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**EuroSDR Advancing FELA –
The Framework for effective
Land Administration**

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EUROSDR ADVANCING FELA – THE FRAMEWORK FOR EFFECTIVE LAND ADMINISTRATION

With 13 figures

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SUMMARY

A significant milestone for land administration globally arrived when the United Nations Committee of Experts on Global Geospatial Information Management (UN-GGIM) adopted the Framework for Effective Land Administration (FELA) at its 10th session in August 2020. The uptake of FELA by the various UN Member States is currently happening. EuroSDR, with the support of EuroGeographics and the UN Expert Group on Land Administration and Management (EG-LAM), initiated a project to raise awareness of the merits and benefits of effective land administration and to share knowledge and experience leveraging FELA. In addition, the project seeks to support FELA as a living document, cognizant of the changing and evolving societal, economic, environmental, political, and technological landscapes and national circumstances. This collaboration allows for leveraging synergies between the national mapping and cadastral agencies, public authorities, universities, research institutes, and private companies. The aim of this publication is to present the preliminary findings of the project on FELA, undertaken by EuroSDR and UN-GGIM, focusing on the results of the online survey component. Subsequent, an in-depth look at the methods applied is presented. This involves providing information about the online survey and details on selected parts of the FELA framework. Partial results from the online survey are presented, summarising results from the countries taking part with regard to the first three FELA pathways. Finally, a brief discussion and conclusion section highlights the key takeaways and the next steps in work.

Key words: Land Administration, Land Information, LAS, UNGGIM, FELA, Assessment

1 INTRODUCTION

Land has always been the elementary source of human existence in the way of providing space for people to live and act. Nowadays, it is also considered an essential component of the economy and stability of any country. The need to adjust current land administration systems (LASs) to the changing needs of society is evident all over the world. Although LASs have undergone continual reform since their establishment, the social, economic, and environmental requirements regarding the functionality of a LAS are greater than ever before. The growing number of diverse and often conflicting interests in land, the complexity of both the built and natural environment, and the need for sustainable development are the driving forces shaping the change and development of LASs.

An important milestone for land administration globally was achieved through the United Nations Committee of Experts on Global Geospatial Information Management (UN-GGIM) when it welcomed and adopted the Framework for Effective Land Administration (FELA) at its 10th session in 2020¹. This accomplishment for the international land sector and land administration professionals around the world is due to continued promotion and awareness. Adoption of FELA by the various UN Member States is currently underway, and this is an ideal moment to contribute and advocate for its implementation.

The United Nations Committee of Experts on Global Geospatial Information Management (UN-GGIM) (UN-GGIM, 2018), was established by a resolution of the Economic and Social Council of the United Nations (ECOSOC), E/RES/2011/24, in July 2011 and comprised all Member States of the United Nations. ECOSOC adopted another resolution in 2016 entitled "Strengthening institutional arrangements on geospatial information management" (E/RES/2016/27), which expanded and strengthened the mandate of the Committee of Experts as the relevant body on geospatial information, composed of government experts and reporting to ECOSOC on all matters related to geography, geospatial information and related topics. Within the resolution (E/RES/2022/24) in 2022 the mandate of the Committee of Experts as a subsidiary body of the Economic and Social Council was enhanced to be in charge of all matters related to geospatial information, geography, land administration and related topics². UN-GGIM is the apex intergovernmental mechanism for making joint decisions and setting directions regarding the production, availability and application of geospatial information within national and global policy frameworks. Led by Member States, UN-GGIM aims to address global challenges regarding the use of geospatial information, including development agendas and the well-being of people, planet, partnership, peace and prosperity (5Ps), and to serve as a body for global policy-making in the field of geospatial information management. UN-GGIM's flagship policy guidance is the Integrated Geospatial Information Framework (IGIF)³.

The UN-GGIM Expert Group on Land Administration and Management (EG-LAM) aims to address the challenge that a large part of humanity does not enjoy recognised and secured land and property rights. There is a need to accelerate efforts through the development of FELA (UN-GGIM, 2018). Inspired and aligned with IGIF, FELA promotes the documentation, recording, and recognition of people-to-land relationships in all forms. FELA further includes references to existing concepts, approaches and mechanisms, such as the Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests (VGGTs) in the Context of National Food Security (FAO, 2012), the continuum of land rights (UN-Habitat, 2008) and (Barry & Augustinus, 2015), and the Land Governance Assessment Framework (Deininger et al., 2012). The framework also considers standardisation developments by international bodies such as the Land Administration Domain Model (LADM) (ISO, 2012) and defines a reference for the development, improvement and modernisation of national and regional land administration (LA) and land information systems (LIS).

¹ Cf. https://ggim.un.org/meetings/GGIM-committee/10th-Session/documents/E-C.20-2020-29-Add_2-Framework-for-Effective-Land-Administration.pdf

² Cf. https://ggim.un.org/documents/E_RES_2022_24_e.pdf

³ Cf. <https://ggim.un.org/meetings/GGIM-committee/8th-Session/documents/Part%201-IGIF-Overarching-Strategic-Framework-24July2018.pdf>

The EG-LAM holds Expert Group meetings and reports to the General Assembly⁴. The EG-LAM is chaired by two Co-Chairs and, by the end of 2019, included up to 28 Member States⁵ and 11 Non-Member States⁶ with the responsibility of managing the activities between general assemblies.

EuroSDR (formerly OEEPE) is a European spatial data research network originally established in 1953 by the International Treaty as the Organisation Européenne d'Etudes Photogrammetriques Expérimentales – OEEPE in Paris in accordance with a recommendation passed by the Council of the Organisation for European Economic Co-operation. The interests of European countries in the field of spatial data research are represented by the membership of national organisations from their production and research sectors in EuroSDR. The result is a network of delegates from European Geographic Information organisations and research institutes that effectively and practically address the needs of European spatial data research. Collaborative research projects address the acquisition, management and delivery of geospatial data and services, while international workshops and courses, in collaboration with related organisations, address key issues in a timely and focused manner.

