

**Report to the 45th General Assembly
FIG Congress 2022, Warsaw, Poland**

FIG Commission 3 – Spatial Information Management

Report of Activities 2021/2022

1. General

Commission 3 addresses the following area of interest: management of geospatial information about land, property and marine data; spatial data infrastructure – data collection, analysis, visualisation, standardisation, dissemination, and support of good governance; knowledge management for geospatial information management; business models, public-private-partnerships, professional practice and administration.

In the current term 2019 to 2022, Commission 3 is focusing on intensifying the cooperation with various FIG commissions and introducing young professional colleagues to the work of FIG. In the current working period, the work of FIG is significantly hampered by the spread of the coronavirus and related measures. The same is true for Commission 3, which is why the goals formulated in the original work plan had to be adjusted.

Commission 3 consists of three working groups covering the core responsibilities of the Commission,

- Geospatial Information Infrastructure for Smart Cities (WG 3.1)
- Geospatial Big Data: collection, processing, and presentation (WG 3.2)
- User-Generated Spatial Content Empowering Communities (WG 3.3)

and three inter-commission Working Groups, which are responsible for working on cross-commission topics,

- 3D Cadastres (WG 3.4), joint Commission 3&7
- GIS Tools for Spatial Planning (WG 3.5), joint Commission 3&8
- Geospatial Next (WG 3.6), joint Commission 3 and YSN, particularly the Volunteer Community Surveyor Program (VCSP)

In line with the general working practices of Commission 3, in the following sections the work and events are not so much assigned to individual working groups, but rather treated as a whole.

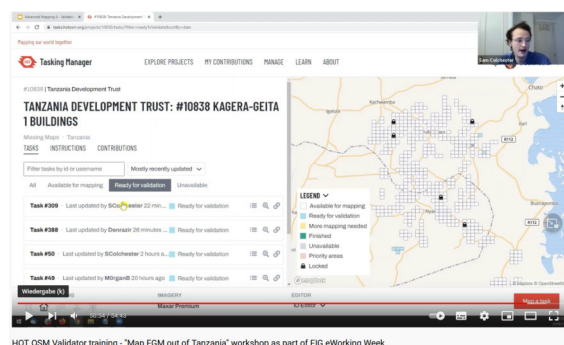
2. Events

Commission 3 at the FIG Working Week 2021

The Working Week 2021 took place online, 20-25 June 2021. Commission 3 held its annual meeting and (co-)organized a number of sessions covering Commission 3 areas within the theme of Smart Surveyors for Land and Water Management.

- Geospatial impact of COVID-19 (organized by Commission 3)
- Integrated Geospatial Information Management (organized by Commission 3)
- Geospatial Analytics Use Cases (organized by Commission 3)
- Emerging Technologies for Geospatial Analysis (organized by Commission 3)
- Participatory Geospatial Approaches (organized by Commission 3)
- Geohazards, Environment and Geo-resources - Surveying Techniques for Risk Mitigation and Sustainable Exploration (jointly organized by Commissions 3, 5 and 6)
- Geospatial technologies in structural monitoring (jointly organized by Commissions 3 and 6)
- GIS for Monitoring and Evaluation of Sustainable Land Use (jointly organized by Commissions 3 and 8)
- Workshop on e-Volunteering to Address Environmental Challenges, Mapathon (jointly organized by Volunteer Community Surveyor Program (VCSP) and WG 3.6 Geospatial Next)

The 'Workshop on e-Volunteering to Address Environmental Challenges - A Real-life Example with a Real-time Project, followed by 24hr Mapathon' was held on June 24th, 2021. The mapathon was designed to engage surveyors across generations, independently from their location, to e-Volunteer to undertake humanitarian surveying under challenging times. VCSP and WG 3.6 Geospatial Next partnered with Crowd2Map Tanzania, which does work using humanitarian surveying and HOT OSM mapping to help fight Female Genital Mutilation (FGM) to help girls to escape cuttings. The local rescue teams and civic services have been challenged with the unknown territories, why the main idea of the workshop was to provide contributions for mapping towns and villages in the region to provide geospatial information and guidance to the ground teams.



