

PCC Conference and Plenary Meeting

Cadastre - contributions for a low carbon economy and society

Lisbon, May 2021



Status and adopted Innovations over the last decade in Cadastre and Land Administration in Europe

Questionnaire in preparation for the PCC Conference jointly organized with the support from CLRKEN of EuroGeographics in 26-27 May 2021 in Lisbon.

In preparation for the PCC Conference in May 2021, the Portuguese Presidency of PCC jointly with the CLRKEN of EuroGeographics was collecting information from their member countries.

Cadastre Contributions for a Low-Carbon Economy and Society

The motto of the conference will be ‘**Cadastre contributions for a low-carbon economy¹ and society**’. The aim is to make a start in the identification of elements and issues, where cadastral systems including land registration can contribute to a low-carbon economy and climate change mitigation.

Structure

The questionnaire consists of four parts:

- Part I – Status of Land Administration Systems in Europe
- Part II – Innovations in Cadastre and Land Administration
- Part III – Roles of Public and Private Sectors
- Part IV – Relationship between Cadastre and Decarbonisation

¹ A low-carbon economy, low-fossil-fuel economy, or decarbonised economy is an economy based on low-carbon power sources that therefore has a minimal output of greenhouse gas emissions into the atmosphere, specifically carbon dioxide (en.wikipedia.org/wiki/Low-carbon_economy, accessed on 12 Feb. 2021).



Participating Countries: 35

Country Code	Country Organization	Name Email-address
AT	Austria BEV - Bundesamt für Eich- und Vermessungswesen	Julius Ernst julius.ernst@bev.gv.at
BA	Bosnia and Herzegovina, Federation of Bosnia and Herzegovina	Denis Tabučić denis.tabucic@fgu.com.ba
BE	Belgium FPS Finance Patrimonial Documentation	Jolien Neckebroeck (MINFIN) jolien.neckebroeck@minfin.fed.be
BG	Bulgaria Geodesy, Cartography and Cadastre Agency	Ludmila Ivanova Людмила Иванова <Ivanova.L@cadastre.bg>
CH	Switzerland Federal Office of Topography swisstopo	Daniel Steudler daniel.steudler@swisstopo.ch
CY	Cyprus Department of Lands and Surveys	Andreas Hadjiraftis ahadjiraftis@dls.moi.gov.cy
CZ	Czech Republic Czech Office for Surveying, Mapping and Cadastre	Svatava Dokoupilova Svatava.Dokoupilova@cuzk.cz
DE	Germany Arbeitsgemeinschaft der Vermessungsverwaltungen der Länder der Bundesrepublik Deutschland (AdV)	Marcus Wandinger AdV-Geschäftsstelle (LDBV) <AdV.GS@ldbv.bayern.de>
DK	Denmark Geodatastyrelsen	Pia Abo Østergaard piaoe@gst.dk
EE	Estonia Maa-amet / Estonian Land Board	Irja-Gea Kukk Irja-Gea.Kukk@maaamet.ee
ES	Spain Dirección General del Catastro	Amalia Velasco amalia.velasco@catastro.hacienda.gob.es
FI	Finland National Land Survey (NLS)	Pekka Halme pekka.halme@maanmittauslaitos.fi Jani Hokkanen jani.hokkanen@maanmittauslaitos.fi
FR	France Direction Générale des Finances Publiques	Franck Guillaume franck.guillaume@dgfip.finances.gouv.fr
GR	Greece Ktimatologio / Hellenic Cadastre	Dimitris Rokos drokos@ktimatologio.gr
HR	Croatia Državna geodetska uprava	Pupačić Maja Maja.Pupacic@dgu.hr
HU	Hungary Ministry of Agriculture	Piroska Zalaba piroska.zalaba@am.gov.hu
IS	Iceland Þjóðskrá / Registers Iceland	Friðrik Örn Bjarnason - Þjóðskrá Íslands Landupplýsingar <landupplýsingar@skra.is>
IT	Italy Direzione Centrale Servizi Catastali, Cartografici e di Pubblicità Immobiliare	Giorgio Finetti giorgio.finetti@agenziaentrate.it
LT	Lithuania State Enterprise Centre of Registers (SECR)	Bronislovas Mikūta Bronislovas.Mikuta@registrucentras.lt
LU	Luxembourg Administration du cadastre et de la topographie	Bernard Reisch bernard.reisch@act.etat.lu



LV	Latvia Valsts zemes dienests / The State Land Service	Rasa Bērziņa Valsts zemes dienests <VZD@VZD.GOV.LV>
ME	Montenegro Cadastré and State Property Administration	Mirjana Ljumovic mirjana.ljumovic@uzn.gov.me
MK	Republic of North Macedonia Agency for Real Estate Cadastré Katastar (AREC)	Lidija Krstevska l.krstevska@katastar.gov.mk
NL	The Netherlands Kadaster	Salzmann, Martin Martin.Salzmann@kadaster.nl
NO	Norway Kartverket / Norwegian Mapping Administration	Sabrina Grimsrud <Sabrina.Grimrud@kartverket.no>; Jan Häusler <Jan.Hausler@kartverket.no>
PL	Poland Główny Urząd Geodezji i Kartografii (GUGiK)	Ewa Surma Ewa.Surma@gugik.gov.pl
PT	Portugal Serviços de Informação Cadastral, Direção-Geral do Território	Paulo Agostinho Torrinha ptorrinha@dgterritorio.pt
RO	Romania National Agency for Cadastré and Land Registration	Adriana Poggi adriana.poggi@ancpi.ro
RU	Russian Federation Federal Service for State Registration, Cadastré and Cartography (Rosreestr)	Valentina Radke, International Division of Rosreestr <inter-dep@rosreestr.ru>
SE	Sweden Lantmäteriet	Magdalena Andersson Magdalena.Andersson@lm.se
SI	Slovenia Surveying and Mapping Authority	Franc Ravnihar Franc.Ravnihar@gov.si
SK	Slovakia Úrad geodézie kartografie a katastra / Geodesy, Cartography and Cadastré Authority	Behuliaková Martina, Ing. Martina.Behuliakova@skgeodesy.sk
UA	Ukraine StateGeoCadastré	Maryna Zozul Марина Зозуль <zozul@land.gov.ua>
UK-EW	UK – England and Wales HM Land Registry	Gareth Robson Gareth.Robson@landregistry.gov.uk
UK-SC	UK – Scotland Registers of Scotland	Alan Howie Alan.Howie@ros.gov.uk

Part I – Status of Land Administration Systems in Europe

The first part of the questionnaire attempts to provide a status report about Land Administration Systems (LAS) in Europe, their current situation, challenges, new technologies and future developments. The intention is to get a partial update of a study carried out in 2008².