EuroSDR, with the support of UN-GGIM Europe and the UN-GGIM Expert Group on Land Administration and Management (EG-LAM), initiated a small project in the summer of 2021 to raise awareness of the merits and benefits of effective land administration and to share knowledge and experience leveraging FELA as an overarching policy guidance. In addition, the project sought to support FELA as a living document, cognizant of the changing and evolving social, economic, environmental, political, and technological landscapes and national circumstances. FELA addresses relevant issues, gaps, and appropriate approaches, including access to basic datasets, to accelerate efforts in documenting, recording, and recognising people-to-land relationships in all forms. Finally, the collaboration sought to allow leveraging synergies among the national mapping and cadastral agencies, public authorities, universities, research institutes, and private companies.

The objectives should be achieved through a combined approach: 1) FELA was to be widely shared and promoted via an event and print media associated with project activities; 2) An online survey was designed and completed to gain sector-wide insights; 3) In-depth key-informant interviews were conducted with relevant experts; and subsequent to the presenting of this paper, 4) A workshop was organised, of which the findings served as inputs for validation for the research findings; 5) A publication that includes the research findings and had to be published as an Official EuroSDR Publication (which is scientifically indexed) and made widely available as an Open Access publication – and various other formats; and 6) Knowledge transfer of the research findings also happens via the organisation of a dedicated EduServ course.

The aim of this publication is, therefore, to present the preliminary findings of this collaborative work on FELA, undertaken by EuroSDR and UN-GGIM, in particular the results of the online survey (see item 2 in the previous paragraph). Following this introduction, the methods applied are presented in more detail. This includes information about the online survey conducted and more background details on parts of the FELA framework. Partial results of the online survey are then presented, summarizing the results from the participating countries in relation to the first three FELA pathways. Finally, a brief discussion and conclusion section highlights key takeaways and the next steps in work.

⁴ Cf. Terms of Reference of The United Nations Expert Group on Land Administration and Management (UN-EG-LAM): <https://ggim.un.org/documents/Final%20TOR%20%20Circulated%20and%20Amended.pdf>

⁵ Australia, Barbados, Belgium, Burkina Faso, Canada, Chile, China, Egypt, Finland, Germany, India, Korea (Republic of), Kuwait, Lesotho, Mexico, Morocco, Norway, Philippines, Saudi Arabia, Singapore, Spain, Sri Lanka, Suriname, Sweden, Tajikistan, Tonga, United Arab Emirates, United Kingdom according to <https://ggim.un.org/UN-EG-LAM/>

⁶ International Hydrographic Organization (IHO), Food and Agriculture Organization (FAO), UNECE-WPLA, UN-Habitat GLTN, World Bank, Open Geospatial Consortium (OGC), International Organisation for Standardisation TC211, International Federation of Surveyors, UN-GGIM Academic Network, and UN-GGIM Private Sector (Esri and Hexagon Geosystem)

2 METHODS

Partially inspired by the FIG Cadastre 2014 work from the mid-1990s and subsequent Cadastral Template surveys, the applied online survey approach aimed to gain an overview of the different stages of awareness and uptake of FELA by the members of EuroSDR and/or UN-GGIM Europe. To this end, the FELA framework was transformed into a series of questions addressing a selection of FELA strategic pathways (explained below). Due to time and resource constraints, not all pathways could be explored. Additionally, as this is the first survey of its kind related to FELA, it also represents a sort of pilot activity. A set of questions was created for each FELA strategic pathway, allowing for a mix of quantitative and qualitative data to be collected. The questions were created based on lessons learned during the development of FELA, as well as the specific context and discussions during the various EG-LAM meetings. The survey, therefore, included both closed and open-ended questions. The closed-ended questions contained multiple-choice answer options. Respondents were thus offered a range of answers from which to choose. Although this might be considered a constraint, it was felt that the benefits of comparing across countries outweighed the prescriptive nature of the responses provided. The open-ended questions provided the opportunity to gain deeper insights at a country-specific level. The survey was initially trialled with at least two land agencies and converted to an online Google Form web service.

The selection of participants was restricted to European countries that have a relationship with EuroSDR, UN-GGIM Europe and/or FIG. Invitations were sent via email between March and April 2022. In total 21 countries participated: Austria, Belgium, Bosnia & Herzegovina, Bulgaria, Cyprus, Czech Republic, Denmark, England and Wales, Estonia, Finland, Germany, Italy, Latvia, Luxembourg, Netherlands, Portugal, Scotland, Slovenia, Spain and Sweden, Switzerland. Participating countries represent all regions of Europe: Central and Eastern, Northern, Southern and Western Europe. All survey participants across Europe had in-depth knowledge of land administration/cadastral/registration/policy-making and were generally coming from governments, national mapping and cadastral authorities, land registries, recognised academic institutions, and/or leading private sector agencies in the land administration domain. These competences were considered in approaching the concept of effective land administration.

The multiple-choice answers were summarised using descriptive statistical tools such as bar charts, pie charts, and percentages. The answers to open-ended questions were analysed using qualitative methods such as identifying themes and potential outlier perspectives.

Before presenting the results, it is worth noting that FELA builds on existing definitions of land administration, including land tenure, land value, land use and land development, and incorporates the concepts of land registry and cadastre. FELA is constructed, implemented and realised through the nine pathways (Figure 1): I. Governance, Institutions and Accountability; II. Policy and Legal; III. Financial; IV. Data (and Processes); V. Standards; VI. Innovation; VII. Partnerships; VIII. Capacity and Education; IX. Advocacy and Awareness. However, as mentioned above, due to limitations on time and resources, and the fact that the work was considered pilot in nature, the online survey focused on only 3 of them - those reflecting the governance branch of the FELA: 1) Governance, Institutions and Accountability (mainly referring to accountable and transparent governance), 2) Policy and Legal (referring to inclusive and recognises all forms of tenure), and 3) Financial (referring to affordable with sustainable business models).

