



UN-GGIM:Americas

REGIONAL COMMITTEE OF UNITED NATIONS
ON GLOBAL GEOSPATIAL INFORMATION
MANAGEMENT FOR THE AMERICAS

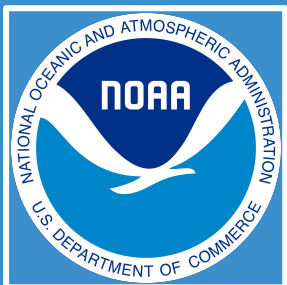
9° SESSION

UN-GGIM: Americas

UN Subcommittee on Geodesy (SCoG) Update

Dr. Daniel Roman, Chair, WG ETCB

Session 9: Geodetic Reference Framework for the Americas Working Group



November 28, 29 and 30
Santiago de Chile, ECLAC

Report filed at UN GGIM 12th Session

- Commended work of SCoG
 - Broad stakeholder engagement
 - Foster greater planning and international coordination
 - Two position papers
 - Sustaining the GGRF
 - Establish need for GGCE
- Global Geodetic Centre of Excellence (GGCE)
 - Facilitate discussions between Germany and UN at Bonn campus
 - Foster international support

United Nations



Economic and Social Council

E/C.20/2022/10/Add.1

**Committee of Experts on Global Geospatial
Information Management**

Twelfth session

New York, 3–5 August 2022

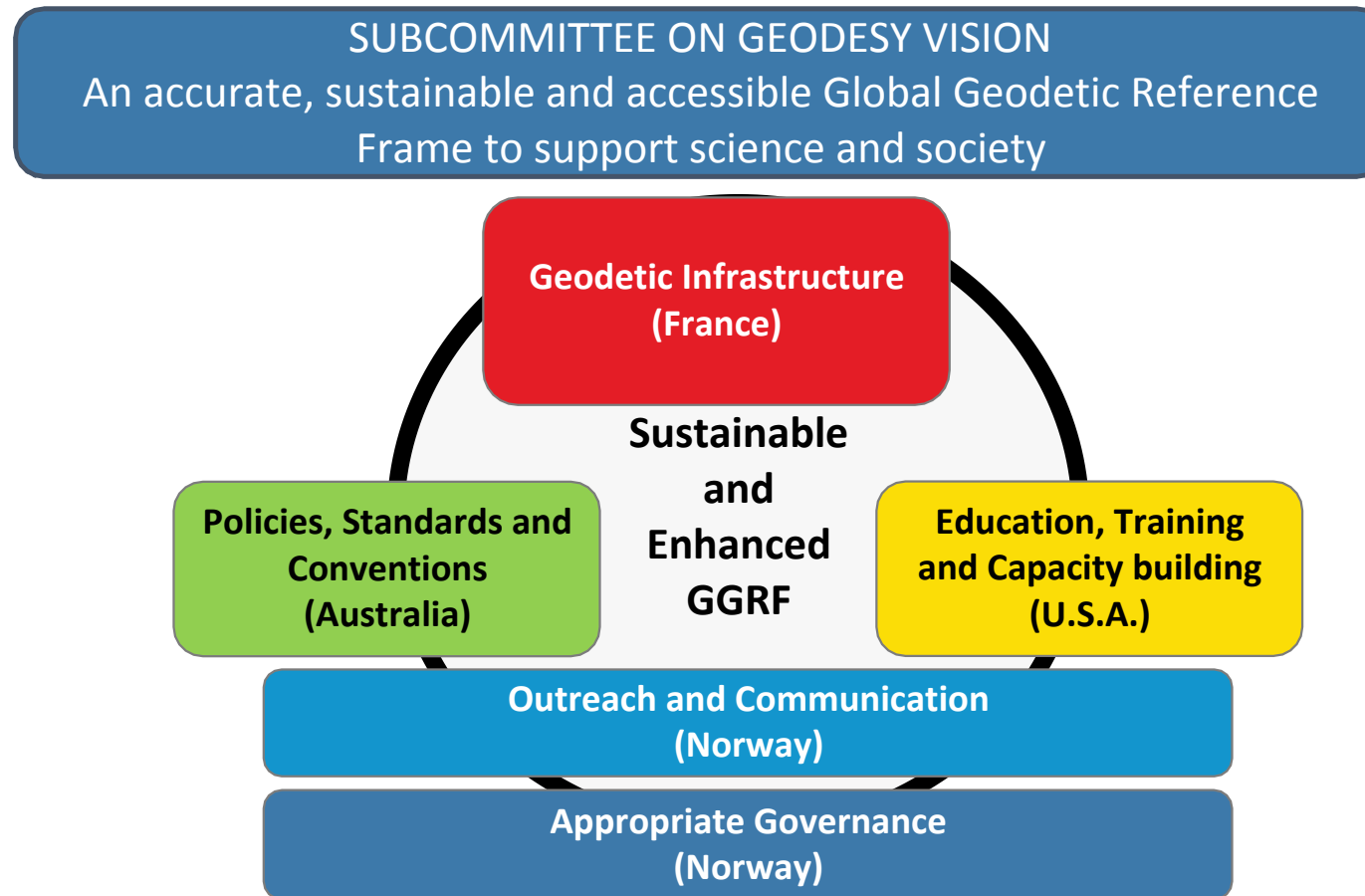
Item 8 of the provisional agenda*

Global geodetic reference frame

18 July 2022

Global geodetic reference frame

The UN SCoG and the GGRF

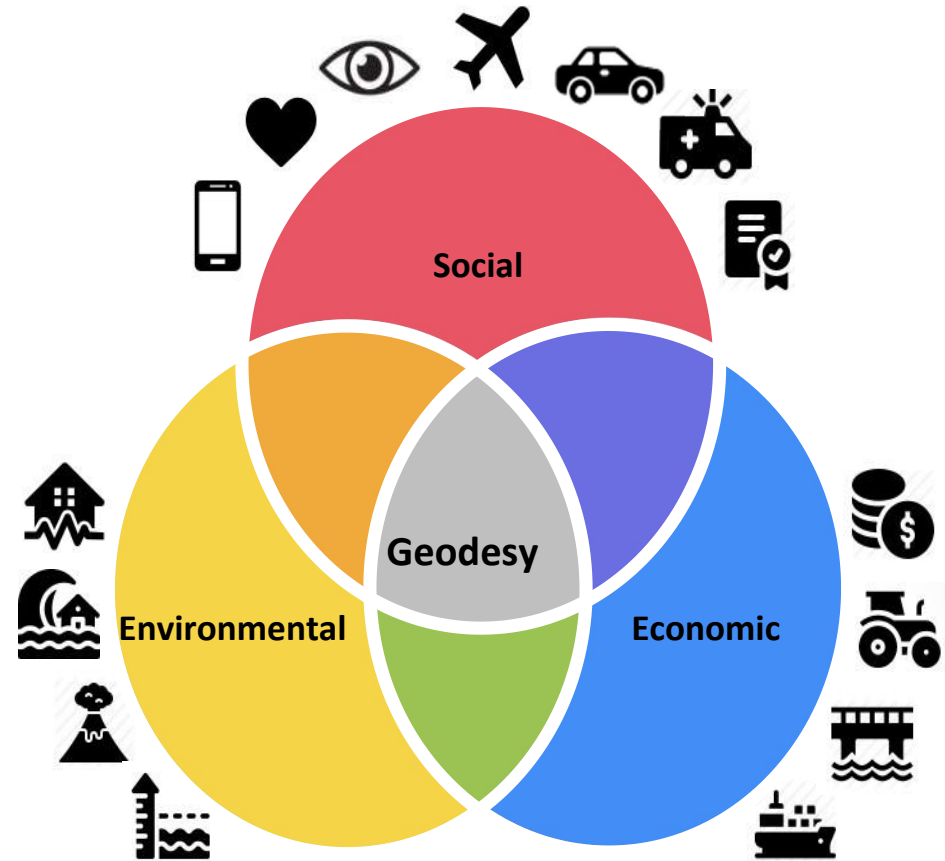


What is the GGRF? Many things ...

