the Awareness focus area of the Global Geodesy Needs Assessment. Scribe to add information or comments to the Needs Assessment, but don't remove any information Add information relating to gaps and options for improvement Report (15 mins): Group representative to report back to the whole group
12:25 – 12:30 pm 12:30 – 1:30 pm	Outcome: Word document from each group sent to Nicholas.Brown@un.org and Focus Area in the title. Lunch



1:30 – 2:55 pm	Other business
	Mr Albert Momo (co-Chair UN-GGCE IAC)
	Mr Nicholas Brown (Head of Office UN-GGCE)
	 Discussion on "Hidden Risk" report (Mr Nicholas Brown)
	 Discussion on "Partners of the UN-GGCE" proposal (Mr Nicholas Brown)
	Any other business
2:55 – 3:00 pm	Outcome: Decision on process towards development of "Hidden Risk" report
	Outcome: Decision on process towards development of "Partners of the UN-GGCE" proposal
3:00 – 3:30 pm	Afternoon Tea
3:30 – 5:00 pm	Other business
	Mr Albert Momo (co-Chair UN-GGCE IAC)
	Mr Nicholas Brown (Head of Office UN-GGCE)
	 Introduction to the Joint Global Geodesy Development Plan (Mr Nicholas Brown)
	o Discussion
6:30 pm	Dinner - Brauhaus Bönnsch (Sterntorbrücke 4, 53111, Bonn)



Hidden Risk

Review Summary of feedback



Partners of the UN-GGCE

Review Summary of feedback



1st Joint Development Plan for Global Geodesy

Structure

- Executive Summary
- Introduction
 - Why a plan is needed
 - Why a joint plan is needed
- State of Geodesy (report card based on information from the Needs Assessment in five focus areas)

Strategic Goal 1 Strategic Goal 2 Strategic Goal 3 - Task - ? - Task - ? - Task – ? - Task - ? - Task - ? - Task - ? - Gap filled / issue resolved - ? - Responsible party - ? Responsible party - ? - Responsible party - ? - Resourcing pathways - ? Resourcing pathways - ?

Recommendations for 2nd Joint Development Plan for Global Geodesy



1st Joint Development Plan for Global Geodesy (due July 2024)

- Draft Development Plan actions this week
- Circulate initial concept draft to IAC, Member States and Partners (mid May)
- Open for feedback (from mid May)
- Circulate near final draft to IAC, Member States and Partners (mid June)
- Feedback due (end June)
- Incorporate feedback from IAC, Member States and Partners (1st week of July)
- Seek endorsement (3rd week of July)
- Provide as background document to 14th session of UN-GGIM Committee of Experts (3rd week of July)



1st Joint Development Plan for Global Geodesy

Discussion

- How do people feel about the timing of the plan?
- How do people feel about it being a joint plan?
- What other components of the plan are needed?



Wednesday, 20 March	Location: UN campus, Langer Eugen Building, 23rd Floor, Room 2312
9:00 – 9:30 am	Arrival and entry to the building
	4th plenary meeting of the Subcommittee on Geodesy (including members of UN-GGCE: IAC who are not members of the Subcommittee)
9:30 – 10:40 am	 Welcome, introductions and organization of the work Mr Fernand Bale and Mr Johannes Bouman (co-Chairs of Subcommittee) Aligning the work program of the Subcommittee on Geodesy and the UN-GGCE Strategy and Operating Plan Mr Fernand Bale and Mr Johannes Bouman (co-Chairs of Subcommittee) Presentation: What is the role of the Subcommittee? (co-Chairs of Subcommittee) Discussion
10:40 – 10:45 am	Outcome: Decision on the role of the Subcommittee
10:45 – 11:15 am	Morning Tea
11:15 am – 12:25 pm	Mr Fernand Bale and Mr Johannes Bouman (co-Chairs of Subcommittee) UN-GGIM: Arab States (Mr Abdullah Alqahtani) (25 mins) UN-GGIM: Europe (Mr Jeffrey Verbeurgt) (25 mins) Questions and discussion
12:25 – 12:30 pm	Outcome: Discuss and document any decisions / actions based
12:30 – 1:30 pm	Lunch



1:30 – 2:55 pm	UN-GGIM regional geodesy working groups update
	 Mr Fernand Bale and Mr Johannes Bouman (co-Chairs of Subcommittee)
	 UN-GGIM: Africa (Mr Aslam Parker) (25 mins)
	 UN-GGIM: Asia-Pacific (Mr Basara Miyahara) (25 mins)
	 UN-GGIM: Americas (Mr Sergio Cimbaro & Mr Dan Roman) (25 mins)
	 Questions and discussion
2:55 – 3:00 pm	Outcome: Discuss and document any decisions / actions
3:00 – 3:30 pm	Afternoon Tea
3:30 – 4:55 pm	UN-GGIM Subcommittee on Geodesy Partners update (30 mins)
	 Mr Fernand Bale and Mr Johannes Bouman (co-Chairs of Subcommittee)
	 IAG – Mr Richard Gross (10 mins)
	○ FIG – Mr Ryan Keenan (10 mins)
	 NASA – Mr Stephen Merkowitz (10 mins)
	Business of the Subcommittee – Working Groups, Bureau and co-Chairs (55 mins)
	 Mr Fernand Bale and Mr Johannes Bouman (co-Chairs of Subcommittee)
	 Selection of new Subcommittee Bureau Member
	 Discussion and decisions on current working groups and plans for the future?
	O Other business
4:55 – 5:00 pm	Outcome: Discuss and document any decisions / actions



Thursday, 21 March	Location: UN campus, Langer Eugen Building, 23rd Floor, Room 2312
9:00 – 9:30 am	Arrival and entry to the building
	4th plenary meeting of the Subcommittee on Geodesy (including members of UN-GGCE: IAC who are not members of the Subcommittee)
9:30 – 10:40 am	 Regional reference frames Mr Fernand Bale and Mr Johannes Bouman (co-Chairs of Subcommittee) Regional reference frames (Mr Zuheir Altamimi) Discussion on all regional reference frames
10:40 – 10:45 am	Outcome: Discuss and document any decisions / actions
10:45 – 11:15 am	Morning Tea
11:15 am – 12:30 pm	 Summary and close Mr Fernand Bale and Mr Johannes Bouman (co-Chairs of Subcommittee) ○ Summary of outcomes / decisions ○ Close 2nd meeting of the UN-GGCE: International Advisory Committee and 4th plenary meeting of the Subcommittee on Geodesy
12:30 – 1:30 pm	Lunch

