

Report of UN-GGIM-AP WG1 - Geodetic Reference Frame

Extended Executive Board Meeting of
UN-GGIM-AP
May 18, 2021



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United Nations Initiative on
Global Geospatial Information Management

"Positioning geospatial information to address global challenges"

ggim.un.org

UN-GGIM-AP Working Group 1 - Geodetic reference frame -

Chair

Mr. Basara Miyahara, Japan

Vice Chairs

Dr. John Dawson, Australia

Dr. Yamin Dang, China

Mr. Shyam Veer Singh, India

Dr. Mohd Yunus Bin Mohd Yusoff, Malaysia

Ms. Dalkhaa Munkhtsetse, Mongolia

Mr. Graeme Blick, New Zealand

Dr. Sangoh Yi, Republic of Korea



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UN-GGIM-AP Working Group 1 – Focus 2018 - 2021

**UN-GGIM
Geodesy**



**Regional
Reference Frame
(APREF, APRGP)**

**Regional Height
System
Unification**

**Regional
Capacity
Building**



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Global Geodesy Forum



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UNITED NATIONS
COMMITTEE OF EXPERTS ON
GLOBAL GEOSPATIAL
INFORMATION MANAGEMENT

Subcommittee on Geodesy

GLOBAL GEODESY FORUM

**THE POWER OF WHERE –
THE VALUE OF GEODESY TO SOCIETY**

Date: Earth Day, Thursday, 22 April 2021 | **Time:** 10:30 am – 12:00 noon (UTC) / 6:30 am – 8:00 am (EDT-New York)

With an Opening Address from
His Excellency Ambassador Peter Thomson
UN Secretary-General's Special Envoy for the Ocean
Global Geodesy Ambassador

- Outreach Geodesy/GGRF roles to policy/decision makers
- Monitoring disasters, economic benefits, SDGs, ...

http://ggim.un.org/meetings/2021/Global_Geodesy_Forum/

Recordings: <https://youtu.be/M0jg00jUPPs>



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Regional Geodesy Forum

THE UNITED NATIONS GLOBAL GEOSPATIAL INFORMATION
MANAGEMENT SUBCOMMITTEE ON GEODESY

Cordially invite you to attend a

ASIA-PACIFIC REGIONAL GEODESY FORUM

**THE POWER OF WHERE –
THE VALUE OF GEODESY TO SOCIETY**

- Further consultation with the Member States in each region
- Online meeting on 8 June 2021
- from 10:00-11:30am (Bangkok time, UTC+7)



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Asia Pacific Reference Frame (APREF)

- Regional geodetic reference frame
- Realized by continuous GNSS observation of over 600 stations
- 28 countries
- Densify ITRF and improve access to ITRF
- Data are routinely processed by three Local Analysis Centres*
- Station coordinates made available publically