² Overview on the Cadastral Systems of EU member States (www.euocadastre.org/documents.html).



Q 1.1 Which institution is responsible for the LAS in your country on the national level?

Q 1.1	Institution responsible for the LAS on the national level
AT	Cadastre: BEV (Federal Office for Metrology and Surveying) at Cadastral offices; Land register: Ministry of Justice at local courts
BA	<p>Bosnia and Herzegovina (BiH) is a small country of close to 4 million people with a complex governance structure. The Dayton Peace Agreement established BiH as a state comprising two entities, each with a high degree of autonomy: The Federation of Bosnia and Herzegovina (FBH) and the Republika Srpska (RS). The district of Brčko (BD) was added to the structure in 2000. Between the two entities, governance structures and budgetary arrangements are starkly asymmetric. While the RS is subdivided into 64 municipalities, the FBH is subdivided into 10 cantons, each with its own executive, legislative, and judicial branches of government. Each canton is further subdivided into municipalities. While the country's complex political system poses significant challenges in developing coherent sectoral policies and efficiently confronting emerging development priorities, the authorities in BiH have been pursuing a joint development strategy that centres on macroeconomic stability and export-led economic growth, employment and social cohesion, and sustainable development. The strategy's overarching goal is accession to the European Union (EU).</p> <p>The entities of BiH have distinctive land administration systems. In accordance with the constitutional regime there are geodetic institutions: At the State level, Sector for geodetic, geological and meteorological affairs was formed within Ministry of Civil Affairs, which has jurisdiction to determine the basic principles of coordination activities, coordination of plans of Entity authorities and defining the strategy at the international level in the field of geodesy, geology and meteorology. At the entity level, there are Administrations for Geodetic and Property Affairs of the Federation of BiH and the Republic of Srpska (FGA and GARS) and in Brčko District of BiH there is an unit formed - Department of Public Register.</p> <p>In FBH, the daily management of the cadastre and land registry is split between the cadastre departments of the municipalities, cantonal geodetic authorities, and land registry offices in municipal courts. By contrast, in RS, the cadastre and land registry are consolidated under the Republic Administration for Geodetic and Property Affairs (GARS). Both administrations are also responsible for a wide range of tasks related to cadastral surveys, mapping, land consolidation, and the utility cadastre, among others.</p>
BE	The responsibility of Land Administration is divided between the federal State and the regions. The Cadastre and Land Registry are represented by the Federal Public Service Finance within the General Administration of Patrimonial Documentation (at a federal level). For this questionnaire, we will focus on the competencies managed at federal level only.
BG	<ul style="list-style-type: none"> • Geodesy, Cartography and Cadastre Agency; • Registry agency.
CH	Federal Office of Topography swisstopo. However, swisstopo as a geodata centre of excellence provides basic data and services, while many of the actual LAS tasks are covered by partner agencies and organizations.
CY	Department of Lands and Surveys
CZ	Czech Office for Surveying, Mapping and Cadastre
DE	Cadastral and Mapping Agencies for the Cadastre, Land Registry Offices for the Land Register, both on Laender-level. Due to the federal structure of Germany the LAS



Q 1.1	Institution responsible for the LAS on the national level
	lies within the responsibility of the 16 Laender.
DK	Danish Geodata Agency
EE	Estonian Land Board. The government agency under the jurisdiction of the Ministry of the Environment.
ES	The Spanish Directorate General for Cadastre (DGC) and the Property Rights Registry. They are two separate institutions but with an effective coordination.
FI	National Land Survey of Finland (NLS): Cadastre, Land Register, Municipalities: Cadastre (72 biggest, city planned areas), land use planning, Tax Authority: land valuation, NLS as sub-contractor
FR	Directorate General of Public Finances
GR	Hellenic Cadastre
HR	State Geodetic Administration (cadastre), Ministry of Justice and Administration (land books) and municipal courts (land books)
HU	Prime Minister's Office and Ministry of Agriculture at the highest level, land administration departments of the government offices at operational level and their work is technically supported by Lechner Nonprofit Ltd.
IS	Registers Iceland (https://www.skra.is/english/properties/property-registration/), in concert with other government institutions
IT	In Italy, territorial governance is managed by different State (Ministries, National Agencies and Departments) and local authorities (Regions, Provinces and Municipalities), at different levels and with different purposes. At national level, "Ministry for Ecological Transition" (former "Ministry for Environment, Land and Sea Protection"), Revenue Agency, Civil Protection Department play a fundamental role.
LT	The Ministry of Agriculture (MoA) forms the state policy in the field of land management and administration, surveying, geodesy, cartography and real property cadastre. The MoA is the controller of data of the Real Property Cadastre. The Ministry of Justice coordinates the work of state registers, monitors compliance with safety and legal acts requirements for register data. The Ministry of Environment is responsible for territory planning and regulation and monitoring of construction process. The Ministry of Economy and Innovation shapes the state policy on state information resources, re-use of documents and information society development. The State Enterprise Centre of Registers (SECR) is the processor of data of the Real Property Cadastre and the Real Property Register, the Address Register and other state registers. SECR is subordinate to the Ministry of Economy and Innovation. The answers below are only given on behalf of and concern SECR.
LU	Ministry of Finance : in particular: Administration du cadastre et de la topographie (ACT) and Administration de l'enregistrement, des domaines et de la TVA (AED) for the registration of deeds.
LV	The State Land Service of Latvia
ME	Cadastre and State Property Administration
MK	Ministry for transport and communication is responsible for spatial planning and construction land management; Agency for real estate cadaster
NL	Cadastre, Land Registry and Mapping Agency (Kadaster)
NO	The Norwegian Mapping Authority (Kartverket)



