

FIG Commission 7 – Cadastre and Land Management

Work Plan 2019–2022

1. Title

Evolving into prosperity – FIG Commission 7 Work Plan 2019 - 2022

2. Terms of Reference

Land is where most activities of earth occur. People define nations based on the land they were born or occupied and land today, unfortunately, is the main source of conflicts and wars around the globe.

Commission 7 of FIG focuses on the economic, social and environmental challenges for surveyors in managing land rights, restrictions and responsibilities. Throughout the history of humanity, surveyors have played a fundamental role in defining where in the geographical space land rights are. In many cases, cadastre surveyors are active participants of systems, processes and institutions to assign, transfer and protect land rights.

The cadastre, which is the inventory of lands of any jurisdiction, is the heart of a land management system. Commission 7, therefore, focuses its efforts on surveyors that work in the field of design and developed cadastre system as well as other parts of the overall land management system of a nation or sub-national jurisdiction.

Topics that are often discussed by Commission 7 activities and publications include:

- land tenure in a diversity of cultures and societies
- cadastre and land registration
- reforming the cadastre legal framework, governance arrangements and digital systems
- security of land tenure, data and information as well as policies for access to information by citizens
- Fit-For-Purpose and pro-poor land administration /low-cost models
- Models and strategies to involve the private sector in the provision of services within a land management system, such as PPPs
- new technologies for remote and in-situ data acquisition on land rights / social media and third-party data capture / crowdsourcing / role of landowners
- land use and land policy
- valuation and taxation of land / land markets
- multi-dimensional and multi-temporal cadastre
- impact of climate change and disasters on land rights
- standards in land administration
- capacity building in land administration

3. Mission statement

Fair, equitable, transparent land rights, restrictions and responsibilities are a key component of most developed societies and a focus of developing nations in order to improve social and economic conditions of their nations. Commission 7 mission is to work with surveyors and other related technical experts from all nations to provide a platform to discuss challenges, explore new technologies, generate new ideas and support the development of a stronger cadastre surveying profession across the world. The main desired outcome of the Commission 7 is supporting cadastre surveying profession on improving their relevant cadastre and land management systems in such a way that the United Nations Sustainable Development Goals (SDGs) are met.

To achieve this, the main output of Commission 7 are technical publications that are developed in a participative manner among FIG members. Other outputs include events, such as the Annual Meetings, as well as participation in key international forums such as the UN-GGIM, UN FAO, UN-Habitat and the World Bank Land and Poverty conference.

4. Overall Commission Plan

For the next four-year, Commission 7 is intended to build from existing achievements in the Commission in previous years while tackling the new challenges facing the cadastre profession. We believe at the Commission that it is time to focus on those topics that are of concern of surveyors around the world and offer a platform for discussion to ensure cadastre surveyors have the necessary tools to evolve into prosperity in the new approaches across the world for land management.

During the next 4 years, the Commission will put an effort to ensure the views of surveyors are heard by governments across the globe as well as by international organizations and donors such as the United Nation and all its agencies, The World Bank and all other multilateral development banks and donor organizations such as the European Commission, USAID, Millennium Challenge Corporation, DFID, DFAT, AFD, SDC and many more. To achieve this, commission 7 will work during events of these organizations and FIG to ensure there is constant communication between officers and agendas are coordinated.

Commission 7 proposes the development of this Work Plan under three guiding principles:

- Building from previous achievements within the Commission and FIG
- Support the overall FIG plan with high-level of coordination and communication with all FIG instances including the Presidency, Vice-Presidencies and other Commissions
- Always represent the views and needs of surveyors and when differences exist to act as an enabling platform for discussion and consensus

To achieve this Work Plan and contribute to its mission, Commission 7 has the following objectives for the period 2019 – 2022:

- to promote the importance of sustainable land management infrastructures as being essential for sustainable development and economic growth

- to facilitate the understanding of innovative and advanced technologies in cadastre and land management
- to raise awareness of the role of surveyors in land management matters to the public and among stakeholders by developing workshops and other events where open discussions are conducted
- to identify mechanisms to follow the progress of cadastre and land management systems and its contribution to achieving the SDGs
- To explore more efficient mechanisms to fund improvements and expansions of land management systems, including the participation of private surveyors in the provision of specific systems under PPP arrangements
- to produce publications that enhance the ability of surveyors to address new challenges