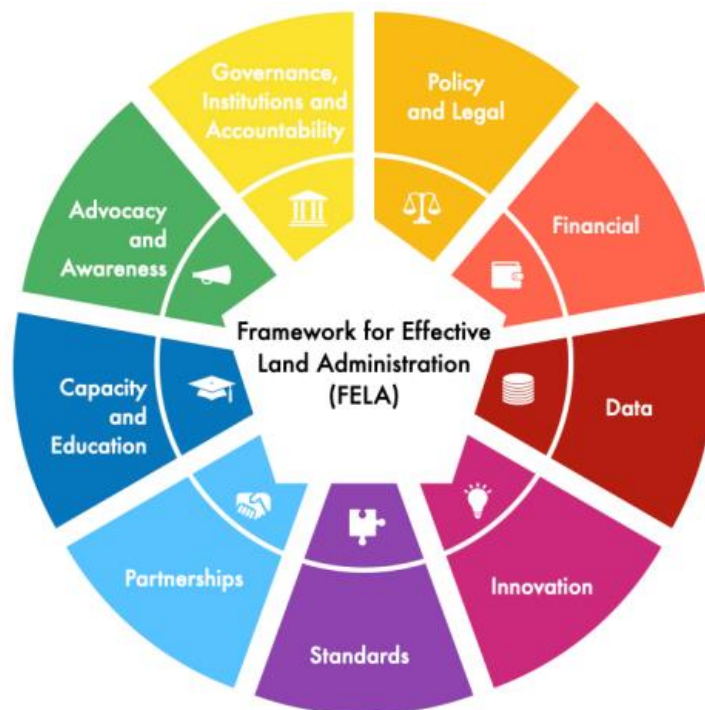


Figure 1: Nine Pathways of the Framework for Effective Land Administration.

3 RESULTS

As already mentioned, the online survey focused on three (out of nine) Pathways of the FELA. The results are presented using these pathways. In each case, a reference to the specific FELA section is delivered, followed by each question and the quantitative result, which is then followed by some specific qualitative information provided by respondents. Many of the additional comments from the participating countries are already reflected in the text.

3.1 Governance, Institutions and Accountability

Within FELA Pathway I - *Governance, Institutions and Accountability*, land administration is described as necessarily being accountable and transparent. FELA states: *'Land administration is a societal activity both shaping and shaped by governance, institutions, and associated with accountability. All SDGs focus on the enhancement and reform of governance, institutions and associated accountabilities.'* In coherence with IGIF, FELA calls for clear governance models, leadership, institutional structures and a clear value proposition. FELA calls for effective and efficient land institutions whose leadership focuses on transparency, accountability, inclusiveness, accessibility, participation, and gender responsiveness. FELA supports a variety of approaches to land governance that are guided by the principles of good governance.

Therefore, the first question (Figure 2) focused on how land administration is governed in different jurisdictions. Here, the main trend toward a single body or agency leading land administration can be identified.

What approach best describes how land administration is governed in your jurisdiction?

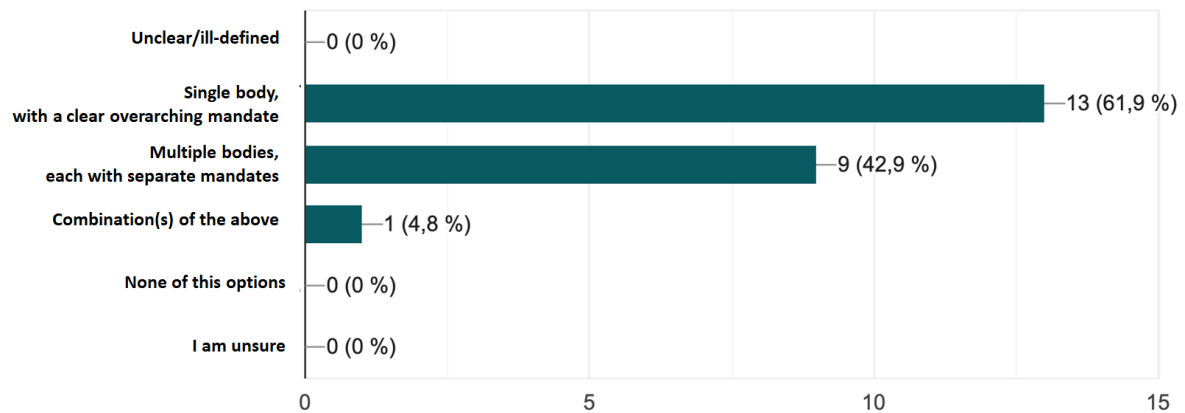


Figure 2: Approach to the governance of land administration.

The questionnaire then focused on leadership within the sector (Figure 3). FELA describes the importance of political endorsement in strengthening the institutional mandate. Both bureaucratic and collaborative leadership styles were most frequently mentioned in the land administration agencies surveyed (with the collaborative leadership style being the most prevalent). It is interesting to note that older style autocratic leadership methods are still seen to exist in some jurisdictions. The qualitative answers also revealed that there are cases of mixed leadership, with some tasks being defined by law (most often the general mandate), and others are defined by collaboration with other key stakeholders.

Which option best describes leadership in the land administration sector in your jurisdiction?

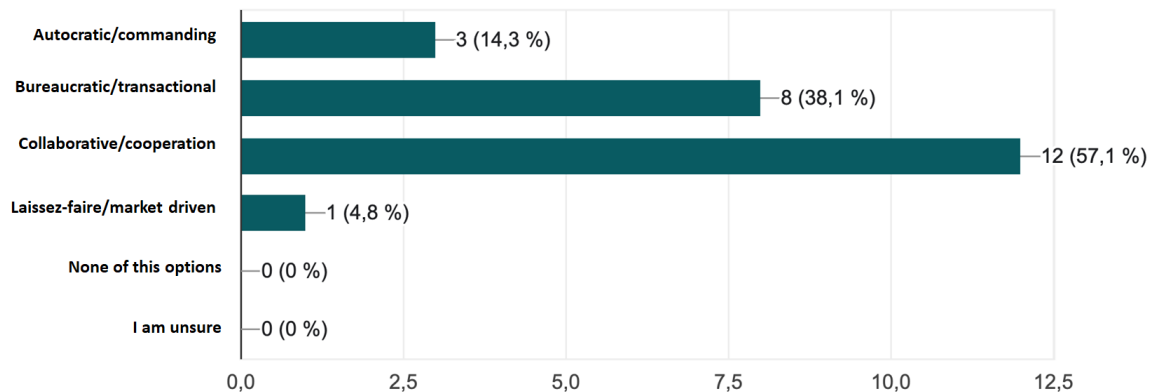


Figure 3: Leadership approach in land administration sector.