Q 1.1	Institution responsible for the LAS on the national level
PL	The Land and Buildings Register (LaBR) maintained by district (powiat)
PT	There are shared responsibilities. The data are distributed into three information systems, which are fundamental for understanding the structure of land ownership – the cadastral geometries (cadastral map), managed by DGT, the land registration, managed by the Portuguese Institute of Registries and Notary (IRN), and the fiscal matrices, managed by the Portuguese Tributary Authority (AT) - the data is correlated through an interoperability platform supported by the parcel identification number.
RO	National Agency for Cadastre and Land Registration (ANCPI)
RU	The Federal Service for State Registration, Cadastre and Cartography
SE	Lantmäteriet, The Swedish Mapping, Cadastre and Land Registration Authority
SI	1. Surveying and Mapping Authority of Republic of Slovenia (SMA): Land Cadastre, Building Cadastre, Register of Spatial Units. 2. Supreme Court: Land Registry.
SK	Úrad geodézie kartografie a katastra Slovenskej republiky / Geodesy, Cartography and Cadastre Authority of the Slovak republic
UA	The State Service of Ukraine for Geodesy, Cartography and Cadastre (StateGeoCadastre)
UK-EW	HM Land Registry is responsible for land tenure and securing legal rights, the Valuation Office Agency is responsible for the assessment of land value, with the collection of property related community taxes being the responsibility of local government. Her Majesty's Revenue and Customs (HMRC) collect property tax on the sale or transfer of a property. The Ministry of Housing, Communities and Local Government (MHCLG) are responsible for Land Use policy with local government controlling land development.
UK-SC	Registers of Scotland

Q 1.2 What are the responsibilities of this institution?

Q 1.2	Responsibilities of this institution
AT	Cadastré: BEV: strategy, objectives, directives, etc.; subordinates local cadastral offices: all tasks of the cadastré (maintaining, establish, information/data delivery,...)
BA	FGA is the central authority of Federation of Bosnia and Herzegovina (FBiH) responsible for administrative and professional tasks in the following areas: <ul style="list-style-type: none"> • Surveying • Land Cadastre • Real Estate Cadastre • Technical Archive – original maps and data produced by geodetic works • Utility cadastré • Cartography • Land consolidation • Inspection supervisions <p>Organization of geodetic affairs within FBiH is decentralized – top-level decision making processes are dispersed throughout the Federation. FGA is under the responsibility of Government of FBiH (GoFBiH), whereas Cantonal Geodetic Administrations (CGA) and 79 Cadastral Offices (CO) are under the responsibility of the Cantonal Governments of</p>



Q 1.2	Responsibilities of this institution
	<p>FBiH and Local Self-Government Units (LSGU) respectively. Consequently, neither CGAs nor COs are under the responsibility of FGA.</p> <p>FGA doesn't have jurisdiction over CGAs – they are under jurisdiction of the Cantonal Governments. Similarly, CGAs don't have jurisdiction over COs, which are under jurisdiction of LSGU. There should be also pointed out the fact that only four cantons in FBiH (out of 10) established CGA. Consequently, in many cases the coordination, communication and cooperation between FGA and COs is direct, without CGA involvement.</p>
BE	<p>The General Administration of Patrimonial Documentation is in charge of the cadastral map and geographic information system and of the property registration (land registry). The institution is also responsible for collecting the mortgage, registration and estate duties, organising the sales of the State properties, expropriating in the public interest and determining the cadastral income (property tax base).</p>
BG	<ul style="list-style-type: none"> • Geodesy, Cartography and Cadastre Agency - creation and maintenance of the cadastral map and the cadastral registers; • Registry agency - creation and maintenance of property register.
CH	<p>National surveying, topographic data, coordination of geospatial data, operation of the national geospatial data infrastructure. These responsibilities also include cadastral surveying and the cadastre of public-law restrictions, which are carried out in a federal context together with the 26 cantons.</p>
CY	<p>Cadastré, Registration, Valuation, Surveying, Cartography, Administration of State Land, Tenure, Land Consolidation, Hydrography and Photogrammetry.</p>
CZ	<ul style="list-style-type: none"> • Complete administration of the Cadastre (including legal relations to real estate property), • Maintenance and modernisation of horizontal, vertical and gravity control in the Czech Republic, • Large-scale mapping (cadastral maps, derived 1 : 5 000 State map), • Medium-scale mapping (Base map of the Czech Republic 1 : 10 000, 1 : 25 000, 1 : 50 000, 1 : 100 000, 1 : 200 000), • Small-scale mapping of the Czech Republic (1 : 500 000, 1 : 1 000 000), • Creation of the Fundamental Base of Geographic Data (ZABAGED), • Geodetic surveys and documentation of state boundaries, • Development and maintenance of the Information System of Surveying, Mapping and Cadastre in the Czech Republic, • Standardisation of geographical names, • Coordination of research and international cooperation in geodesy, cartography and cadastre.
DE	<p>Cadastral and Mapping Agencies maintain the Cadastre. Their main responsibility is the Cadastral Map including parcels, buildings and the underlying cadastral numerical data set.</p> <p>The main responsibility of the Land Registry Offices are owner information and private-law-restrictions such as usufruct, right of way, mortgages, etc.</p> <p>The link between both Cadastre and Land Register is the parcel number.</p>
DK	<p>Recording real estate in Denmark and nautical charts in Denmark and Greenland.</p>
EE	<ol style="list-style-type: none"> 1. Implementation of national land policy (execution of land reform, administration of state-owned lands, sales of land not required for public purposes, acquisition of land in public interests). 2. Maintenance of Land Cadastre (management of cadastral data and guaranteeing