<https://www.youtube.com/watch?v=1NUpjnr3GUE>

- Workshop on the Land Administration Domain Model / 3D Land Administration (organized by joint Commission 3&7 WG 3.4 3D Cadastres)

for details see https://www.fig.net/fig2021/workshops.htm#3D_Land_Administration

Commission 3 + 8 workshop, 20-21 July 2021 Prato, Italy

In 2021, Commission 3 once had again the opportunity to enjoy the hospitality of our Italian colleagues. By name, Enrico Rispoli, Chair of the joint Commission 3&8 Working Group 'GIS for Spatial Planning' and Maria Scorza, Chair of the Local Organizing Committee. The joint Workshop of FIG Commissions 3 and 8 on "Spatial information management to optimize Spatial planning and Sustainable development" was held in Prato, Italy, on July 20-21 July, 2021, as part of the XXII edition of the "International Summer School", organized by Comitato Internazionale di Fotogrammetria Architettonica. The Prato conference, in the context of global environmental policies, was important to encourage and publicize planning works and proposals based on the management of geospatial data as a paradigm of the urban regeneration project and opportunities for sustainable city development.

Welcome addresses were given by FIG president Rudolf Staiger online, by President of Consiglio Nazionale Geometri e Geometri Laureati, Maurizio Savoncelli in person, and other high level speakers. Practical cases of strategies to transform and improve cities on themselves were illustrated by a number of high level speakers, FIG Honorary President Chryssy Potsiou, Chairs of Commission 1,3 and 8, to name a few.

The Workshop was held both in presence, ensuring compliance with safety, and on line (virtual meeting). A big thank you to the organizers in organizing such a fruitful and successful event. The hybrid setup went very smoothly. The full simultaneous translation attracted a number of up to 950 participants from Italy who attended online, making it possibly the largest Commission 3 event ever in terms of attendance.



Maurizio Savoncelli, President *CNGeGL*



Marije Louwsa, Commission 8 Chair



Speakers photo



Italian evening in beautiful Prato

7th International FIG Workshop on 3D Cadastres, 11-13 October 2021, New York, USA, virtual (organized by joint Commission 3&7 WG 3.4 3D Cadastres)

for details see

<https://www.isprs-ann-photogramm-remote-sens-spatial-inf-sci.net/VIII-4-W2-2021/>

ISPRS Annals of the Photogrammetry, Remote Sensing and Spatial Information Sciences, Volume VIII-4/W2-2021, 2021 | ISPRS TC IV, 16th 3D GeoInfo Conference 2021, 11–14 October 2021, New York City, USA. Editor(s): L. Truong-Hong, E. Che, F. Jia, S. Emamgholian, D. Laefer, and A. V. Vo

Commission 3 at the upcoming FIG Congress, 11-15 Sept 2022 Warsaw, Poland

The FIG Congress is to take place onsite at the venue. Commission 3 will hold its annual meeting and (co-)organize a number of technical sessions.

- The Third Dimension of Geospatial Information (organized by Commission 3)
- Open Geospatial Data and Crowdsourcing (organized by Commission 3)
- Geospatial Analytics Use Cases (organized by Commission 3)
- Geospatial Data in the 2020's (organized by Commission 3)
- Participatory Geospatial Approaches (organized by Commission 3)
- GIS for 3D Urban Planning, Construction and Valuation (jointly organized by Commissions 3, 8 and 9)
- Climate Smart Planning with GIS (jointly organized by Commissions 3 and 8)
- Land Use Planning and Management fed by Spatial Analyses (jointly organized by Commissions 3 and 8)
- Real Estate Data goes Geodata (jointly organized by Commissions 3 and 9)
- Geospatial Data in the 2020s - transformative power and pathways to sustainability (special session for the official launch of the new FIG publication, authored by Commission 3, Commission 8, Young Surveyors Network and the Volunteer Community Surveyor Program, see below)

3. Publications

Commission 3 has the practice of summarizing the results of its work in publications which address topical issues. Currently, the new publication on 'Geospatial Data in the 2020s - transformative power and pathways to sustainability' is under development and will be published as a FIG Report.

The new publication addresses the role of geospatial data in the current decade. The list of authors shows the success of the efforts to bring together the different generations of professionals in the global FIG in a common project. Authors of different ages, from eight countries, Australia, Canada, Germany, Greece, Italy, Netherlands, Turkey are working on the joint publication.

Here is the Draft Table of Contents.