The number of organisations broadly involved in land administration activities was also assessed (Figure 4). These included private, public and NGO organisations, where applicable. FELA highlights the importance of raising awareness across multiple sectors, within and between agencies, as well as working with professionals, industry, investors, civil society organisations (CSOs), and non-governmental organisations (NGOs). Whilst Figure 2 illustrates that in many countries, only one or two agencies are involved in land administration governance, a large portion of countries acknowledged that many organisations are involved. This contrasting result could indicate differences in understanding of the question, or it could simply be a manifestation of the different approaches

taken to land administration governance. From the qualitative data, it appears that the cooperative and distributed roles are taken on when it comes to planning processes. Cooperation is also evident regarding spatial planning, building permitting and spatial development.

How many organisations are involved in the governance of your land administration sector?
(Note: please include public, private, and NGOs)

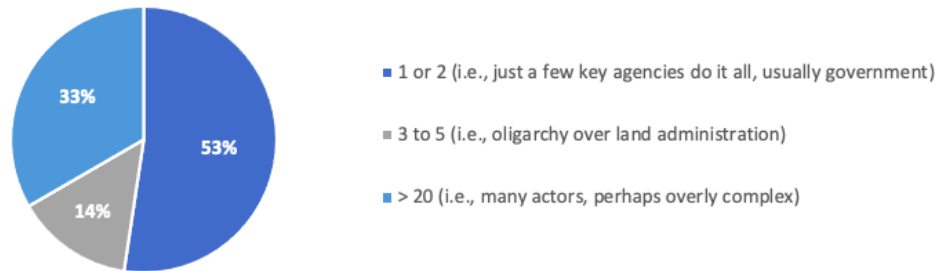


Figure 4: Number of organisations involved in land administration governance.

The subsequent question focused on the use of performance indicators within the sector, specifically if these are linked to the SDGs (Figure 5) and whether the data is kept up-to-date and publicly available. This question relates to FELA's mention of value proposition: land administration actors should take the lead in developing and enforcing accountability and transparency in terms of procedures, metrics and indicators. Doing so justifies and strengthens mandates, roles and responsibilities amongst the community and society more broadly. The SDGs were still not prevalent in the majority of performance metrics for land administration sectors (only 21.1%), although this does mean that some jurisdictions have already adopted the SDGs in the past five years since their introduction.

Does the land administration sector in your jurisdiction use performance indicators linked to the SDGs?
Is data on these measures up-to-date and publicly available?

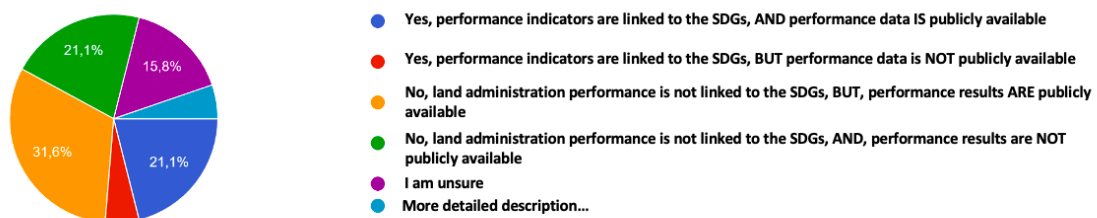


Figure 5: Performance indicators in land administration.

3.2 Policy and Law

FELA calls for a sound policy and legal framework as a fundamental basis, which requires an inclusive legal and policy framework that recognises all forms of tenure to be gender-responsive and inclusive of vulnerable groups. Therefore, FELA refers to: *'The creation and existence of sound policy and legal frameworks relating to land tenure, land use, land value, and land development is fundamental. These should enable the creation and ensure the existence of effective land administration that is available, accessible, inclusive, participative, gender- and minority responsive, transparent, and supports the exchange, application and management of land information to all. These frameworks should also define the degree of responsibility of various legal institutions for dispute settlement.'*

In general, most respondents indicated that the jurisdiction in question does have a clear, concise, and integrated land policy. This was perhaps above what was expected, given the often historical divergence in aspects of land management and governance in many jurisdictions. Importantly, in this context, based on the qualitative data, it was found that land policy appears to be very clear and concise but for overlapping issues such as spatial planning, environmental impact assessment etc., both mandates and political interest vary.

Does your jurisdiction have a clear, concise, comprehensive, and integrated land policy(s) ?

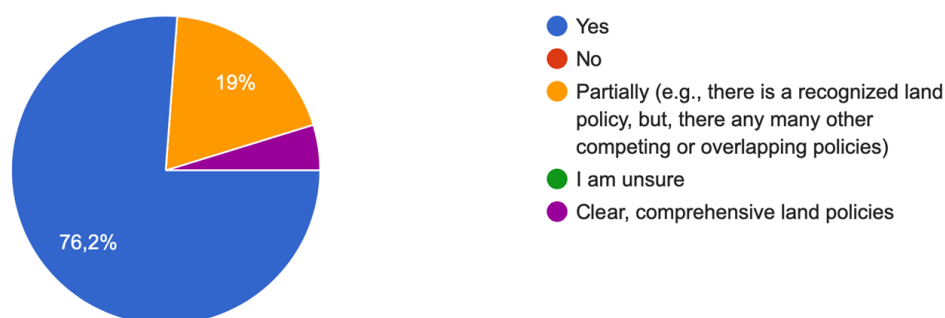


Figure 6: Evidence of unified land policy.

Subsequent questions focused on identifying legally related accountability mechanisms for land administration agencies (Figure 7). The overwhelming 'yes' responses indicates that this aspect is well covered in European jurisdictions. From the qualitative data, it seems that accountability is often achieved through the requirement for publicly available assessment data and audit reports.

