

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

FIG

ANNUAL  
REVIEW  
2011



## FIG XXXIV General Assembly 2011 – Marrakech, Morocco May 2011



FIG Council members at the first session of the General Assembly in Marrakech.



Delegations at the fully packed first session of the General Assembly discussing work plans 2011–2014.



President Henning Elmstroem, DdL, Honorary President Stig Enemark and President CheeHai Teo, FIG.

veying Professionals Association – ESPA), Senegal (Ordre National des Geomètres Experts du Senegal – ONGES), Nigeria (Nigerian Institution of Estate Surveyors and Valuers – NIESV), Mali (Ordre des Geomètres Experts du Mali – OGE) and Liberia (Cadastral Surveyors Association of Liberia). At the same time member associations from Armenia, Brazil (FENEA), Burkina Faso and Tanzania were expelled. The total number of member associations after this General Assembly is 102.

In addition, four new affiliate members were admitted: China Land Surveying and Planning Institute, Survey Department from Sri Lanka, Cyprus Lands and Surveys Department and Unidad Administrativa Especial de Catastro Distrital – UAECD from Colombia. The number of affiliate members is now 40.

There were also four new corporate members, FARO, Hi-Target Survey Instruments Company Ltd, Global Survey Qatar, and Concord Surveying Company from Qatar. Seven new academic members were also admitted from Turkey (Zonguldak Karaelmas University), Kazakhstan (East Kazakhstan State Technical University named after D. Serikbayev), Norway (Bergen University College), Kosovo (University of Prishtina), Cyprus (Neapolis University Paphos), Saudi Arabia (TECRS – The Environmental Center for Remote Sensing) and Morocco (IAV – Institut Agronomique et Vétérinaire Hassan II).

The General Assembly decided to postpone selection for the venue of FIG Working Week 2015 to Rome in 2012 when also the venue for the FIG Working Week 2016 will be selected.

General Assembly had a good breakout session and subsequently a robust discussion during the second session on membership issue relating to voting rights. The General Assembly by consensus established a working group from amongst those present to consider the issue and bring a discussion paper to the next General Assembly in Rome. The working group comprises member associations from Belgium, Canada, Denmark, Germany, Hong Kong SAR, China (HKIS), Ireland (IIS), Italy, Kenya, Lebanon, Netherlands, New Zealand, South Africa and USA (AI). The 13-member group later selected Mr. **Brian Coutts** (New Zealand) for chair and Mr. **Henning Elmstroem** (Denmark) as Vice Chair.

President Teo, in addressing the General Assembly, expressed optimism that together, surveyors can to be a Profession, armed with knowledge and best practices, extending the usefulness of surveying for the benefit of society, environment and economy, increasingly positioned in significance and relevance, next door to everywhere.

The FIG General Assembly 2011 was held during the Working Week in Marrakech, Morocco. 50 member associations with almost 300 participants attended the first session. The second session was attended by 48 member associations and about 250 participants representing all member categories as well as observers. The General Assembly was for the first time chaired by President

**CheeHai Teo**. The assembly recognized the great contributions of the immediate past President Prof. **Stig Enemark** by appointing him as an Honorary President.

The main item at this General Assembly was the adoption of the Council and Commission work plans for 2011–2014. These were endorsed by the members which allowed the Commissions to develop their work plans further during the week at Commissions' annual and other meetings. As part of the Council work plan, for the first time a four-year budget was adopted for 2011–2014. This four-year budgetary framework included the proposal to maintain membership fees at the 2012 level, approved at the 2010 General Assembly, for 2013 and 2014.

The work plan introduces four task forces. The Africa Task Force (2009–2014) and Task Force on Spatially Enabled Society (2009–2012) will continue their work. Two new task forces were established by the General Assembly. Both the Task Force on Surveyor and the Climate Change (chaired by **John Hannah**, New Zealand) and Property and Housing (chaired by **Chryssy Potsiou**) had their first meetings in Marrakech.

This General Assembly admitted five new member associations: Ethiopia (Ethiopian Sur-



# Greeting from the President

By Mr. CheeHai Teo, President of the International Federation of Surveyors



**“Engaging the Challenge:  
Enhancing the Relevance”  
FIG motto 2011–2014**

This Annual Review covers the activities of FIG over the past period and includes in particular the ten commissions, the work they are doing as well as through their working groups; the two networks and the four task forces. This Annual Review also presents some highlights of visits to international, regional and national events that have given Council the opportunity to engage the memberships and gain insights into the present day practices and activities of our members in these places.

The activities and achievements of FIG this past period would not be possible if not for the goodwill, resources and contribution of our corps of volunteers as well as the contributions and support of our members from around the world. FIG is fortunate and thankful for these contributions and support from practitioners working in both the public and private sectors, from the scientific, research and academic community, as well as from the spatial technologies and services providers.

During this period under review, the significant event within the FIG calendar undoubtedly is the Working Week in Marrakech, Morocco from 18<sup>th</sup> to 22<sup>nd</sup> May 2011 where more than 1,500 participants from 90 countries attended, a technical program in excess of 90 sessions with close to 450 presentations and an exhibition that attracted over 50 companies. It is regarded as the biggest FIG Working Week ever, both in the number of participants and in the size of the exhibition. The 34<sup>th</sup> General Assembly saw the Council's and Commissions' Work Plans approved together with the formation of two new FIG Task Forces, on Surveyors and the Climate Change (Prof. **John Hannah**, New Zealand as chair) and on Property and Housing (Prof. **Chryssy Potsiou**, Greece as chair). The Council's Work Plan comprises three key pillars,

namely, engaging the membership, engaging global challenges and enhancing the relevance. These three pillars are underpinned by ensuring administrative and financial sustainability within the Federation.

Commissions are collectively, “powerhouses” of the Federation, sources of in-depth knowledge, promoters and champions of standards and best practices. Each has an approved work plan and they continue to undertake studies and activities to effectively facilitate the technical agenda of FIG. As Commissions are powerhouses, national delegates as well as correspondents to these Commissions are the vital “power grids”, transmitting this in-depth knowledge, standards and practices to the memberships.

The Task Force on Spatially Enabled Society is bringing its Work Plan to a conclusion and will table its final report at the 2012 General Assembly that includes a publication. The FIG Africa Task Force had an eventful and successful workshop in December 2011 on “*Building Resilience in the Profession: A focus on Young People and Women*” in Cape Town co-organized and hosted by FIG's South African members. FIG Young Surveyors Network also supported this event as well as being engaged in the preparation and organization of the inaugural FIG Young Surveyors Conference in May 2012.

FIG continues its collaboration and dialogue with international partners, organizations and allied international spatial information societies, sharing and exchanging practices, approaches and experiences. FIG is collaborating with the World Bank in the organization of their 2012 Land and Poverty Conference with the theme “*Land Governance in a Rapidly Changing Environment*” that will include a joint segment that considers a number of issues related to assured and authoritative land and property information, spatial enablement and the growing recognition that there should be “continuum” of approaches and solutions, of technologies and technological sophistication.

The United Nations inaugural High Level Forum on Global Geospatial Information Management (UN-GGIM), convened in October 2011, was significant as there is certainly a need for international coordination on global geospatial information management with a vision to migrate to a paradigm of managing all information geospatially.

The 23<sup>rd</sup> Governing Council of UN-HABITAT in Nairobi, Kenya, 11–15 April 2011 witnessed the affirmation of the “*Continuum of Land Rights*” and where the resolution on “*Sustainable urbanization through equitable access to land, housing, basic services and infrastructure*” was adopted. The Global Land Tools Network Partners convened its 2011 Partners Meeting in Nairobi in November 2011 with the theme “*Strengthening Global Partnership: Sustaining a Paradigm Shift towards Designing, Developing and Implementing Pro-Poor Land Tools and Approaches*”. FIG was honored and privileged to be selected as the representative for the professional cluster on the GLTN International Advisory Board and over the next two years will need to work on improving the feedback mechanisms, strengthen working relationships and collaboration between and among partners within the professional cluster and across other clusters towards addressing emerging global challenges in the land sector.

UN FAO's intergovernmental negotiations on the Voluntary Guidelines on Governance of Tenure of Land, Fisheries and Forests in the context of National Food Security were successfully finalized in March 2012.

FIG continues to provide the global forum for sharing and exchanging practices and experiences between member associations and their memberships, the individual professionals. The activities of FIG are crucial to foster this global forum so that the Surveyor, armed with knowledge and best practices, can extend usefulness of surveying for the benefit of society, environment and economy and thereby increasingly positioned in significance and relevance, next door to everywhere.

On behalf of the global community of surveyors and the FIG membership, I wish to thank all who have unselfishly contributed, resourced and supported all these activities achievements under review.



**CheeHai Teo  
President**

# FIG Working Week and General Assembly in Morocco 18–22 May 2011

Bridging the Gap between Cultures – Facing the Challenges – Building the Capacity



FIG Fanfare at the Opening Ceremony.



Moroccan ministers and President CheeHai Teo, FIG and President Aziz Hilali, ONIGT after the opening.



Ms. Aida Opoku-Mensah, ECA, Othman Skiredj, Chris Gibson, Trimble and session chair Mohammed Ettarid in the first plenary session.

The FIG Working Week “*Bridging the Gap between Cultures*” and the XXXIV General Assembly was held in Marrakech, Morocco. The conference included also the 6<sup>th</sup> National Congress of the Ordre National des Ingénieurs Géomètres topographes (ONIGT) that was at the same time the local host of FIG 2011. The conference turned out to be the biggest FIG Working Week ever both in the size of the exhibition and the number of participants. More than 1,500 participants from 90 countries attended. The technical program comprised of more than 90 technical sessions, workshops and special forums. Total number of presented papers was almost 450. The Working Week was held at the fully packed Palais des Congrès in Marrakech.

The Working Week was organized under the patronage of His Majesty King **Mohammed VI** of Morocco. In the exotic city of Marrakech for sure cultures have been bridged. Meetings with young surveyors, a specific China forum, meetings with Moroccan, Mediterranean and Arab surveyors, and gathering of the ‘francophone’ world – and big participation from Africa – it was a big mix resulting in dynamic and multi-linguistic sessions – and acclaimed as a big success.

The opening ceremony gathered about 1,200 people to listen to the opening speeches of FIG President **CheeHai Teo** and ONIGT President **Aziz Hilali**. The opening address was given by Mr. **Karim Ghellab**, Minister of Infrastructure and Transport who addressed the conference on behalf of Prime Minister **Abas El Fassi**. Several ministers attended the opening ceremony and Mr. **Aziz Akhennouch**, Minister of Agriculture and Marine Fishery co-sponsored the welcome reception the previous evening.

Welcome greetings were also presented by President **Sarkis Fadous**, Arab Union of Surveyors, President **François Mazuyer**, Fédération des Géomètres Francophones, FGF and Vice President **Fausto Savoldi**, Mediterranean Union of Surveyors, UMG. They all organized their general meetings during the week. The FIG fanfare and the national anthem of Morocco brought festivity to the opening ceremony moderated by Prof. **Mohammed Ettarid**, Chair of the local organizing committee.

The Working Week included three plenary sessions addressing different aspect of the conference theme on bridging cultural gaps.

The first session was titled “*Knowledge and Technology Bridging the Gap between Cultures*”. This session and also the Working Week was kicked off by presentations from President Teo and President Hilali. In his opening remarks President Teo expressed optimism that together, “we can to be a Profession, armed with knowledge and best practices, extending the usefulness of surveying for the benefit of



society, environment and economy, increasingly positioned in significance and relevance, next door to everywhere”.

The first keynote speaker was Ms. **Aida Opoku-Mensah**, Director of UN Economic Commission for Africa, Division of ICT. She spoke about “*Bridging the Gap: The Role of ICTs & Spatial Technologies in Empowering Communities*” focusing on concrete leverage of Information and Communication Technology. Her main message was that the key issue is not only about the technology but also about acceptance of ICT and capacity building.

**Chris Gibson**, Vice President, Trimble Navigation spoke about the conference theme “*Bridging the Gap between Cultures*”. His clarified clearly that where GPS is concerned there is no need to learn the conventional survey approaches but that you can now ‘step in’ directly and that it is possible to work in different context using the same technology. The final presentation was given by Dr. **Othman Skiredj** from Morocco who spoke about the theory of the creation of the universes and of spiritual inheritance.

The second plenary session “*Governance and Regionalization*” was at the same time announced as the 6<sup>th</sup> National Congress of ONIGT. The session moderated by **Houde Ait-Mik**, World Federation of Engineering Organizations and Vice President **Dalal S. Alnaggar** was opened by the keynote presentation of President Aziz Hilali, ONIGT. The second presentation was made by **Abdouh Abdellatif**, Secretariat of Consultant Board on the Moroccan perspective to governance and regionalization. The most interesting presentation was made by FIG Honorary President **Holger Magel** on *Governance and Regionalization: New Paradigms for Transparent Politics and Accountable Civic Engagement*.

The last plenary session focused on environmental issues and sustainable development. It was co-chaired by **Mohammed Timoulali**, UN ECA and **John Hannah**, Chair of FIG Task Force on Surveyors and the Climate Change. The session started with presentation of **Mohammed Nbou**, Secretary of State, Energy Mines, Water and Environment. The FIG perspective for surveyors was given by Prof. **Stig Enemark**, who in his address “*The Climate Change Challenge – The Role of Land Professionals*” provided a good background for the FIG agenda for the coming years. The third speaker was **Kamel Ayadi** from Tunisia who in his paper “*Elargissement du Concept de la Durabilité: Gouvernance et Intégrité pour une Meilleure Durabilité du Développement*” discussed among other corruption.

The plenary sessions were very well attended. The interpretation at the key sessions and in two parallel technical sessions made it



**The biggest exhibition in the history of FIG Working Weeks at the Palais des Congrès. Trimble Navigation and ESRI as the platinum sponsors were located in the centre of the Salle Royale.**



**In total 12 Chinese companies exhibited in the Chinese pavilion.**

easier for the Moroccan and participants from Francophone Africa to attend the sessions.

