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FIG COMMISSION 7 ANNUAL MEETING

GEOCONFERENCE ON CADASTRE 4.0
TRANSPARENCY, PARTICIPATION, COLLABORATION

24-28 OCTOBER 2016 | COIMBRA, PORTUGAL

Report Annual Meeting FIG Commission 7

From Fit-For-Purpose to Multi-Purpose

Introduction

In October 2016 the annual meeting of FIG Commission 7 took place in Coimbra, Portugal. Like other years the meeting was combined with a conference for international guests and for members of the national association. Both meetings were organised together with the "Ordem dos Engenheiros (OE)" (the Portuguese Engineers Professional Association).

The FIG Commission 7 Annual Meeting is an excellent opportunity for land surveyors from around the world to meet up and hear first-hand about cadastral developments in different scenarios, to share experiences, and to learn about what is happening in this particular sector of activity.

In the two-days Geoconference on "Cadastrre 4.0 - Transparency-Participation-Collaboration" invited speakers from all over the world shared their knowledge on new technologies and automatization of processes, products and services.

In total 78 participants from five continents participated in both meetings. During the week they were able to learn and discuss about the developments ranging from fit for purpose to multi-purpose. The social program provided a wonderful opportunity to learn more about Coimbra, its impressive history and the strong link with the university traditions.

FIG Commission 7 Annual Meeting

The meeting was opened by Mrs Gerda Schennach (Austria) as Chair of Commission 7, the president of OE Mr Armando Silva Afonso (Portugal) and the Chair of the local organising committee, Mrs Virginia Manta (Portugal). The participants were welcomed in the regional centre of Ordem dos Engenheiros. An excellent venue for meetings and networking with its own theater, terrace and bar area.

In the morning the participants were briefed by [Gerda Schennach](#) about the progress of Commission 7 in general. Commission 7 looks back on a successful year. Delegates of the Commission represented FIG in numerous events all over the world. Also the technical sessions dedicated to Commission 7 during the FIG Working Week 2016 contributed to the goals of the Work Plan for the period 2015-2018. For the remaining time the focus is on more regional topics and the implementation of new technologies like Fit for Purpose Land Administration, Crowdsourcing and Cadastre 4.0.



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The report was followed by an update of each of the 4 Working Groups. There are 4 Working Groups in Commission 7:

- Working Group 7.1: Fit-For-Purpose Land Administration
- Working Group 7.2: Land Management in Climate Change and Pre- and Post- Disaster Areas
- Working Group 7.3: Crowdsourcing of Land Rights
- Working Group 7.4 – Citizen Cadastre

[Christiaan Lemmen](#) (the Netherlands) set the scene for Fit for Purpose Land Administration (FFP LA). He informed the participants about the key elements of this approach followed by highlights of the impact of the approach. The launch of the guiding principles for FFP LA, the strengthened cooperation with OGC, UN GGIM Addis Abeba statement and the UN Expert Group on Land Administration and Land Management will all contribute to achieve the sustainable development goals.

[Daniel Paez](#) (Colombia) explained about the focus of his Working Group: climate change and pre- and post disaster areas. The approach is to use pointshare to share knowledge and data for disaster management. Within the Work Plan period the Working Group works on guidelines on the pre- and post disaster management of land rights, data collection for disaster prevention, analysis of climate change on land management and the spatial data infrastructure for sharing data. With a questionnaire (under development) Delegates will be asked to contribute to these guidelines.

[Robin McLaren](#) (Scotland) updated the participants on the developments of Working Group 3. The objective of the Working Group is to become the primary knowledge source of crowdsourced / citizen centric approaches to land rights worldwide. There are several organisations that apply crowdsourcing to secure land rights. Also there is cooperation with Commission 3 on VGI initiatives. Robin McLaren concluded with a call for action and encouraged the participants to take an active role in Working Group 3 to contribute to the objectives.

[Conrad Tang](#) (Hong Kong) presented the updates of Working Group 4. The topics of this Working Group are closely linked to the topics of Cadastre 4.0 with more involvement of the citizen in a key role. The increasing interest in Land Registration, the available tools for involvement of landowners into Land Administration processes and E-Land Administration supports the involvement of citizens in Land Administration.

In the last session of the first day country reports were presented.

- Developments and updates from the Netherlands by [Paula Dijkstra](#), Kadaster International, the Netherlands
- News from the Cadastre in Finland by [Ari Tella](#) (Finland)
- The current cadastral resurvey project in Korea by [Son Woojun](#) (South Korea)
- Free Internet Access to Cadastre as Effective Tool for Enhancing its Credibility by [Libor Tomandl and Vladimira Zufanova](#) (Czech Republic)
- Open Data strategy in Sweden by [Marija Juric](#) (Sweden)
- Country report for Hong Kong SAR by [Conrad Tang](#) (Hong Kong)

One slide from the presentation about the Czech Republic fuelled the discussion throughout the whole week. The portal shows the accuracy of the measurements with green (accurate)



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and red (less accurate) dots, It was for most participants the first time to see the accuracy visually translated in a portal.