Do land laws ensure that land rights are available, accessible, inclusive, participative, gender and minority responsive, and transparent? (i.e., are they aligned to international policy guidelines)

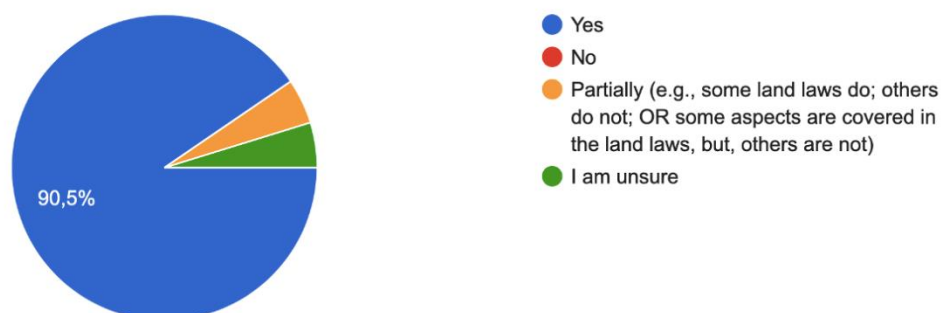


Figure 7: Accountability of land administration organisations.

The final question on law and policy related to laws to support sharing and management of land data (Figure 8). Again, many respondents indicated that the jurisdiction in question had such legal provisions. The qualitative data supports this and highlights the importance of privacy standards, which are met primarily through the General Data Protection Regulation (GDPR) of the European Union but also through federal laws and data exchange protocols between institutions. Further, the role of key registers with a clear mandate for certain datasets was highlighted by some respondents as well as the national roll-out of the INSPIRE directive.

Are there specific laws, processes, bodies, and resources allocated for ensuring land administration sector accountability in your jurisdiction?

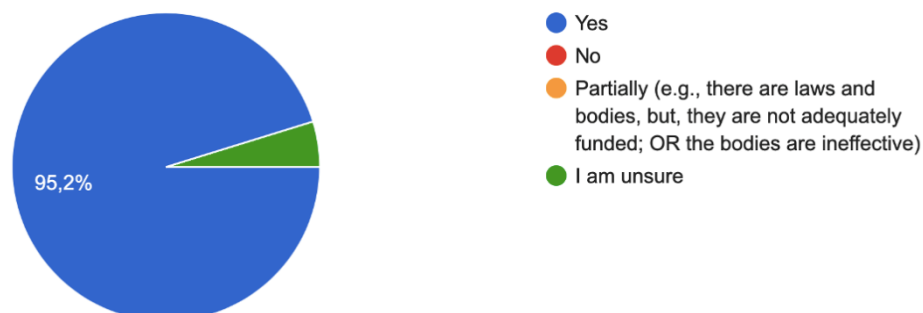


Figure 8: Laws to support sharing and management of data.

3.3 Finance

Within FELA Pathway III – Finance, it is said that: *'The financial strategic pathway stresses the necessity for sound, accountable and transparent financial governance, management and arrangements, helps to focus on the importance of understanding the implementation costs and the required ongoing financial commitment necessary for maintenance. It is important to promote the achievement of a sustainable economy, and economic justice through land administration that can be sustained and maintained on an ongoing basis. Land administration is one of the limited examples in the geospatial domain, that in addition to supporting administration and governance activities, have historically acted as a revenue generation tool for governments, be it through duties, tax, or charging for information. Therefore, the identification or development of land administration business models is essential'* (UN-GGIM, 2020). Therefore, the questions addressed in the survey were centered around: how the land administration sector sustain itself financially; if the land administration sector offers financial opportunity and support for non-public entities; how improvements and innovations are financed; and whether or not benefits realisation is used.

The first question related to funding focused on how the land administration sector sustains itself financially. This question relates to FELA's mention of the achievement of a sustainable economy so that land administration can be sustained and maintained on an ongoing basis. From the variety of responses (Figure 9), it is clear that there are different methods to sustain services and maintain data. While the majority indicated a combination of taxes and/or levies, user payment, and market-based approaches, separate state budgets or allocated budgets were also still dominantly presented. The qualitative data indicated in one case that key activities such as maintenance are covered through user payments, but innovation, for example, is financed in other ways or based on demands from certain organisations. In one specific case, private sector contributions are mentioned in areas such as valuation and photogrammetry.

How does the land administration sector sustain itself financially in your jurisdiction?

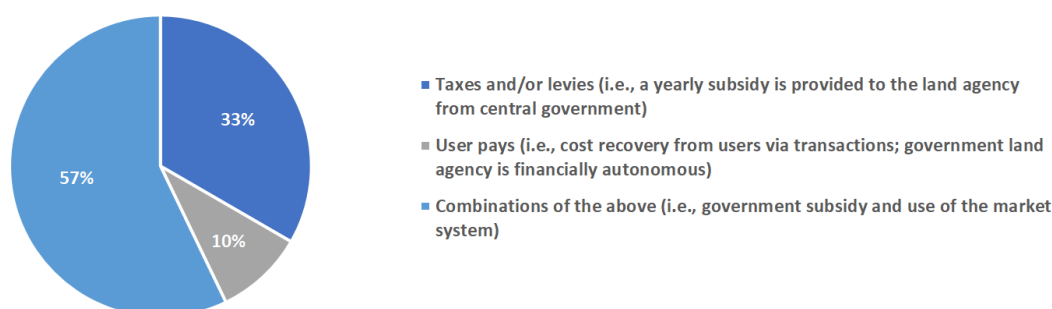


Figure 9: Financial sustainability.

The next question focused around on whether the land administration sector offers financial opportunities and support for non-public entities. Here, responses varied widely from no support to partial support being predominant. Some respondents indicated that private partnerships were established for certain processes, but especially for IT infrastructure and Web Services. Support for municipalities as well as the involvement of licensed surveyors were also mentioned (Figure 10).

Does the land administration sector offer financial opportunity and support for non-public entities (e.g., for private sector participation; or financial support of vulnerable/minority groups)?

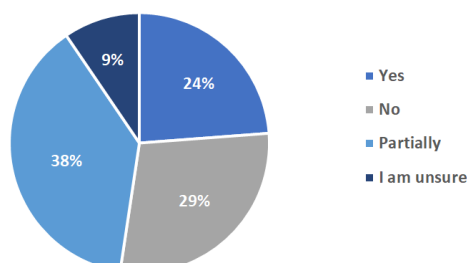


Figure 10: Financial opportunity and support for non-public entities.