At the exhibition in FIG 2011 there were 50 exhibitors occupying all 60 booth available. The exhibition spread out to the Salle Royale and all foyers at the ground floor of the Palais des Congrès. This made the tradeshow the biggest at any FIG Working Week in the history. Location of the technical sessions and coffees served in the exhibition area allowed a continuous visitors flow to the booth over the three days that the exhibition continued. The main exhibitors were the three platinum sponsors of

the FIG Working Week: ESRI and Trimble as the platinum international sponsors and ANCFCC as the main local sponsor. Trimble Navigation was also the sponsor to the FIG Foundation Dinner: It also announced to become a Charter Foundation Partner to the FIG Foundation. The other exhibitors included international companies and many Moroccan private companies and public institutions. For the first time there was also the Chinese Pavilion at the exhibition introducing 12 Chinese companies to the FIG audience.

The Chinese participation further included the China Forum and the reception hosted



**Prof. Ian Williamson at the special session on future cadastres (Towards Cadastre 2034).**



**Moroccan music entertained participants at the welcome reception.**

by the State Bureau of Surveying and Mapping. In the special forum 'China Surveying and Mapping Serves the World' attention was given to the comprehensive set of contents of MapWord, the Chinese own website with geo spatial data. During the forum the latest survey instruments were also presented. The preconference workshop for local surveyors was organized by Trimble and ESRI as part of their platinum sponsorship.

The technical program with more than 90 sessions offered something for everyone – the difficulty was in selecting the right sessions. Almost 70 papers were offered to peer review process and more than 30 presented in the program. In total 650 papers were offered and 450 included in the final program. A set of technical visits were offered to allow participants to visit local surveying and other institutions. all these tours were fully booked.

in Land Administration.

Discussions on disaster management and climate change and the surveyors' role in relation to this was a hot topic. The recent earth quake in New Zealand has also consequences for cadastral maps: a part of the earth surface disappeared but is still represented on the maps. There was a discussion on the situation in Haiti as in other post disaster areas. FIG has also established a task force on surveyors and the climate change that will also address these issues in the coming years.

Commission 5 had a very well planned program in co-operation with IAG, IGS and AFREF on CORS infrastructures. It should be recognized in relation to the accuracy of surveys that (very) high accuracy is in many cases not required nor demanded for. In many countries it is most important to get the cadastral map finalized and accessible. It can be a very good approach to start with

The technical program included some new openings e.g. a special forum with international experts on the futures of cadastres (Towards Cadastre 2034) that was organized in co-operation with GIM International.

Having the conference in Morocco lot of attention was focused to ongoing developments in Northern and Sub Saharan Africa. There were many representatives from the continent presenting papers and joining the discussions. The FIG Africa task force organized two round table sessions in which the focus was on the African surveying profession and how it can best contribute to meet the key challenges of poverty alleviation, economic growth, and environmental sustainability. UN-Habitat gave an overview of the latest developments on the Social Tenure Domain Model – an OpenSource Pro Poor software tool for unconventional support

a lower accuracy and even impreciseness and to perform quality upgrades later. Approaches with high accurate results do not in many cases result in complete cadastral coverage.

During the conference also some first, slightly reluctant, attention was given on possible future options of using infrastructures as Google Earth, Open Street Map, Facebook, Wikipedia etc. Can people built for example their own land administration with participatory and community based input?

During the week the already traditional Director General Forum was organized to discuss the key issues on the agenda of the national mapping and cadastral agencies. The lively and fruitful discussion was attended by about 20 leaders from national institutions. The first Academic Members Forum was attended by 22 universities to develop the agenda for further co-operation between universities and within the FIG academic network. The FIG Corporate members meeting was attended by one third of the corporate members. The FIG Young Surveyors Network and Standards Networks continued their active contribution to the Working Week program.

The welcome reception was held at the Mansour Eddahbi Hotel that worked as the main conference hotel. The FIG Foundation Dinner that at the same time was the Moroccan cultural evening was sponsored by Trimble Navigation. The venue Palais des Jbilates offered a nice Arabic surrounding for the evening that included Arabic music and dance. The conference dinner sponsored by His Majesty King Mohammed VI attracted thousand participants to Le Pacha Restaurant with international entertainment and a nice meal. The additional events included the ONIGT dinner and more information Commission dinners.

The Working Week ended with two closing ceremonies one for the 6<sup>th</sup> National Congress of ONIGT and the formal Closing Ceremony of the Working Week after the wsecond General Assembly. In his closing remarks President Teo trusted that everyone will leave the hospitable city of Marrakech with memorable moments. But at the same time "we must continue and strive to bridge the gaps that exist, that will ensure that the profession continues to enhance its role and relevance to ensure a sustainable future." President Teo acknowledged for the successful Working Week the local organizing committee, especially President and Congress Director Aziz Hilali, Chair of the LOC **Mohammed Ettarid** and Prof. **Moha ElAyachi** who carried out a big part of the logistics with FIG. Special thanks were also recorded to the big group of volunteers, young professionals and students that made the conference memorable.



# FIG Work Plan 2011–2014

## – Engaging the Challenge: Enhancing the Relevance



### During the term of office 2011–2014 the FIG Council is mindful of the need to:

- engage the membership to further strengthen the standing and prestige of the profession and the Federation as well as that of our members;
- continue engaging global challenges in partnership with UN agencies and the World Bank as well as sister and allied organizations; and
- enhance the significance of surveying, promote the profession's relevance and extend the usefulness of surveying for the benefit of society, environment and economy.

These needs will be underpinned by careful management, and fiscal prudence and restraints to ensure the sustainability of the Federation's delivery and membership services, administration and finances.

### The Work Plan of the FIG Council in 2011–2014 focuses on three key pillars:

- Engaging our Membership;
- Engaging Global Challenges; and
- Enhancing the Significance and Relevance of the Profession.

The pillar of Engaging our Membership includes communications and continuing dialogue with the members; support. It further includes to create working conditions to the commission that are, collectively, "powerhouses" of the federation. Therefore, the Council continues to develop and implement sustainable and effective knowledge sharing framework. Thirdly the Council will focus on conference structures where the Working Weeks, regional conferences and congress will remain the primary focus in terms of events. The Council will also work with Commissions and Task Forces to ensure better dissemination of science, knowledge

and practices through workshops, symposia and conferences that reach out and add value to our membership. A biennial event for Young Surveyors will be introduced in 2012 and 2014, alongside the Working Week and the congress.

Within the pillar of Engaging Global Challenges is recognized that humanity currently faces a series of challenges – adequate food and shelter, climate change, disaster management, rapid urbanization as well as environmental degradation, large-scale development and cultivation. Sustainable national and economic development, as well as good governance of land, natural and built environment, therefore remain fundamental. The Council will therefore develop concepts to mainstream the profession into the broader realm of governance of the natural and built environment, national development and economic progress and prosperity. Collaboration with the United Nations Human Settlement Programme (UN-Habitat), the United Nations Food and Agriculture Organization (FAO), the United Nations Office for Outer Space Affairs (UN-OOSA) and other international and multilateral agencies will be strengthened.

Further the federation will develop collaborative activities with UN-Habitat, UN-FAO, UN-OOSA and the World Bank to better understand, develop and present the Federation's response to the global challenges. The Council will consider new collaborative activities with UN related agencies in the areas of good land governance, undernourishment, inadequate shelter and sanitation, rapid urbanization particularly in the less developed countries, and climate change.

Two new Task Forces will be established: the Task Force on Surveyors and the Climate Change will identify and investigate specific areas where surveyors have the professional expertise to contribute to studies related to climate change; and the Task Force on Property and Housing will investigate challenges and identify roles for surveyors in a post-global financial crisis era including the challenge for adequate shelter.

The third pillar Enhancing the Significance and Relevance of the Profession emphasizes that promotion of the federation and the significance of the profession remains crucial. The Council will contribute in enhancing the Federation's partnership with UN related agencies, the World Bank and other external international or multilateral agencies as well as sister and allied organizations. Council will also encourage member organizations to cascade the benefits of these partnerships and related activities down to the national and local arena. During the term the status of all existing Memoranda of Understanding will be reviewed and where applicable new agendas for action and/or activities, particularly with the United Nations will be agreed. FIG will co-operate with, and, when appropriate, support regional surveying structures and organizations including Fédération des Géomètres Francophones (FGF), Comité de Liaison des Géomètres Européens (CLGE), Arab Union of Surveyors, Mediterranean Union of Surveyors, ASEAN Federation of Land Surveying and Geomatics (AFLAG), Asociacion Panamericana de Profesionales en Agrimensura (APPA), with the intention of improving the standing and status of surveyors at local and national levels.

## Commission Activities



**Commission chairs with Vice President Rudolf Staiger, who is chairing ACCO 2011–2014. Hartmut Müller is representing Commission 3 instead of its chair Yerach Doytsher and Wafula Nabutola (Comm. 8) was not able to be present in the photograph. In addition to the chairs the meeting was also attended by Kate Fairlie, Chair of Young Surveyors Network.**



**The ACCO meeting in Marrakech focused on implementation of Commission work plans, joint Commission activities and future events: Commission chairs in discussion with President Fausto Savoldi, CNGeGL about the FIG 2012 in Rome.**

The Commission officers met in 2010 in conjunction to the FIG Working Week in Marrakech, Morocco in May 2011. At the Working Week all commissions had their annual or other administrative meetings. At the meeting the work plans for 2011–2014, commission co-operation and organization of FIG conferences were discussed and at the commission meetings the implementation of their work plans.

### Commission 1 – Professional Standards and Practice

The Commission held its annual meeting at the FIG Working Week with close to 20 people attending. Four technical sessions were held

attracting good audiences and in addition a number of successful joint sessions were held with young surveying professionals and students; on organizational and legislative issues; on boundary delineation issues; and on different ways of service delivery.

Commission is supporting the worldwide surveying profession analysis that is being undertaken by **Cecilia Lindén**, Sweden, for working group 1.1 and work undertaken by **Robyn McCutcheon**, Australia, on the status of women in the spatial industry.

Working group 1.4 on international boundary settlement and demarcation chaired by **Haim Srebro**, Israel, has progressed on its final

publication and is close to having it completed in 2012.

Vice chair of administration Robyn McCutcheon attended the 25<sup>th</sup> International Cartographic Conference in Paris in July and the biennial Surveying and Spatial Sciences Conference 2011 in Wellington, New Zealand in November. Commission chair **Leonie Newnham** and McCutcheon attended also the 4<sup>th</sup> Land Administration Forum for the Asia and Pacific Region – Beyond Spatial Enablement, in October in Melbourne where they met the FIG President.

Commission has built a LinkedIn sub group and is considering revitalizing the work on gender issues.

### Commission 2 – Professional Education

Commission organized its annual meeting and several sessions on professional education at the FIG Working Week in Marrakech.

Prof. **Steven Frank**, Chair of Commission 2, participated the 23<sup>rd</sup> Surveying and Geomatic Educators Society Conference 19–22 July hosted by the Department of Civil Engineering and Surveying, University of Puerto Rico.

### Commission 3 – Spatial Information Management

In 2011 Commission 3 was active in three international events starting with a very active participation to the annual Working Week in Marrakech with 11 technical sessions. The total figure of presentations exceeded 80 in Commission 3 own sessions.

The annual 2011 FIG Commission 3 conference on “*The Empowerment of Local Authorities: Spatial Information and Spatial Planning Tools*” was held 25–28 October in Paris, France, **Rafic Khouri** from OGE being the chair of the organizing committee. Close to 50 participants arriving from 19 countries worldwide attended 8 technical sessions and 35 papers were presented.

The 2<sup>nd</sup> International Workshop on 3D Cadastres was organized jointly with Commission 7 in Delft, the Netherlands 16–18 November with 9 technical sessions and 4 working sessions (each one in 3 separate sessions). The total number of presentations at the event was more than 30.

Commission has three working groups. Working group 3.1 on SIM infrastructure focuses on SIM policy issues. Within the information society domain SIM serves as an integrator of components designed for spatial information infrastructure, mainly in urban areas. The activity is oriented to produce a FIG-publication on guidelines to establish an efficient SIM infrastructure in urban areas by addressing legal, institutional and technical issues (a joint publication with WG 3.2 – Technical aspects of SIM to be published in 2014.



Working group 3.2 focuses on SIM technical issues. New tools, techniques and policies are required to baseline and integrate the social, economic and environmental factors associated with spatially managing urban areas in general, and cities/megacities in particular.

Working Group 3.3 on 3D cadastre (joint WG with Commission 7) chaired by **Peter van Oosterom** (Netherlands) has focus on 3D cadastre issues. The increasing complexity of infrastructures and densely built-up areas requires a proper registration of the legal status (private and public), which can be provided to a limited extent by the existing 2D-cadastral registrations. An important work has been done by the WG in preparing a very detailed questionnaire and gathering information regarding the status of 3D cadastre in many different countries worldwide. The activity of WG 3.3 is oriented to a FIG-publication on guidelines to establish 3D-cadastrals (a "Primer on 3D-Cadastrals"), addressing legal, institutional and technical issues.

### Commission 4 – Hydrography

At the Working Week in Marrakech Commission 4 technical sessions comprised of 26 papers. The sessions were well attended, and attendees made significant contributions. Of significance was the participation of "Young Hydrographers" as part of FIG's Young Surveyors' Network.

**Michael Sutherland**, Chair of Commission 4 attended the 11<sup>th</sup> South East Asian Survey Congress in Kuala Lumpur, Malaysia 22–24 June as a guest speaker. He addressed the plenary session on the topic of implementing a marine cadastre. The concept of the marine cadastre continues to be of importance to jurisdictions in South East Asia, and hydrography plays an important role in developmental strategies.

The IHO-IMO-IOC-WMO-IALA-IAEA held their 5<sup>th</sup> Capacity Building Coordination Meeting at in Paris, France 27–28 October 2011. Commission 4 was in attendance by special invitation and was represented by Vice-Chair Administration **Gordon Johnston**, Commission 4's de facto liaison to IHO.

