
**Report to the 48th General Assembly
FIG Working Week 2025, Brisbane, Australia**

FIG Commission 3 – Spatial Information Management

Report on Activities 2024-2025

FIG Commission 3 is deeply saddened by the loss of our dear colleague and friend, Dr. Eng. Cemal Özgür Kivilcim, on 12th May 2024. Cemal took active roles in the establishment of the FIG Young Surveyors Network (YSN) starting in 2006, and in 2018, he founded Working Group 5 - Geospatial Next - of Commission 3. Since 2023, Cemal has fulfilled a key role in our commission as Vice Chair of Administration. Cemal's passion, commitment, and kindness touched everyone who had the privilege of working with him. We will remember our dear friend and valuable colleague Cemal for his hard work, enthusiasm, and positivity. Rest in peace, dear Cemal.



1. General

Commission 3's task is to continue to provide new perspectives that support and promote professional practices and standards in the field of Spatial Information Management. Commission 3 supports international spatial-related domains and policy development spheres as featured in the SDGs.

Commission 3 term 2023-2026 work plan builds on the progress made in the previous term, together with the result of extensive work done during the past year, as part of fruitful discussions and meetings. These led to the restructuring of commission 3 and the roles its working groups play in achieving the commission's missions, aiming to achieve productive joint work with sister FIG commissions and FIG Task Forces.

In the period 2024 to 2025, Commission 3 focused on three pillars of spatial data and applications. The three pillars are:

Spatial data collection and management,

- including contributed and user-generated geodata.
- focusing on ubiquities and emerging technologies, Spatial Data Infrastructure (SDI), geodatabases, standards, and ethics.

Spatial data handling and processing,

- covering data mining and knowledge recovery.
- incorporating geoAI and Geographic Information Systems (GIS).

Spatial data usage,

- involving nD cadaster, smart cities, land and city planning, and environmental knowledge.

The work of Commission 3 is divided into five working groups that drive practical implementation and collaboration with various FIG task forces and networks:

- Working Group 1: Geospatial data: professionalism, technology, and services
- Working Group 2: Urban challenges in developing countries (joint WG with Commission 9)
- Working Group 3: GIS for sustainable (geo-)spatial planning (joint WG with Commission 8)
- Working Group 4: LADM and 3D LA (joint WG with Commission 7)
- Working Group 5: Geospatial next (joint with the Young Surveyors Network)

On September 2024, Dr. Konstantinos Apostolopoulos joined Commission 3 as the new Vice Chair. Konstantinos, who has been active in FIG for many years, holds a Ph.D. from the School of Rural, Surveying & Geoinformatics Engineering (SRSE-GI) at National Technical University of Athens. His research interests

encompass Land Administration, Crowdsourcing, Participatory Design, Gamification, Geoinformatics, and Sustainable Development.

2. Working Groups

2.1 WG 3.1 Geospatial data: Professionalism, Technology, and Services

WG 3.1 goal is to disseminate geospatial data/SDI knowledge, knowledge, state-of-the-art skills, including open spatial data and geospatial analytics. The aim of this Working Group is to disseminate geospatial/SDI knowledge, skills and know-how to expert domains outside the geospatial realm. This starts with basic skills, such as awareness for the quality of data and analyses or data literacy. Depending on the needs, this can also include advanced concepts such as linked open data, artificial intelligence - etc. This way, experts from non-technical or data-driven professions will become aware of how to use geospatial data more profoundly in their domain and in the interests of sustainability. Vice versa, geomatic experts will become aware of how to get more involved in other domains and sustainability-oriented activities. This transfer of knowledge will be focused to some defined domains and certain pathways to sustainability. In addition, research is performed on how proper data management can look like in socio-technical systems.

2.2 WG 3.2 Urban challenges in developing countries (joint WG with Commission 9)

WG 3.2 focuses on Urban Challenges in Developing Countries and its goal is to support local communities with accessible and affordable geo-related working methodologies to support urban challenges. The agenda for this year is to organize either a webinar/ a keynote speech/a panel discussion/an interactive session /or case study presentations focusing on one of the following topics:

- 1) The potential of crowdsourcing in real estate and urban planning
- 2) The role of contributed initiatives in solving urbanization challenges in Africa.
- 3) Demonstrate tools for crowdsourcing (e.g., OpenStreetMap, KoboToolbox, drone mapping for real estate development).
- 4) Actionable strategies to incorporate crowdsourcing into urbanization policies.