Q 1.2	Responsibilities of this institution
	<p>their availability to the public, organising land surveying and control of surveying quality, organising land assessment).</p> <p>3. Geoinformatics (management of spatial data, provision of spatial data services, co-ordination of geoinformation related activities).</p> <p>4. Capture and management of geodetic, geological and topographic data (organising the establishment of geodetic networks, organising geological mapping, mapping of the Estonian territory, providing national topographic data and maps to the society).</p>
ES	<p>DGC is responsible for describing the real-estate properties of the country, being in charge of providing and keeping updated the Real-estate Cadastre as well as of taking care of the correct diffusion of Cadastral data. This description includes, legal, physical and economic characteristics, featuring title holders data and their rights over the real estate; geographical representation, location, cadastral reference, surface, usages, class of crop, buildings, graphic representation among other physical characteristics; and cadastral values that are the basis for real estate taxation.</p>
FI	<p>See above Q 1.1. NLS maintains the Cadastre and updates it together with the above-mentioned municipalities. NLS maintains and updates the Land Register</p>
FR	<p>The Directorate General of Public Finances belongs to the Ministry of Economy</p>
GR	<p>The "Hellenic Cadastre" is responsible for:</p> <ul style="list-style-type: none"> • The development, maintenance and operation of the National Cadastre. • The maintenance and operation of the system of Registrations and Mortgages. • The production, maintenance and revision of basic and value-added topographic maps and topographic diagrams. • The design, development, organization, operation and management of systems necessary for the creation and management of geodetic infrastructure of the Country related to its purpose. • The planning, execution and control of photogrammetric and cartographic projects from the taking of aerial photographs and satellite images to the development of basemaps to cover the needs of the Agency, the Greek State, Local Government Organizations and Public Legal Entities. • The organization and maintenance of digital geospatial databases.
HR	<p>The State Geodetic Administration is responsible for State Surveying, Real Estate Cadastre, Utility Cadastre, Building Register, Register of Spatial Units, Register of Geographical Names, National Spatial Data Infrastructure. Municipal courts/Land registry offices are responsible for registration of real property and property rights.</p>
HU	<p>At ministry level: legislation, professional regulation, high level management, coordination and supervision; land administration departments (former land offices): operational tasks of land registry, cadastre, land protection, land use, land marketing. Lechner Non-profit Ltd. (former FÖMI) provides technical support, countrywide data services and deals with special national tasks like control point networks, GNSS, aerial photos, remote sensing etc.</p>
IS	<p>Ownership of LAS system, storage of LA data and property boundaries, quality assurance for registering parties.</p>
IT	<ul style="list-style-type: none"> • Ministry for Ecological Transition: protection of biodiversity, ecosystems and marine-coastal heritage, protection of the land and water, policies to fight climate change and global warming, sustainable development, energy efficiency and circular economy, integrated management of the waste cycle, remediation of sites of national interest (SIN), environmental assessment of strategic infrastructures, fight air-



Q 1.2	Responsibilities of this institution
	<p>acoustic-electromagnetic pollution and risks arising from chemicals and genetically modified organisms. It works together with the Higher Institute for Environmental Protection and Research (ISPRA). It promotes good environmental practices, sustainable mobility and urban regeneration according to sustainability criteria;</p> <ul style="list-style-type: none"> • Revenue Agency: Cadastre and Land Registration (Cadastral, Geo-cartographic and appraisal services, Land Registry and Real Estate Market Observatory); • Civil Protection Department: projects and activities for the prevention, forecast and monitoring of risks and intervention procedures, coordination of the response to natural disasters, catastrophes or other events.
LT	<p>The SECR registers objects of the Real Property Cadastre and Register (land parcels, structures, premises), real rights to them and related legal facts; processes the Real Property Cadastre and Register, Address Register, performs mass valuation of real property, provides official data from state registers and information systems.</p>
LU	<p>The ACT has the exclusive prerogative for collecting, archiving and delivering surveying data and official property plans, as well as the administration and information of land property rights. The ACT is responsible for official specifications related to property survey and is the administrator of land registration, cadastral surveys, geodesy, topography and the implementation of a national GIS. ACT is the official host of the national geoport.</p>
LV	<ul style="list-style-type: none"> • Ensures the operation of country-level information systems (The Cadastre, the State Address Register, Encumbered (Restricted) Territories' information system, Central Database of the High-Detail Topographic information). • Performs the mass cadastral valuation of real estate. • Participates in the implementation of the state policy in the field of land reform. • Performs the cadastral surveying of constructions and groups of premises.
ME	<p>State Survey; Records on real estate; Cadastre registry databases-Land registration; Topographic mapping, Utility cadastre, Address register, Register of spatial unit; Property and ownership rights, Real estate evaluation, Creation and maintenance of geodetic networks, Creation, maintenance and development of Geo information system, Technical documents archive, Issuing licences for geodetic works performance, State property register and other pursuant to Regulation on organization and manner of State Administration work.</p>
MK	<p>AREC is authorized to: Manage the geodetic-cadastre information system; Perform basic geodetic works; Perform real property survey; Perform survey and maintenance of the state borderline ; Perform geodetic works for special purposes ; Establish and maintain the real estate cadastre; Perform mass valuation of real properties registered in the real estate cadastre; Establish and administer the graphic registry of construction land; Produce topographic maps; Administer a spatial units register; Administer graphic registry of streets and house numbers, establish and maintain Register of Repossessed Real Estate Intended for Sale; Establish, maintain and provide public access to the National Spatial Data Infrastructure in compliance with a separate law; Monitor and supervise the performance of the sole proprietors – authorized surveyors and the trade companies for geodetic works.</p>
NL	<p>Land administration (land registry and cadastre), the national reference system, topographic mapping, (geo-)information node in national spatial data infrastructure, information on cables and pipelines and land consolidation</p>
NO	<p>National geodetic frame, digital maps, cadastre, land registry, property information, place names, standards, positioning services, electronic nautical chart service, national</p>