Commission 4 has five working groups. WG4.1 on Ellipsoidally Referenced Hydrographic Surveys (ERS) has distributed a questionnaire related to ERS practices in the summer of 2010. The findings from the information gathering were summarized in a paper that was presented at the U.S. Hydrographic Conference 2011 in Tampa, Florida and subsequently published in the November 2011 issue of the International Hydrographic Review. During 2011 the Working Group has been gathering information on the methods used by various nations to conduct vertical datum transformation from the ellip-



**The Working Week in Morocco was highlight for many commissions and their delegates both professionally and for networking. Technical Commissions gathering for their traditional Commission dinner.**



**Some attendees at the Workshop on Hydrography Awareness, Lokoja, Nigeria. Chair, Working Group 4.5 and workshop organizer, Mrs. Angela Etuonovbe stands at the center.**

soid to the chart datum. The resultant vertical separation model (SEP) will enable ellipsoidally referenced coherent hydrographic survey data sets to be referenced to the nautical chart datum. The goal is to publish an FIG report on the best practices and make a proposal to the International Hydrographic Organization (IHO) to include the information in this publication in the IHO Manual on Hydrography.

Working Group 4.4 Maritime and Marine Spatial Information Management is now chaired by **Jonathan Li**, Canada. This working group's

aim is to participate in co-operation with United Nations agencies on topics that are related to commission expertise (e.g. marine cadastre, data framework for e-Navigation etc.) and to represent the interests of FIG Commission 4 to, IMO in the development of an e-Navigation data framework (e.g., harmonization of data models among stakeholders).

Working Group 4.5 Hydrography in Africa, chaired by **Angela Etuonovbe**, Nigeria, continues to push for increased recognition in Africa of the important contributions of hydrography

## Commission Activities



**Commission 5 and 6 Workshop was held in Mongolia in September: Chair of Commission 6 Gethin Roberts and Vice President Rudolf Staiger in front of the map of Mongolia.**



**Commission 6 WG 6.1 symposium in Hong Kong in November 2011. In front row, Professor Judy Tsui, PolyU Vice President, Mr. Wong Chung Hang, Deputy Director of Lands Department, Professor Gethin Roberts, Representative of FIG, and Professor Ramon Hanssen, a keynote speaker at the opening ceremony.**

to society's objectives, and to ensure that this discipline receives the public funding and support that it deserves. The main work carried out in 2011 included meetings with high level government officials, and the organization of a workshop on hydrography and national development, held in Lokoja, Nigeria 24–26 October 2011. The theme of the workshop was "Hydrography and National Development". Participants came from as far away as Ghana and Canada.

During 2011 Commission 4 officers and members attended other meetings or presented papers at a number of conferences of importance to hydrography: Hydro 2011 in Fremantle,

Western Australia, 2<sup>nd</sup> International FIG Workshop on 3D-Cadastral in Delft, the Netherlands; 11<sup>th</sup> International LiDAR Mapping Forum 2011 in New Orleans, USA; Ocean Business 2011, in Southampton, UK; U.S. Hydrographic Conference 2011 in Tampa, USA; and 6<sup>th</sup> International Shallow Survey Conference 2012, Wellington, New Zealand.

Commission 4 continues to represent FIG on the FIG/IHO/ICA International Board on Standards of Competence for Hydrographic Surveyors and Nautical Cartographers (IBSC) jointly with IHO and ICA. Commission 4 has four representatives on the Board, these being: Gordon Johnston (UK), Dr. **Razali Mahmud** (Malaysia),

and **Adam Greenland** (New Zealand). In June 2011, Dr. **David Neale**, former Commission 4 Vice-Chair Administration, and former Commission 4 representative on IBSC, lost his battle with cancer. He has recently been replaced by Dr. **Keith Miller** as the 4<sup>th</sup> FIG member on the Board. At the IBSC meeting, held in New Orleans the Board reviewed 8 submissions, granting immediate recognition to 4 and requesting further input on the others.

In 2011 a dialogue started between FIG Commission 4 and the IHB of the IHO with an aim to creating a possible dual hosted event. Meanwhile FIG has been included in the invitations to a couple of Regional Hydrographic Commission events.

Commission continued to publish newsletters in Hydro International on a regular basis.

### **Commission 5 – Positioning and Measurement**

During 2011, the Commission 5 team took steps forward in achieving the five work plan goals by focusing to ensure the Working Week in Marrakech to be a success. Commission effectively collaborated with sister organizations at events.

Commission 5 continued to work with the other FIG Commissions primarily with Commission 6 on topics relating to deformation measurement, calibration of instruments, long range measurement, satellite and terrestrial imagery measuring techniques (in particular mobile and static laser scanning).

Commission 5 has put in a lot of effort in maintaining a successful working relationship with the International Association of Geodesy (IAG), the Permanent Committee for GIS Infrastructure Asia-Pacific (PCGIAP) and the International Committee on GNSS (ICG) by convening joint technical sessions and holding joint administrative meetings during the FIG Working Week and the IUGG General Assembly.

During 2011, the following events were held with sister organizations or where the Steering Committee held discussions with our sister organizations: General Assembly for the International Union of Geodesy and Geophysics, IAG; ICG-6, International Committee on GNSS in Tokyo, Japan; The Geodetic Infrastructure in Europe, CLGE in Umeå, Sweden; 3<sup>rd</sup> International Colloquium – Scientific and Fundamental Aspects of the Galileo Programme in Copenhagen, Denmark; and UAV-g, ISPRS in Zurich, Switzerland.

Commission 5 has five working groups. WG 5.1 on standards, quality assurance and calibration was active at the Working Week in Marrakech. The main item was a meeting to discuss revision of FIG publication No. 9 Rec-





**Group of participants to FIG Commission 7 Annual Meeting in Innsbruck, Austria in September.**

ommended Procedures for Routine Checks of Electro-Optical Distance Meters with additions for recommendations for hand held distance-meters and reflector-less instruments. An important initiative is underway to submit to ISO a proposal for a standard related to ITRS.

Working group 5.2 on reference frames focus has been to work on issues around the establishment of 4-dimensional datums, i.e. those including a time variable component to account for the effects of crustal deformation. A small sub-group meet in Sydney in July 2011.

WG 5.3 on geodetic and positioning infrastructure has one big projects that the IGS is gearing up for is "repro2" which will involve the reprocessing all the GNSS data collected at the IGS reference stations. Supplemental data will be included from a number of regional networks to strengthen the ties around the globe.

WG 5.4 on kinematic measurements is discussing the trend that the surveying profession is moving from static to kinematic measurements. The two technical main points identified are; multi-sensor-systems related to monitoring and machine guidance. Covered topics are e.g. synchronisation of measurement and modelling of movements. The main task is to facilitate the interchange of knowledge about kinematic measurements among practitioners and researchers at FIG conferences. Also joint conferences with other organizations like the Mobile Mapping Technology and the Machine Control and Guidance are the focus of the WG.



**Visit to the BEV Cadastral Office of Kufstein during Commission 7 symposium in Austria.**

Working group 5.5 on ubiquitous positioning discussed the fusion of multiple sensors, signals or measurements to deliver a position solution in environments that are 'difficult' for Global Navigation Satellite System (GNSS). To fully deliver a ubiquitous positioning capability requires an understanding of the performance

capabilities of the sensors used to augment or replicate that of a GNSS.

The working group maintained a strong and active presence at the following events: Mobile Mapping Technology (MMT) Symposium in Krakow Poland; 2011 International Union of Geodesy and Geophysics (IUGG) General As-

## Commission Activities

sembly in Melbourne, Australia; ION GNSS 2011: 24<sup>th</sup> Institute of Navigation GNSS Conference in Portland, Oregon; International Symposium on Location-Based Services in Vienna, Austria; and International GNSS Symposium in Sydney, Australia.

### Commission 6 – Engineering Surveys

Commission 6 was active within the Working Week in Marrakech by participating in 11 technical sessions. Commission Working Group 6.1 organized Deformation Monitoring Conference in Hong Kong, and Commission had involvement, participation and supported further 5 international meetings in Novosibirsk, Ulaanbaatar, Melbourne, Croatia and Kazakhstan. Commission 6 is sub-divided into three working groups and a fourth jointly with Commission 5.

The main activity of Working Group 6.1 on Deformation Measurements and Analysis was the Deformation Monitoring Conference held in Hong Kong in November 2011. This was jointly organized by the IAG and the Hong Kong Polytechnic University. This was the third such joint meeting, although the FIG's conferences go back to the early 1970s. Over 128 people from 27 countries attended, and presented 114 oral papers, in 26 technical sessions. Papers were presented on various practical and theoretical aspects of deformation monitoring. Commission Chair **Gethin Roberts** also represented FIG.

Working Group 6.2 on engineering surveys for construction works and structural engineering main activity focused on the Working Week in Marrakech being involved with five technical sessions.

Commissions 5 and 6 Workshop „*Innovative Technologies for an Efficient Geospatial Management of Earth Resources*“ was held in Ulaanbaatar, Mongolia 4–8 September 2011. The event was organized by Commissions 5 and 6 together with the Mongolian Association of Geodesy, Photogrammetry and Cartography (MAGPC) and the Siberian State Academy of Geodesy (SSGA) from Novosibirsk. FIG was represented by Vice President **Rudolf Staiger** and **Gethin Roberts**, Chair of Commission 6. The 3-day workshop was divided into five technical sessions, a poster session and a roundtable discussion. In total more than 40 presentations were given in Mongolian, Russian and English. “Early Warning and Crisis Management – the Role of GI and Spatial Data Infrastructure” was the title of the roundtable discussion. The workshop was the first of its kind in Mongolia and was very well organized by Dr. **Enkhtuvshin Baatar** – and his entire team.

Both Commission 5 and 6 were further involved in supporting the following events:

Geo-Siberia in Novosibirsk, Siberia and Workshop on Innovative Technologies for an Efficient Geospatial Management of Earth Resources in Kazakhstan.

Commission co-operation with sister organizations included: INGENIO 2011, organized jointly with the Faculty of Civil Engineering, Slovak University of Technology and UAV-g, ISPRS (Zurich, Switzerland)

### Commission 7 – Cadastre and Land Management

Commission 7 highlights in 2011 were the Working Week in Marrakech and the Annual Meeting and workshop in Innsbruck, Austria.

The Annual Meeting was held in Innsbruck 26–30 September. This very successful event culminated with the high level International Symposium Cadastre 2.0. The meeting gathered delegates from 30 countries among them FIG Vice President **Chryssy Potsiou**, former Chairs of Commission 7 **Andrzej Hopfer**, **Ian Williamson**, **Paul Munro-Faure** and **András Oskó**. Without any doubt, issues related to land administration and cadastral perspectives are still of very high interest, namely in regard of citizens' involvement, crowd sourcing and social medias. And to completion of cadastre and land registration in the developing world, this concerns about 75% of the 6 billion or so spatial units in use by humans on the planet.

During the meetings many discussions were on one hand held about the need for a AAA Cadastre (Accurate, Authoritative, Assured) for the some advanced countries and on the other hand, the immediate need for low cost solutions to meet the challenge of population in developing countries. There are different opinions and solutions. Developments of 3D cadastre have been discussed. This will be one of the important attention points in the work of the Commission, as well as management of government lands, pro poor land tools (with UN-HABITAT), spatial enabled societies, climate change, the cadastral template and the ISO Land Administration Domain Model. Further it was stated that the technology will take over the work of surveyors in land registration more and more. This work can be done by many people based on a very short education. We will not see cadastral surveyors in the field so much in the future. The annual meeting and symposium were organized by the Austrian Society for Surveying and Geoinformation and more specifically Ms. **Gerda Schennach**, Vice-Chair of Commission 7.

Commission 7 has three working groups. Working group 7.1 on pro poor land management has been active during the year. At the break out sessions at the Annual Meeting the issue of alienation of large tracts of land to

foreign countries was discussed. The professionals need to provide the data for decision making. This means that realistic solutions need to be proposed and land professionals need to be aware of the RRR (Rights, Restrictions and Responsibilities) toolbox.

In many developing countries, there are problems related to transfers of land to foreigners causing many conflicts. A set of guidelines would be most supportive, namely for African surveyors. The possible contents of an eventual declaration in this regard have been discussed.

Further innovations and advanced technology in cadastre and land-administration have been further investigated: digital pen, point cadastre, satellite images, etc.

The Land Administration Domain Model is at stage of Final Draft International Standard at ISO. The last voting round in ISO TC/211 is expected around July 2012. The LADM includes the Social Tenure Domain Model (STDM) that has been presented at several occasions in 2011.

Working Group 7.2 on disaster management and climate change has a joint project with the FAO that aims to develop online training materials on land tenure and disaster risk management. For the first phase, which involves face-to-face training in the Pacific and also in the Caribbean, **Daniel Roberge**, **Jaap Zevenbergen** and **David Mitchell** participated to a meeting at FAO headquarters in Rome, October, to discuss further implementation of the project and update the work plan. During the Working Week in Rome Commission 7 is working with FAO to run a workshop on land tenure and disaster risk management.

Working Group 7.3 on cadastral perspectives has worked based on the results of the discussions and outcomes of activities since its establishment in 2010. Several actions has taken place: joint seminar with FIG Commission 3 on 3D Cadastre, held in Delft in November 2011 was attended by members of WG 7.3; WG is producing a brochure defining visions and recommendations for cadastre in future. The working group will also contribute to the update of 3D cadastral questionnaire and collaborate in the improvement of the FIG cadastral template, considering social media and investigating about state of play of e-government procedures for cadastre.

Working Group 7.4 on cadastral and land management and reforms has carried out a study of the management of state and public sector land across a number of countries. A paper by **Richard Grover** and **Elikkos Ellia** “*The Management of State and Public Sector Land*” set out the initial conclusions from this study was presented in Marrakech and it drew on contributions from 26 members of Commission



7. The intention over the coming year is to move from research and analysis towards producing material to assist state land managers. The expected adoption of Voluntary Guidelines on Responsible Governance of Land Tenure by FAO provides a timely opportunity to do this.

Commission 7 wants to reach land professionals from under represented regions. In this aim, it has published two newsletters in three languages (English, Spanish and French). Commission 7 is also present on Facebook and LinkedIn.

### Commission 8 – Spatial Planning and Development

Commission 8 was fully involved at the Working Week in Marrakech contributing to as many as 12 technical sessions with a total of 65 papers submitted. Commission has four Working Groups: planning strategy for urban development and regeneration; informal settlements issues in spatial development planning and governance; re-engineering of mega cities; and land policies, land use planning control and implementation.

As an example of the Commission 8 activities in Africa after promulgation of the constitution of Kenya in 2010 and the passing of the national land policy the previous year, Kenya is in the process of passing three laws to replace the more 25 outdated and potentially confusing laws related to land. The Institution of Surveyors of Kenya, ISK will develop a model that will be adopted for other countries facing similar land administration and land governance challenges.

