UN-GGIM: Global Geodetic Reference Frame (GGRF) for Sustainable Development

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SIRGAS 2015 Symposium: Universidad Nacional Pedro Henríquez Ureña, Santo Domingo, November 18, 2015

“Positioning geospatial information to address global challenges”
UN Resolution
Survey on GGRF
Development of a Roadmap

unggrf.org
@unggrf

“Positioning geospatial information to address global challenges”
To benefit People and Planet
Sustainable Development Goals
The First UN geospatial Resolution (1)

General Assembly, 26 February 2015 (A/RES/69/266)

Positioning geospatial information to address global challenges
Resolution adopted by the General Assembly on 26 February 2015

[without reference to a Main Committee (A/69/L.53 and Add.1)]

69/266. A global geodetic reference frame for sustainable development

The General Assembly,
Reaffirming the purposes and principles of the Charter of the United Nations,
Reaffirming also its resolution 54/68 of 6 December 1999, in which it endorsed the resolution entitled “The Space Millennium: Vienna Declaration on Space and Human Development”,1 which included, inter alia, key actions to improve the efficiency and security of transport, search and rescue, geodesy and other activities by promoting the enhancement of, universal access to and compatibility of space-based navigation and positioning systems, including Global Navigation Satellite systems,

6. Further invites Member States to develop outreach programmes that make the global geodetic reference frame more visible and understandable to society.

1. Positioning geospatial information to address global challenges
GGRF UN Resolution: Key objectives

- Develop a global geodetic roadmap for the GGRF
- Global cooperation in providing technical assistance in geodesy for those countries in need to ensure the development, sustainability and advancement of a GGRF
- Implement open geodetic data sharing
- Improve and maintain national geodetic infrastructure
- Enhanced multilateral cooperation that addresses infrastructure gaps and duplications globally
- Improved Outreach to make the GGRF more visible and understandable to society
A significant response rate to GGRF survey

Regional distribution:

North America: 2 (50%)
South America: 7 (54%)
Caribbean: 8 (36%)
Europe: 32 (67%)
Middle East: 3 (14%)
Asia: 11 (35%)
Pacific: 4 (20%)
Africa: 17 (27%)
92 responses from 84 countries
Survey conclusion: Global cooperation is key

- Key elements to achieving a sustainable GGRF
  - Governmental and country commitment and funding
  - Common standards
  - International obligations

- Key elements for development of GGRF
  - Maintain and build infrastructure
  - Common standards
  - Internationally coordinated policies
A roadmap for the enhancement of geodesy

- Governance
- Infrastructure
- Policy, standards and conventions
- Education, training and capacity building
- Communication and outreach

Photo: Andrick Lal, SPC, Fiji
Communicate GGRF

www.unggrf.org

"Looking forward to seeing this #GGRF roadmap", says Peni Suveinakama, Fiji UN mission @UNGGIM #ggim5 Side event.
Communication Strategy

**GOAL**
A roadmap for enhancement of the Global Geodetic Reference Frame and multilateral cooperation on geodesy

**Communication challenge**
Make the UN-GGIM delegates, decision makers and geodetic opinion leaders understand how important it is to communicate the GGRF roadmap in their regions and countries in order to achieve a sustainable multinational collaboration.

**Communication objectives**
- Reach UN-GGIM delegates, decision makers, and geodetic opinion leaders to communicate the importance of the GGRF roadmap and why sustainable global cooperation on geodesy is key to meet the objectives of the GGRF resolution.

**Ambitions**
- Support and enthusiasm for the GGRF roadmap and sustainable global cooperation on geodesy.
- UN-GGIM 6th Session endorses the GGRF Roadmap in August 2016.

**Strategy**
- Capture experiences and best practices for the global geodetic reference frame, particularly in developing countries, through newsletter distribution and social media.
- Develop new tools and use the communication tools including newsletters, unggim.org, and @unggim-twitter account and GGRF-video for enhancement of global cooperation on geodesy.
- Communicate the importance of the UN resolution and the importance of their contribution to the GGRF roadmap among the UN-GGIM nations and regions and ask them to spread the message in their countries through communications tools including the newsletters, unggim.org, social media, and GGRF-video.
- Make use of international science networks and geodetic opinion leaders to communicate the importance of geodesy to their respective science domain.