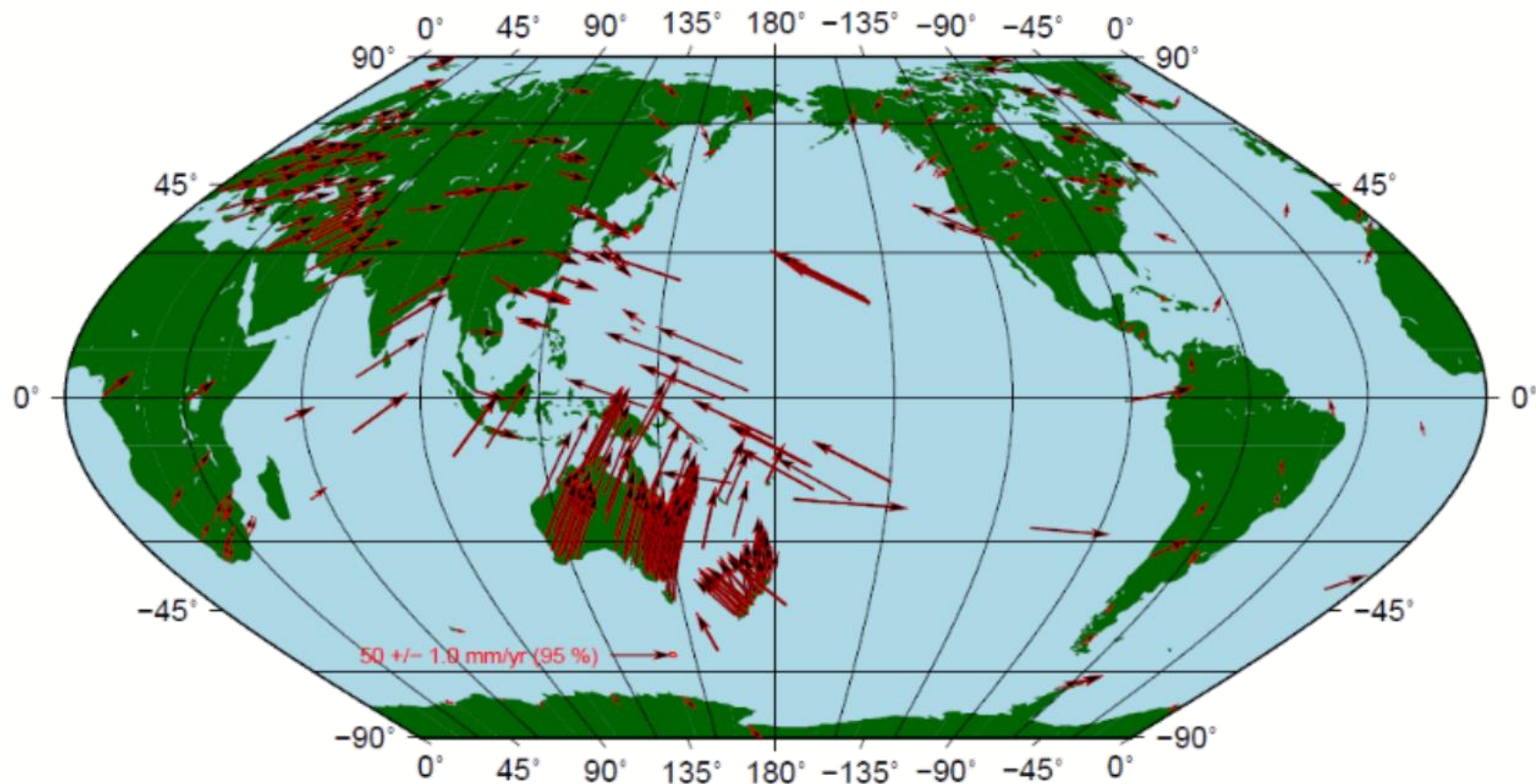
Update

- Additional Stations from India, Indonesia and Japan

- * Geoscience Australia
Office of Surveyor-General Victoria, Australia
Institute of Geodesy and Geophysics, Chinese Academy of Sciences



Asia Pacific Reference Frame (APREF)



The velocity field for the APREF CORS network

G. Hu, M. Moore and J. Dawson (2016): An Update on the Asia Pacific Reference Frame (APREF)



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Asia Pacific Regional Geodetic Project (APRGP)

- Annual GNSS campaign
- Densify ITRF and improve access to ITRF
- Data are analysed by Geoscience Australia
- Analysis report is distributed each year

- **APRGP 2020:** 13 to 20 September 2020
- Participation from 14 countries and regions*
- Processed by Dr. Guorong Hu, Geoscience Australia
- Final report will be available at UN-GGIM-AP Website

- **APRGP2021:** September 2021
- Call for Participation will be sent on early August 2021

* Bangladesh, Brunei, Hong Kong SAR, Indonesia, Japan, Korea, Laos, Malaysia, Mongolia, Myanmar, Philippines, Republic of Korea and Singapore



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Asia Pacific Regional Geodetic Project 2019