### Commission 9 – Valuation and the Management of Real Estate

Commission 9 work plan focuses on three relevant themes: property taxation which recognizes the social and economic value of real estate and provides revenue (normally) to fund public services, for the benefits of the wider community; large scale land acquisition for agriculture including investigation the issue of land grab – a highly topical and controversial issue causing international concern; and the management of public property assets in developing countries with a view to presenting guidelines on best practice for the public sector management community.

Commission was very active in Marrakech and has currently four working groups. Study group 9.1.2 on mass appraisal systems is organizing a seminar in Cyprus in 2012.

Commission 9 is co-operating closely with FAO on the planned FIG/FAO sessions at the Working Week 2012 in Rome, specifically on “Implementing Land and Property Taxes”, and



**Robert Šinkner, Chair FIG Commission 10, Christiaan Lemmen, Director OICRF, CheeHai Teo, President FIG, Ahmad Fauzi Nordin, chair of the Organizing Committee, and Michael Sutherland, chair of Commission 4 at the SEASC in Kuala Lumpur in June.**



**Commission chairs in Morocco following discussion on their work plans getting guidance for their term of office.**

in bringing to the debate issues from the study groups in Working Group 9.1.

### Commission 10 – Construction Economics and Management

Commission 10 had two technical sessions and annual meeting at the Working Week in Marrakech.

Commission contributed to following meetings in 2011: 15<sup>th</sup> PAQS Congress and Board meeting in Sri Lanka, 22–27 July; 11<sup>th</sup> South

East Asian Survey Congress and 13<sup>th</sup> International Surveyors' Congress in Kuala Lumpur, Malaysia, 22–24 June, where Commission Chair **Robert Sinkner** was an invited speaker for a plenary session with the paper on sustainable development of using maps in the Czech Republic; 5<sup>th</sup> General Assembly of AAQS in Mombasa, Kenya, 26 August, where **Michael K. Frimpong**, the Chair of WG 10.3, was elected as a President of AAQS. This will help the cooperation between AAQS and Commission 10 in the future.

## Co-operation with United Nations



World Bank Land Conference in April.

### The World Bank

FIG participated the World Bank Conference on Land and Poverty in Washington DC, USA, 18–20 April 2011. The 2011 edition of the World Bank's Land Conference continued to bring together policy makers, practitioners, professionals and participants from academia and civil societies. This year's event included country specific focus on improving land governance at country level from Brazil, PR China, Ethiopia, Ghana, India and Rwanda. President **CheeHai Teo** attended the conference and chaired the session on "Making Land Administration Accessible" on 20<sup>th</sup> April. The session had three presentations including "What is required to bring the social element into land administration? Moving from LADM to STDM" by Dr. **Clarissa Augustinus** and Mr. **Christian Lemmen**. In his introductory remarks, President Teo commented that land administration is more than just a process, as it has to account for culture and context, it is about places and people and it involves technologies and techniques. Inclusive and equitable access to effective land administration can reduce poverty and thus improve the physical and economic well being. Former FIG President, **Stig Enemark**, also attended the Conference and made a presentation titled "Towards a Global Partnership for Capacity Building in Land Administration".

The 2012 edition of the World Bank Conference on Land and Poverty will again aim to foster dialogue and sharing of good practices by showcasing the diversity of reforms, approaches and experiences that are being implemented in the land sector around the world. With the theme "Land governance in a rapidly changing environment", FIG is collaborating with the Bank in the organization of this annual event that will include a joint segment that considers a number

of issues related to assured and authoritative land and property information, and the growing recognition that there should be "continuum" of approaches and solutions, of technologies and technological sophistication

### United Nations Human Settlement Programme (UN-HABITAT) and Global Land Tool Network (GLTN)

President **CheeHai Teo** attended the 23<sup>rd</sup> Governing Council of UN-HABITAT in Nairobi 11–15 April 2011 and met with the Executive Director Dr. **Joan Clos** during his visit. Dr Clos was appointed the Executive Director of UN-HABITAT in October 2010. Prior to this appointment, Dr. Clos was Mayor of Barcelona, Spain. He appealed for cities to be considered an asset and not a liability and called for renewed optimism at the closing of the 23<sup>rd</sup> biennial meeting of the Governing Council. During his visit to Nairobi President Teo made a courtesy call on Dr. Clos; the meeting was also attended by Dr. **Mohamed El-Sioufi** (Head, Shelter Branch, Global Division), Dr. **Clarissa Augustinus** (Chief, Land, Tenure and Property Administration Section, Shelter Branch) and Mr. **Danilo Antonio** (Global Land Tools Network Secretariat). It was a most cordial meeting, the first between the newly appointed Executive Director of UN-Habitat and FIG. In the meeting, FIG affirmed her continuing support and commitment to UN-Habitat's new vision for sustainable urbanization as well as the ongoing initiatives and projects, particularly that which relates to adequate shelter, access to land and water, continuum of land rights, social tenure domain model and in particular, the programs within the Global Land Tools Network. President Teo commended and welcomes Dr. Clos's calls for renewed optimism for our urban spaces, for a return to basics in city layouts and planning

and for sustainable urbanization through equitable access to land, housing, basic services and infrastructure. Dr. Joan Clos recorded FIG's invitation to attend and give a keynote address at the XXV FIG Congress in Kuala Lumpur in 2014.

The Governing Council adopted a resolution on "Sustainable urbanization through equitable access to land, housing, basic services and infrastructure". Global Land Tools Network, the Land, Tenure and Property Management Section and the Shelter Branch within UN-HABITAT must be congratulated for this landmark resolution. Years of consistent and persistent efforts culminated in the passing of this resolution. The contribution of UN-HABITAT's management in facilitating GLTN, the development and advocacy of this resolution is to be lauded and applauded. FIG is indeed proud and privilege to be a partner within GLTN, to have supported and contributed towards the realization and the acceptance of this continuum of land rights and alternative form of secure tenure.

The Global Land Tools Network partners convened its 2011 Partners Meeting in Nairobi on 15–16 November 2011 with the theme "Strengthening Global Partnership: Sustaining a Paradigm Shift towards Designing, Developing and Implementing Pro-Poor Land Tools and Approaches" aimed at further strengthening the global partnership towards sustaining the paradigm shift in the development and implementation of pro-poor land tools and approaches and in the promotion of alternative land tenure and land management systems to improve tenure security within the land governance framework. The two-day event also decided on the representations to the International Advisory Board (IAB) and FIG was honored and privileged to be selected as the representative from the professional cluster and over the next two years will need to work on improving the feedback mechanisms and to strengthen working relationships and collaboration between and among partners within the professional cluster and across other clusters towards addressing emerging global challenges in the land sector.

### United Nations Global Geospatial Information Management

United Nations Economic and Social Council made history on in July 2011 in Geneva by establishing a new intergovernmental body, the United Nations Committee on Global Geospatial Information Management, to bring together, for the first time at the global level, government experts from all member states to consult on the rapidly changing field of geospatial or location information. The global surveying community must recognize the role of the United Nations in recognizing the urgent need for actions to



promote and strengthen international cooperation in the area of global geospatial information.

The United Nations convened the inaugural First High Level Forum on Global Geospatial Information Management (UN-GGIM) 23–27 October in Seoul, Republic of Korea where international geospatial information societies within the Joint Board of Geospatial Information Societies (JBGIS) represented at the Forum, including FIG, affirmed their commitment and pledged to use their collective professional expertise, research and development capacities to help realize the vision and goal of UN-GGIM, in particular, of building appropriate and sustainable geospatial information infrastructure at national, regional and global levels and of enhanced collaboration in the generation, dissemination and sharing of geospatial information. FIG together with allied organizations within the JBGIS opined that there is a need for international coordination on global geospatial information management with a vision to migrate to a paradigm of managing all information geospatially. This inaugural Forum brought together approximately 350 participants from 90 Member States together with 22 representatives from the United Nations and 37 representatives from international organizations and the private sector.

#### Food and Agriculture Organization of the United Nations (FAO)

Vice President **Dalal Alnaggar** participated in FAO Workshop Gender-Equitable Governance of Land Tenure 10–12 May at the FAO Headquarters in Rome, Italy. At the workshop 20 specialists were invited, and Vice President Alnaggar represented FIG. The purpose of the workshop was to bring together land sector professionals from government, civil society and the private sector to share their experiences of practical approaches to improving gender-equitability in governance of land tenure. The participants defined that gender is a socially and politically constructed identity which is broader and more differentiated than just men and women. The recommendations were identified and best practices for wider dissemination through a technical guide on gender were developed to support the implementation of responsible governance of tenure. In her presentation Prof. Alnaggar concentrated her speech on gender-equitable technologies (GIS, LIS, spatial and registration databases, land administration) in developing countries and in the Arab world in particular.

FIG contributed in the process of drafting the FAO Voluntary Guidelines on Responsible Governance of Tenure of Land and other Natural Resources and the e-consultation in April-May 2011. The final text of the Voluntary Guidelines was submitted for the consideration of the 37<sup>th</sup>



**Danilo Antonio (left) from the Global Land Tool Network presenting the GLTN activities at the UN-Habitat Governing Council in Nairobi in April 2011.**



**United Nations Under-Secretary-General, H.E. Sha Zukang addressing the Forum during the Opening Session at the United Nations Global Geospatial Information Management meeting in Korea.**



**Invited participants at the workshop at the FAO Workshop on Gender-Equitable Governance of Land Tenure in May in Rome.**

## Co-operation with United Nations



**Mr. Gert Steinkellner and Chairperson Helen Kerfoot at the 26<sup>th</sup> Session of the United Nations Group of Experts on Geographical Names in Vienna in May.**



**Prof. Abbas Rajabifard and Prof. Ian Williamson at the 4<sup>th</sup> Land Administration Forum for Asia and the Pacific in Melbourne.**



**Satisfied officers of ICG Working Group D. From left: Chris Rizos, Matt Higgins, Mikael Lilje and Ruth Neilan at the meeting in Tokyo.**

session of the Committee on World Food Security (CFS) whose board has unanimously agreed to reconvene the Intergovernmental Negotiation on the Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security. The negotiations will take place in March 2012 with an aim at reaching an agreement on a final version of the Voluntary Guidelines. As part of the FIG contribution a series of technical sessions on the guidelines will be organized during the FIG Working Week 2012 in Rome.

### **United Nations Group of Experts on Geographical Names (UNGEGN)**

The 26<sup>th</sup> Session of the United Nations Group of Experts on Geographical Names (UNGEGN) was convened in Vienna, Austria, 2–6 May 2011, where Mr. **Gert Steinkellner**, President of the Austrian Society for Surveying and Geoinformation (OVG), represented FIG. This experts' group deals with technical, cultural and linguistic aspects of geographical names. It is organized in geographical/ linguistic divisions and working groups amongst others for on toponymy, exonyms and terminology. The Chairperson **Helen Kerfoot** (Canada) highlighted in her report about the period 2009–2011 the challenges for UNGEGN, the big need for data integration and the proliferation of user-generated names in the light of rapidly advancing technology and multi-instance communications.

### **United Nations sponsored Permanent Committee on GIS Infrastructure for Asia and the Pacific (PCGIAP)**

The President attended the 17<sup>th</sup> Meeting of PCGIAP held at Ulaanbaatar, Mongolia 21–22

July. During the meeting, it was resolved that there will be a 4<sup>th</sup> Land Administration Forum with the theme “*Beyond Spatial Enablement*” at the University of Melbourne’s Centre for Spatial Data Infrastructure and Land Administration (CSDILA) 5–7 October 2011 and an International Symposium on Spatially Enabled Government and Society with the theme “*Towards Spatial Maturity*” in Kuala Lumpur, Malaysia on 15–16 February 2012. Both the events were supported by FIG and proved to be successful. Alongside the International Symposium there will be the Expert Group Meeting convened by PCGIAP Working Group 3, FIG Task Force on Spatially Enabled Society and the GSDI Association. The EGM will bring together and provide a forum for professionals from government and private sector, academia and research institutes and technologies providers to discuss the issues, trends and technologies that impacts a spatially enabled government and society.

The aims of the Permanent Committee are to maximize the economic, social and environmental benefits of geographic information in accordance with Agenda 21 by providing a forum for nations from Asia and the Pacific to cooperate in the development of a regional geographic information infrastructure.

FIG intends to seek avenues to collaborate with PCGIAP in furthering the “Sydney Agenda for Action” that has a primary focus on the small island developing states in the Pacific as these states are part of the 56 member jurisdictions of PCGIAP.

The 4<sup>th</sup> Land Administration Forum for Asia and the Pacific “*Beyond Spatial Enablement*” and Tenth Anniversary Celebration of the Centre for SDIs and Land Administration took place at the University of Melbourne, 7 October. The forum and associated workshops were coordinated through the PCGIAP Working Group 3 on “*Spatially Enabled Government*” and the University of Melbourne’s Centre for SDIs and Land Administration (CSDILA). Mr. **Greg Scott**, Chair of PCGIAP WG3 and Prof. **Abbas Rajabifard**, Director of CSDILA were the event co-chairs. The focus of the event was developed both by PCGIAP and CSDILA along with the outcomes of the 3<sup>rd</sup> Land Administration Forum for Asia and the Pacific hosted by the Iranian Government in 2009.

There were three keynote presentations; “Spatial Enablement in Australian Government” by Dr. **Chris Pigram**, Chief Executive Officer, Geoscience Australia; “Spatial Enablement in Europe – The Role of Cadastre and Land Administration” by Ms **Dorine Burmanje**, Chair, Executive Board, Dutch Kadaster and Prof. **Stig Enemark**, Aalborg University and Honorary President, FIG. The keynote session



was followed by four technical sessions with the themes “Spatial Enablement in Action”; “The Role of Land Administration in Spatial Enablement” where FIG President **CheeHai Teo** spoke on the “Role of Surveyors in Support of Spatial Enablement” as well as Dr. **Daniel Steudler**, Chair of FIG Task Force on Spatially Enabled Society who spoke on the topic “Swiss Cadastre and Spatial Enablement”. The third session was titled “The Role of Government and The Private Sector” and this was followed by “Challenges and Opportunities to Achieve Spatial Enablement” that was moderated by FIG President. The 4<sup>th</sup> PCGIAP Land Administration Forum ended with a Discussion Session on “The Way Forward to Beyond Spatial Enablement”.