The following question relates to funding improvements and innovations in the land administration sector. This question is closely related to the previous questions, with responses categorised as: government subsidies and projects, led by a lead agency, industry or sector funded, or there is no formal funding. Most respondents indicated that improvements and innovations are financed by government subsidies and projects, which means business cases are developed and are funded on an ad-hoc basis. From the qualitative answers, it was also shown that on some occasions, innovations are initiated and led by a lead agency or in cooperation with other stakeholders from the private sector and/or academia (Figure 11).

How are improvements and innovations in the land administration sector generally financed?

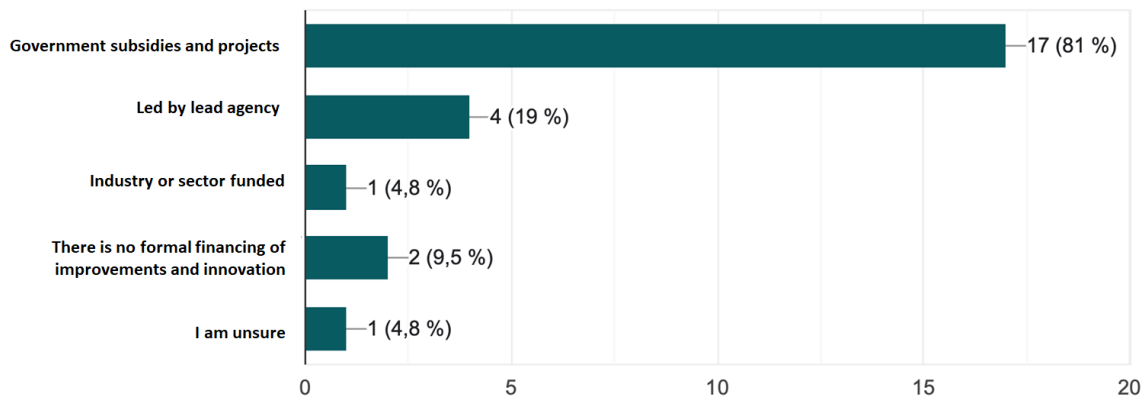


Figure 11: Financing of improvements and innovations.

The final question was dedicated to investigating whether the land administration sector uses a benefits realisation approach (e.g., a document that outlines the activities needed to achieve the planned benefits, including timeline, tools and resources) to ensure that value, which is generated in the sector, benefits all. This question refers to a holistic view of day-to-day services, maintenance as well as innovation aspects. Here, responses vary, and although approximately half of the respondents indicated 'yes' the sector uses benefits realization, it is not clear how this benefits realization is organised. Nevertheless, it is clear from the qualitative data that social and environmental aspects of the land administration sector are becoming more prominent (Figure 12).

Does the land administration sector use a benefits realisation approach to ensure that value which is generated in the sector benefits all (i.e., that...and have positive social and environmental impacts)?

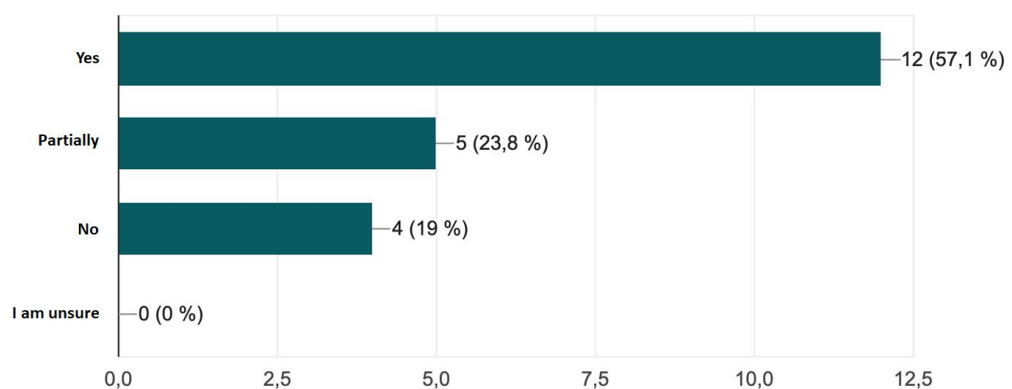


Figure 12: Use of benefits realisation approach.

4 DISCUSSION

This publication was designed to present the preliminary findings of the collaborative work on FELA, undertaken by EuroSDR, UN-GGIM EG LAM and UN-GGIM Europe, and to specifically present the results of the online survey.

4.1 *There is much homogeneity*

Within the survey, there appears to be some homogeneity among the European countries in terms of governance structures, leadership, laws, and finances.

In general, most countries (or until now) appear to have been moving toward greater collaboration and diversification in land administration decision-making and mandate. Whilst this would appear aligned with the ideals behind the SDGs, the IGIF and the FELA, it is more likely that these ideals were driving developments in governance, even prior to the introduction of the SDGs.

In many cases, 1 or 2 institutions are predominant in land administration according to the responses to the questions, and this is also reflected in the more qualitative data. This is to be expected given the historical origins of land administration systems and the recent influence of the European Commission and other donor organisations on the land administration sector.

4.2 *Diversity still abounds*

However, there are also outliers. These could indicate different interpretations of the question or that a given jurisdiction is taking a substantially different approach to land administration. It is noteworthy that there is much more diversity in the financing aspects. Interestingly, this was also apparent in earlier work on Cadastral Template, where it was shown that there were many ways to fund a governance-mandated function of land administration, especially when it had the potential to draw its own profits, often stemming from ‘new public management’ philosophies, and the responses confirm that the full breadth were used in land administration in the European context.

4.3 *Survey and study had limitations*

Regarding the limitations of this work, it should be noted that this was the first time that the questionnaire was conducted in this way and that there was little intervention and explanation to the participants. Therefore, it is likely that there could be some misinterpretations of some questions and answer options. Although the respondents are experts in the land administration sector and are directly involved in land agencies, the FELA uses a broad definition of LA, and there might be considerable variation in understanding. This potential for misinterpretation and the qualitative answers will need to be investigated further and addressed in any further developments.