2.3 WG 3.3 GIS for Sustainable (Geo-)Spatial Planning (joint WG with Commission 8)

Working Group 3.3 will focus on continuing the establishment and promotion of land administration standards to support global tenure security. Working Group 3 focus on the study of current and future GIS -

and other digital tools - for geospatial planning, services, and applications aimed to tackle global challenges. Focus is also be given to e-government applications, and data standards.

Working Group 3 of FIG Commission 3 has promoted and supported work and research on digital geospatial planning that addresses services, e-government applications, and data standards. These support sensitizing decision-making bodies, stakeholders, and investors to implement global forecasting and prevention policies related to, among others, sustainable planning, natural disasters, and environmental protection.

2.4 WG 3.4 LADM and 3D LA (joint WG with Commission 7)

Working Group 3.4 focus on continuing the establishment and promotion of land administration standards to support global tenure security.

The initial edition of LADM (Land Administration Domain Model, ISO 19152:2012) already included support for 3D representations of spatial units, and the seamless integration of 2D and 3D spatial units. Providing 3D representations improves clarity about the legal spaces, increases the spatial readability, and therefore improves the trust in the land administration.

LADM revision part 1 published as ISO standard 19152-1:2024 (selected quotes from https://www.fig.net/news/news_2024/02_ISO-ladm-II.asp): 'The Land Administration Domain Model (LADM) is an internationally recognised ISO standard since 2012 (ISO 19152:2012) that provides and supports responsible innovation and partnerships, for effective land administration. The LADM aligns the data model with a standardised global vocabulary for land administration. As an international standard it can stimulate the development of software applications and may accelerate the implementation of land administration systems that support sustainability objectives. The Land Administration Domain Model is developed at the initiative of FIG, as part of the FIG Standards Network and Commissions 3 & 7. The International Standardization Organization (ISO) regularly checks whether their standards need to be revised in order to meet user requirements. The LADM revision has been a careful process and started already in 2017 during a joint working meeting of the FIG and UNGGIM, during which it was indicated that the scope of LADM should be expanded to include conceptual models for cadastral acquisition techniques, marine boundaries, valuation information, spatial plan information, and more 3D support (BIM/IFC input). In addition, there should also be more support for the implementation itself. It was subsequently decided within ISO/TC211 that organising the standard into multiple parts was the best approach. The first part focuses on the conceptual model and [this has now been published](#) as ISO 19152-1:2024 Geographic information, Land Administration Domain Model (LADM), Part 1: Generic conceptual model. Part 1 forms the basis and also provides a global overview of the conceptual models in parts 2 to 5. Also, part 3 Marine Georulations has been published in 2024 as ISO 19152-3:2024. The parts 2 (Land Registration), 4 (Valuation Information) and 5 (Spatial Plan Information) are expected to be published in 2025. If you would like to know more about the status of the other parts you will find an [overview here](#) and [further information here](#).

Results of testing a new 3D LADM prototype: Ping Mao, an MSc Geomatics thesis student of TU Delft has developed a new 3D LADM prototype, exploring how to better analyze and visualize the rights (RRRs) in a complex building. In the previous email newsletter, you were asked to online test this prototype, and many WG members did do so. Many thanks! As a reminder, some of the novel techniques included: showing an instance level LADM diagram for selected persons (parties) and/or apartments (spatial units) with the rights (RRRs) and the basic property units (BAUints) linking them, showing surrounding buildings in different levels of detail (LoD), nearby buildings more detailed, further away less details, doing sunlight/shading analysis, and also supporting the updates of rights (not available in the public access). You can find the results, including the usability testing, in: Ping Mao, A digital twin based on Land Administration, Master's thesis, Geomatics, Delft University of Technology, pp. 85, 2024 ([pdf](#)).

2.5 WG 3.5 Geospatial next (joint with the Young Surveyors Network)

Working Group 5 – Geospatial Next (WG 3.5) was established in 2018 with the initiatives of former Young Surveyors and the support of FIG to develop cooperations with the Young Surveyors, and other commissions in line with common themes focused on geospatial information and spatial information management.

Working Group 5 focus on introducing new initiatives and practices of the geospatial community through the cooperation of new professional networks.