### **United Nations Economic Commission for Africa (UNECA)**

The United Nations Economic Commission for Africa (UNECA) has taken the role to lead the UNGGIM initiative in Africa and convened the GGIM Africa Preparatory Meeting in Addis Ababa, Ethiopia 8–10 August, to consult member states in Africa with a view to develop the continent’s needs, prospects and vision for an overall Geoinformation Governance in Africa and to recommend any action that may be required to guide member states in achieving a better coordination mechanism for geospatial information management. More than 61 delegates attended this meeting. The President of FIG made a presentation at the meeting on capacity building and knowledge transfer and stressed that there are three important aspects emphasizing that capacity is not of a passive state but is part of a continuing process. He promoted FIG’s view that capacity development is a concept that is broader than institutional development since it includes an emphasis on the overall system, environment and context within which individuals, organizations and societies operate and interact.

UNECA has prepared a Memorandum of Understanding that will be endorsed by the FIG General Assembly in Rome. The MoU is intended to deepen collaborative activities between UNECA and FIG and is in support of improving access to information, specifically geospatial information, the promotion of geospatial science and technology for socio-economic development as a key objective.

### **United Nations Office for Outer Space Affair (UNOOSA)**

The 6<sup>th</sup> Meeting of the International Committee on Global Navigation Satellite Systems (ICG) was held in Tokyo, Japan 5–9 September. The ICG has been formed as a result of recommendations of the UN Committee on the Peaceful Use of Outer Space (COPUOS), as ratified by the General Assembly of the UN. FIG is an Associate Member of the ICG. The meeting was attended by **Matt Higgins**, Immediate Past FIG Vice President, and **Mikael Lilje**, Chair, FIG Commission 5.

Mikael Lilje attended as the FIG representative to UNOOSA and Matt Higgins as co-chair for Working Group D. More than 200 people attended the meeting with representatives from all GNSS providers as well as many others. The closing statement outlined the highlights of the broad scope of work across the ICG and the most recent developments in Tokyo. Various presentations were made at the plenary sessions and working group sessions of the meeting and they form a very useful snap shot of the state of the art with the various GNSS and also with issues across key user groups.

## **FIG Definition of the Functions of the Surveyor**

The definition of the functions of the surveyor as adopted by the FIG General Assembly in 2004:

### **Summary**

A surveyor is a professional person with the academic qualifications and technical expertise to conduct one, or more, of the following activities;

- to determine, measure and represent land, three-dimensional objects, point-fields and trajectories;
- to assemble and interpret land and geographically related information,
- to use that information for the planning and efficient administration of the land, the sea and any structures thereon; and,
- to conduct research into the above practices and to develop them.

### **Detailed Functions**

The surveyor’s professional tasks may involve one or more of the following activities which may occur either on, above or below the surface of the land or the sea and may be carried out in association with other professionals.

1. The determination of the size and shape of the earth and the measurement of all data needed to define the size, position, shape and contour of any part of the earth and monitoring any change therein.
2. The positioning of objects in space and time as well as the positioning and monitoring of physical features, structures and engineering works on, above or below the surface of the earth.
3. The development, testing and calibration of sensors, instruments and systems for the above-mentioned purposes and for other surveying purposes.
4. The acquisition and use of spatial information from close range, aerial and satellite imagery and the automation of these processes.
5. The determination of the position of the boundaries of public or private land, including national and international boundaries, and the registration of those lands with the appropriate authorities.
6. The design, establishment and administration of geographic information systems (GIS) and the collection, storage, analysis, management, display and dissemination of data.
7. The analysis, interpretation and integration of spatial objects and phenomena in GIS, including the visualisation and communication of such data in maps, models and mobile digital devices.
8. The study of the natural and social environment, the measurement of land and marine resources and the use of such data in the planning of development in urban, rural and regional areas.
9. The planning, development and redevelopment of property, whether urban or rural and whether land or buildings.
10. The assessment of value and the management of property, whether urban or rural and whether land or buildings.
11. The planning, measurement and management of construction works, including the estimation of costs.

In the application of the foregoing activities surveyors take into account the relevant legal, economic, environmental and social aspects affecting each project.

## Co-operation with Professional and Regional Organizations



The Joint Board for the Geospatial Information Societies at the meeting in Paris in July.

### Joint Board for the Geospatial Information Societies (JB-GIS)

The Joint Board for the Geospatial Information Societies (JB-GIS) at its meeting in Paris in July 2011 elected Prof. **William Cartwright** from International Cartographic Association as the Chair. Vice President **Iain Greenway**, represented FIG at the meeting. The JB GIS is gaining prominence and importance, particularly within the United Nations initiatives on Global Geospatial Information Management. This was reaffirmed when the Chair of JB-GIS was included as a member of the “extended” Bureau for the United Nations Committee of Experts on Global Geospatial Information Management, underlying the necessity for international professional geospatial societies to work collaboratively and to have a collective voice within the United Nations system.

23–27 October, on the sideline of the United Nations First High Level Forum on Global Geospatial Information Management, an ad-hoc JB-GIS meeting was held and members within JB-GIS reaffirmed their desire to continue collaborating and to coordinate the work particularly in raising the profile of the importance of geospatial information in disaster management.

### International Association of Geodesy (IAG)

**Mikael Lilje**, Chair, FIG Commission 5, **Rob Sarib**, **Graeme Blick** (WG 5.2) and **Allison Kealy** (WG 5.5) attended the General Assembly for the International Union of Geodesy and Geophysics in Melbourne where the International Association of Geodesy (IAG) is one of the eight scientific

associations within IUGG with whom FIG has an operating Memorandum of Understanding (MoU) with.

### ASEAN Federation of Land Surveying and Geomatics

President **CheeHai Teo** attended the 44<sup>th</sup> Council Meeting of the ASEAN Federation of Land Surveying and Geomatics in Bangkok, Thailand 20–21 October. The meeting was hosted by the Survey and Mapping Society, Thailand and

chaired by Dr. **Wicha Jiwalai**, President of AFLAG. FIG President stressed in his greeting the key role and contribution of surveying sciences, practices and technologies in various aspects of disaster management and disaster risk reduction.



President Dr. Wicha Jiwalai, ASEAN Federation of Land Surveying and Geomatics and President CheeHai Teo, FIG.



## Visits to Members

Dato' Prof. Dr. **Abdul Kadir Taib**, Director General of Survey and Mapping Malaysia (Department of Survey and Mapping, Ministry of Natural Resources and Environment Malaysia) cordially received Mr. **CheeHai Teo**, FIG President at his office in Kuala Lumpur, Malaysia 3 January 2011. The Director General also chairs the Land Surveyors Board, the regulatory authority for the land surveying profession in Malaysia. FIG President thanked the Director General for his continuing support for FIG and his attendance at the recent FIG Handover Ceremony. During the courtesy visit, various matters were discussed including the standing and advancement of the profession in Malaysia, the active participation of the Department's officers at FIG events, as well as the support of the Department in particular, the Government of Malaysia in general for the XXV FIG Congress in 2014.

FIG representatives visited Rabat and Marrakech 11–14 January to check the final preparations of the FIG Working Week 2011 that is a second FIG conference to be held in Morocco as the FIG Regional Conference was held in Marrakech in 2003. The visit was organized to agree on final arrangements of the Working Week with the Ordre National des Ingénieurs Géomètres Topographes (ONIGT) and the local organizing committee. The team led by Dr. **Dalal S. Alnagar**, FIG Vice President together with **Louise Friis-Hansen**, Office Manager and **Markku Villikka**, FIG Director could see that the organizing committee and local surveyors had put a lot of effort to guarantee a big, professionally interesting and socially unbeatable conference.

The Albanian Association of Geodesy (AAG) celebrated its 20<sup>th</sup> anniversary since its establishment and organized a one-day Conference in Tirana 22 January 2011. The conference was a historic event as it was at the same time the 1<sup>st</sup> conference of AAG. During these past 20 years Albania and AAG have both walked in the path of progress and AAG became a member association of FIG at the congress in Sydney. More than 400 participants attended the conference, most of them surveyors from Albania and the neighboring countries in the Balkan region. The technical program included more than 30 presentations; all of them will be published in the technical journal of AAG. Organizer of this conference was Dipl. Ing. **Bledi Stefa**, President of AAG and Vice President, Prof. **Chryssy Potsiou** represented the Council at the conference where she gave also an invited speech on "Land Reforms and the Importance of Security of Tenure". During the event, the AAG President kindly nominated Vice President Potsiou as an honorable member of the AAG.

President of the Hong Kong Institute of Surveyors, Mr. **Wong Bay** together with Past

President Mr. **Raymond Chan Yuk-Ming**, Honorary Secretary Mr. **Edwin Tang Hoi Kwan**, Honorary Treasurer Mr. **Simon Kwok Chi-wo**, Chairman of Land Survey Division Mr. **Koo Tak Ming** warmly received FIG President Teo at the Institute's Office in Hong Kong SAR on 3 March 2011. Present during FIG President's courtesy call on the HKIS President was Ms **Winnie Shiu**, Co-Chair designate for FIG Commission Working Group 1.1 and Mr. **Kenny Chan Chi Hung**, Vice Chair of HKIS Young Surveyors Group, an active member of the FIG Young Surveyors Network. Apart from being shown around HKIS impressive premises President Teo thanked President Wong for HKIS's continued contribution and engagement with FIG, discussed various professional matters that is of mutual interest and welcomed HKIS's interest to play a more active role within FIG's Commissions, networks and Task Forces during the current term.

The European Group of Surveyors (EGoS) held its General Assembly and one day seminar in Thessaloniki 11–12 April 2011. FIG was represented by Vice President **Potsiou** who made a keynote presentation at the seminar. In her presentation she spoke about the work of FIG representing surveyors throughout the world on an International basis. Many of the EGoS member organizations are also members of FIG. She promoted especially the activities that FIG has started to attract young surveyors and professionals and welcomed future co-operation between FIG and EGoS. The seminar was attended by 60 Greek professional surveyors and students who together with



**Dato' Prof. Dr. Abdul Kadir Taib, Director General of Survey and Mapping Malaysia and Mr. CheeHai Teo, FIG President.**



**Dipl. Ing. Bledi Stefa, President of AAG, and Prof. Chryssy Potsiou, FIG Vice President.**



**President Teo visiting HKIS headquarters in Hong Kong in March.**

## Visits to Members



**Chairman Collins Kuwuor is on President CheeHai Teo's left and Deputy Chairman John Kihagi on the right together with ISK's Council Members and senior members.**



**FIG representatives Prof. Gethin Roberts, Prof. Volker Schwieger and Vice President Staiger and the bell that is used to open Geosiberia.**

international guests attended the EGoS seminar on matters concerning surveyors in Europe. A large number of subjects were presented by speakers from the EU and Turkey providing information of training courses, technical matters and education and mutual recognition of professional qualifications for surveyors. The seminar was opened by President of EGoS Mr. **Randolph Camilleri** from Malta. The speakers included President of HARSE ( Hellenic Association of Rural Engineers) Greece. Mr. **Stefanos Xekalakis**, Dr. Chryssy Potsiou, FIG, Geom. **Bruno Razza** CNGGL ( Consiglio Nazionale Geometrie Geometri Laureati) Italy who spoke about e-cadastre and international surveying courses and services offered to surveyors.

In connection to the 23<sup>rd</sup> Governing Council of the United Nations Human Settlement Programme (UN-Habitat) in April 2011, President **Teo** was delighted at the opportunity to address and interact with members of the Institution of Surveyors of Kenya (ISK) as well as surveying undergraduates on the afternoon of 13<sup>th</sup> April in Nairobi. The event was facilitated by the University of Nairobi and the audience comprised members of ISK and students from both the geospatial and land economy programs. ISK Chairman **Collins Kowuor** together with **Wafula Nabutola**, Commission 8 Chair and Kenyan surveyors warmly received

the President who in his address congratulated ISK for its groundbreaking work in engaging civil society, bringing the value and benefits of surveying to better the Kenyan society. ISK has been a key actor in the lead up to the new Kenyan Constitution with an important land chapter that aimed to ensure secure tenure rights for all Kenyan citizens.

FIG delegation visited Rome to prepare the Working Week 2012 8–9 April 2011. The visit was at the same time the first official visit of President **Teo** to a FIG member association. President **Teo** accompanied by Vice President **Chryssy Potsiou** and FIG Director met with President **Fausto Savoldi**, CNGGL and his board members. The visit included discussions also with representatives of UN FAO and it was confirmed that FAO will be partnering FIG at the 2012 Working Week in Rome. During the visit it was further confirmed that the first FIG Young Surveyors Conference will be held back-to-back with the Working Week, on 4–5 May 2011. This new initiative is targeted at young surveying professionals to assist them to participate in FIG's international conferences at affordable costs. The conference is aimed at young professionals under 35 years including students.

Geosiberia 2011 was organized 26–29 April in Novosibirsk, Russia by the Siberian State Academy of Geodesy. This event which was already the 7<sup>th</sup> edition was organized under the lead of Prof. **Alexander Karpik** and Prof. **Vladimir Seredovich**. FIG was one of the co-sponsors and was represented by Vice President **Rudolf Staiger**. Geosiberia is an exhibition for instrumentation and services and at the same time a national and international congress. Six different topics were treated over 19 technical sessions with more than 600 presentations. The international part of the Congress started with an opening ceremony followed by the first plenary session, where Vice President Staiger gave a presentation on "10 years of Terrestrial Laser Scanning". The FIG participation was strong this year as also **Volker Schwieger** (Vice Chair of Commission 5) and the **Gethin W. Roberts**, Chair of FIG Commission 6 made their presentations.

Vice President Potsiou participated the International Seminar on Land Administration and Management 12 April in Prishtina, Republic of Kosovo. The seminar was organized by Geo-SEE and its President Prof. **Bashkim Idrizi** from FY Republic of Macedonia and Kosova Cadastral Agency and its Chief Executive Officer Prof. **Murat Meha** and was supported by FIG. It was attended by almost 100 participants from 34 organizations from 13 different European countries. Prof. **Potsiou** spoke about "Compulsory Purchase and Compensation in EU-Land Takings in Greece".