4.4 *Further work needed*

It may be necessary to further refine the survey and, in particular, spend more time on the definitions and terminology used. The survey may need to be revisited and the appropriateness and utility of some of the questions investigated. In addition, it must be recognised that this survey (and the FELA in general) only assesses inputs or components for Land Administration. The FELA, as a policy guidance, does not assess the outputs of a land administration system.

Another area that could be explored beyond descriptive statistics is inferential statistics, i.e., whether certain calibrations or combinations of governance, legal, and financing approaches lead to better outcomes. This would require a more robust statistical approach to undertake such work. Nevertheless, it can be concluded that it appears possible to convert the FELA into a set of quantitative questions but, semantics and definitions are important in such surveys.

In addition, this survey focused only on the three pathways related to the governance branch of the FELA. It would be welcomed to also study the six pathways related to the technology and people branches of FELA.



Figure 13: Governance, Technology and People branch of the FELA.

5 CONCLUSION

The presented work is part of a broader activity/collaboration between UN-GGIM and EuroSDR. It is positive to see that this type of policy transfer (Unger et al. 2020) is being carried out at the European level. It has been shown that it is possible to convert the FELA into an assessment and awareness-raising tool. From the participation and interest that this initiative has generated, we can conclude that the FELA can be seen as an opportunity for partnerships and regional cooperation. In addition, the study confirms that there is no one size fits all approach in the land administration domain. Therefore, FELA can be seen as a maturity agnostic framework that promotes continuous improvement of services to citizens. It supports the assessment of the current situation and guides towards the target situation through trend analysis and the already mentioned continuous improvement.

REFERENCES

Barry, M. & Augustinus, C., 2015. Property metaphors, property theory and communicating the continuum of land rights. Washington, US.

Deininger, K., Selod, H. & Burns, A., 2012. The Land Governance Assessment Framework. Washington, D.C.: The World Bank.

FAO, 2012. Voluntary Guidelines on the responsible Governance of tenure of land, fisheries and forests in the Context of national food security. Rome, Italy: Food and Agriculture Organization of the United Nations.

ISO, 2012. ISO 19152:2012 Geographic Information - Land Administration Domain Model (LADM), Edition 1. 118p. Geneva, Switzerland. [Online] Available at: <https://www.iso.org/standard/51206.html> [Accessed on 20 February 2018].

UN-GGIM, 2018. 8th Session. Committee of Experts on Global Geospatial Information Management. Report on the eight session (1-3 August 2018). Economic and Social Council Official Records, 2018. Supplement No. 26. [Online] Available at: <http://ggim.un.org/meetings/GGIM-committee/8th-Session/documents/GGIM8-report-e.pdf> [Accessed on 24 December 2018].

UN-GGIM, 2020. Framework for Effective Land Administration, August 2020, New York, United States. Available online: https://ggim.un.org/meetings/GGIM-committee/10th-Session/documents/E-C.20-2020-29-Add_2-Framework-for-Effective-Land-Administration.pdf [Accessed on 10 May 2021].

UN-HABITAT, 2008. Secure land rights for all, Nairobi, Kenya: UN-HABITAT.

Appendix: Survey Questionnaire

EuroSDR - Advancing the Framework for Effective Land Administration (FELA)

Dear colleague and friend,

we are conducting research on the Framework for Effective Land Administration (FELA), adopted by the United Nations.

You can find FELA here: https://ggim.un.org/meetings/GGIM-committee/10th-Session/documents/E-C.20-2020-29-Add_2-Framework-for-Effective-Land-Administration.pdf

The uptake of FELA by the various UN Member States is currently taking place, and this is an ideal time to contribute to the implementation of FELA. EuroSDR, the European Spatial Data Research network and the UN Expert Group on Land Administration and Management (EG-LAM), has initiated this project to raise awareness of the merits and benefits of effective land administration and to share knowledge and experiences about leveraging FELA as an overarching policy guidance.

Therefore, we would be happy to hear from you about governance, institutions and accountability, policy and legal and financial aspects of land administration in your country. This will help us all to gain sector-wide insights, share knowledge and, most importantly, experiences.

We know how valuable your time is, that is why the survey should only take 10 minutes. By completing this survey, you agree that your data will be processed by EuroSDR. The results of the questionnaire will be processed in accordance to the GDPR regulations and will be published by countries.

If you have any questions about the survey, please contact us at: eurosdrr@kuleuven.be

We greatly appreciate your contribution and participation in the survey. Thank you for every second you invested in our research!

Eva-Maria Unger, Rohan Bennett, Joep Crompvoets, Anka Lisec, Frederic Cantat

Privacy Consent

1. Your data will only be used for the purpose it was collected for and which you consented to.

Markieren Sie nur ein Oval.

☐

A gree

☐

Disagree - please then close the questionnaire

Personal information

Please first provide us with some information about you.

2. First Name

3. Last Name

4. Country

5. Organisations Name

6. Position within the organisation

Pathway I: Governance, Institutions and Accountability

FELA calls for the articulation of clear governance models, institutional structures and leadership, and clear value proposition to develop and enforce accountability and transparency. These are intended as a means to strengthen multi-disciplinary and multi-sectoral participation, and a commitment to achieve effective land administration.

7. What approach best describes how land administration is governed in your jurisdiction?

Wählen Sie alle zutreffenden Antworten aus.

- ☐ Unclear/ill-defined (i.e., chaotic, ad-hoc, unclear, or competing mandates)
- ☐ Single body, with a clear overarching mandate (i.e. government land agency sets strategic direction and implements it)
- ☐ Multiple bodies, each with separate mandates (i.e., sector-wide advisory board(s); steering committees; peak bodies; user groups)
- ☐ Combination(s) of the above
- ☐ None of these options
- ☐ I am unsure

8. Please feel free to explain further or clarify your choice to the question above.

9. Which option best describes leadership in the land administration sector in your jurisdiction?

Wählen Sie alle zutreffenden Antworten aus.