3. Cooperation

In the period 2024 to 2025, Commission 3 established a series of actions to promote professional practices and standards in the field of Spatial Information Management.

The most important ones per Working Group are the following:

WG 3.1: In the period of 2024-2025, WG 3.1 has been engaged in several initiatives linked to SDG 3, 10 and 11 and produced several publications (see below), many in cooperation with Working Group 3.5 – Geospatial Next.

WG 3.2: This working group, in collaboration with OSMKenya, aimed to tackle pressing urban challenges in developing countries, including rapid urbanization, informal settlements, and infrastructure deficiencies. By leveraging geospatial technologies and participatory mapping, the initiative seeks to enhance data accessibility, promote sustainable urban planning, and support local decision-making processes.

WG 3.3: Working group 3 cooperated with other FIG Commissions like Commission 8 and 9 and with other sister organizations such as EGOS. Moreover, this working group is currently in the process of structuring cooperations with FIG Task Force on Climate Change.

WG 3.4: Forming the OGC Standards Working Group on LADM. Next to the development of the LADM conceptual models as initiated by FIG and published by ISO as international standards, also the LADM implementation aspects will benefit from further standardization. For this purpose the OGC did establish in 2018 the Domain Working Group on Land Administration (DWG land admin), which has been active ever since. On Monday 25 March 2024 as part of the OCC TC meeting in Delft, The Netherlands, the DWG land admin has organized two sessions. In the first session the focus was on LADM update and country experiences (Colombia, Estonia, Finland, Netherlands, UN-Habitat, 50 country profiles,..), while the second session addressed LADM implementation options and experiences explored (JSON, Linked Data, BIM/IFC, CityGML, InfraGML, UN SDG Land-related Indicators,..). Many years after the start of the OGC DWG, there has been not only many fruitful meetings and presentation sessions (initially under leadership by Chrit Lemmen and Peter van Oosterom, and recently Eva-Maria Unger succeeding Chrit, after his retirement), but also a clear scope description of the LADM implementation aspects for the [OGC Standards Working Group LADM charter](#). The OGC SWG LADM implementation components include:

1. Methodology for developing a country profile
2. Technical model / encodings (Linked Data, JSON, GML, INTERLIS, IFC, ..)
3. Management and maintenance of semantically rich code list values (possible SKOS)
4. Procedures / workflows (land registry, marine georegulation, valuation information, spatial plan information)

This was presented at the OCC TC plenary meeting on Thursday 28 March 2024 and links with existing OGC standards were highlighted: Geographically-referenced land administration units are often encoded using the generic OGC standards, OGC CityGML is relevant as topographic context of the legal spaces, OGC IndoorGML is relevant for indoor legal spaces (e.g. apartment rights), and OGC LandInfra is relevant for the LADM survey model. At the OGC TC plenary meeting the SWG LADM proposal was well received and after the electronic voting the OGC SWG LADM was officially established. Next, the OGC organizes the chair election with a broad request to OGC members. The development of LADM part 6, Implementation aspects, is planned in collaboration between FIG, ISO/TC 211 and the Open Geospatial Consortium.

WG 3.5: In the period of 2024-2025, WG 3.5 initiated several professional and academic activities, and was involved in a number of publications, mostly in cooperation with Working Group 3.1 Geospatial Data: Professionalism, Technology, and Services (see below).

4. Events

During the period of 2024-2025, Commission 3 conducted events to enhance professional practices and standards in Spatial Information Management. Key activities were organized by each Working Group, focusing on their respective areas of expertise. The events aimed to foster knowledge sharing and collaboration within the field of land surveying and spatial information management. Below are the most notable activities per Working Group.

WG 3.1: Markus Schaffert actively participated in the EGOS and FIG Commissions 3 and 9 Joint Workshop in Malta (February 2024). The presentation titled "Geospatial Data for Monitoring and Mobility: A Case Study on Aging in Rural Single-Family Home Areas" was given there and authored jointly with Cemre Sahinkaya (WG 3.5 chair).

At the FIG Working Week 2024 in Accra, WG 3.1 was actively involved in various roles (including serving as commission 3 representative to ACCO, due to the absence of the commission chair): <https://i3mainz.hs-mainz.de/news/2024/05/28/markus-schaffert-bei-der-fig-working-week-in-accra-ghana.html>



The chairs of the commissions report to the General Assembly on the progress of the commission's work and its relevance to the Sustainable Development Goals. Photo taken by Daniele Brancato.



