

GEO Architecture and Data Committee
Task AR-07-03

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Task Sheet is available at

<ftp://ftp.wmo.int/Projects/GEO/TaskSheets/2007-01>

Task Sheets are updated on the basis of Team Reports

- nominal every four months;
- last update (unscheduled): April 2007;
- next update: moved from May 15 to September 15, 2007.

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“Ensure the availability of accurate, consistent, homogeneous, long-term stable, global geodetic reference frames as a mandatory framework and the metrological basis for Earth observation.”

Goals:

- **User requirement coordination:** Establish a comprehensive GEOSS database of user requirements concerning georeferencing and geodetic reference frames by identifying, describing and establishing links to relevant user communities in the nine societal benefit areas and conducting appropriate surveys.
- **Georeferencing:** Ensure the availability of appropriate global geodetic reference frames for GEOSS.

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Task Team:

Members:

Germany

Korea

Italy

U.K. (soon)

Participating Organizations:

IAG

CEOS

Point of Contact: Hans-Peter Plag (IAG)

Deliverables in 2007:

- **GGOS 2020 Reports: *GEO Reports***
- **GEO/GGOS 2007 Workshop**

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GGOS 2020 Reference Document:

July 10, 2007: Submission of Reference Document to ADC

August 1, 2007: Response from ADC

August 1-5, 2007: Distribution of Document for external hearing

September 5, 2007: Deadline, hearing

September 12-13, 2007: ADC meeting

September 15-30, 2007: Final editing round

October 15, 2007: Submission of Reference Document to GEO

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Early Achievement for GEO Report to the Ministerial Summit

Title: Global Geodetic Reference Frames

Brief Description: mainly from Task Sheet

Added Value (of GEO): ... appropriate forum ... foster new links between GGOS and Participating Organizations and institutions in Member Countries ... provides for the links to users in a wide range of applications across all SBAs.

Relevance to GEO: Geodetic observations and products are relevant at least for the GEO SBAs of Water, Disasters, Energy, Weather, Climate, Health, and Agriculture. ...

Participants: as on Task Sheet

Current Status and next Steps: ... A major goal will be on the stability of an operational core infrastructure and the closure of spatial gaps in the global *in situ* networks.

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(1) **User requirement coordination:** Establish a comprehensive GEOSS database of user requirements concerning georeferencing and geodetic reference frames by identifying, describing and establishing links to relevant user communities in the nine societal benefit areas and conducting appropriate surveys. Individual steps include:

- Identify relevant user groups in the societal benefit areas, including groups of users relevant for several benefit areas, and create a matrix of users, groups of users and benefit areas.
- Identify and quantify the requirements of the nine benefit areas with respect to georeferencing and access to a long-term stable reference frame.
- Facilitate an assessment of the current status and future requirements for the geodetic reference frames and geodetic observations with particular focus on the needs of the nine benefit areas.
- Identify user-oriented capacity building needs within the different user groups with respect to reference frames.

Establish links between representatives of the different user groups within the nine benefit areas and an appropriate expert team to coordinate georeferencing and reference frame issues across these areas.

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(2) **Georeferencing:** Ensure the availability of appropriate global geodetic reference frames for GEOSS. Individual steps include:

- **Identify steps** towards ensuring consistent, high-accuracy, homogeneous, and long-term stable global geodetic reference frames for Earth observation and the observing systems contributing to GEOSS.
- **Advocate the continuous support** of the global geodetic infrastructure required for the maintenance and development of the global geodetic reference frames at an appropriate level.
- **Critically assess the sustainability** of the global geodetic infrastructure and the Services, which are currently based on: the voluntary commitments of a large number of national agencies, research institutions, and individuals, and consider alternative organizational models, including an intergovernmental framework for the maintenance of the geodetic reference frames, which would support the transition to fully operational reference frames.

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(2) **Georeferencing:** Ensure the availability of appropriate global geodetic reference frames for GEOSS. Individual steps include:

- ...
- Consider the **potential of regional organizations** to address reference frame related challenges in their regions and to stimulate cross-disciplinary solutions.
- Promote the **establishment of sufficient geodetic infrastructure** in regions currently lacking such infrastructure, particularly in Africa and parts of Asia and Latin America.
- **Improve the accessibility and applicability** of the geodetic reference frames for all GEOSS components.