Title

Geospatial Data in the 2020s - transformative power and pathways to sustainability

Draft Table of Contents

1 General Introduction (Markus Schaffert, Germany)

2 Use cases

2.1 Spatial Planning

Spatial Planning and Geo-Information (Marije Louwsma, Netherlands, Cemre Sahinkaya- Özer, Germany/Turkey)

2.2 The Spatial Dimension of Health

2.2.1 Ubiquitous big geodata for measuring the change of pedestrian mobility patterns during COVID-19 (Avital Angel, Achituv Cohen, Pnina Plaut, Sagi Dalyot, Israel)

2.2.2 Towards an Integrated Geospatial Information Management for Public Sector Health Data - The COVID-19 pandemic seen through the lens of IGIF (Marije Louwsma, Netherlands and Hartmut Müller, Germany)

2.3 Diversity in Geospatial Context

How and why diversity and inclusion are vital for the future of geospatial data management and the surveying profession (Roshni Sharma, Australia)

2.4 Volunteered Geographic Information (VGI)

2.4.1 eVolunteering and Engaging Young Surveyors in the 2020s (VCSP team, Canada, Cemal Kivilcim, Turkey)

2.4.2 Attributes and Ethical Preferences of Land Surveyors towards Data Contribution to Land Management Systems (Ruba Jaljolie, Sagi Dalyot, Israel)

2.5 Cadastre and Property Market

2.5.1 Introduction (Chryssy Potsiou, Greece)

2.5.2 Dutch Use case (Marije Louwsma, Netherlands)

2.5.3 Italian use case (Enrico Rispoli and Maria Scorza, Italy)

2.5.4 Less developed systems (Chryssy Potsiou, Greece)

3 Discussion and Conclusions

4. Co-operation with United Nation Organisations

In 2021/2022 Commission 3 established closer ties with UN organisations than before, in particular with FAO of the UN. The most important joint activities were

- Joint session at the FIG Working Week 2021 (virtual)
Title: The Role of the Geospatial Information in Responding to Crises and Accelerating the Progress on Achieving the SDGs, jointly organised by FAO, FIG, UNSD/UN-GGIM, UNECE and World Bank
Chair: Rumyana Tonchovska, FAO of the UN and Hartmut Müller, FIG Chair Commission 3, Rapporteur: Kate Fairlie, Australia
- Rosreestr panel session at the Eastern Economic Forum – 2021 “Digital Twin. The Future of Spatial Data”, 2 Sept, 2021, Vladivostok, Russia (hybrid)
Rosreestr, UNECE/Working Party for Land Administration (WPLA), FAO and FIG presented their activities at the VI Eastern Economic Forum, Hartmut Müller represented FIG by giving his address on ‘Geospatial Information Management for Land administration, the European Way’.



Hartmut Müller, FIG (left) and Rumyana Tonchovska, FAO (right) addressing online *Photo: Roscongress*

- Joint FAO-FIG-UNECE publication on accelerated digitization in UNECE Region and beyond with the support of the UNECE Working Party for Land Administration.

FAO and the International Federation of Surveyors (FIG) with the UNECE Working Party on Land Administration support are on their way to prepare a publication titled ‘**Accelerated Digitization and the future role of Land Administration Authorities in UNECE region and Beyond**’. Rohan Bennett, Incoming Chair of Commission 7 is the lead author of the drafting team, Commission 3 supports the work with its specialized expertise. The results of the study will provide a base for the countries and the development partners to prepare post-covid-19 recovery action plans with the focus on the future role of the Land Administration.

➤ Joint session at the upcoming FIG Congress 2022

Title: Accelerated Digitalisation and the Future of Land Administration in the UN-ECE Region and Beyond, jointly organised by FAO, FIG and UN-ECE WPLA

This session aims to explore the future of land administration through the lenses of digital disruption and accelerated digital transformation – with a specific focus on lessons from the UN-ECE region and beyond.

5. Concluding remarks

All the work described and the results obtained would not have been possible without the commitment of so many volunteers who have invested considerable time and effort to contribute. I will refrain from naming specific individuals and thus overlooking others. In these times, international cooperation and mutual understanding and trust seems more important than ever. A big thank you to all. Let us keep working to make the world a better place.

Hartmut Müller
Chair, FIG Commission 3
www.fig.net/commission3
June 2022