The Annual Meeting continued on Thursday, after the two day Geoconference. In the morning there were two break-out groups related to Working Group 1 and 2. The second group provided input for the questionnaire and also discussed the content and organisation of the next Annual Meeting to be held in late autumn 2017 in Cartagena, Colombia.

The meeting was followed by another break-out group to discuss the international curricula on responsible land administration. [David Mitchell](#) (Australia) summarised the presentation given in the Geoconference (see below) and explained the structure and objective of the session. Both groups received the same questions. The input from the first group had mainly a global perspective, while the second group had discussions about the importance of the local context. The input from both groups contributes to the further development of the curricula.

[Daniel Steudler](#) (Switzerland) gave an update on the Cadastral Template 2.0. New countries uploaded information about their organisation to the template. And several other countries updated their information. There are now 53 profiles available. The portal itself is at a crossroad and decisions need to be made about the infrastructure and maintenance. Paula Dijkstra (the Netherlands) agreed to support Daniel in the development of a strategy for the Cadastral Template in the future.

During the wrap-up the participants were informed about the next Annual Meeting by Daniel Paez (Colombia) and the upcoming FIG Working Week 2017 in Helsinki by Kirsikka Riekkinen (Finland). Both [Christiaan Lemmen](#) and [Brent Jones](#) (USA) gave a global overview to put all the discussions and country perspectives into a global perspective. Christiaan Lemmen focused on the relation to the Sustainable Development Goals. Brent Jones focused on the technology supporting the cadastral developments from 'fit for purpose to multipurpose'.



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Gerda Schennach closed the meeting focusing on the next steps of Commission 7.

Geoconference on '4.0 Cadastre - Transparency, Participation - Collaboration'

In the Geoconference on "Cadastre 4.0 - Transparency-Participation-Collaboration" there were presentations related to knowledge on new technologies and automatization of processes, products and services. The aim of the meeting was to bring professionals from private and public service, from academic institutions as well as from industry together to discuss about how transparency can be achieved, participation can be realised and collaboration can be made more visible and how we as professionals can set the scene for stepping into the future.

On both days there were thematic sessions followed by a panel debate. The organising committee and the participants were honoured that FIG President Chryssy Potsiou (Greece) was present during all events in Coimbra. She welcomed the participants with a welcome address together with words of welcome by Teresa Sa Pereira (Portugal), Chair of the department of geographic engineers (CEG) of OE, Gerda Schennach (Austria) and Virginia Manta (Portugal) on behalf of the city council of Coimbra.

[Gerda Schennach](#) set the scene of the Geoconference with a presentation about 'Cadastre 4.0: a demand for the future'. She explained that 'Cadastre 4.0 is a system based on fully automatically processing within a network surrounding of people and devices embedded in technological intelligence'. In short; Cadastre 4.0 is a cadastre for people made by people. The role of society, stakeholders and citizens is more inclusive than the linear cadastral model where Cadastre organisations provide data and information for these groups instead of with these groups.

Cadastre 4.0 as a paradigm will close the circle between new technologies and automatisisation of processes, products and services and stakeholders, including citizen and landowners as essential partners at equal level. Cadastre 4.0 establishes links between the virtual and real world securing interests of landowners, society, governments and economy. It sets the scene for permanent communication between people, procedures and products.

[Rui Pedro Juliao](#) (Portugal) followed up with a keynote on the role of Spatial Data Infrastructure (SDI) in relation to Cadastre 4.0. The examples in Portugal were used as background on how to bridge the gap in public administration data.

The first thematic session was dedicated to technology driven innovation. The first presentation provided an overview of the cadastral history of Portugal. Followed by presentations with reflections and visions for the future developments on our profession.

- Portuguese Cadastre. Actual state, case studies, projects, data infrastructure by [Paulo TORRINHA](#) (Portugal)



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- Is 3D Cadastre really needed? By [José Paulo Elvas DUARTE de ALMEIDA](#) (Portugal)
- Land Administration and Management – Towards the Fifth Dimension by [Daniel STEUDLER](#) (Switzerland)
- The use of new technologies for mapping the future by [Raluca MANEA](#) (Romania)

The topic of the second thematic session was Participation.

- Cadastre 4.0 as a paradigm towards a Fin-tech enabled Real estate management by [Manohar VELPURI](#) (Denmark)
- Designing for transparency and participation in the Hellenic Cadastral Project by [Dimitris ROKOS](#) (Greece)
- The current Marine Cadastre system and policy in South Korea by [Hyun Sook LEE](#) (South Korea)
- The integrated Cadastre for legal security in Land Transactions by [Carlos VARELA](#), (Cabo Verde)
- Towards an international curriculum on Responsible Land Administration by [David MITCHELL](#) (Australia)

The presentation of Manohar Velpuri was a good addition to the keynote on Cadastre 4.0. The developments from Cadastre 1.0 to 4.0 were addressed and a few case studies highlighted, including a case study in Ghana with blockchain technology.

