


**FIG 2015-18
KICK-OFF EVENT**

**ENSURING THE RAPID RESPONSE TO CHANGE,
ENSURING THE SURVEYOR OF TOMORROW**

Technical Chamber of Greece,
4 Nikis Str, Syntagma, Athens,
GREECE

24 January 2015



Response to Change:
FIG 2011 - 14

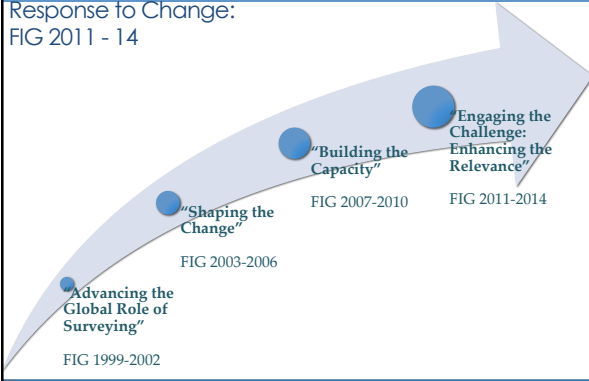


FIG 1999-2002
"Advancing the Global Role of Surveying"

FIG 2003-2006
"Shaping the Change"

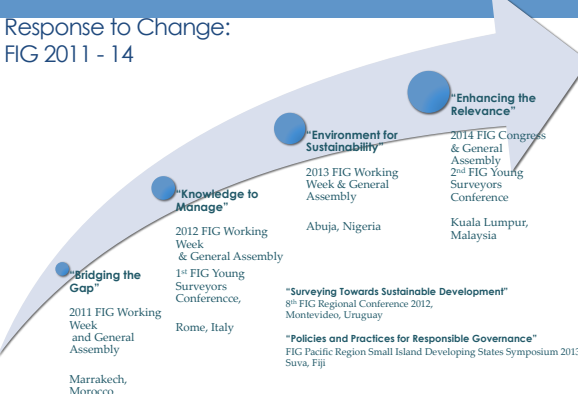
FIG 2007-2010
"Building the Capacity"

FIG 2011-2014
"Engaging the Challenge: Enhancing the Relevance"

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Athens, Greece, 24 Jan 2015

**Fédération Internationale des Géomètres
International Federation of Surveyors
Internationale Vereinigung der Vermessungsingenieure** FIG

Response to Change:
FIG 2011 - 14



2011 FIG Working Week and General Assembly
Marrakech, Morocco
"Bridging the Gap"

2012 FIG Working Week & General Assembly
Rome, Italy
"Knowledge to Manage"

2013 FIG Working Week & General Assembly
Abuja, Nigeria
"Environment for Sustainability"

2014 FIG Congress & General Assembly
Kuala Lumpur, Malaysia
"Enhancing the Relevance"

"Surveying Towards Sustainable Development"
8th FIG Regional Conference 2012,
Montevideo, Uruguay

"Policies and Practices for Responsible Governance"
FIG Pacific Region Small Island Developing States Symposium 2013,
Suva, Fiji

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**Fédération Internationale des Géomètres
International Federation of Surveyors
Internationale Vereinigung der Vermessungsingenieure** FIG

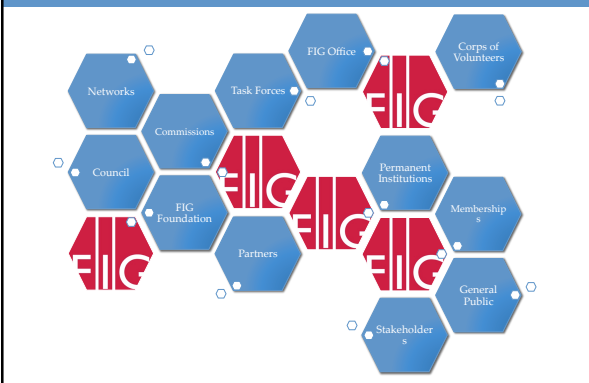


FIG Office

Corps of Volunteers

Networks

Task Forces

Commissions

Council

Partners

FIG Foundation

Permanent Institutions

Membership

General Public

Stakeholders

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**Fédération Internationale des Géomètres
International Federation of Surveyors
Internationale Vereinigung der Vermessungsingenieure** FIG