- ITRF – authoritative model of the Earth
- ICRF – to orient the Earth in the universe
- GI - VLBI, SLR, DORIS, GNSS
- Gravity and vertical control for physical heights
- Laws, international agreements and norms for Nations
- Standards, techniques & policies for clear guidance
- Equipment, tools and educated people to make it work
- More than just a reference frame – a lot more

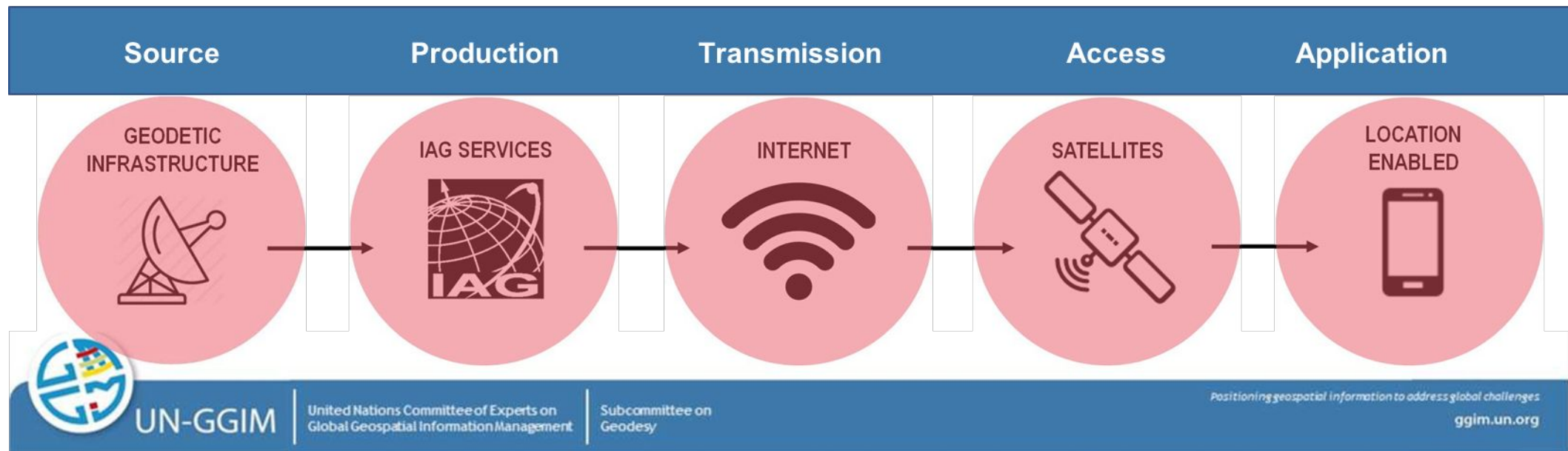
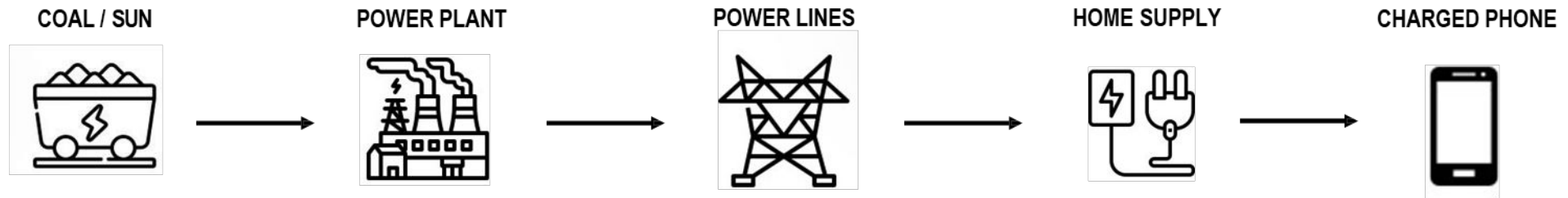
What does it support?

- Evidenced based policies
 - Environmental
 - Social
 - Economic
 - Accurate positioning data
 - In an accessible framework
 - With consistent standards
 - Synergy from interoperability
-
- But the geodesy at the core is often overlooked, unseen and under-appreciated



It is all connected ...