An impression of the Annual Meeting of Commission 3. Markus Schaffert presents the milestones of the past working year. Photo taken by Leonardo Franchi.

In June 2024 WG 3.1 also participated actively at the COBGI2024 event in Varadzin, Croatia by presenting the paper Influence of 3D Barriers on Walkability for the Elderly in a German City (authors: Geist, K.; Böhm, K.; Schaffert, M.; Müller, H.). COBGI2024 was a joint event organized by commission 3 and the Erasmus+ program BIRGIT. COBGI24 workshop focus was on challenges and opportunities in BIM and GIS Integration, and it was held in Varaždin, Croatia, from June 18th to 21st, 2024. The event drew dozens of participants from many countries and included several keynote speakers. Selected presentations were included in a special issue. Website: <https://figcom3-ws-croatia2024.hgd1952.hr/home-2/>



Impression of a technical session during COBGI2024.

In June 2024, the presentation titled "Space & Transformation: Living in Harmony with Nature" authored together with Ms. Sahinkaya was given at the the IOER Conference 2024 in Dresden, Germany.

In early 2025, another joint presentation with Ms. Sahinkaya will be given at the 4th International Conference on Real Estate Development and Management (ICREDM) in Ankara, Turkey on 3-5 February 2025. The presentation is titled "Zero Net Land Take in Rural Germany: Engaging Communities With Geospatial Storytelling."

At the FIG Working Week in Brisbane, WG 3.1 will be present and engage actively. M. Schaffert is planned to give a presentation titled "Enhancing the Explainability of Urban Walkability Assessments. A 3D Visualization Approach for Elderly Accessibility in Germany" (authored together with Geist, K.; Böhm, K.; Stamenov, M.).

WG 3.3: Working Group 3 organized and participated in:

- Workshop in Malta organized by Commission 3 joint with Commission 9 and EGOS on "Surveying-Registration – Valuation: how we gather and deal with our data today". The event was held on 5-7 february 2024, drawing dozens of participants from various organizations.
- FIG Working Week 2024 in Ghana.
- Romanian Surveying Week in Bucharest on October 22-25 October 2024.

Working Group 3 will also participate in:

- FIG Working Week 2025 in Brisbane, 6-10 April 2025.
- Workshop on "Building Back Better the Self-made Cities: Improving Geospatial Data Ecosystems & Formalizing Informal Settlements," organized jointly by UNECE WPLA, FIG Commissions 3 & 9, EGoS, and the World Bank, Athens, 18-22 June 2025.

WG 3.4: Working Group 4 organized and participated in the following events:

Looking back at the 12th FIG LADM & 3D LA Workshop (3DLA2024): The 12th International FIG Workshop on the Land Administration Domain Model & 3D Land Administration did take place in Kuching, Malaysia, 24-26 September 2024. It was a joint event including the Malaysian Geoinformation Week, Annual Meeting FIG Commission 5 - Positioning and Measurement, Annual Meeting FIG Commission 7 - Cadastre and Land Management, and UN Habitat Social Tenure Domain Model, STDM. In total there were over 250 participants enjoying both the scientific and professional content of this event, next the a range of social activities. There is a short video impression on [YouTube](#). The proceedings of 3DLA2024 workshop can be found [here](#) (together with the presentation slides). The keynotes and the presentations of the other events are on <https://www.geoinfo.utm.my/geoweek/>. Many thanks to the team of local organizers, consisting of the University of Technology Malaysia (UTM), the Sarawak Land and Survey Department (JTS), and the Royal Institution of Surveyors Malaysia (RISM) Sarawak Branch.





Top: Official opening by premier of Sarawak; Bottom: impression of a technical session.

Looking forward the 13th FIG LADM & 3D LA Workshop (3DLA2025): The 13th International FIG Workshop on LADM & 3D LA, 3-5 November 2025, Florianópolis, Santa Catarina, Brazil (3DLA2025). This will be a joint event together with FIG Commission 7 (Cadastre and Land Management) Annual Meeting, FIG Commission 8 (Spatial Planning and Development) Annual Meeting, UN Habitat Social Tenure Domain Model (STDM), and national Brazilian events. The deadline for submitting an extended abstract (500-1000 words) to the 3DLA2025 workshop is 15 May 2025. More information on the 3DLA2025 [website](#).