Fédération des Géomètres Francophones (FGF)
 Arab Union of Surveyors (AUS)
 Comité de Liaison des Géomètres Européens (CLGE)
 ASEAN Federation of Land Surveying and Geomatics (AFLAG)
 Asociación Panamericana de Profesionales de la Agrimensura (APPA)
 Mediterranean Union of Surveyors (UMG)
 Pacific Association of Quantity Surveyors (PAQS)
 Commonwealth Association for Surveying and Land Economy (CASLE)

Member association
 Affiliate
 Correspondent
 Academic members

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Fédération Internationale des Géomètres
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- Global Spatial Data Infrastructure (GSDI) Association
- IEEE Geoscience and Remote Sensing Society (IEEE-GRSS)
- International Association of Geodesy (IAG)
- International Cartographic Association (ICA)
- **International Federation of Surveyors (FIG)**
- International Geographical Union (IGU)
- International Hydrographic Organization (IHO)
- International Map Industry Association (IMIA)
- International Society of Photogrammetry and Remote Sensing (ISPRS)
- International Steering Committee for Global Mapping (ISCGM)

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World Bank Group
 United Nations Department of Economic and Social Affairs (UN DESA)
 Food and Agriculture Organization of the United Nations (FAO)
 United Nations Human Settlement Program (UN-Habitat)
 United Nations Global Geospatial Information Management (GGIM)
 United Nations Office for Outer Space Affairs (UNOOSA)
 United Nations Cartographic Section (Department of Field Support)(UNCS)
 United Nations Economic Commission for Europe (UNECE)
 United Nations Economic Commission for Africa (UNECA)
 United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP)
 United Nations Conference on the Standardization of Geographic Names
 United Nations Regional Cartographic Conferences (UNRCC)
 Global Land Tool Network (GLTN) (facilitated by UN-Habitat)
 International Organization for Standardization (ISO)

Corporate
 Correspondent
 Academic

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Landmark resolution on “Sustainable urbanization through equitable access to land, housing, basic services and infrastructure” adopted. (April 2011)

WELCOME TO THE 23RD GOVERNING COUNCIL

Continuum of Land Rights

Global Land Tool Network, UN-HABITAT (2010)

GLOBAL LAND TOOL NETWORK

The Social Tenure Domain Model
 A Pro-Poor Land Tool
 FIG Publication No. 52

Informal land rights → Formal land rights

Perceived tenure approaches: Customary, Occupancy, Adverse possession, Leases

Anti evictions, Group tenure, Registered freehold

include rights that are documented as well as undocumented, from individuals and groups, from pastoralist and informal settlers, that are legal as well as extra-legal and informal

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CREATION OF THE UNITED NATIONS COMMITTEE OF EXPERTS ON GLOBAL GEOSPATIAL INFORMATION MANAGEMENT

At its substantive session in July 2011, ECOSOC considered the report of the Secretary General (E/2011/89) and adopted a resolution to create the United Nations Committee of Experts on Global Geospatial Information Management (2011/24).

AIMS AND OBJECTIVES
The United Nations initiative on Global Geospatial Information Management (UN-GGIM) aims at playing a leading role in setting the agenda for the development of global geospatial information and to promote its use to address key global challenges. It provides a forum to liaise and coordinate among Member States, and between Member States and international organizations.

"Sound geospatial information is crucial for addressing the complex problems the world is facing today. These problems are global in nature and affect different regions, rural and urban areas alike, requiring coordinated efforts, more innovative and sophisticated approaches, as well as effective tools to ultimately guide our way to sustainable development"

Prof. Paul Cheung (UN Statistics Division & GGIM Secretariat), February 2012



UN-GGIM | United Nations Committee of Experts on Global Geospatial Information Management

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VOLUNTARY GUIDELINES ON THE Responsible Governance of Tenure

OF LAND, FISHERIES AND FORESTS IN THE CONTEXT OF NATIONAL FOOD SECURITY

HISTORIC INTERNATIONAL AGREEMENT ON THE GOVERNANCE OF TENURE

The Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security promote secure tenure rights and equitable access to land, fisheries and forests as a means of eradicating hunger and poverty, supporting sustainable development and enhancing the environment. They were officially endorsed by the Committee on World Food Security on 11 May 2012.

(Since then implementation has been encouraged by G20, Rio+20, United Nations General Assembly and Francophone Assembly of Parliamentarians.)

