Newsletter
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UN-GGIM – Global Geodetic Reference Frame Working Group

UN RESOLUTION
The UN Committee of Experts on Global Geospatial Information Management (UN-GGIM) decided in July 2013 to formulate and facilitate a draft resolution for a global geodetic reference frame.

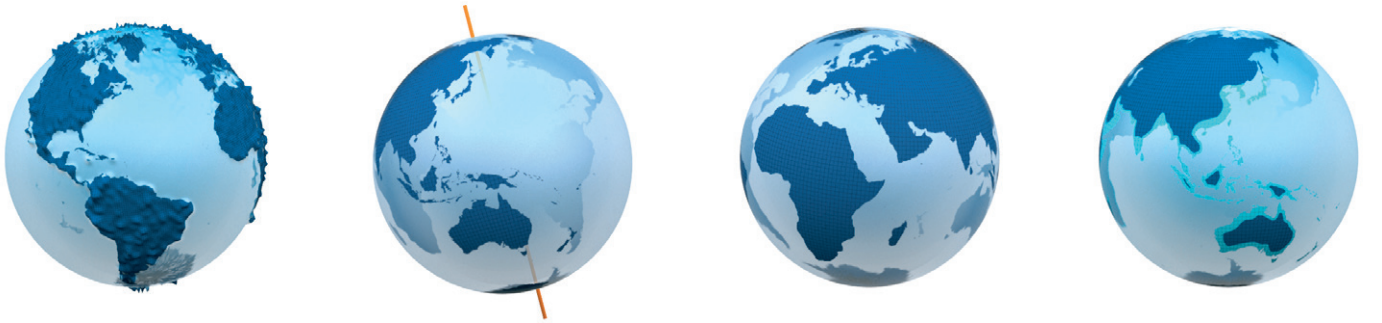
UN-GGIM recognises the growing demand for more precise positioning services, the economic importance of a global geodetic reference frame and the need to improve the global cooperation within geodesy. The resolution will be tabled at the 2013-14 Session of the UN General Assembly.

How geodesy contributes to strengthen the study of our changing planet

Measuring the planet

Through geodesy, we measure and define the Earth's shape, rotation and 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.



THE EARTH TIDE *THE EARTH ROTATION* *PLATE TECTONICS* *GLOBAL MASS TRANSPORT*

EARTH IS A DYNAMIC PLANET and is in constant motion. We monitor the different processes which cause these motions.

Where places and people are

Because the Earth is in constant motion, an accurate point of reference is needed for making measurements. Geodesy provides a very accurate and stable coordinate reference frame for the whole planet: A global geodetic reference frame.

This coordinate system allows us to relate measurements taken anywhere on the Earth with similar measurements taken at a different time or location.

A GLOBAL GEODETIC REFERENCE FRAME which allows us to know where people and places are on the Earth.

Natural hazard and disaster management

To make good decisions for the future, information is needed about sea level changes, plate movements, land uplift and ice sheet and glacier changes.

The global geodetic reference frame provides the basis for such decisions. Without this system, it would be difficult to identify areas under threat of flooding, earthquakes or drought and to adopt preventive measures to protect them.

PHOTO: ANNE JØRGENSEN

PHOTO: BJØRN-OWE HOLMBERG

The basis for geospatial information

A global geodetic reference frame is in growing demand. Monitoring changes to the Earth is important for environmental studies and for the global economy.

It's the basis for geospatial information and navigation used in many Earth sciences and societal applications and in a whole series of industries, such as construction, mining, agriculture, financial transactions and transport.

PHOTO: MORTEN BRUN

More precise observations

Earth observations must become more precise. We require information about current trends at a scale measured in millimetres to detect changes of the Earth system with sufficient precision, to meet society's future needs.

Global Geodesy is dependent on contributions from nations all around the globe, since no single country can maintain the global geodetic reference frame alone.

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 a multilateral collaboration under a UN mandate.