WG 3.5: In February 2024, WG5 collaborated with Prof. Dr.-Ing. Markus Schaffert (WG 3.1 chair) to present the paper **“Geospatial Data for Monitoring and Mobility: A Case Study on Aging in Rural Single-Family Home Areas”** at the EGOS and FIG Commissions 3 and 9 Joint Workshop in Malta. The study, based on the RAFVINIERT project at Mainz University of Applied Sciences, explored the sustainability of rural single-family homes using geospatial data and spatial data infrastructure (SDI) analysis.

The Nigeria Institute of Quantity Surveyors (NIQS) held an event joint with WG3.4 Geospatial Next at the International Conference Centre, Lead City University, Ibadan, Oyo State. Highlights of this event can be viewed here: <https://www.youtube.com/live/PMYOrAUgB3E?si=7H-KxISNuPB3GBT5>.

In 2025, active participation will be maintained in the 4th International Conference on Real Estate Development and Management to be held in Ankara, Turkey on 3-5 February 2025 and in this context, Prof. Schaffert and Prof. Andreas Hendricks co-authored “Zero Net Land Take In Rural Germany: Engaging Communities With Geospatial Storytelling”, “Tracing Urban Regeneration And Liveability In Ankara Through Individual Narratives” co-authored with Mr. Geoffrey Payne and Prof. Uwe Altrock, and “From Gecekondu to High-Rise: Transformations of Daily Life and Community Dynamics in Ankara’s Araplar Neighbourhood” co-authored with Dr. Ufuk Poyraz will be presented.

It is also aimed at joining FIG Workshop on “Building Back Better the Self-made Cities, Improving the Geospatial Data Ecosystems & Formalizing the Informal Settlements” in 18-20 June 2025, Athens, Greece with a presentation on the transformation of the informal settlements in Ankara, Turkey, in collaboration with WG3.1.

5. Communication and publications

- Schaffert, M.; Sahinkaya, C. (2025). Spatial Storytelling to Mitigate Urban Sprawl. In: Bentz, J.; Ristic Trajkovic, J. (2025) *Imagining, Designing and Teaching Regenerative Futures: Creative Approaches and Inspirations From Around the World* (accepted).
- Schaffert, M.; Sahinkaya, C.; Wolff, C. (2025). Visualizing Urban Sprawl to Raise Local Awareness. *Frontiers in Environmental Sciences* in December (in review)
- Schaffert, M.; Steensen, T. (2024). Demographic transition in aging neighborhoods: a GIS-based analysis from Germany's countryside, *Survey Review*, doi 10.1080/00396265.2024.2340896
- Geist, K.; Böhm, K.; Schaffert, M.; Müller, H.(2024). Influence of 3D Barriers on Walkability for the Elderly in a German City, *Tehnički glasnik* 18, 62-66, doi 10.31803/tg-20240907113323
- Lan, D., Dalyot, S., & Baram-Tsabari, A. (2024). Expressions of geographic literacy in the context of the COVID-19 pandemic: the role of geographic education among adults. *Journal of Geoscience Education*, 72(4), 472-484.

These results and output are are linked to SDG 3, 10 and 11. By promoting more compact and well-designed cities, urban space is used more efficiently, leading to improved quality of life and reduced environmental impact (Spatial Storytelling to Mitigate Urban Sprawl). Improving living conditions for older adults contributes to reducing inequalities and fostering inclusive, sustainable communities (Demographic Transition in Aging Neighborhoods). Designing barrier-free cities creates sustainable, healthy living environments for all residents, particularly for the elderly (Influence of 3D Barriers on Walkability for the Elderly in a German City).

WG 3.4: Special issue 'Broadening 3D Land Administration' published in the journal of Land Use Policy

(LUP): This is the first special issue focusing of the more broad scope of land administration beyond land tenure, cadastre, surveying, and land registry, now also including marine georegulation, valuation information and spatial plan information. The editors (Peter van Oosterom, Alias Abdul Rahman, Eftychia Kalogianni, and Mila Koeva) invited from the earlier FIG (LADM and 3D LA) workshops, best contributions. The authors were asked to submit a scientific journal version of their paper, with at least 40% new materials, based on discussions at the workshops and new research results. The special issue is now complete and contains 12 full papers covering the broader scope of land administration with specific attention to 3D representations. The special issue can be found here

<https://www.sciencedirect.com/special-issue/10G9MDVMKB7> (note some papers are open access, others not). Many thanks to the authors and reviewers of the papers!