From an operational perspective, FIG Commission 7 proposes to have 4 Working Groups during the next four years (maximum 4 actives at any one time). These working groups are:

- Cadastre Technologies and the digital Twin
- Fit for purpose
- Cadastre template and the SDGs
- The role of the Cadastre Surveyor

5. Working Groups

Working Group 7.1 – Cadastre Technologies and Smart City (2 years)

Policy Issues

There are multiple technologies being offered for surveyors as part of their activities in the development of cadastre and land management systems. Many of these technologies are unknown to many surveyors, and there is limited understanding of the role, if any, of these technologies.

To address this, working group 7.1 will focus on exploring these new technologies with a critical eye and on building capacity within the surveying community to ensure the best use of the technology and the competitiveness of cadastre surveyors in the market.

Digital twin and Smart City, in particular, are emerging as key topics to improve transportation, energy, social safety and to decrease pollution caused by climate change and urbanization. To solve these problems, total efforts are being made on the smart city construction with all the latest technologies such as Drones, Artificial Intelligence (AI), Big Data, Robot Technology, Virtual Reality (VR) and Augmented Reality (AR) Technology for the era of the Fourth Industrial Revolution. And a smart city can be completed using the platform base called the Digital Twin.

Finally, smart cities are being built to solve the problems of cities that have reached their limits and to ensure sustainability, and eventually, smart cities will change the paradigm of urbanization around the world with the continuing growth of cities and the construction of human-centred smart cities that improve the quality of citizen's life.

Chair: JANG, Bong Bae

Specific project(s):

- The digital twin concept in Korea and opportunities in other jurisdictions
- Introduction of new technologies related to cadastre activities such as Drones (UAVs), Artificial Intelligence, Big Data, IoT, Virtual Reality, Augmented Reality and a study of their effect on cadastral surveying.
- Analysis report will be also circulated among working group 7.5 (the role of the cadastre surveyor)
- Issuing activity report of working group 7.1

Workshop(s)

- Commission 7 2019 Annual Meeting and Smart Geospatial Expo
 - Date: August 5-9, 2019
 - Venue: Novotel Ambassador Seoul Gangnam & COEX
 - Events: Opening and Closing ceremony, Seminars on Technology, Annual Conference, Technical Tour, etc.
 - Official Website: www.smartgeoexpo.kr

Timetable:

Goals	2019		2020		2021	2022
	First Half	Second Half	First Half	Second Half		
Defining Concept and Terms						
Reporting Developments and Practices						
LX Case Studies						
Study Results Presentation						
Report Writing						
Report Reviewing						
Report Publication						

- Terms: Digital Twin, Smart City, Drones (UAV), Big Data, Robot Technology, Virtual Reality, Artificial Intelligence, Internet of Things, Automatic Driving, etc.
- Report title (tentative name): New Cadastre Technologies and Smart City.

Publication(s)

- Discussion paper on emerging technologies and smart city(digital twin)
- Summary recommendations for the assessment of new technologies in land administration systems

Beneficiaries

- Private surveyors in developed and developing countries exposed to new technologies in their profession
- Providers and vendors of technologies so they understand the better use of their products
- Government and donors in the design and development of land reform projects

Working Group 7.2 – Fit-for-purpose (FFP) implementation (4 years)

Policy issues

Many people do not have tenure security. Less than 30% of land rights are documented. Linking people to polygons of land should happen in a fair way.

The Fit-For-Purpose (FFP), Land Administration approach, argues for cost-effective and time-efficient, transparent, scalable and participatory land administration.

During the previous terms, the Commission contributed to the development of the approach and underlined the importance of FFP as a mechanism to optimise resources and, therefore, expand the coverage of land administration system.

A great understanding and adoption of the concept are being achieved. However, further work is required for improving implementation mechanisms. In particular, methods and procedures are needed to identify purposes and selecting the best fit for each situation and to find ways to accommodate to legal national frameworks and to gain legal security for landowners by visible agreement by decision makers.