President **Teo** visited Mongolia in July where he met with the Mongolian Association of Geodesy, Photogrammetry and Cartography 20 July in Ulanbaatar. He spent an evening with the President **Enkhtuvshin Baatar** and his board members interacting extensively on professional and association related matters. They provided the President with a general overview of the profession, practice and industry in Mongolia, the current state of affairs within the association. The challenges include bringing about greater cohesiveness within the profession, establishing appropriate standards that will raise the level of practice within the industry. During the visit linked to the 17<sup>th</sup> Permanent Committee on GIS Infrastructure for Asia and the Pacific President Teo called on Mr. **Gankhuu Tsevelsodnom** at his office and congratulated him on his appointment as the General Director of the Mongolian Administration of Land Affairs, Construction, Geodesy and Cartography (an affiliate member of FIG).

President Teo visited China Land Surveying and Planning Institute in Beijing, China PR, 24–25 July where Mr. **Wang Shiyuan**, Vice Minister of Land and Resources China hosted a dinner for the President during this stopover in Beijing on his return from the 17<sup>th</sup> PCGIAP Meeting. CLSPI was admitted as an affiliate member of FIG at the FIG General Assembly in Marrakech, Morocco. During discussion with Vice Minister Wang it was made to understand that there are approximately 300,000 land managers and administrators in China and the seniors in their ranks are members of China Land Science Society. Vice Minister Wang wishes to see China Land Science Society becoming a member association in FIG in 2012.

President Teo visited the China Institute of Real Estate Appraisers and Agents (CIREA) during his trip to China in July. 25 July he met with Prof. Junping Liao who is an active member of FIG Commission 9 and was recently appointed as a member of the FIG Task Force on Property and Housing. President was warmly received at the Institute's office in Beijing by Dr Chai Qiang, the Institute's Deputy Executive President and other leaders of CIREA and later with President **Song ChunHua** over lunch. President Song reiterated CIREA's desire and willingness to host commission level symposiums and workshops in China as part of its effort to further develop the profession.

In conjunction to the UN-ECA GGIM Africa Preparatory Meeting President Teo met Vice President of the FIG Member Association from Ethiopia, ESPA, **Zelalem Asemu** 10 August. They discussed extensively on current state of the profession in Ethiopia. ESPA is a young professional organization that was admitted

into FIG at the Working Week in Marrakech. Mr. Zelalem reiterated the need for support not just from FIG but also from neighboring FIG member associations to further develop the profession in Ethiopia and to raise the profile of the profession in the country and to promote the contribution of the profession in national development.

The 11<sup>th</sup> South East Asian Survey Congress was held this year in the Putra World Trade Centre, Kuala Lumpur, Malaysia, 22–24 June. Under the congress theme 'Innovation towards Sustainability', about one thousand participants were welcomed by the President of Institution of Surveyors Malaysia Sr **Elvin Fernandez**; the President of the ASEAN Federation of Land Surveying and Geomatics (AFLAG), Ms. **DiahKirana Kresnawati** and by the President-elect of the Royal Institution of Chartered Surveyors (RICS): Sr **Ong See Lian**. Under the chairmanship of Sr **Ahmad Fauzi Nordin** an excellent program was prepared in co-operation with FIG President **CheeHai Teo** and Sr **Teng Chee Hua** from the Surveying and Mapping Department. The conference offered broad coverage of the survey profession, from modern geodesy to land administration and valuation, real-estate markets to 3D and marine cadastres. FIG was well represented by several invited speakers: **Christiaan Lemmen**, director OICRF, had a keynote on 'Society Driven Innovations in Land Administration', **Robert Šinkner**, Chair Commission 10, presented a paper on Sustainable Development in using of Maps and Geospatial Data for GIS/MIS Systems in comparison with availability of Graphical Data in the last centuries in the Czech Republic and in Europe and **Michael Sutherland**, Chair Commission 4 (Hydrography) on Implementing Marine Cadastres.

Vice President **Staiger** attended the FIG Commission 5 and 6 Workshop „Innovative Technologies for an Efficient Geospatial Management of Earth Resources“ in Ulaanbaatar, Mongolia 4–8 September. The workshop was organized by FIG Commissions 5 and 6 together with the Mongolian Association of Geodesy, Photogrammetry and Cartography (MAGPC) and the Siberian State Academy of Geodesy (SSGA) in Novosibirsk. FIG was represented also by Gethin Roberts, Chair of FIG-Commission 6.

The FIG Office hosted a delegation from China Land Surveying and Planning Institute, Ministry of Land and Resources who came to visit the FIG Office, and to explore about FIG, the Danish Association of Chartered Surveyors and Aalborg University 26 September. The delegation was led by Chief Planner **Hu Cunzhi**, Ministry of Land and Resources. The purpose of the meeting was to deepen mutual understanding and strengthen the cooperation between MLR and the global surveying community. Honorary President **Stig Enemark** was present during the day and he also gave a presentation on Land Governance in support of the Global Agenda. The meeting was hosted by Ms. **Louise Friis Hansen** and Ms. **Hanne Elster** from FIG office. The delegation visited also the National Survey and Cadastre, Denmark.

**Vice President Greenway attended the congress in Ilidza in Bosnia Herzegovina, 28–30 September. as an invited guest.** The Geodetic Society of Bosnia-Herzegovina became a member association of FIG in 2010. Over 200 professionals attended the congress, from Bosnia-Herzegovina and surrounding countries. Those responsible for the cadastre in the country face a number of particular challenges. Some of these relate to the loss of cadastral



**Vice President Greenway with the Congress organizers in Bosnia Herzegovina.**



**President César Mario Garachico, FADA, President Raúl Horacio Grosso, APPA and President Teo at the seminar in Argentina in October 2011.**



**President Nelma Benia and members of the Council of AAU together with President Teo in Montevideo to prepare the FIG regional conference.**

records in the recent war; others to the legacy of differing cadastral systems in the country. The reconstruction of the cadastre following the war began in 2007 and is making good progress. It is seen by the government as a key national task, one which is also being supported by other countries. It is aimed to have the work complete in 2013; this includes a review of the quality of the records with the aim of reducing and removing errors, as well as reconstructing the records that were lost in the war.

INTERGEO 2011 was held in Nuremberg, Germany 27–29 September 2011. The world biggest tradeshow in surveying and geomatics business gathered more than 16,000 visitors from 80 countries. The exhibition space exceeded 28,000 sqm introducing 800 exhibitors. Prof. **Karl-Friedrich Thöne**, President of the German Society for Geodesy, Geoinformation and Land Management (DVW) stated that “there is simply no better platform to promote networking between providers and users on a professional level in geomatics business”. The

focus at INTERGEO 2011 was very much on the geodata infrastructure, sensors and 3D mapping. FIG was represented at the INTERGEO by Vice President Staiger, who also made the greeting on behalf of all partner associations at the Opening Ceremony at the City Hall of Nuremberg. Prof. Staiger and FIG Director had fruitful meetings with the major FIG corporate members and also with several member associations. The number of FIG members attending INTERGEO indicated that it has also become a platform for international networking.

The International NSDI Conference on “*Impact of the NSDI in the society, Challenges for establishment*” was held in Skopje, Macedonia FYROM 19–20 September 2011. It was organized by the Agency for Real Estate Cadastre (AREC) and the Faculty of Civil Engineering and FIG and EuroGeographics as co-organizers. FIG was represented by Vice President **Potsiou**. The technical program included 37 presentations; the conference was attended by 130 participants from 22 countries.

The 3<sup>rd</sup> International and Professional Training Course for Young Surveyors was held in Athens, Greece 3–14 October. The training course was an excellent event, organized and sponsored by the CNGeGL (national association of the Italian surveyors) and Geoweb (FIG corporate member), in collaboration with HARSE (Hellenic Association of Rural and Surveying Engineers). The course was supported by FIG, EGoS, and CLGE. FIG was represented by Vice President **Potsiou**. In total 50 young surveyors from 21 European and non European countries participated in the course; the 66 hour-course schedule consisted of lectures and technical visits; in total 23 professors from Italy, Greece, Turkey and the United Kingdom have participated.

President Teo joined the 3<sup>rd</sup> Cadastral Congress in October in Warsaw, Poland. The theme was ‘Cadastral in sustainable spatial management’. The congress was organized by the Association of Polish Surveyors in close cooperation with the Head Office of Geodesy in Poland. About 150 participants from 19 countries joined. The congress was held under the auspicious of President of Poland Mr. **Bronisław Komorowski**. The participants were welcomed by **Stanisław Cegielski**, President of the Polish Association of Surveyors, **Jolanta Orli ska**, Surveyor General of Poland and President Teo. Honorary President **Stig Enemark** gave a keynote. Issues discussed were the future of Cadastre (Cadastre 2014plus), cadastral reforms in local and global scale – integration of the technical and legal part of cadastre, cadastre in the field of disaster management and cadastre in the European Union.

In October President Teo and FIG Director visited Argentina and Uruguay. In Argentina they met with President **César Mario Garachico** and Board members of the Federación Argentina de Agrimensores, FADA. In the discussions future co-operation and activities were discussed and it was agreed that Commission 7 will organize its annual meeting in 2012 in Argentina linked to the 8<sup>th</sup> FIG Regional Conference. FADA also organized a small seminar for the local surveyors to meet the FIG President. This meeting was also attended by President **Raúl Horacio Grosso**, Asociación Panamericana de Profesionales en Agrimensura, APPA.

The visit to Uruguay was organized to prepare the 8<sup>th</sup> FIG Regional Conference after meetings with President **Nelma Benia** and the board members of the Asociación de Agrimensores del Uruguay, AAU it was agreed to have the conference in Montevideo 26–29 November 2012.

The last visit of the year to member associations was the visit to Rome to prepare the Working Week 2012. The visit was made by President Teo and the FIG office staff in November.



## Permanent Institutions and Task Forces

### Permanent Institutions

FIG has two permanent institutions: *The International Office of Cadastre and Land Records – OICRF*, and *The International Institution for the History of Surveying and Measurement – Permanent Institution of FIG (IIHSM)*. The *FIG Foundation* is in addition an independent body within the Federation.

OICRF maintains a digital library that contains approximately 10,460 publications (1<sup>st</sup> of January 2012), which include things such as conference documents, magazine articles and reports on land administration. All of the available documents and the most recent publications can be downloaded and accessed electronically at [www.oicrf.org](http://www.oicrf.org). In 2011 the digital library got more than 20,900 visitors from 145 countries and about 9,616 papers have been downloaded.

This number is based on the application of Google Analytics; visits from search engines are excluded in this. OICRF is hosted by the Cadastre, Land Registry and Mapping Agency of the Netherlands.

At the congress in Sydney FIG General Assembly appointed **Christiaan Lemmen** (Netherlands) as the new OICRF Director and Ms **Pauline van Elsland** as OICRF Secretary.

The International Institution for the History of Surveying and Measurement attended the Working Week in Marrakech and had in addition its own projects. The long running project for the possible extension of the Struve Geodetic Arc World Heritage Monument has reached a critical stage. During 2011 Jim Smith completed the collection and summarising of as much published material as it was possible to find relating to the two additional sections. These are the triangulation through Central Europe of the 1920s and 1930s that extended from Lithuania to Crete and that in Africa known as the Arc of the 30<sup>th</sup> Meridian. A document summarising this has recently been sent to representatives of all the Struve Arc countries.

Jan de Graeve has recently completed a Report about Gerhard Mercator in English and French and it is to be published in spring 2012.

Several commemorations of Mercator are taking place in Europe to celebrate his 500<sup>th</sup> anniversary in 2012.

### Task Forces

FIG has currently four Task Forces: Task Force on Spatially Enabled Society, chaired by Dr. **Daniel Steudler** (Switzerland) will get its work completed by publishing its final report at the conference in Rome; FIG Africa Task Force (2009–2014), chaired by Dr. **Diane Dumashie** (United Kingdom); Task Force on Surveyors and the Climate Change (2011–2014) chaired by



The participants at the African Task Force meeting in South Africa in December 2011.

Prof. **John Hannah** (New Zealand); and Task Force on Property and Housing (2011–2014) chaired by Prof. **Chryssy Potsiou** (Greece).

The FIG Africa Task Force organized a two-day workshop on Building Resilience in the Profession: A focus on young people and women 1–2 December 2011. The key purpose of the task force is to enable the surveying profession in Sub Saharan Africa to deal with social responsibility in terms of contributing to achieving the Millennium Development Goals. In this regard, the role of the surveyors as change agents engaging with the politicians and civic society is important. The local organizers were the University of Cape Town and the South African Council for Professional and Technical Surveyors (PLATO). The Africa Task Force believes that the workshop designed to promote delegates as agents of change has deliberated how member associations may demonstrate societal contribution and specifically to achieve this, developed recruitment tools that are required to convince young people that surveying profession should be a first choice career.

The Task Force on Surveyors and the Climate Change is identifying those areas where surveyors can assist uniquely the international community to better understand the effects and impacts of climate change and can provide advice on how to mitigate and cope with the effects of climate change. It will further consider the skills of a surveyor, on the design and

use of any global measuring, monitoring and management systems that might be used to mitigate the effects of climate change.

The Task Force on Property and Housing will investigate challenges and major threats resulting from the current global financial crisis, and identify new role for the surveyor. It will develop awareness, vision and key strategies as well as to investigate tools and techniques around institutional development, improvement of coordination of various stakeholders, adoption of effective policies; and land tool development, technical tools to support the above.

# FIG Foundation and Communication

## The FIG Foundation – Building a Sustainable Future



The FIG Foundation is an independent body under the International Federation of Surveyors.

– The Foundation has been established for the purpose of raising funds to finance surveying education development projects

and supporting young surveyors in order to build a sustainable future.

- The Foundation funds shall not be used to support the normal activities of FIG.
- The Foundation is administered by the FIG Office in Copenhagen and directed by a Board of five Directors appointed by the FIG Council.
- The Directors of the Foundation will announce every year the scholarships and grants available. The first grants were given in 2002.

In 2011 the FIG Foundation decided on two new initiatives: it will give up to four Young Surveyor Conference Fellowships to provide funding for individuals to cover the costs to attend and participate in the First FIG Young Surveyor Conference in 2012 and the FIG Working Week in Rome. The second new initiative is the FIG Foundation Academic Research Grants which will provide for research grants of up to 20,000 euros spread over two years.