Sustain the entire value chain



The Two Position Papers

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

Strategy and Action Plan to sustain all elements of the geodesy value chain

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

Dedicated people focused on improving collaboration and coordination amongst the global geodetic community

Establishment of the GGCE in Germany

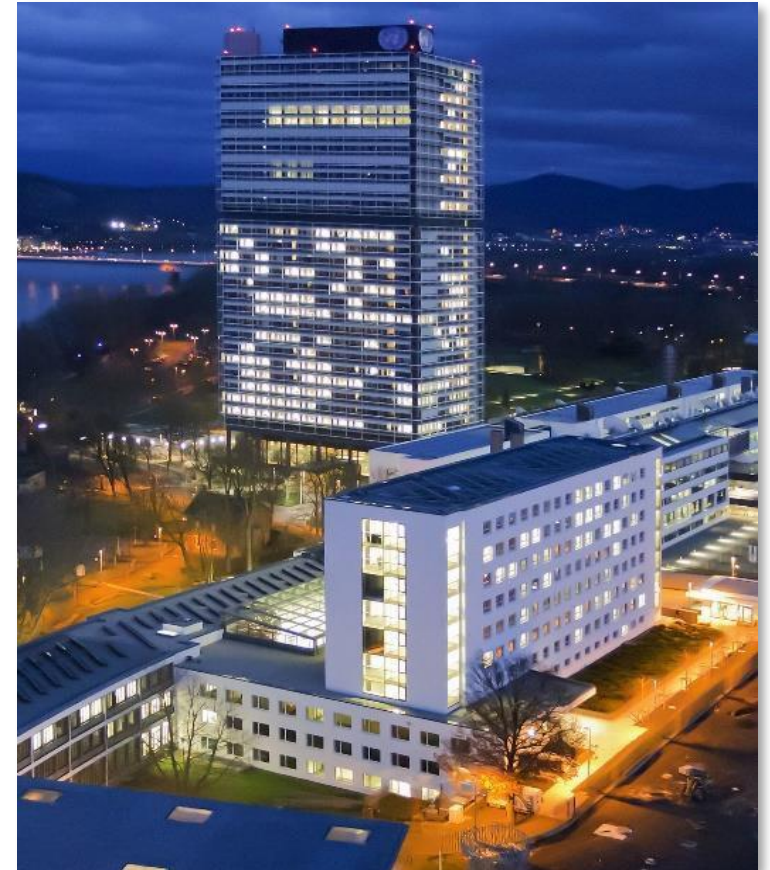
Offer of the German Federal Government was accepted and supported on 11.09.2020 at the 10th UN-GGIM Committee of Experts

The GGCE in Germany

- located at the UN Campus Bonn
- financed and supported by BKG
- supported with virtual secondment by Norway
- Steering Committee (UN DESA + Germany)
- Technical Advisory Committee (SCoG, IAG, FIG, Space Agencies, ...)

} ~ 6 FTE

- Courtesy Johannes Bouman



UN Campus Bonn

Source: Press office of the city of Bonn

Global cooperation and coordination

Economic benefits from investment in geodesy



IGS INTERNATIONAL
GNSS SERVICE



- Held a side event in addition to the UN SCoG meeting
- Outreach & Communication to global leaders
- Can't just talk with ourselves
- Need to expand to decision makers and leaders
- Help society to understand the power of where

Geodesy Event @ UN-GGIM 12

August 2022



UN-GGIM – Subcommittee on Geodesy

Learn how geodesy is fundamental for Earth science missions and climate adaptation.

United Nations Forum on a Global Geodetic Reference Frame (GGRF) for Sustainable Development

UN-GGIM 12th Session Side Event - 2 August 2022 at 1:30 pm
Conference Room 2 - UN Headquarters - New York

[unggim.org](#)

FUNDAMENTAL FOR EARTH SCIENCE AND CLIMATE ADAPTATION

Forum to discuss the Critical Role of Global Geodesy

Did you know that the measurements that we make from satellite systems help to inform decisions around the world, including measurements of sea level rise? Learn more at a forum discussing how the Global Geodetic Reference Frame (GGRF) informs decision-making, taking place as a **UN-GGIM 12th Session Side Event on the GGRF for Sustainable Development** and how it's fundamental for Earth science missions and climate adaptation.