Q 1.2	Responsibilities of this institution
	geodata coordinator (coordinating the NSDI).
PL	Responsible for creating, maintenance, updates and sharing.
PT	The Directorate-General for Territory as, among others, the responsibility to: <ul style="list-style-type: none"> regulate cadastral activity, playing the role of National authority; ensure the execution and maintenance of the cadastre; maintain and improve the national geodetic framework; promote the cartographic coverage of the territory; prepare and maintain the Official Administrative Map of Portugal; develop, coordinate and manage, at national level, territorial and geographical information systems and portals; intervene in environmental assessment procedures and in the preparation, monitoring, execution and compatibility of territorial management instruments.
RO	<ul style="list-style-type: none"> Consolidates and Maintains the Register and the National Cadastral Plan, and the Register of Real Rights; coordinates and controls the execution of cadastral works and ensures the registration of real estate and real rights in the real estate publicity register nationwide: elaborates regulations and norms, promotes techniques, procedures and specialized methodologies compatible with those of the European Union, techniques in the field of cadastre, geodesy, cartography and real estate advertising; ensures the execution and updating of official maps and approves the topographic content of maps, plans, atlases, guides and other cartographic documents intended for public use; builds and maintains the INSPIRE geoportal of Romania and ensures its compatibility with the INSPIRE geoportal of the European Union.
RU	<ul style="list-style-type: none"> State registration of real property rights and transactions; cadastral registration of real property units; maintenance of the Unified State Register of Real Property; supervision of geodesic and cartographic activities; maintenance of registers of self-regulated organizations of cadastral engineers, appraisals and mediators, state register of arbitration managers, etc.; land management; state land monitoring and state land supervision; state supervision of the state cadastral valuation.
SE	Main responsibilities are: Property formation, land registration, geographical and real property information, geodetic services, place-names, international co-operation
SI	SMA is responsible for providing real estate data in official records and implementing data change procedures, field of cartography and mass real estate valuation. Supreme Court is responsible for registration of property rights (ownership).
SK	Geodesy, Cartography and Cadastre state administration on national level
UA	StateGeoCadastre is responsible for topography, geodesy, mapping, geographical names database, State Land Cadastre, National Spatial Data Infrastructure, land relations, land use & protection, control for land use, administrative services, land valuation.
UK-EW	HM Land Registry help provide trust and confidence in land ownership. We contribute to making the conveyancing process quick, easy and secure, preparing the way for a wholly-digital, wholly-secure conveyancing process. Finally, our property data supports a stable and innovative UK economy.



Q 1.2	Responsibilities of this institution
UK-SC	20 registers focused primarily on land and to a lesser part people.

Q 1.3 Does this institution operate according to a strategy? If so, what was the strategy and has it been fulfilled in recent years?

Q 1.3	Strategy of this institution
AT	Cadastre provides clarity and transparency about the property relations in Austria with regard to real estate and boundaries of parcels by management of the cadastre and by official acts; the cadastre is the evidence of ownership, property descriptions, the documentation of rights, restrictions and obligations as well Data for tax and planning purposes.
BA	The institution operates under the Land administration strategy document and several thematic strategic documents (SDI, ICT, Cartography, Reference frames, etc.) and monitoring systems are established that show high level of fulfilment of goals.
BE	The General Administration of Patrimonial Documentation within the Federal Public Service Finance aims to remain a leading public service with a genuine added value for society. That is why we must continue our development and carry our organization to a higher level through four strategic ambitions: <ul style="list-style-type: none"> • Tailored: personalized and accessible services • Cooperation: valuable interaction based on mutual trust • Smart: a data-driven, innovative organization • Performance: a flexible organization creating pleasant working conditions Accomplishing our core missions allows us to contribute to the economic and social welfare of every citizen and company and to help build a healthy, safe and future-oriented society. We are transparent, we apply the tax system correctly and we provide legal certainty and financial stability.
BG	Geodesy, Cartography and Cadastre Agency is operating according to a long-term program of the government for the activity on the creation of the cadastre and the property register, which is updated every year.
CH	Yes, the actual "Strategy 2025" has been published recently. The main points are: BIM data, Future labs, Intelligent and multimodal mobility, National Spatial Data Infrastructure, Open Government Data, Sustainable, Unbiased, Up-to-date. The strategies of the last periods have more or less been successfully fulfilled.
CY	Yes. There is a strategy which is regularly linked to and monitored by ISO certification. Yes, with very good results.
CZ	Long-term strategy has been completing digitization of the cadastre and its services. Most of the goals were fulfilled during previous years and now ČÚZK focuses on increasing of the quality of cadastral maps, completing land consolidation and renewal of the cadastral documentation.
DE	The operation of both institutions is based on a long-standing tradition and experience; today, strategies may exist on Laender level.
DK	Yes. The Danish Geodata Agency's strategy consists of a vision and three targets supported by seven focus areas. The vision is "To be the driving force in the digital development of the real property and marine domains, for the benefit of all". The focus areas are Competent authority, Relevant services and Attractive workplace.