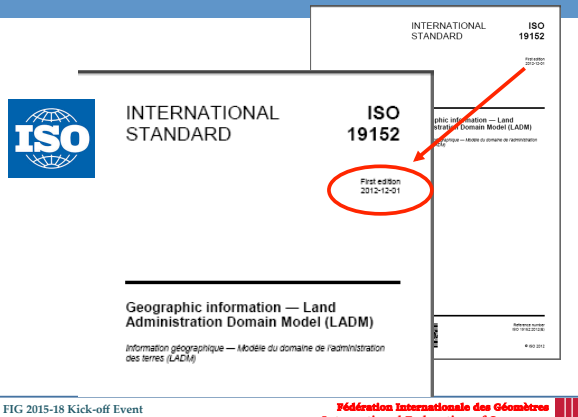


Endorsed on 11th May 2012 by the United Nations Committee on World Food Security



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INTERNATIONAL STANDARD ISO 19152

Geographic information — Land Administration Domain Model (LADM)

Information géographique — Modèle du domaine de l'administration des terres (LADM)

First edition 2012-12-01

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Kuala Lumpur Declaration on Spatially Enabled Government and Society, 2012

Recognizing that geospatial information includes fundamental data that is essential for better informed decision-making, evidence-based policy-making, risk reduction, disaster preparedness, and sustainable development, and that geospatial information is a key enabler for sustainable development and poverty eradication, we, the undersigned, hereby reaffirm, recommit, and pledge to implement, through our respective national governments and societies, the following:

- ensure that spatially enabled countries and governments, recognizing that all activities and services have a geographical and temporal context, make decisions and actions that are based on the best available geospatial information and services;
- facilitate the responsible use of geospatial information and services to support national development and poverty eradication, and to enhance the resilience of societies to natural hazards, disasters, and other crises;
- enhance national efforts, including investments towards the strengthening of all geospatial systems for land, fisheries and forests, and other natural resources, and activities that are critical to national development;
- ensure the integration of geospatial information and services into national and local development planning, and to support the implementation of national and local development plans;
- ensure the integration of geospatial information and services into national and local development planning, and to support the implementation of national and local development plans;
- build and sustain national and local geospatial information systems, and ensure that geospatial information and services are accessible to all citizens and stakeholders;
- improve national and local geospatial information systems, and ensure that geospatial information and services are accessible to all citizens and stakeholders;
- build and sustain national and local geospatial information systems, and ensure that geospatial information and services are accessible to all citizens and stakeholders;

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Partners:

Supported by:

Voluntary Guidelines on the Responsible Governance of Tenure
OF LAND, FISHERIES AND FORESTS IN THE CONTEXT OF NATIONAL FOOD SECURITY

Statement on Spatially Responsible Governance

Recognizing that land is a finite resource in the Pacific area unique in its situation and with particular vulnerabilities, remains a special case for sustainable development.

Recognize that the Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests outline the principles and practices that governments can refer to when making laws and administering land, fisheries and forest rights, particularly in the administration of tenure and specifically in areas such as the recording of tenure rights, valuation, taxation, spatial planning as well as issues and responses that is required in the recognition and protection of access and rights.

Recognize that the United Nations Initiative on Global Geospatial Information Management provides an inter-governmental consultative mechanism on policy, locally and geography and plays a leading role in setting the agenda for the development of global geospatial information infrastructure and its management;

Recognize that key partners of the Global Land Tool Network supported by the Secretariat in UN-IGGIM are actively developing joint gender sensitive and suitable land tools in support of the Continuum of Land Rights and alternative forms of secure tenure that include the enhancement of customary rights;

Recognize that all activities have a geographical and temporal context, and where countries and governments make decisions and register their affairs through the effective and efficient use of geospatial data, information and services;

Agree that information on geography, custodianship and ownership is foundational for accessible data and information has authority, currency and is comprehensive, freely available, accurate and usable;

Agree that work governance includes sustainable use of the environment, fosters economic growth, can empower people to hunger and poverty and the loss of lives through violent conflicts;

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FIG-World Bank Declaration on Fit-for-Purpose Land Administration

There is an urgent need to build cost-effective and sustainable systems that identify the way land is occupied and used and accordingly provide for secure land rights. When considering the resources and capacities required for building such systems in less developed countries, the concepts of robust, sophisticated systems are predominantly used in developed countries may well be seen as the end target, but not as the point of entry. When assessing technology and investment choices, the focus should be on a "fit-for-purpose approach" that will meet the needs of society today and that can be incrementally improved over time.

