



ECOSOC • Integration Segment (27–29 May, 2014)
SUSTAINABLE URBANIZATION

**BUILDING
THE FUTURE**
we WANT

UNITED NATIONS COMMITTEE OF EXPERTS ON GLOBAL GEOSPATIAL INFORMATION MANAGEMENT

**Contribution to the
2014 United Nations Economic and
Social Council (ECOSOC)
Integration Segment**

ECOSOC Integrated Segment: Sustainable Urbanization

Inputs from the United Nations Committee of Experts on Global Geospatial Information Management (UN-GGIM)

Background

Geospatial information technologies support national development, economic growth, improved decision making, enhanced policy formulation and contribute to overcoming many global challenges. Their uses range from personal navigation tools to informing large-scale humanitarian or disaster responses. Governments, industry and society now recognise and understand that 'location' is a vital component for effective decision making.

In recognition of the growing importance of geospatial information globally, in July 2011 the United Nations Economic and Social Council (ECOSOC) established the United Nations Committee of Experts on Global Geospatial Information Management (UN-GGIM) as the peak inter-governmental mechanism to make joint decisions and set directions on the production and use of geospatial information within national and global policy frameworks.

Represented by the Member States, with international and non-governmental organizations, the private sector and other stakeholders as observers, UN-GGIM addresses global challenges regarding the use of geospatial information in the development agenda and serves as a guide for global policy making in the field of geospatial information. In this regard, UN-GGIM has the mandate and responsibility to foster a geographic approach to the goals of the post-2015 development agenda, and has been active in this area.

In several UN-GGIM forums experts have emphasized several common global challenges including: sustainable geodetic networks; mitigating and managing disasters; population growth and food security; urban planning and sustainable development; and privacy and confidentiality in the face of growing public demands for data access. Ministers have stressed the importance of working together across borders and sharing experiences and advancements in geospatial information management, in order to address these critical issues and to enhance comparability across countries.

The Rio+20 outcome document 'The future we want' specifically recognized the importance of "reliable geospatial information" in the areas of national disaster risk reduction strategies and plans (including comprehensive hazard and risk assessments), and for sustainable development, policymaking, programming and project operations. A key part of UN-GGIM's program has been the role of geospatial information in urban hazard mapping and disaster risk reduction, particularly in the context of sustainable development and global urbanization.

Addressing sustainable urbanization in an integrated and focused way

The rates of rapid urbanization that are overwhelming land management and administration systems, especially in the developing world, are arguably one of the greatest challenges for the twenty first century. There is general consensus that a solution for addressing these challenges can be founded on sustainable cities, yet an essential foundation for planning and implementation of strategies for sustainable cities that is overlooked is an effective Land Information System. Land Information Systems have been successful in the developed world

and have contributed significantly to sustainable land management practices. However, similar successes have not yet been achieved in the developing world where the absence of reliable geospatial information impedes initiatives to establish and sustain even the most basic land information systems. This scenario is evidenced by the lack of progress in registration of land ownership units, where less than 30% is properly registered globally. The need for homogeneous and reliable geospatial information for sustainable urbanization cannot be over-emphasised considering: property values (including their associated economic production) that mandate accurate demarcation/boundary re-establishment; the subterranean utilities infrastructure which have to be accurately located during developments; lack of security of land tenure in developing countries; response to environmental challenges based on accurate data such as height when pre-empting flood risks; and various data sources from different agencies which have to coincide precisely.

Within any country, and in particular to address the growing needs for sustainable urbanization, measuring development and progress will depend on the availability of and access to national fundamental data themes and information that reliably depict features on, above, or below the Earth. These core reference geographies, upon which all other information is based, may include: a geodetic control network; topography; elevation; water; transport; vegetation; human settlement; administrative boundaries; land ownership and use; and other socioeconomic and environmental data. Concerted efforts should be made to bring the developing countries to a base level of capability and capacity with respect to these framework data themes.

By way of example, consider the geodetic control network. Positioning services around the world rely on the guaranteed availability of and access to a high quality global coordinate system: the Global Geodetic Reference Frame (GGRF). The GGRF enables geospatial information to be utilised in applications such as land systems and ownership, engineering construction, precision agriculture, intelligent transport, navigation, geodynamics, and other geoscientific studies, including climate change and sea level monitoring. The GGRF is underpinned by an infrastructure that consists of globally distributed observatories and satellite tracking stations, and is operated by an internationally organized effort of data centres and analysis teams within governments and the scientific community. Although vitally important to society, this global cooperation relies almost entirely on a 'best efforts' principle.

An African initiative to unify the geodetic reference frames of Africa is being implemented under the African Geodetic Reference Frame (AFREF). The aim is to make the national and regional reference networks fully consistent and homogeneous with the GGRF. While this continental collaboration utilises the economies of scale, thereby sharing technical capacity and capital investments, there is still limited understanding, limited data sharing, and lack of political buy-in. This translates to a lack of development.

In response to this transitional shortfall, at the political level, UN-GGIM is presently formulating a draft resolution to be considered by the General Assembly at the appropriate time in the near future. At the practical level, UN-HABITAT is developing the Global Land Tool Network (GLTN), an innovative pro-poor land tool to support progressive approaches that incrementally improve land tenure security. Within the GLTN, the Social Tenure Domain Model (STDM) addresses the lag in comprehensive registration coverage, and exclusion of disadvantaged groups from benefitting from land, especially in developing countries, by

providing information of person to land relationship regardless of legal status, while not insisting on geospatial precision (as it is not yet achievable).

Within the sustainable development process, UN-GGIM is advocating that one cannot measure and monitor sustainable development without access to fundamental and consistent geospatial information – geography. In these critical domains the importance of having a reliable national geospatial information infrastructure in each country, built on internationally recognized standards that will integrate, manage, and deliver geospatial information for timely, evidence based and authoritative decision making and policy formulation on location-based development issues, cannot be under-estimated.

UN-GGIM notes that, while the sustainable development goals (SDGs) will be negotiated at the political level, they will rely heavily on the availability of human and physical geography data, much of it likely to be new data, to measure and monitor change and progress. A number of practical targets and indicators will eventually be required. Not all targets will be equal and will require different means of measure. Indicators will need to be linked to the targets and be well defined (accurate, reliable and understandable), measurable over time, cost effective and clearly and easily communicated. There will be a need to create a network of global data and information that is supported by the best science, tools, and technology to analyse and model data, create maps and detect and monitor change over time in a consistent and standardized manner. Much of this will have an urban dimension, and much of this will be geospatial information.