Q 1.3	Strategy of this institution
EE	Yes, the Estonian Land Board (ELB) has a strategy document (2018–2021). It has been fulfilled in recent years. In general, this document sets out the following objectives: the state has the necessary land reserve, the state's land management and operations have been expediently carried out, the availability of high-quality spatial data (incl. cadastral data) has been ensured. This document is part of the strategy document of the Ministry of the Environment (2019–2022). The next strategy document of the ELB (2022+) is being prepared.
ES	Yes. Anticipation to be more effective in updating data; simplifying procedures and ease of access to citizens; collaboration with other administrations, registrars, notaries, municipalities and agencies working in the territory. Yes, we improved very much.
FI	Yes, the NLS has a fresh strategy from 2020. Two of the basic statements are: "The data we maintain ensures stability in society. We are responsible for residential and commercial property information, land information and topographic data.
FR	--
GR	The mission and the priorities of the agency are prescribed in the institutional law of the agency.
HR	Yes. Implementation of the Joint Information System of land registry and cadastre (fulfilled) which enables standard and uniform maintaining cadastral and land registry data by civil servants and implementation of the System of Digital Geodetic Elaborates which enables standard and uniform production of geodetic elaborates prepared by private geodetic companies (fulfilled) and improvement of the quality of data in land registry and cadastre (still ongoing).
HU	Operation is according to Acts and Decrees
IS	No
IT	The Italian Revenue Agency operates to fulfil the strategic objectives of fiscal policy and tax management, as provided from a specific strategic policy act, of the Ministry of Economy and Finance. The main mid-term targets for the cadastral and land registration activities are: <ul style="list-style-type: none"> • facilitate the correct fulfilment of tax obligations; • encourage tax compliance through the efficient improvement of the services provided; • improve the quality and completeness of cadastral, cartographic and land registries databases; • ensure the constant updating of the cadastral and cartographic archives.
LT	The SECR operates according to the 2021-2024 strategy updated on annual basis. Main strategic tasks: effective and reliable management of the state information resources, transfer of public and administrative services to the electronic environment, provision of qualitative, reliable, value-added data and services to customers.
LU	3 year working plan focussed on digitalization, creation, maintenance and publishing of open and free authoritative datasets. A long-term strategy will be the withdrawal of ACT from the official survey and plan creation.
LV	The State Land Service of Latvia is currently working on a new strategy for 2021 and onwards.
ME	State Institution work on the basis of annual work plans and currently the new midterm work programme is in the phase of creation. Also, during 2021 creation of Development



Q 1.3	Strategy of this institution
	of Cadastre and State Property Administration Strategy is planned.
MK	The establishment and the maintenance of the real estate cadastre, the performance of the basic geodetic works, the geodetic works for special purposes, the real property survey in service of the real estate cadastre, the survey and the maintenance of the state borderline of Republic of Macedonia, the mass property valuation, the establishment and the administration of registries, the production of the topographic maps are performed on a basis of a Strategic Plan and an Annual Program for implementation of the strategic plan. The Strategic Plan adopts the Government for a period of 3 years.
NL	Yes and core of this strategy is the further digitisation of our tasks with a focus on improving benefits for our stakeholder in the land market and society at large which often concern spatial issues and interests.
NO	<p>The strategy for 2020 was to provide updated map and property information as a basis for value creation and development through: Managing the NSDI; Coordinating cooperation between actors in the NSDI; Facilitating increased use of map and property information; and by being a competent and innovative professional environment nationally and internationally. This has been fulfilled to some extent although it is always a work in progress.</p> <p>The new strategy for 2021-2025 is centred on three goals:</p> <ol style="list-style-type: none"> 1. As the national data coordinator, the Norwegian Mapping Authority is pushing for Norway to be a leader in the use of geographical information. 2. Through cooperation, we develop the geographical infrastructure to become the community's digital twin as a basis for a sustainable society. 3. We make it easy to collect process and share location-based information.
PL	It is based on geodetic law.
PT	<p>Yes.</p> <ul style="list-style-type: none"> • Reform the Cadastral System, through legislative modernization and decentralization of competences; • Implement the National Spatial Planning Policy Program, modernize and develop geographic, cadastral and territorial information systems, optimize the production and availability of official geodetic and geographic information, improve organizational performance and promote priority projects; • The systematic operations of acquiring cadastral data, carried out under the experimental SiNERGIC regime, which resulted in more than 270 thousand cadastral parcels; • The dematerialization and updating of the cadastral parcels under the regime called “geometric cadastre of the rustic property”, completed in 60 municipalities and to be completed in the remaining 58 by the end of 2022, making possible to convert it into modern land cadastre; • The implementation of the viewer platform that currently allows, from the DGT website, public access to the characterization data of about 1 million cadastral parcels. <p>In recent years, the strategy has been partially achieved.</p>
RO	<p>ANCPI carries out its activity in accordance with the Law no. 7/1996 on cadastre and land registration and aims to achieve the objectives based on a strategy, which is constantly updated depending on the evolution of the socio-political context. In the last 10 years, ANCPI has constantly pursued the following main objectives:</p> <ul style="list-style-type: none"> • completion of the cadastre for the entire national territory; • ensuring direct and efficient access to information for all the consumers of information: citizens, business environment, authorities, etc.;