A fit-for-purpose approach includes the following elements:

- ✓ **Flexible** in the spatial data capture approaches to provide for varying use and occupation;
- ✓ **Inclusive** in scope to cover all tenure and all land;
- ✓ **Participatory** in approach to data capture and use to ensure community support;
- ✓ **Affordable** for the government to establish and operate, and for society to join;
- ✓ **Reliable** in terms of information that is authoritative and up-to-date;
- ✓ **Adaptable** to establish the system within a short timeframe and within available resources;
- ✓ **Upgradable** with respect to incremental improvement over time in response to social and legal trends and emerging economic opportunities.

A country's legal and institutional framework must be revised to apply the elements of the fit-for-purpose approach. This means that the fit-for-purpose approach must be enshrined in law and that the information be made accessible to all users.

A fit-for-purpose approach will ensure that appropriate land administration systems are built with a minimum about time frame and affordable costs. The systems allow for incremental updating and upgrading. This approach will facilitate economic growth, social equity and environmental sustainability to be better supported, pursued and achieved.

March 2014
World Bank, Washington DC

FIG

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XXV FIG Congress
Kuala Lumpur 16-21 June 2014 (M.A./A.S./S.A.)

UN-GGIM-AP/FIG Statement on Global Geodetic Reference Frame

Recognizing the growing need for an accurate and stable Global Geodetic Reference Frame to support, inter alia, earth observation, including sea level and climate change monitoring, natural resource and disaster management, and a wide range of other activities in public and private sectors throughout the World, contributing towards inclusive social progress, environmental sustainability and economic development.

Noting the decision adopted by the Committee of Experts on UN-GGIM at its third session in Cambridge in July 2013, on taking action to facilitate the submission of a resolution on Global Geodetic Reference Frame to be tabled at the 2013-14 session of the UN General Assembly and to establish a Working Group to develop the conceptual note and draft text of a UN General Assembly resolution.

Noting further that the draft resolution is planned to be discussed at the fourth session of the Committee of Experts on Global Geospatial Information Management in New York on 6-8 August 2014.

Recognizing the collective commitment of UN-GGIM-AP and FIG to support the implementation of an accurate and stable geodetic reference frame being essential to a wide range of activities in all territories of the World, at land and sea.

Urges member states and their representatives within UN-GGIM-AP together with all member states and their representatives at the fourth session of the Committee of Experts on Global Geospatial Information Management to support the approval of a draft resolution on Global Geodetic Reference Frame for Sustainable Development, and to submit to the 2013-14 session of the UN General Assembly for final adoption.

Urges FIG member associations and all other membership groups of FIG, to take appropriate initiatives to inform and encourage the representatives of their respective countries to the fourth session of the Committee of Experts on Global Geospatial Information Management, to support the approval of the draft resolution on Global Geodetic Reference Frame for Sustainable Development and its submission to the UN General Assembly.

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UN-Habitat

Continuum of Land Rights
A key concept to advance tenure security

The continuum ranges between the two extremes of highly informal and highly formal land rights.

- offering alternatives
- providing feasible path forward to make tenure systems work for all
- serving sustainable development

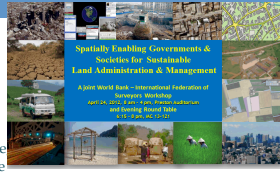
GLTN

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The Next Paradigm

Spatially enabling land administration and management will allow land information to be more effectively used in all levels of decision making and will allow Land Professionals to design and implement the next generation of land administration and management solutions that are fit-for-purpose more affordable, are citizen centric and can be improved incrementally when appropriate.



This would be of distinct advantage to the poor and disadvantaged in the context of securing tenure rights for all. This will require structural changes in the institutional, legislative and professional domains to allow this next paradigm to be successfully and quickly implemented.

In addition, this will require embracing Open Standards; Interoperability (systems, institutional and legislative); culture of collaboration and sharing; avoiding duplication (map once – use multiple times); encourage the incorporation of volunteered information; develop enabling platforms by locating, connecting and delivering information from different scales, purposes and origins.





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We observe an urgency and an immediate challenge in the building of an up-to-date, credible, comprehensive and authoritative inventory of land (and the seas) that include information on tenure, custodianship and ownership. This could be key to the success of the voluntary guidelines. We must seize the opportunities provided by a newer generation of web and mobile technologies and services such as online maps and location based solutions to build this crucial information base. This inventory, with both geographic and temporal context, is dependent on the availability of spatial data that is readily accessible for re-use, has minimal restrictions, is affordable, has appropriate quality and can be easily integrated and linked into collaborative environments using common frameworks.