“These measurements depend on having a very well understood reference point:
a global geodetic reference frame”

Keynote presentation by Dr. Karen St. Germain
Earth Science Division Director
NASA Science Mission Directorate

Moderator:

Nicholas Brown
Co-Chair of the UN-GGIM Subcommittee on Geodesy
Director of National Geodesy
Austrian Republic



Understanding the consequences of sea level rise in the South Pacific

Ms. Melzyanna Hicks
Director of Geospatial Information
Fiji Ministry of Lands and Mineral Resources



“If we want precise positioning and accurate sea level measurements, we need to continue to observe and produce the very best of geodetic products”

Opening remarks by
H.E. Ambassador Peter Thompson
United Nations Secretary-General’s Special Envoy for the Ocean
UN-IGF Global Geodesy Ambassador



Geodesy as a fundamental component of climate adaptation and sea level monitoring

Dr. Matthew Simpson
Research Geophysicist
Norwegian Mapping Authority



Establishing a United Nations Global Geodetic Centre of Excellence



To sustain the GGRF, the Subcommittee on Geodesy proposed establishing a United Nations Global Geodetic Centre of Excellence in 2019. This was followed in 2020 by an offer by the Federal Republic of Germany to host the Centre, a proposal that was supported by the UN-GGIM Committee of Experts.

Johannes Boonert, head of the geodesy department at the Federal Agency for Cartography and Geodesy in Germany will present on the progress made by the Government of Germany and the United Nations to host and establish a Global Geodetic Centre of Excellence at the United Nations campus in Bonn, Germany.



Photos: [https://photos.state.gov/libraries/un/2022/07/igim-official-photos-and-infographic](#)
[Federal Agency for Cartography and Geodesy, Germany](#)/[Geodesy Center of Excellence](#)



UN-GGIM

United Nations Committee of Experts on
Global Geospatial Information Management

[agim.un.org](#)

UN SCoG Representatives from the Americas

Argentina: **Federico Arpe**

Canada: **Calvin Klatt**

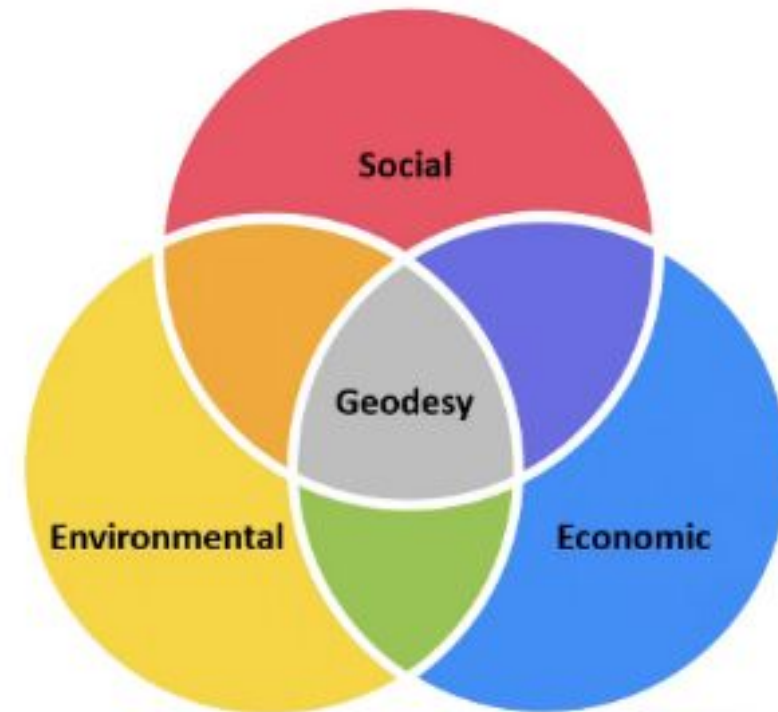
Costa Rica: **Álvaro Álvarez**

Jamaica: **Nolan Aikens**

Mexico: **Francisco Medina**

United States: **Daniel Roman**

Uruguay: **Juan Croquis**



Thank you for your attention