This working group will focus on collecting experiences and lessons from projects in the world where principles of the FFP approach were applied. The experiences and results will be discussed and shared. This will support surveyors understand better how to implement FFP in cadastre and land management systems. This working group will also work on improving the understanding of FFP in the broader surveying community and highlights where improved capacities are needed to ensure surveyors maintain the relevance of participation in land administration systems. These two tasks will help the working group to contribute to the further development of FFP.

Chair: Paula DIJKSTRA (NL)

Specific project(s)

- Review and Summary of FFP projects with experiences and results
- Workshops to discuss the role of surveyors in FFP projects
- Contributing to further development of FFP

Workshop(s)

- Vietnam during the 2019 FIG Working Week
- The Netherlands during the 2020 FIG Working Week

Timetable:

- Annually: workshop during FIG Working Week / Congress
- Annual: update during the annual meeting

Publication(s)

- FFP implementation case study report
- Contributor to international FFP publications on further development of FFP

Beneficiaries

- Cadastre surveyors are going to be a key beneficiary of this Working Group as it will ensure there is a better understanding of implementation mechanism, their role and opportunities to provide tenure security to all
- Developing countries, donors and multilateral banks will significantly benefit from lessons learned and experiences from projects where the FFP approach was applied, to gain support from communities and stakeholders

Working Group 7.3 – Cadastral Template 2.0 and the SDGs (4 years)

Policy issues

Since 2003, and by mandate of Resolution 4 of the 16th UNRCC-AP in Okinawa, Japan, Commission 7 with the support of Melbourne University has maintained a repository of information about cadastre systems across the world in the website www.cadastraltemplate.org. Commission 7 members have been instrumental in maintaining this information and today there is information for over 50 countries. The relevance of the Cadastral Template platform has been renewed by the United Nations GGIM expert meeting in New York (2018) in where a resolution was approved to support use as a supporting mechanism to track the progress on achieving the sustainable development goals.

Chair: Daniel Steudler (CH) with the support of Abbas Rajabifard (AU)

Specific project(s)

- Modernization of the technical platform
- Development of indicators relevant to SDGs
- Development of information updating mechanisms

Workshop(s)

an initial workshop in Hanoi 2019 will be conducted to present the general project plan

Timetable:

It has been agreed with the University of Melbourne the following timeframe:

- The general concept for the development of the new template under SDGs: April 2019
 - Workshop with commission 7 delegates: April 2019
- Development of a preliminary pilot: August 2019
 - Workshop with commission 7 delegates at the annual meeting in Korea
- The release of the platform for delegates to contribute
 - Amsterdam working week

Publication(s)

- Update information on the website (www.cadastretemplate.org)

Beneficiaries

- Overall FIG surveyors as the relevance of FIG and Commission 7 will be highlighted as an instrument to support the achievement of SDGs

Joint Working Group – Urban Challenges (Joint Working Group with Commission 8 and 9)

Please see work-plan Commission 8

6. Co-operation with Other Commissions and organisations

We have agreed with Commission 8 and 9 to have a multi-commission Working Group in where topics of relevance for the three Commissions will be discussed. This Working Group will have a rotating chair, and it will serve as a bridge between the Commissions to ensure information, documents and events are coordinated.

Additionally, Commission 7 is actively participating in Commission 3 working group on 3D cadastre, and this cooperation is intended to continue for the next 4 years.

7. Co-operation with United Nation Organisations, Sister Associations and other Partners

FIG Commission 7 has notably developed very strong relationships with key international bodies in the cadastre and land sector. Notably, Commission 7 has a close relationship with:

- UN-GGIM – liaison Commission member : Abbas Rajabifard
- World Bank – Liason Commission member : Daniel Paez
- UN-Habitat
- FAO
- UN Regional Commissions

8. Commission Officers

Commission Chair

Daniel Paez (CO)

Vice Chair of Administration

Paula Dijkstra (NL)

Chair of Working Group 7.1

JANG, Bong Bae (KR)

Chair of Working Group 7.2

Paula Dijkstra (NL)

Chair of Working Group 7.3

Daniel Stedluer (CH)

Chair of Joint? Working Group ?

TBA