When considering the resources and capacities that are required to build this crucial data and information base, an "initial point of entry" may well involve methodologies that are of lesser sophistication and accuracies, information from participatory and volunteered sources, technologies that are mobile and widely available, for example. These can be distinct from prevailing approaches and practices that are usually rigorous and can be out-dated.

Bold and innovative approaches, when combined with other socio-economic information can derive wider societal, environmental and economic benefits.

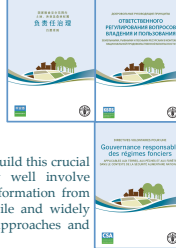


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How can you measure and monitor sustainable development?



UN-GGIM
United Nations Group of Experts on Geographical Information

United Nations Economic and Social Council
Committee of Experts on Global Geospatial Information Management Third session
Cambridge, United Kingdom of Great Britain and Northern Ireland
24-26 July 2015

Agenda Item 2D
Critical Issues relating to the integration of land and marine geospatial information

The Federation again welcomes the mandate of this Committee to enhance global collaboration and support the use of geospatial information to promote sustainable development and address challenges faced by humanity today such as climate change, rapid urbanisation and under nourishment.

At this third session, the Federation particularly welcomes the discussion on the statement of principles, global geospatial reference frame and the integration of land and marine geospatial information. The Federation urges members to formulate, implement and deliver policies that will further expand collaboration, access to critical geospatial information.

It has been observed that the seas and the oceans offer new opportunities and knowledge of this environment is crucial to create new opportunities. Until 2006, the data covered the entire ocean people (half of the world's population lives less than 200 kilometers of the shoreline and estimated that by 2025, this figure may double). The need to effectively manage the coastline as well as the need for integration of data between the land, coast and marine environment requires system that incorporate them all. Many countries have a land administration system and some kind of marine management system, but these generally operate as separate entities.

We observed how integrated land and marine geospatial information capture, collation and access collection and policies, and the need for closer collaboration between land and marine geospatial information data creators remains. Whilst technical challenges are being addressed and could be resolved progressively and with time, there remains the people and policy issues that will need to be addressed. The non-technical can be policy, legal and organisational. And beyond national boundaries, the policy and politics to collaborate with one another. In our information, both geospatial and people's worlds, it needs to consider, identify and build interoperable standards, frameworks and infrastructures, to ensure that institutions as well as jurisdictions collaborate.

Whilst we observe that advances in number, types and capacities of platforms and sensors together with varied and numerous practices provide a spectrum of possibilities and opportunities, the need for interoperability and collaboration remains. This is necessary to harness the full potential and opportunities afforded by integrating land and marine geospatial information.

Whilst international organisations, though only within its own capacities, are working collaboratively, in addressing technical challenges, as an example, the utilisation of reference ellipsoid as the common vertical datum, we urge the Committee of Experts and their respective governments to seek solutions to address key technical challenges within its jurisdiction, consider working parts of experts from within this Committee to identify, share and promote, good national policies, standards, infrastructures and practices that promote the desired course of interoperable collaboration, to begin reaping the benefits and returns in the integration land and marine geospatial information for all members.

Chemical ID
Fédération Internationale des Géomètres
27 July 2015

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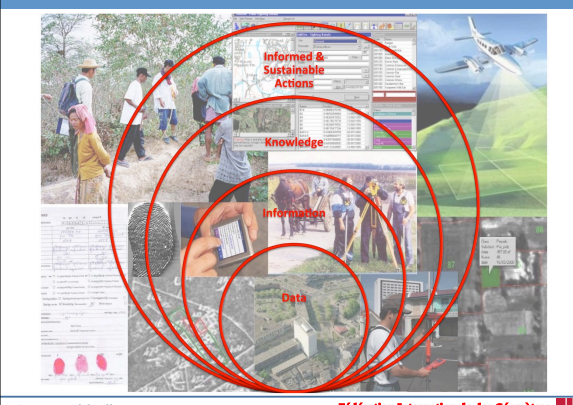
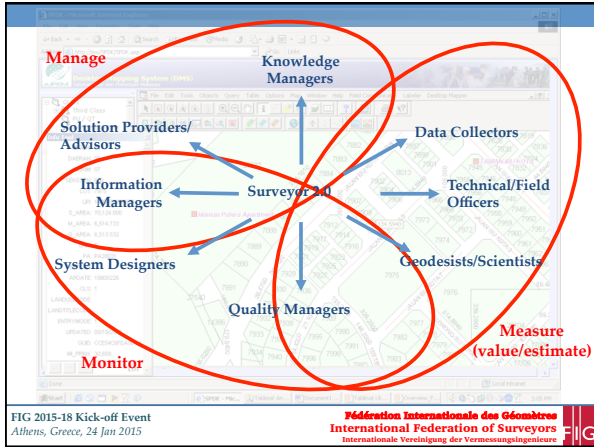


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Newsletter
 December 2014
 03

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 recognizes 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 2014-15 Session of the UN General Assembly.