Q 1.3	Strategy of this institution
	<ul style="list-style-type: none"> • increasing the quality of services, in terms of accessibility, tangibility, reliability. <p>The main directions of action stated in the strategy of the institution, in order to achieve these objectives:</p> <ul style="list-style-type: none"> • digitization of archives; • complete remodelling and computerization of all processes; • elimination of paper as a means of transmitting information; • initiation and development of a national property cadastre program, financed by the state
RU	<p>The main relevant strategies that have been fulfilled: 1) a road map “Improvement of the state services in state cadastral registration of real property and state registration of rights to real property and deeds” (2012 - 2018); 2) a state programme “The development of the unified state system of registration of rights and cadastral registration of real property” (2014 – 2020).</p> <p>Currently Rosreestr is developing a complex institutional strategy, which includes development plans for all its responsibilities.</p>
SE	<p>There is a new Geodata Strategy from 2020. Lantmäteriet has a vision and a set-up of goals realized in strategies. All based on our letter of governmental instruction.</p>
SI	<p>Yes. Strategic objectives in the field of real estate registration:</p> <ul style="list-style-type: none"> • establishment of 3-D real estate cadastre, which will enable quality recording of the boundaries of property rights and physical properties of real estate • modernization of registration procedures for all real estate with controlled compliance with external restrictions and related databases <p>With the adoption of the new Real Estate Cadastre Act and the implementation of a comprehensive information renovation of real estate records, the strategic goals will be achieved in the coming years.</p>
SK	<p>Conception of the development of the cadastre for years 2015-2020 (improvement of land administration and cadastral data, registration of property prices, new SW and HW, component of e-Government, web services)</p>
UA	<p>StateGeoCadastre operates according to an annual strategy that is adopted every year. Annual Strategy 2020 was valid until March 2021 and is considered to be 80% completed. Also StateGeoCadastre is the part on National 4 years Strategy and National 10 years Strategy programs.</p>
UK-EW	<p>HM Land Registry have a business strategy from 2017 – 2022. At a high level the strategy is to digitise and automate 95% of our transactions by 2022; to create a more complete / comprehensive register; to engage with our stakeholders and community through the Digital Street research project; to publish more of our data; to develop the right skills and capability in our people underscored by a robust financial plan. We are on track to deliver against each of these objectives.</p>
UK-SC	<p>Register of Scotland publish a yearly corporate plan. 2021-2026 will be issued in the coming month. The link to 2020/2025 is: https://www.ros.gov.uk/about/publications/governance-and-corporate/2020/corporate-plan-2020-2025</p>

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Q 1.4 What is the financial model of this institution?

Q 1.4	Financial model of this institution
AT	Public financed by a yearly budget of the government
BA	The institution is fully government budget financed.
BE	The expenses of the General Administration of Patrimonial Documentation are financed by a state budget. Its income is included in the Budget of Ways and Means.
BG	State administration
CH	Government budget. The degree of cost recovery over the last few years has been around 30%, which is being supported by the political level. The political level also approved that data to be used free of charge by adopting the Open Government Data strategy by 1 March 2021.
CY	Financed by Government.
CZ	State budgeted organization
DE	The institutions are part of the public service. They charge fees for their activities. Fees should cover costs.
DK	The institution is both state- and fee-financed.
EE	100% State budget.
ES	100% funded by the Ministry of Finance to which we belong.
FI	NLS is a net-budgeted government agency. Roughly 35 % of the costs are covered from government budget, and 65 % by customer fees.
FR	--
GR	Self-financed
HR	State budget
HU	National budget
IS	Half self-financed half publicly-financed government institute
IT	The Italian Revenue Agency is a non-profit public body, acting under the supervision of the Ministry of Economy and Finance. The relations between the Agency and the Ministry are regulated by a specific, three-years lasting, "Agreement", updated every year. The Agreement defines the services to be carried out and the objectives to be achieved yearly and specifies the funds transferred for operating costs, investment expenses and incentives for the objectives achieving.
LT	The SECR is a self-financed state enterprise, earning revenue from the services provided to customers (individuals and businesses).
LU	100% financed via a yearly allocated budget
LV	The State Land Service of Latvia is financed from its own revenues (60%) and from the State budget funding (40%).
ME	State Budget
MK	The funds required for performance of AREC are provided from the Budget of the R. of North Macedonia, revenues generated from fees, donations and other sources in compliance to the REC Law.
NL	Overall, Kadaster operates on a cost-recovery basis, where the land administration part is fee-based and the spatial information tasks are budget-based.



Q 1.4	Financial model of this institution
NO	The Mapping Authority is 95% funded by the The Ministry of Local Government and Modernisation (KMD). Since 1992, we have had a cost-sharing model where detailed geospatial data is jointly funded and funding parties in the cooperation hold rights to the data. Joint funding leads to cheaper data capture, management, and more standardized data, resulting in better services to end users. Detailed map data and some orthophotos are sold by dealers and municipalities. Map sales are reported back to the Mapping Authority, which distributes the revenues according to a given distribution key back to the Geovekst-parties both in a national pot and to all parties locally. Sales revenues largely finance new data collection or data maintenance.
PL	It is public administration. Financed from the budget of the district.
PT	The institution has no financial autonomy. The funding comes from meritorious applications that have been submitted under the European funding programs end directly on the state budget.
RO	ANCPI is a governmental authority that is self-financed based on the fees collected following the capitalization of the specific services. The annual budget of revenues and expenditures is proposed by the institution and approved by the relevant ministry - the Ministry of Development, Public Works and Administration.
RU	Rosreestr is a state-financed public authority
SE	User fees and governmental grants
SI	SMA is financed from the budget of the Republic of Slovenia
SK	state budget
UA	StateGeoCadastre is funded by the State budget of Ukraine in full. The plan and financial forecast of the central body of the StateGeoCadastre, its regional offices, state enterprises which are coordinated by StateGeoCadastre, control of the use of financial and material resources, ensurance of accounting procedures are also the responsibilities of the central body.
UK-EW	HM Land Registry has been a trading fund for a number of years but this year the department has come back under control of central government and so bids for a budget to cover defined objectives over a 3 years budget cycle.
UK-SC	Hybrid model, self-financing through Fees and services but part of Scottish Government providing core services to the citizens of Scotland.

Q 1.5 What is the degree of digitalisation in this institution?

Q 1.5	Degree of digitalisation in this institution			Degree of digitalisation in this institution		
	Data			Processes		
	<50%	50-75%	>75%	<50%	50-75%	>75%
AT			X			X
BA			X	X		
BE		X				X

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Q 1.5	Degree of digitalisation in this institution					
	Data			Processes		
	<50%	50-75%	>75%	<50%	50-75%	>75%
BG						X
CH			X			X
CY			X			X
CZ			X			X
DE			X		X	
DK			X			X
EE			X			X
ES			X			X
FI			X			X
FR			X			X
GR			X		X	
HR			X			X
HU			X		X	
IS	X					X
IT			X			X
LT			X			X
LU			X			X
LV			X			X
ME			X			X
MK			X		X	
NL			X			X
NO			X			X
PL						
PT		X		X		
RO		X				X
RU		X			X	
SE			X	X		
SI			X			X
SK		X			X	
UA		X			X	
UK-EW			X			X
UK-SC		X			X	

DE: The degree of digitalisation in Land Registry Offices is less than in CMA's.