The last thematic session focused on Fit-for-Purpose Land Administration. The presentations gave an overview of the changing technology, the approaches for land registry that is fit for the future supported by practical examples.

- The digital transformation of cadastre by [Rui SABINO](#) (Portugal)
- Fit-for-Purpose; Fit-for-Future Technology for Cadastral Systems by [Brent JONES](#), USA
- Fit-for-Purpose Land Administration in Perspective by [Christiaan LEMMEN](#), (the Netherlands)
- LMITS – An integrated registration system by [Luis MAXIMIANO](#) (Cabo Verde)

The first day of the Geoconference was concluded with a panel discussion about collaboration. The session was lead by Daniel Paez (Colombia). He actively involved the audience in the discussions. The panel members shared their ideas and point of views on collaboration.

The program on the second day was shorter due to a visit to the Library of the University of Coimbra in the afternoon. The first session was related to collaboration. CLGE, the council of European Surveyors recently had their General Assembly. The cooperation between the public and private sector was intensively discussed. This presentation was followed by a presentation about the value of cadastre to the national economy, not only for the legal certainty but also for the real estate market. The session was closed with two country reports about the history and cadastral challenges in Norway and New Zealand.

- The relation between the private surveyors and the Land Registry/Cadastre by [Maurice BARBIERI](#) (Switzerland)



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- Sustainable Real Estate Markets-Policy Framework and Reforms by [Chryssy POTSIU](#) (Greece)
- Cadastral development and need for reforms by [Leiv Bjarte MJØS](#) (Norway)
- Development of legislation for earthquake affected cadastral boundaries in NZ by [Don GRANT](#) (Australia)

The last thematic session focused on the topic of transparency. From different angles the importance of access to and transparency of information about land was highlighted. Crowdsourcing has the potential to contribute to eradicate tenure insecurity worldwide. Finland is currently doing research on the future needs and role of the Finnish Cadastral system. An example was given from Mozambique and Estonia on how the people are involved to increase the tenure security and transparency of information.

- Global Security of Tenure Campaign - the Time of Rights by [Robin McLAREN](#) (Scotland)
- The future of the Finnish Cadastre – a research project by [Kirsikka RIEKKINEN](#) (Finland)
- Cadastre 4.0 - rethinking land administration for emerging economies by [Daniel PÁEZ](#) (Colombia)
- National Registry of lands in Mozambique: SIGIT as a gear by [Marisa BALAS](#) (Mozambique)
- Cadastral services and virtual offices in e-cadastre by [Priit KUUS](#) (Estonia)

The Geoconference finished with a panel discussion. The topic was originally on technology, however the panel members agreed that technology is available. Brent Jones (USA) steered the discussion towards the developments on Fit-for-Purpose to Cadastre 4.0. Gerda Schennach (Austria) supported the Fit-for-Purpose approach but stressed the importance of a clear definition of and broad consensus among stakeholders on the purpose when applying the approach. Chryssy Potsiou (Greece) added that it is key to keep informing the FIG community about the developments. And she called for action to 'just do it, try it and report the results back to our community'.

Social Program

OE organised a well developed social program. They provided opportunity to learn more about Coimbra, its impressive history and the strong link with the university traditions. The participants travelled through the different phases of the cultural history of the city from the Roman times, to the middle ages, to the foundation of the oldest university of the Portuguese speaking world to the history and tradition of the Coimbra Fado. The technical tour took place in the Douro Valley and Porto. The valley is the oldest Protected Designation of Origin (PDO) vineyard region in the wine growing history of the world. During the tour we learned from a Professor from the University of Agriculture in Villa Real about the Douro region cadastre and the scoring method to balance the production and trade of port wine. Interesting to see that each parcel is classified with a score related to the potential quality of the port wine produced.



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Concluding Remarks

FIG Commission 7 is the only professional platform on land tenure and land rights surveying, mapping and registration. This concerns the whole range of approaches, innovations and methodologies in countries with a traditional and conventional land administration as is countries where land administration are under development.

This work is highly recognised.

The well organised Annual Meeting in Coimbra brought a relevant contribution to this. We thank Ordem dos Engenheiros, especially Virginia Manta as a local organizer, for the organisation of the meeting and of the fantastic social events. Also we would like to thank our partner DG Territorio and the sponsors, Trimble, Esri Portugal and Artop. The banquet in medieval environment as well as the other events confirmed that it is not only about professional cooperation but also about friendship. Thanks!!

For more information please check the following links:

Website event: <http://figc7.ordemengenheiros.pt/pt/>

Presentations at http://www.fig.net/resources/proceedings/2016/2016_10_comm7.asp

<http://figc7.ordemengenheiros.pt/pt/presentations/> and at OICRF:

<http://www.oicrf.org/searchdocument.asp?e=254>

Pictures may be obtained on a CD from OE/Virginia Manta virginia.manta@cm-coimbra.pt

Pictures independent photographer: <https://google.com/photos/N8uzKyXRCEBjT3d68>