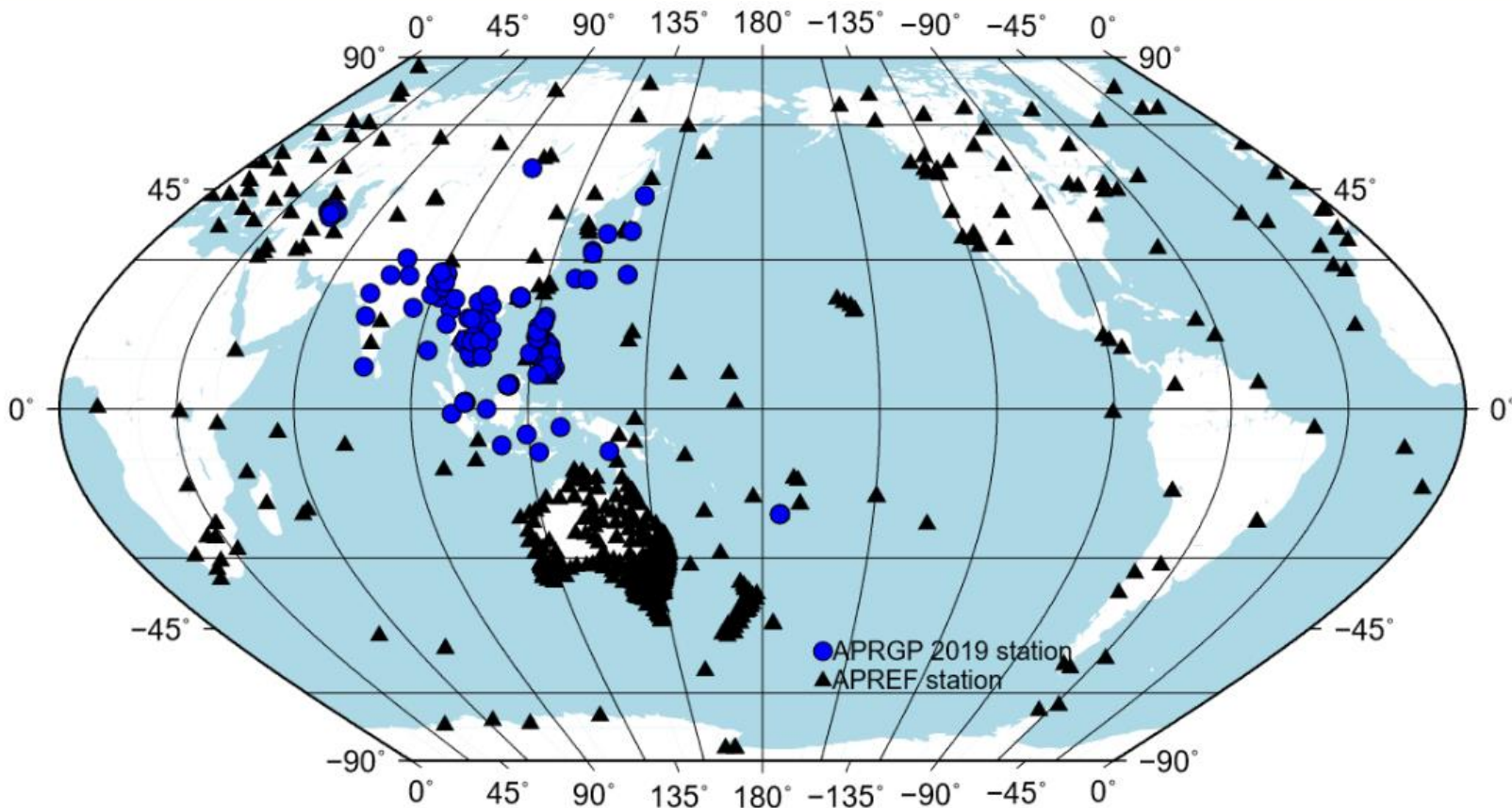


Figure 1 APRGP stations in the APRGP 2019 GPS campaign analysis along with the APREF stations and IGS stations, blue circles are APRGP campaign sites, and black triangles are APREF stations.