The Board of Directors for 2011 was as follows: **John Hohol**, President of the FIG Foundation (USA), Prof. **Michael Barry**, (Canada), Prof. **Steven Frank**, (USA), Prof. **Chryssy Potsiou** (Greece) and Prof. **Paul van der Molen** (Netherlands). The Foundation is also proud to acknowledge Trimble Navigation as an FIG Foundation Charter Partner.

## The FIG Foundation – How can I contribute?

Companies, associations, institutions, events, surveyors' groups and individuals may contribute to the Foundation by:

- Donations which will be recognised by a plaque or a certificate of different categories reflecting the sum of donation as follows:
  - platinum plaque EUR 25,000
  - gold plaque EUR 10,000
  - silver plaque EUR 5,000
  - bronze plaque EUR 1,000.
- Donations to support specific projects or by offering scholarships. Donors and Benefactors may use the FIG Foundation logo to promote their project donations or scholarships.

- Voluntary donation when registering to FIG events.
- Attending social functions such as the FIG Foundation Dinners held during every FIG Congress and Working Week and other events.

## Communication

The main tools for communication of the Federation are the FIG web site [www.fig.net](http://www.fig.net) and different newsletters and printed material and publications and CD-ROMs.

The web site includes e.g. the work plan of the Council and the commissions; contact details of Council members, member associations, affiliates, corporate members, academic members, commission officers and commission delegates; forthcoming events; and FIG publications and conference reports.

*The FIG annual review* – an overview of major activities and achievements and the main medium of external communication.

This is supported by a monthly e-Newsletter which is sent free of charge to all subscribers. All commissions have also their newsletters that are published 1–2 per year and posted on the commission's web site.

In the FIG publications series the federation publishes formal policy statements and ethical, educational and technical guidelines, these are also available on the FIG home page.

Proceedings of FIG conferences and of selected technical seminars sponsored or cosponsored by FIG's commissions and member associations are available on the FIG home page.

FIG publishes also on the web site a monthly article that is selected from a conference or event and that is of general interest.

In addition FIG Commissions have launched on their web sites proceedings from their workshops and seminars.

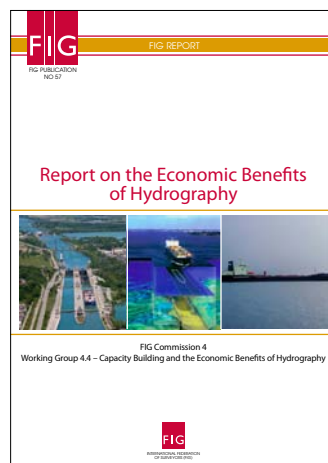
## New publications in 2011

After launching in total 12 new FIG publications in 2010 the new Commission and Task Force chairs have focussed on implementing their work plans. Most results will be presented in reports that will be published in 2014. In 2011 following publications were launched:

- FIG Publication No. 57: *Report on the Economic Benefits of Hydrography*. FIG Commission 4 Working Group 4.4 – Capacity Building and the Economic Benefits of Hydrography. FIG Report 2011. Available only on the web.

## Land Administration Domain Model

*Land Administration Domain Model* (LADM) has been published as a Draft International Standard by the International Organization for Standardization (ISO), as ISO 19152. LADM describes the data contents of land administration in general, based on a practical approach. The roots are in FIG's Cadastre 2014. Implementation can be performed in a flexible way; the standard can be extended and adapted to local situations. External links to other data bases, e.g. addresses, are included. The draft standard defines the core issues in land administration. The LADM is a conceptual schema organized in packages: (1) Party Package, (2) Administrative Package and (3) Spatial Unit Package. Existing standards have been re-used, particularly from the ISO 19100 series from ISO/TC 211. It also includes the standard, ISO 19156, Geographic information – Observations and Measurements, which is under development in ISO/TC 211.

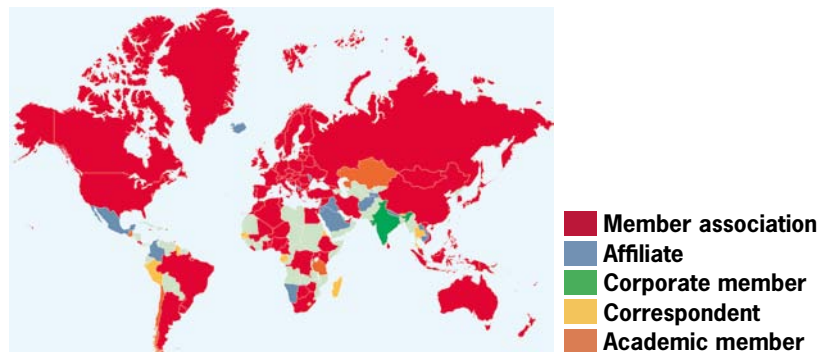


Land Administration Domain Model concept is described in FIG publication no. 52.



## FIG Members (December 2011)

Map based on information in April 2012.



### Member associations

<b>Albania</b>	Albania Association of Geodesy
<b>Algeria</b>	Ordre des Géomètres-Experts Fonciers
<b>Argentina</b>	Federación Argentina de Agrimensores
<b>Australia</b>	Surveying and Spatial Sciences Institute
<b>Austria</b>	Austrian Society for Surveying and Geoinformation
<b>Belarus</b>	Land Reform Association
<b>Belgium</b>	Union Belge des Géomètres-Experts Immobiliers
<b>Benin</b>	Syndicat National des Géomètres-Topographes et Assimilés du Bénin
<b>Bosnia-Herzegovina</b>	Geodetic Association of Herceg-Bosnia
<b>Botswana</b>	Botswana Surveying and Mapping Association
<b>Brazil</b>	Brazilian Society of Cartography, Geodesy, Photogrammetry and Remote Sensing
<b>Brunei Darussalam</b>	Brunei Institution of Geomatics
<b>Bulgaria</b>	Union of Surveyors and Land Managers in Bulgaria Chamber of Graduate Surveyors
<b>Cameroon</b>	Ordre National des Geometres du Cameroun
<b>Canada</b>	The Canadian Institute of Geomatics
<b>China P.R.</b>	Chinese Society of Geodesy, Photogrammetry and Cartography China Institute of Real Estate Appraisers and Agents CIREA
<b>Congo D.R.</b>	Federation des Ingenieurs Geometres-Topographes
<b>Costa Rica</b>	Colegio de Ingenieros Topógrafos de Costa Rica
<b>Croatia</b>	Croatian Geodetic Society
<b>Cyprus</b>	Association of Rural Surveying Engineers of Cyprus Cyprus Association of Property Valuers
<b>Czech Republic</b>	Czech Union of Surveyors and Cartographers Czech Association of Certified Property Appraisers
<b>Denmark</b>	Den danske Landinspektørforening
<b>Egypt</b>	Egyptian Committee of Surveying and Mapping
<b>Estonia</b>	Association of Estonian Surveyors
<b>Ethiopia</b>	Ethiopian Surveying Professionals Association
<b>Fiji</b>	Fiji Institute of Surveyors
<b>Finland</b>	The Finnish Association of Surveyors Maanmittausalan ammattikorkeakoulu- ja opistoteknisten Liitto MAKLI ry

<b>France</b>	Ordre des Géomètres-Experts Association Française de Topographie
<b>Georgia</b>	Society of Professionals of Land Information Technologies
<b>Germany</b>	DVW – Deutscher Verein für Vermessungswesen – Gesellschaft für Geodäsie, Geoinformation und Landmanagement
<b>Ghana</b>	Ghana Institution of Surveyors
<b>Greece</b>	Technical Chamber of Greece Hellenic Association of Rural and Surveying Engineers
<b>Hong Kong SAR, China</b>	The Hong Kong Institute of Surveyors The Hong Kong Institution of Engineering Surveyors
<b>Hungary</b>	Hungarian Society of Surveying, Mapping and Remote Sensing
<b>Indonesia</b>	Ikatan Surveyor Indonesia
<b>Iran, Islamic Republic</b>	Iranian Society of Surveyors
<b>Ireland</b>	The Society of Chartered Surveyors The Irish Institution of Surveyors
<b>Israel</b>	Association of Licensed Surveyors in Israel
<b>Italy</b>	Consiglio Nazionale Geometri e Geometri Laureati
<b>Jamaica</b>	The Land Surveyors Association of Jamaica
<b>Japan</b>	Japan Federation of Surveyors
<b>Kenya</b>	Institution of Surveyors of Kenya
<b>Korea, Republic of</b>	Korea Confederation of Surveyors
<b>Kosovo</b>	Kosova Surveyors Association
<b>Latvia</b>	Latvian Associations of Surveyors
<b>Lebanon</b>	Ordre des Géomètres-Topographes du Liban
<b>Liberia</b>	Cadastral Surveyors Association of Liberia
<b>Lithuania</b>	Lithuanian Association of Surveyors Lithuanian Association of Property Valuers
<b>Luxembourg</b>	Ordre Luxembourg des Géomètres
<b>Malaysia</b>	Association of Authorised Land Surveyors Malaysia
<b>Mali</b>	Ordre des Géomètres Experts du Mali
<b>Malta</b>	The Malta Institution of Surveyors
<b>Mongolia</b>	Mongolian Association of Geodesy and Cartography
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<b>Nepal</b>	Nepal Institution of Chartered Surveyors

## FIG Members (December 2011)

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<b>Niger</b>	Association des Géomètres Experts du Niger
<b>Nigeria</b>	Nigerian Institution of Surveyors The Nigerian Institute of Quantity Surveyors Nigerian Institution of Estate Surveyors and Valuers
<b>Norway</b>	Norges Jordskifte kandidatforening (NJKF), faglig gruppe af Tekna and GeoForum
<b>Palestinian Authority</b>	Licensed Surveyors Association in Palestine
<b>Papua New Guinea</b>	Association of Surveyors of Papua New Guinea
<b>Philippines</b>	Geodetic Engineers of the Philippines, Inc.
<b>Poland</b>	Association of Polish Surveyors
<b>Portugal</b>	Ordem dos Engenheiros, Colégio de Engenharia Geografica
<b>Puerto Rico, USA</b>	Colegio de Ingenieros y Agrimensores de Puerto Rico
<b>Romania</b>	Union of Romanian Geodesy Romanian Association of Private Surveyors
<b>Russia</b>	Federal Service of State Registration, Cadastre and Cartography (Rosreestr)
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<b>Slovak Republic</b>	Slovak Union of Surveyors and Cartographers Chamber of Surveyors and Cartographers
<b>Slovenia</b>	Association of Surveyors of Slovenia
<b>South Africa</b>	South African Council for Professional and Technical Surveyors
<b>Spain</b>	Colegio Oficial de Ingenieros Técnicos en Topografía
<b>Sri Lanka</b>	Surveyors' Institute of Sri Lanka
<b>Sweden</b>	Association for Chartered Surveying, Property Evaluation and Transactions – ASPECT
<b>Switzerland</b>	geosuisse – Swiss society of geomatics and land management
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<b>Togo</b>	Ordre des Géomètres du Togo
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<b>Zimbabwe</b>	Survey Institute of Zimbabwe

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<b>Brunei Darussalam</b>	Survey Department, Ministry of Development
<b>Cambodia</b>	Ministry of Land Management, Urban Planning and Construction
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<b>Republic of Iraq</b>	General Directorate for Surveying, Ministry of Water Resources
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<b>Lao PDR</b>	National Geographic Department
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<b>Mexico</b>	National Institute of Statistics, Geography and Informatics (INEGI)
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<b>Switzerland</b>	Swiss Federal Office of Topography, swisstopo
<b>United Arab Emirates</b>	Surveying Department, Dubai



<b>USA</b>	United States Department of Commerce, National Oceanic and Atmospheric Administration NOAA
	Cadastral Survey Bureau of Land Management

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	University of Technology Sydney, School of Construction Property & Project Management
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	University of Liege, Unit of Geomatics
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	Université Laval, Department of Geomatics Sciences
	University of New Brunswick, Department of Geodesy and Geomatics Engineering
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	Universidad Distrital Francisco José de Caldas, Facultad del Medio Ambiente y Recursos Naturales
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<b>Cyprus</b>	Neapolis University Paphos
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	National Research Institute of Astronomy & Geophysics
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	Technische Universität München

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	Center for Soil Protection and Land Use Policy
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	Technological Educational Institute of Athens, Department of Topography
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<b>Ireland</b>	Dublin Institute of Technology, Department of Geomatics
<b>Israel</b>	Technion – Israel Institute of Technology
<b>Jamaica</b>	University of Technology Jamaica, Division of Surveying and Geographic Information Sciences
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	Abia State Polytechnic
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	Bergen University College
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<b>Palestinian Authority</b>	Palestine Polytechnic University
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<b>Puerto Rico, USA</b>	University of Puerto Rico, Civil Engineering Department
	Polytechnic University of Puerto Rico, Department of Land Surveying and Mapping
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	“1 Decembrie 1918” University of Alba Iulia, Department of Topography and Cadastre
<b>Russian Federation</b>	Moscow State University of Geodesy and Cartography, Economic and Land Management
	State University of Land Use Planning




<b>Saudi Arabia</b>	TECRS – The Environmental Center for Remote Sensing
<b>Serbia</b>	University of Novi Sad, Faculty of Technical Sciences
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<b>Slovenia</b>	University of Ljubljana, Faculty of Civil and Geodetic Engineering
<b>South Africa</b>	University of Cape Town, Department of Geomatics
<b>Spain</b>	Universidad Politécnica de Madrid, Escuela Universitaria de Ingeniería Técnica Topográfica Universidade de Santiago de Compostela, Department of Agricultural and Forestry Engineering
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<b>Switzerland</b>	University of Applied Sciences Northwestern Switzerland
<b>Tanzania</b>	Ardhi University School of Geospatial Science and Technology
<b>Turkey</b>	Istanbul Technical University, Department of Geodesy and Photogrammetry Zonguldak Karaelmas University
<b>Uganda</b>	Makerere University, Geomatics and Land Management Department
<b>United Kingdom</b>	Kingston University, School of Surveying Newcastle University, School of Civil Engineering and Geosciences Oxford Brookes University, School of Built Environment Reading University, School of Rural Estate and Planning Sheffield Hallam University, School of Environment and Development University College London, Department of Geomatic Engineering The University of Nottingham, Institute of Engineering Surveying and Space Geodesy University of the West of England, Faculty of the Built Environment
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<b>West Indies</b>	University of the West Indies, Department of Surveying and Land Information
<b>International</b>	UNIGIS International Association

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Bahrain, Bhutan, Eritrea, Gabon, India, Lesotho, Madagascar, Peru, Saint Lucia, WI, Tanzania (Zanzibar), Thailand, Tonga, Tunisia and Tuvalu.