Related PhD theses at University of Twente/ITC: During the last couple of month two PhD students at the UT/ITC successfully defended their PhD theses:

- Yue Ying: 3D property valuation in vertical cities, 17 Oct 2024, Enschede: University of Twente, Faculty of Geo-Information Science and Earth Observation (ITC). 221 p. [pdf](#)
 - Clifford O. Okembo: Data modeling and interoperability for an inclusive and distributed land administration system: the case of a LADM based country profile for Kenya, 9 Dec 2024, Enschede: University of Twente, Faculty of Geo-Information Science and Earth Observation (ITC). 254 p. [pdf](#)
- Warm congratulations to the young doctors and their supervisors with their milestone achievements.

WG 3.5: In June 2024, the presentation on "Space & Transformation: Living in Harmony with Nature" prepared together with Prof. Markus Schaffert was presented at the the IOER Conference 2024 in Dresden, Germany. The reserach has been accepted to be published in the Journal *Flächennutzungsmonitoring XVI. Flächenpolitik – Flächenanalysen – Methoden und Werkzeuge, 2024, (IÖR Schriften Band 82 · 2024* and the work is under the process.

As another outcome of the ongoing co-operation, during the summer of 2024, the book chapter "Spatial Storytelling to Mitigate Urban Sprawl" was prepared for the book publication called "Imagining, Designing and Teaching Regenerative Futures : Creative Approaches and Inspirations From Around the World", co-authored with Markus Schaffert. The work has been accepted and is in the printing stage.

Moreover, a new paper titled "Visualizing Urban Sprawl to Raise Local Awareness" was written and accepted for *Nature-based Solutions for Climate Change Adaptation*, a special issue of *Frontiers in Environmental Sciences* in December 2024, co-authored with Markus Schaffert. The study is at the publication stage.

6. Other highlights

- The paper *Schaffert, M.; Steensen, T. (2024). Demographic transition in aging neighborhoods: a GIS-based analysis from Germany's countryside, Survey Review, doi 10.1080/00396265.2024.2340896* that was written for the FIG Working Week in Accra was selected to be a winner of the Survey Review Biennial Prize. The 2024 winners were recognized at the 2024 FIG conference in Accra, Ghana, <https://www.tandfonline.com/journals/ysre20/collections/best-paper-prize-survey-review>.

- A meeting in Naironi, Kenya, of Commission 3 chair and the Institution of Surveyors of Kenya (ISK). During the discussions, we explored the work of FIG3 and considered various possibilities for future collaborations.



Augustine Munialo, Chief Executive Officer, ISK, and Dr. Sagi Dalyot, Commission 3 Chair.

- **World Bank Land Conference, 13-17 May 2024, Washington, DC (USA).** The conference theme this year was 'Securing Land Tenure and Access for Climate Action'. From the [World bank website](#): 'The Conference is the premier forum for the land sector, bringing together participants from governments, development partners, civil society, academia, and the private sector to showcase research, discuss issues and good practice, and inform policy dialogue. ... The Land Conference aims to: 1. Direct and inform investments in the land sector, 2. Facilitate and advance multi-stakeholder dialogues and collaboration, 3. Advocate for evidence-driven policy making, and 4. Share knowledge on emerging best practices and innovative research.'. On Monday 13 May 2023 there was a very well attended session, supported by FIG, dedicated to the LADM: 'Success Factors in Land Administration: How Standards Empower People, Environment, Economic Progress, and its Underlying Data'. The main aim of this session is to present, discuss and evaluate the international experiences of the LADM and STDM – the concept, the software, and the data model - around the world. The session provided a platform for a multi-stakeholder dialogue and collaboration. The dialogue and collaboration are key to further developing the model and to ensure further embedding in the global land agenda. In summary the session increased knowledge and understanding and fostered partnership and cooperation for further standard development. This session included amongst others: opening and LADM introduction presentations, panel discussion on LADM implementation, panel discussion and STDM for indigenous tenure rights, and much more.