G. Hu: Report on the Analysis of the Asia Pacific Regional Geodetic Project (APRGP) GPS Campaign 2019



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Capacity Building Events in 2021

- Several events were planned but postponed or moved to online due to the COVID-19 pandemic.

The 5th Pacific Geospatial & Surveying Council Meeting

11-12 August 2020- Open Participation

- Formal opening
- Regional updates and emerging issues

13-14 August 2020- Members Only

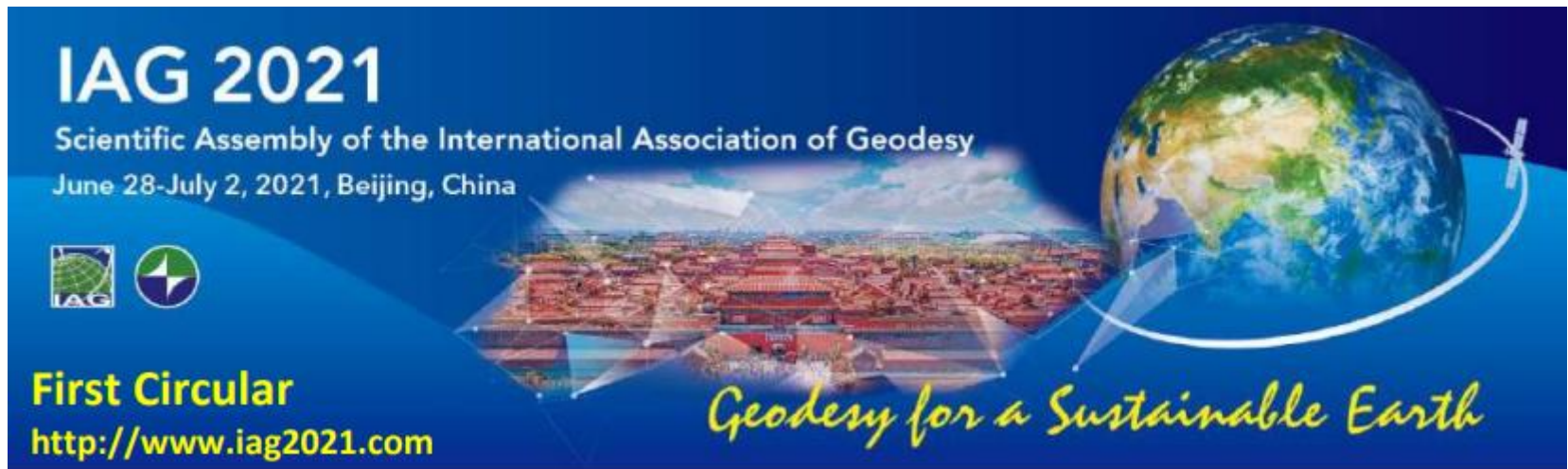
- PGSC business and governance

Invitations, agenda, and details to follow
Contact pgsc_desk@spc.int with queries

- Report - <https://www.councilpacificaffairs.org/news-media/pacific-calls-for-integrated-geospatial-information-management/>



Capacity Building Events in 2021



Symposium 5: Global Geodetic Observing System (GGOS)

Session 6: Geodesy contributions to address societal challenges

This session solicits contributions focusing on aspects of :

- Development of sustainable Global Geodetic Reference Frame (GGRF)
- Global and Regional collaboration to sustain GGRF
- Recent progress from the UN, GEO and other stakeholders
- Common challenges in geodesy that are related to societal issues



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Capacity Building Events in 2021 (Cont.)

- FIG e-Working Week 20-25 June 2021



eWORKING WEEK 2021 **20-25 JUNE**
SMART SURVEYORS FOR LAND
AND WATER MANAGEMENT
CHALLENGES IN A NEW REALITY

- UN/Mongolia Workshop on the Applications of Global Navigation Satellite Systems in Mongolia, 25-29 October 2021 (in hybrid format)



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**Thank you for
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