**UN-GGIM delegates**
- Develop good GGIM ambassadors who will provide advocacy for the UN resolution and the implementation of the GGRF roadmap in their countries and regions.

**Decision makers/policy makers**
- Increase the knowledge about the UN resolution and the ongoing work with the GGRF roadmap. Explain that joint international effort is needed in order to meet the objectives of the GGRF resolution.

**Opinion leaders in international research/science networks**
- Influence the opinion leaders to share the message about the importance of the UN resolution and the GGRF roadmap.

**Communication platform**

**Basis**
- Geodesy is a global science. Through geodesy we measure and define the Earth’s shape, motion, rotation, gravitational field, and changes to these.
- Geodesy is fundamental for monitoring changes to the Earth including the continents, ice caps, oceans, and the atmosphere. Geodesy is also fundamental for mapping, navigation, and universal timing.

**GGRF**
- Geodesy provides a very accurate and stable coordinate reference frame for the whole Earth. This coordinate system allows you to relate measurements taken anywhere on the Earth with similar measurements taken at a different time or location.
- Global Geodesy is dependent on contributions from nations all around the globe. We aim to change from the current system where contributions to the development of a global geodetic reference frame are undertaken on a “best efforts” basis to one where they are made through multinational cooperation under a UN mandate.

**UN resolution, survey and roadmap**
- UN General Assembly adopted its first resolution - “A global geodetic reference frame for sustainable development.” Recognizing the importance of a globally-coordinated approach to geodesy. The discipline focuses on accurately measuring changes in the shape, rotation, and gravitational field of planet Earth.
- A global survey identified a joint international governance effort is needed in order to meet the objectives of the GGRF resolution.
- A Working Group on the Global Geodetic Reference Frame has begun working on the roadmap to build a framework to implement the Global Geodetic Reference Frame.
## Timeline 2015 - 2016

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<thead>
<tr>
<th>2015</th>
<th>2016</th>
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<tr>
<td>Sept-October</td>
<td>February</td>
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<td>- Working Group GoTo/telecom-meetings</td>
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<td>- 15 September 15 October</td>
<td>- Send out 1. draft roadmap mid/ end January</td>
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<td>- UN-GGIM regional meetings and involvement: Europe incl EUREF and Asia Pacific</td>
<td>- Working Group GoTo/Telecom-meeting</td>
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<td>- Revised standard presentation on UN GGRF</td>
<td>- WG-meeting for those present at IGG, Sydney?</td>
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<td>- Revised communication strategy</td>
<td>- Deadline for feedback from regions and others on 1. draft</td>
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<td>- Revised timeline</td>
<td>March-April</td>
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<td>January</td>
<td>May</td>
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<td>- Working Group GoTo/telecom-meeting</td>
<td>- Report and GGRF Roadmap to UN-GGIM 6th session</td>
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<td>- Send out 1. draft roadmap mid/ end January (after the discussions in San Francisco and the regional input and consultations)</td>
<td>- Working Group GoTo/Telecom-meetings</td>
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<td>February</td>
<td>June</td>
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<td>- Working Group GoTo/Telecom-meeting + WG-meeting for those present at IGG, Sydney?</td>
<td>- Prepare A3 Roadmap-glossy version for UN-GGIM 6th session (key elements)</td>
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<td>- Deadline for feedback from regions and others on 1. draft</td>
<td>- Newsletter for UN-GGIM 6th session</td>
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<td>March-April</td>
<td>August</td>
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<tr>
<td>- Working Group GoTo/Telecom-meetings</td>
<td>- UN-GGIM 6th session endorses the GGRF Roadmap in August, New York</td>
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Positioning geospatial information to address global challenges
Way forward

• Final roadmap endorsed at the UN-GGIM 6th session in early August 2016
• Outcomes described by UN General Assembly resolution are included
• Involvement of UN-GGIM regions and consultation with IAG, FIG, GEO, CEOS in progress
• Draft will be sent out for comments
• Working Group to combine feedback and build cohesive document
• Roadmap deadline in May 2016
Positioning geospatial information to address global challenges

Global Geodetic reference frame for sustainable development

Global collaboration
Thank you, very much.