- ☐ Autocratic/commanding (i.e., centralised to a single body, position, or person)
- ☐ Bureaucratic/transactional (i.e., multiple agencies lead via rules of law)
- ☐ Collaborative/cooperation (i.e., multiple agencies work together to make decisions)
- ☐ Laissez-faire/market driven (i.e., limited formal overarching leadership)
- ☐ Not of these options
- ☐ I am unsure

10. Please feel free to explain further or clarify your choice to the question above.

11. How many organisations are involved in the governance of your land administration sector?
(Note: please include public, private, and NGOs)

Markieren Sie nur ein Oval.

- ☐ 1 or 2 (i.e., just a few key agencies do it all, usually government)
- ☐ 3 to 5 (i.e., oligarchy over land administration)
- ☐ 6 to 20 (i.e., maturing towards shared and distributed roles)
- ☐ > 20 (i.e., many actors, perhaps overly complex)
- ☐ I am unsure
- ☐ Sonstiges: _____

12. Please feel free to explain further or clarify your choice to the question above.

13. Does the land administration sector in your jurisdiction use performance indicators linked to the SDGs? Is data on these measures up-to-date and publicly available?

Markieren Sie nur ein Oval.

- ☐ Yes, performance indicators are linked to the SDGs AND performance data IS publicly available
- ☐ Yes, performance indicators are linked to the SDGs, BUT, performance data is NOT publicly available
- ☐ No, land administration performance is not linked to the SDGs, BUT, performance results ARE publicly available
- ☐ No, land administration performance is not linked to the SDGs, AND performance results are NOT publicly available
- ☐ I am unsure
- ☐ Sonstiges: _____

14. Please feel free to explain further or clarify your choice to the question above.

Pathway II: Policy and Legal

FELA calls for robust policy and legal frameworks related to the establishment, renewal and strengthening of land administration grounded in social, environmental and economic needs.

These are considered essential for enabling the accountability, availability, accessibility, exchange and application of inclusive, participative and transparent land information.

15. Does your jurisdiction have a clear, concise, comprehensive, and integrated land policy(s) ?

Markieren Sie nur ein Oval.

- ☐ Yes
- ☐ No
- ☐ Partially (e.g., there is a recognized land policy, but, there any many other competing or overlapping policies)
- ☐ I am unsure
- ☐ Sonstiges: _____

16. Please feel free to explain further or clarify your choice to the question above.

17. Do land laws ensure that land rights are available, accessible, inclusive, participative, gender and minority responsive, and transparent? (i.e., are they aligned to international policy guidelines)

Markieren Sie nur ein Oval.

- ☐ Yes
- ☐ No
- ☐ Partially (e.g., some land laws do; others do not; OR some aspects are covered in the land laws, but, others are not)
- ☐ I am unsure
- ☐ Sonstiges: _____

18. Please feel free to explain further or clarify your choice to the question above.

19. Are there specific laws, processes, bodies, and resources allocated for ensuring land administration sector accountability in your jurisdiction?

Markieren Sie nur ein Oval.

- ☐ Yes
- ☐ No
- ☐ Partially (e.g., there are laws and bodies, but, they are not adequately funded; OR the bodies are ineffective)
- ☐ I am unsure
- ☐ Sonstiges: _____

20. Please feel free to explain further or clarify your choice to the question above.

21. Do laws support the sharing, exchange, application and management of land data and information for people and stakeholder groups?

Markieren Sie nur ein Oval.

- ☐ Yes
- ☐ No
- ☐ Partially (i.e., some land data sharing is enabled (e.g. parcel boundaries); but land transaction data is not)
- ☐ I am unsure
- ☐ Sonstiges: _____

22. Please feel free to explain further or clarify your choice to the question above.

**Pathway
III:
Financial**

Financial aspects for FELA relate to the establishment and maintenance costs of a system and the underlying data and records within, and also where and how the financial benefits of the system are distributed back to society. FELA calls for the necessity for sound, accountable and transparent financial governance, management and partnership arrangements to support the implementation costs and the required ongoing financial commitment necessary for maintenance.

23. How does the land administration sector sustain itself financially in your jurisdiction?

Markieren Sie nur ein Oval.

- ☐ Taxes and/or levies (i.e., a yearly subsidy is provided to the land agency from central government)
- ☐ User pays (i.e., cost recovery from users via transactions; government land agency is financially autonomous)
- ☐ Market-based (i.e., private sector actors set prices for services and does most of surveying/registration work)
- ☐ Combinations of the above (i.e., government subsidy and use of the market system)
- ☐ There is no measures for financial sustainability of land administration in my jurisdiction
- ☐ I am unsure
- ☐ Sonstiges: _____

24. Please feel free to explain further or clarify your choice to the question above.

25. Does the land administration sector offer financial opportunity and support for non-public entities (e.g., for private sector participation; or financial support of vulnerable/minority groups)?

Markieren Sie nur ein Oval.

- ☐ Yes
- ☐ No
- ☐ Partially
- ☐ I am unsure
- ☐ Sonstiges: _____

26. Please feel free to explain further or clarify your choice to the question above.

27. How are improvements and innovations in the land administration sector generally financed?

Wählen Sie alle zutreffenden Antworten aus.

- ☐ Government subsidies and projects (i.e., a business case is developed and is funded on an ad-hoc basis)
- ☐ Led by a lead agency (i.e., autonomous agency, innovation fund)
- ☐ Industry or sector funded (i.e., land sector actors contribute directly, lowering the cost to provide services))
- ☐ There is no formal financing of improvements and innovation in land administration
- ☐ I am unsure

28. Please feel free to explain further or clarify your choice to the question above.

29. Does the land administration sector use a benefits realisation approach to ensure that value which is generated in the sector benefits all (i.e., that benefits are not only financial, and have positive social and environmental impacts)?

Wählen Sie alle zutreffenden Antworten aus.

- ☐ Yes
- ☐ Partially (e.g., the primary benefit accounted for is revenue generation, however, secondary benefits such as dispute minimisation are formally accounted for)
- ☐ No
- ☐ I am unsure
- ☐ Sonstiges: _____

30. Please feel free to explain further or clarify your choice to the question above.

Additional Remarks

31. Do you have recommendations to further improve FELA (if yes, you are kindly ask to elaborate your ideas)?

32. Do you have question(s), remark(s) or comment(s) related to this questionnaire (if yes, you are kindly ask to elaborate your ideas)?

Thank you for your participation and valuable contribution!