

# Brief Overview of the ICG activities

14<sup>th</sup> meeting of the International Committee on Global Navigation Satellite Systems  
Bengaluru, India, 9 - 13 December 2019

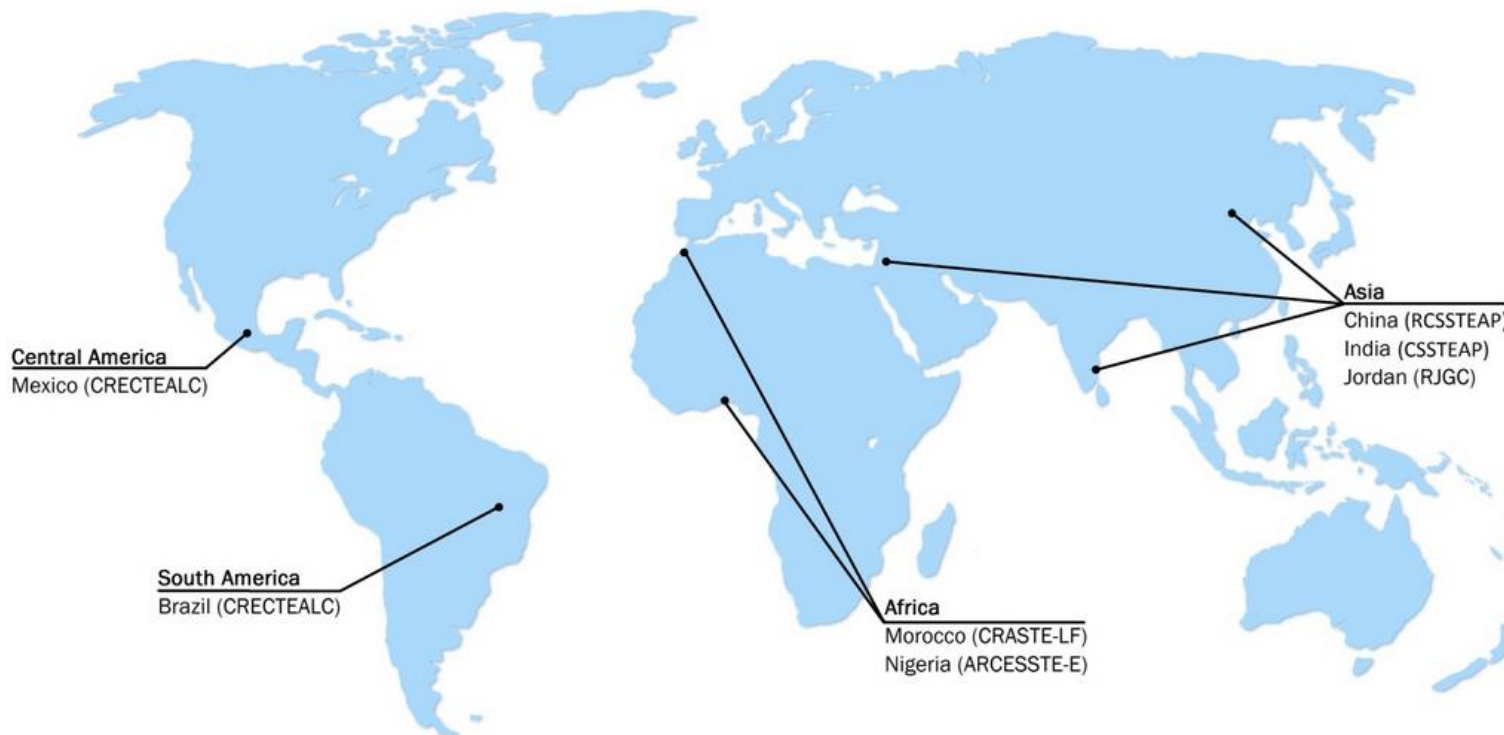
Working Group C meeting, 10 – 12 December 2019

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## Information Centres for ICG

The Programme of Space Applications established regional centres (**also acting as the ICG information centres**) in each region covered by the United Nations Economic Commissions: Africa, Asia and the Pacific, Latin America and the Caribbean, and Western Asia





# ICG: Programme on GNSS applications

## ❖ Space Weather and GNSS (WGC)

- Promotes the use of GNSS for scientific applications and space weather in developing countries
- Increased number of students and young scientists studying and using GNSS, including increasing participation by women, and many opportunities for research (improved imaging of the ionosphere over the equatorial region, ionospheric effects on augmentation systems...)
- *In cooperation with the Institute for Scientific Research at Boston College, the United States, and the Abdus Salam International Centre for Theoretical Physics, Italy: A series of outreach workshops on space weather effects on GNSS operations*





# ICG: Programme on GNSS applications

**2020: African Workshop on GNSS and Space Weather, Rabat, Morocco, 5 – 16 October**

- To provide updated knowledge of how GNSS operate and their applications; to describe the science of SW; and how to perform ionospheric and SW research with GNSS data
  
- Introduction to Global Navigation Satellite Systems
- GNSS Applications
- Ionospheric Total Electron Content
- Scintillation
- Ionospheric Modeling
- Space Weather
- The Sun-Earth Connection
- Hands-on laboratories





# ICG: Programme on GNSS applications

- ❖ **United Nations Regional Workshops/training courses on the use and applications of GNSS**
  - Building the capacity of developing countries in using GNSS technology for sustainable development
  - **WGS:** *Seminar on GNSS Spectrum Protection and Interference Detection and Mitigation:*
    - The purpose of the seminar is to educate participants on the importance of GNSS spectrum protection at the national level and explain how to reap the benefits of GNSS
  - **WGD&B&S:** *Special technical session on Interoperability of GNSS PPP services*
    - To to increase the user benefits and opportunities to support PNT applications in developing countries.

***2020: United Nations/Mongolia Workshop on the applications of GNSS, 13 – 17 April, Ulaanbaatar***



# ICG: Programme on GNSS applications

## ❖ Reference frames and timing (WGD)

- To benefit operational geodesists or surveyors involved in positioning and measurement and potentially dealing with sea level changes. It is open to government, private sector, academic or graduate students in surveying or a related discipline (IAG, FIG, IGS): *Technical Seminars on Reference Frames in Practice, FIG Working Week*

## ❖ Training Course on GNSS (WGC)

- To create awareness on GNSS and its applications in Asia and the Pacific region (*the Centre for Spatial Information Science of the University of Tokyo, Japan and Asian Institute of Technology, Bangkok*)
- General overview of signal processing in receiver, receiver performances, field survey using low-cost receiver for high-accuracy positioning,

***Training on GNSS, 6 – 10 January 2020, Bangkok, Thailand***

# THANK YOU



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