## Corporate Members









### PLATINUM LEVEL

 <b>Bentley</b>	Bentley Systems, <a href="http://www.bentley.com">www.bentley.com</a>
 <b>esri</b>	Environmental Systems Research Institute, Inc. (ESRI), <a href="http://www.esri.com">www.esri.com</a>
 <b>Leica Geosystems</b>	Leica Geosystems AG, <a href="http://www.leica.com">www.leica.com</a>
 <b>Trimble</b>	Trimble Navigation Ltd, <a href="http://www.trimble.com">www.trimble.com</a>

### GOLD LEVEL

 <b>SOKKIA</b>	SOKKIA TOPCON CO., LTD., <a href="http://www.sokkia.co.jp">www.sokkia.co.jp</a>
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 <b>ashtech</b>	Ashtech, <a href="http://www.ashtech.com">www.ashtech.com</a>
 <b>BLOM</b>	BLOM ASA, <a href="http://www.blomasa.com">www.blomasa.com</a>
 <b>COWI</b>	COWI A/S, <a href="http://www.cowi.dk">www.cowi.dk</a>
 <b>FARO</b>	FARO Europe GmbH & Co. KG, <a href="http://www.faro.com">www.faro.com</a>
 <b>Geoweb</b>	Geoweb S. p. A <a href="http://www.geoweb.it">www.geoweb.it</a>
 <b>Grontmij</b>	Grontmij nv, <a href="http://www.grontmij.com">www.grontmij.com</a>
 <b>Hi-Target GNSS</b>	Hi-Target Survey Instruments Co, Ltd <a href="http://www.zhdgps.com/cn/index.html">www.zhdgps.com/cn/index.html</a>
 <b>MERIDIAN+</b>	Meridian+, <a href="http://www.agpmeridian.com">www.agpmeridian.com</a>

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 <b>GIM Geomares</b>	GIM International – Geomares Publishing, <a href="http://www.gim-international.com">www.gim-international.com</a>
 <b>IGN France International</b>	IGN France International, <a href="http://www.ignfi.fr">www.ignfi.fr</a>
 <b>KQ GEO Technologies</b>	KQ Geo Technologies Co, <a href="http://www.kanq.com.cn">www.kanq.com.cn</a>
 <b>Mason</b>	Mason Land Surveys Limited, <a href="http://www.mason.co.uk">www.mason.co.uk</a>
 <b>SEPRET</b>	SEPRET (Société des Etudes de Projets et Réalisation des Travaux, S.A.R.L.), <a href="http://www.sepret.com">www.sepret.com</a>

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 <b>Global Survey Qatar</b>	Global Survey Qatar
 <b>GEO:connexion</b>	GEO:connexion Ltd, <a href="http://www.geoconnexion.com">www.geoconnexion.com</a>
 <b>geoexpert</b>	GEOEXPERT, <a href="http://www.geoexpert.asso.fr">www.geoexpert.asso.fr</a>
 <b>GEO Informatics</b>	Geoinformatics, <a href="http://www.geoinformatics.com">www.geoinformatics.com</a>
 <b>GEOTRILHO</b>	Geotrilho Topografia Engenharia e Projecto Ida, <a href="http://www.geotrilho.pt">www.geotrilho.pt</a>
 <b>ICC</b>	Institut Cartogràfic de Catalunya, <a href="http://www.icc.es">www.icc.es</a>
 <b>THOMSON REUTERS</b>	Thomson Reuters, <a href="http://grm.thomsonreuters.com">http://grm.thomsonreuters.com</a>

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 <b>Concord Surveying Works Co.</b>	Concord Surveying Works Co. <a href="http://concordsurveying.com/">http://concordsurveying.com/</a>
 <b>Coordinates</b>	Coordinates Magazine, <a href="http://www.mycoordinates.org">www.mycoordinates.org</a>
 <b>galileo instruments</b>	Galileo Instruments, Inc., <a href="http://www.earthsurface.com">www.earthsurface.com</a>
 <b>ORBITS</b>	Orbits Engineering Firm <a href="http://www.orbitseng.com/">www.orbitseng.com/</a>
 <b>DdL</b>	<b>OTHER SPONSORSHIP:</b> Den danske Landinspektørforening (DdL), <a href="http://ida.dk/sites/ddl/">http://ida.dk/sites/ddl/</a>



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**Members of FIG Council 2011–2014 at the Council meeting during the FIG Handover ceremony in Copenhagen in November 2010: Vice President Iain Greenway (United Kingdom, on the left), Vice President Chryssy Potsiou (Greece), President CheeHai Teo (Malaysia), Vice President Dalal S. Alnaggar (Egypt) and Vice President Rudolf Staiger (Germany).**

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## Commission Chairs 2011–2014



Commission chairs 2011–2014 at their first meeting in the FIG Office in November 2010: Leonie Newnham (Comm. 1, on the left), Steven Frank (Comm. 2), Yerach Doytsher (Comm. 3), Michael Sutherland (Comm. 4), Mikael Lilje (Comm. 5), Gethin W. Roberts (Comm. 6), Daniel Roberge (Comm. 7), Wafula Nabutola (Comm. 8), Frances Plimmer (Comm. 9) and Robert Sinkner (Comm. 10).

### Commission 1 – Professional Practice

Chair: Ms. **Leonie Newnham** (SSSI, Australia)  
Perception of surveying profession; professional practice, legal aspects and organizational structures; standards and certification; code of ethics and applications; under-represented groups in surveying; students and young surveyors; information technology management and professional practice; project management, quality and best practice.

### Commission 2 – Professional Education

Chair: Prof. **Steven Frank** (ACSM, USA)  
Curriculum development; learning and teaching methods and technologies; educational management and marketing; continuing professional development; networking in education and training.

### Commission 3 – Spatial Information Management

Chair: Prof. **Yerach Doytsher** (ALSI, Israel)  
Management of spatial information about land, property and marine data; spatial data infrastructure – data collection, analysis, visualisation, standardisation, dissemination, and support of good governance; knowledge management for SIM; business models, public-private-partnerships, professional practice and administration.

### Commission 4 – Hydrography

Chair: Dr. **Michael Sutherland** (CIG, Canada)  
Hydrographic surveying; hydrographic education, training and CPD; marine environment and coastal zone management; data processing and management; nautical charting and bathymetric

maps – analogue and digital, including electronic navigational charts.

### Commission 5 – Positioning and Measurement

Chair: Mr. **Mikael Lilje** (SLF, Sweden)  
The science of measurement including instrumentation, methodology and guidelines; the acquisition of accurate and reliable survey data related to the position, size and shape of natural and artificial features of the earth and its environment and including variation with time.

### Commission 6 – Engineering Surveys

Chair: Prof. **Gethin W. Robert** (ICES, UK)  
Acquisition, processing and management of topometric data; quality control and validation for civil engineering constructions and manufacturing of large objects; modern concepts for setting-out and machine guidance; deformation monitoring systems; automatic measuring systems, multi-sensor measuring systems; terrestrial laser systems.

### Commission 7 – Cadastre and Land Management

Chair: Mr. **Daniel Roberge** (CIG, Canada)  
Cadastre, land administration and land management; development of pro poor land management and land administration; development of sustainable land administration as infrastructure for sustainable development to underpin economic growth; applications of innovative and advanced technology in cadastre and land administration; promoting the role of surveyors

in land administration matters to the public and stakeholders.

### Commission 8 – Spatial Planning and Development

Chair: Mr. **Wafula Nabutola** (ISK, Kenya)  
Regional and local structure planning; urban and rural land use planning and implementation; planning policies and environmental management for sustainable development; re-engineering of mega cities; public-private partnerships; informal settlement issues in spatial development, planning and governance.

### Commission 9 – Valuation and the Management of Real Estate

Chair: Dr. **Frances Plimmer** (RICS, UK)  
Valuation; investment in real estate and investment planning; real estate investment vehicles; real estate, development finance and land use feasibility planning; real estate economics and markets and market analyses; management of property and property systems; management of public sector property.

### Commission 10 – Construction Economics and Management

Chair: Mr. **Robert Sinkner** (CSVTS, Czech Republic)  
Construction economics, including quantity surveying, building surveying, cost engineering and management, estimating and tendering; commercial management including procurement, risk management and contracts; project and program management including planning and scheduling.

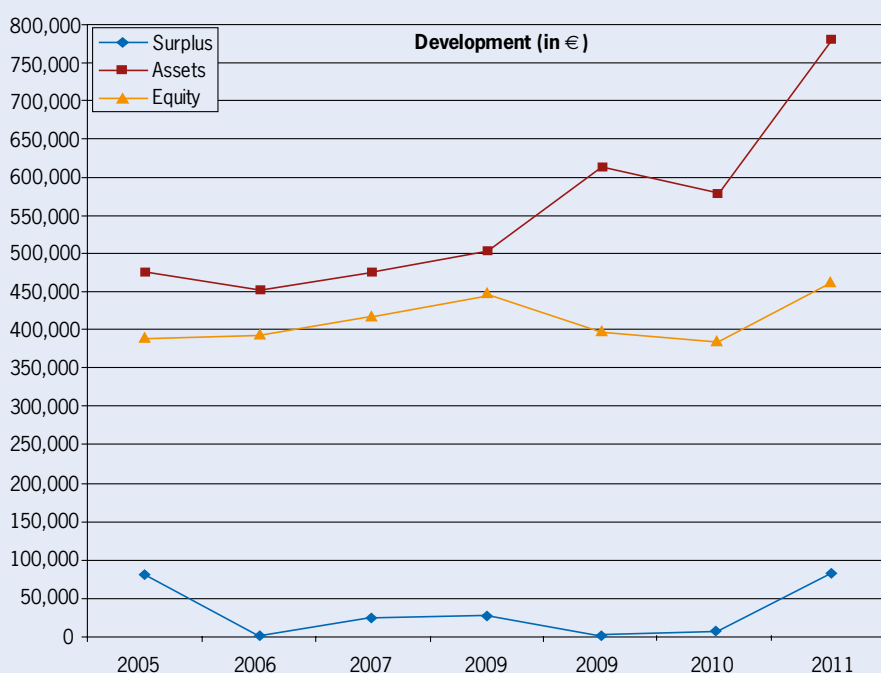


## Income and Expenditure Account 2009–2011

REGULAR INCOME	Result 2011 *)	Budget 2011	Result 2010	Result 2009
<b>Subscriptions (all figures in Euro)</b>				
Member associations	292,657	290,000	283,051	285,572
Affiliates	24,523	22,000	20,203	16,361
Corporate members	92,091	92,000	88,874	109,667
Academic members	18,312	19,000	18,674	17,895
Less bad debts	25,752	15,000	20,540	11,794
	<b>401,831</b>	<b>408,000</b>	<b>390,262</b>	<b>417,702</b>
Financial income	7,274	3,000	6,259	4,856
Less banking costs	875	250	205	294
Events and other (incl. advertisements)	62,201	40,000		
<b>Total regular income</b>	<b>470,431</b>	<b>450,750</b>	<b>396,316</b>	<b>422,273</b>
<b>REGULAR EXPENDITURE</b>				
Administration	195,465	198,500	212,134	241,423
Marketing and publications	11,804	15,000	35,642	11,232
Council and executive management	162,388	192,000	208,746	207,762
Commission support	33,069	33,000	24,842	25,986
<b>Total regular expenditure</b>	<b>402,726</b>	<b>438,500</b>	<b>481,364</b>	<b>486,403</b>
<b>Surplus/deficit of regular income over regular expenditure</b>	<b>67,705</b>	<b>12,250</b>	<b>-85,048</b>	<b>-64,130</b>
<b>PROJECTS</b>				
Events – funds received by FIG	29,720	20,000	85,599	41,657
Development spent	-17,405	29,000	-10,602	
Other projects	0	0	14,096	22,853
<b>SURPLUS OF THE YEAR (REGULAR)</b>	<b>80,020</b>		<b>4,045</b>	
Exceptional items	0		-14,808	
<b>RESULT</b>				
<b>Overall surplus/deficit in the year – normal activities</b>	<b>80,020</b>	<b>3,250</b>	<b>4,045</b>	<b>380</b>
Exceptional items			4,325	50,713
Items funded from reserves			10,483	2,123
<b>Total reserve at the year end</b>	<b>463,052</b>		<b>383,032</b>	<b>394,493</b>
Specific reserves	25,000		–	8,548
General reserves	438,052		383,032	385,945
General reserve as a % of regular annual expenditure	109%		79%	79%

\*) The accounts will be adopted by the General Assembly 6 May 2012. The income and expenditure presentation follows the template approved by the General Assembly in 2009.

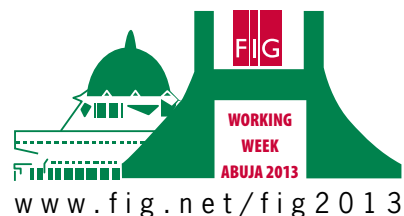
## FIG Balances 2005–2011



**Iain Greenway, Vice President in charge of finances.**

# FIG Working Week 2013

## Environmental Sustainability



Abuja, Nigeria • 6–10 May 2013



### Forthcoming events:

**8<sup>th</sup> FIG Regional Conference**  
26–29 November 2012  
Montevideo, Uruguay  
[www.fig.net/uruguay](http://www.fig.net/uruguay)



**FIG Working Week 2013**  
6–10 May 2013  
Abuja, Nigeria  
[www.fig.net/fig2013](http://www.fig.net/fig2013)



**FIG XXV Congress**  
16–21 June 2014  
Kuala Lumpur, Malaysia  
[www.fig.net/fig2014](http://www.fig.net/fig2014)

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### FIG PLATINUM CORPORATE MEMBERS