ECOSOC recommends resolution to the UN General Assembly

The United Nations Economic and Social Council (ECOSOC) recently adopted a resolution to strengthen the development of the Global Geodetic Reference Frame.

– This is excellent news, says Dr Verónica Lawrence CE, co-Chair of the United Nations Committee of Experts on Global Geospatial Information Management (UN-GGIM). A draft of this resolution was tabled in August 2014 in New York at the fourth session of the UN-GGIM and will now be referred to the United Nations General Assembly.

and helping to underpin and promote new location-based investments across the globe, says Dr Lawrence.

“I wish the UN-GGIM GGFR Working Group success as this important global resolution progresses to the General Assembly in the coming months.”

Dr Verónica Lawrence CE, Co-Chair, UN-GGIM

Adopted at the General Assembly Hall, United Nations

UN-GGIM | United Nations Committee of Experts on Global Geospatial Information Management

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WORLD ECONOMIC OUTLOOK UPDATE - JANUARY 2015

ANNUAL GROWTH RATES
 The sharp fall in oil prices will spur global growth, but not enough to offset other negative factors.

2009 2014 2015 2016
 Global Economy
 3.3 3.2 3.4 3.7

2009 2014 2015 2016
 Advanced Economies
 2.0 2.0 2.0 2.0

2009 2014 2015 2016
 Emerging Markets & Developing Economies
 5.0 5.0 5.0 5.0

EXPLAINING GROWTH PROJECTIONS
 Four key developments in 2014 that influence the Growth Projections

Surplus oil production
 U.S. exceeded growth expectations, while most other economies grew more slowly than assumed

U.S. dollar appreciated
 Euro and yen depreciated

Risk spreads have increased in emerging markets

Global growth in 2015–16 is projected at 3.5 and 3.7 percent, downward revisions of 0.3 percent relative to the October 2014 World Economic Outlook (WEO). The revisions reflect a reassessment of prospects in China, Russia, the euro area, and Japan as well as weaker activity in some major oil exporters because of the sharp drop in oil prices. The United States is the only major economy for which growth projections have been raised

(IMF, 20 Jan 2015)

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FIG REPORT

The Surveyor's Role in Monitoring, Mitigating, and Adapting to Climate Change

FIG Task Force on Surveyors and the Climate Change

Global warming threat escalated in U.N. report

Officials in the Marshall Islands blamed climate change for severe flooding last month.

“The report and subsequent health claims, in particular, are a wake-up call for the world,” says the report. “The report also calls for more action to reduce greenhouse gas emissions and to adapt to the impacts of climate change.”

Coastal Cities at Risk
 By 2050, average global flood losses in the world's 150 largest port cities will rise to as much as \$63 billion a year. Here are the top 10 with the most to lose.

New York, London, Boston, Toronto, St. Petersburg, Miami, New Orleans, Chicago, Osaka, Tokyo, Sydney, Seoul, Shanghai, Guangzhou, Beijing, Hong Kong, Singapore, Perth, Melbourne, Sydney, Auckland, Wellington, Christchurch, Dunedin, Auckland, Wellington, Christchurch, Dunedin, Auckland, Wellington, Christchurch, Dunedin.

Average annual losses
 \$100
 \$200

Source: World Bank, OECD, CIPPEC, Middlebury University, Southampton University

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ENSURING THE RAPID RESPONSE TO CHANGE,
ENSURING THE SURVEYOR OF TOMORROW

"Institutions must advance also to keep pace with the times"
(Thomas Jefferson)

From left: Vice President Rudolf Staiger, DVM-Germany (2013-15); Vice President Chee Hai (President 2013-14), President Cheryap Poksina, TCG-Greece (2013-15); Vice President Diane Damable, RICS-United Kingdom (2013-15) and Vice President Cheng Pengfei, CSCGP-PR China (2013-15); Vice President Bruno Ranza, CNIGG-Italy (2013-15) (insert)