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Q 1.6 Are the cadastre and land registry being operated by an integrated organization or by separate organizations?

Q 1.7 Are the data of the cadastre and land registry integrated and processed in a single database or are they separately being handled?

Q 1.6 / 7	Cadastre and land registry organiza- tion		Cadastre and land registry database	
	integrated	separate	integrated	separate
AT		X		X
BA		X		X
BE	X		X	
BG		X	X	
CH		X		X
CY	X		X	
CZ	X		X	
DE		X		X
DK		X		X
EE		X	X	
ES		X	X	
FI	X			X
FR		X		X
GR	X		X	
HR		X	X	
HU	X			X
IS	X			X
IT	X			X
LT	X		X	
LU		X	X	
LV		X		X
ME	X		X	
MK	X		X	
NL	X		X	
NO	X*			X
PL		X		X
PT		X		X
RO	X		X	
RU	X		X	

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Q 1.6 / 7	Cadastre and land registry organization		Cadastre and land registry database	
	integrated	separate	integrated	separate
SE	X		X	
SI		X		X
SK	X			X
UA		X		X
UK-EW		X		X
UK-SC	X			X

* NO: the local community provides inputs to the cadastre.

Q 1.8 Are geospatial data kept in a format that allows interoperability between the different parts of the land administration system?

Q 1.8	Geospatial data interoperability between the different parts of the LAS									
	Cadastre		Land register		Land-use planning		Land valuation		National geo-data infrastructure	
	yes	no	yes	no	yes	no	yes	no	yes	no
AT	X		X		X		X		X	
BA	X					X		X		X
BE	X		X		X		X		X	
BG	X		X							
CH	X		X		X			X		X
CY	X		X		X		X		X	
CZ	X		X		X			X		X
DE	X			X	X		X		X	
DK	X		X		X		X		X	
EE	X		X		X		X		X	
ES	X		X		X		X		X	
FI	X			X	X		X		X	
FR	X			X	X			X		X
GR	X		X		X			X		
HR	X		X		X			X		X
HU	X		X		X		X		X	
IS	X		X			X		X		X
IT	X			X			X			

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Q 1.8	Geospatial data interoperability between the different parts of the LAS										
	Cadastre		Land register		Land-use planning		Land valuation		National geo-data infrastructure		
	yes	no	yes	no	yes	no	yes	no	yes	no	
LT	X		X		X		X			X	
LU	X		X		X					X	
LV	X		X		X		X			X	
ME	X		X								
MK	X		X		X					X	
NL	X		X		X		X			X	
NO	X		X		X		X			X	
PL	X		X		X		X			X	
PT	X		X		X		X			X	
RO	X		X		X		X			X	
RU	X		X		X		X			X	
SE	X		X		X		X			X	
SI	X		X		X		X			X	
SK	X		X		X				X	X	
UA	X		X			X	X			X	
UK-EW	X		X		X				X	X	
UK-SC	X		X								

Part II – Innovations in Cadastre and Land Administration

Q 2.1 Describe major innovations in cadastre and land administration in your country over the last ten years.

Q 2.1	Major innovations in cadastre and land administration over the last ten years
AT	Automated electronic submission of requests and document to maintain the cadastre; fully digitised process within the organisation as well as with partners (land register and licensed surveyors);
BA	8 systems are linked in FBH. Cadastral system is now linked with systems of Land registry, Sales price registry, Address registry, Citizens registry and Digital archive. The LR system is linked to the systems of Cadastre, Address registry, Citizens registry.
BE	<ul style="list-style-type: none"> • Integration of the Cadastre and Land Registry databases. • Digitization of all processes and ongoing digitization of the tools used by our clients through easily accessible platforms • Advanced data exchange between the federal, regional and local administrative levels and partners (e.g. notaries, surveyors, ..)



Q 2.1	Major innovations in cadastre and land administration over the last ten years
	<ul style="list-style-type: none"> • Creation of webservices for clients and within an Open Data strategy (e.g. cadastral map, current and historical situation) • Pre-cadastration of cadastral parcels before property transactions in order to have a correct definition of the object that will be owned and thus assure legal security; possibility of on line demands through a unique platform
BG	Providing electronic access to data and services of the cadastre.
CH	Data interoperability through model-driven approach / full integration of cadastral data in national spatial data infrastructure / extension of purpose to also include public-law restrictions
CY	Integrated Land Information System is fully operational including all activities mentioned above. Integrated portal (DLS-Portal) is fully operational providing access to spatial and non-spatial data, electronic services, electronic applications, and information. INSPIRE e-services are fully embedded in the same platform.
CZ	<ul style="list-style-type: none"> • completing digitization of maps and significant progress in digitization and simplification of services for citizens and public administration • new cadastral law in effect from January 1,2014 • creation and operational run of one of the basic state registries – Registry of territorial identification, addresses and real estate (RÚIAN)– significant source of information (addresses, information about buildings etc.) not only for the cadastre, but also for public administration
DE	The AAA-data-model for Land Surveying (AFIS), Cadastre (ALKIS) and Cartography (ATKIS) was established.
DK	A property data programme has been implemented. With the implementation of the programme the registration of all types of real estate is consolidated in the cadastre within the same authoritative, unique and stable property identification.
EE	100% digital Land Cadastre, opportunity to use digital signature, fully digital (paper free) cadastral procedures (incl. data exchange between cadastre and land surveyors), transmission of the data nationwide between all registers electronically via X-road, digital topographic database, some boundaries of the parcels are matched with topographic database, renewal of the (legal) areas of all cadastral parcels registered in Land Cadastre, natural status of the parcel (land use/cover types) will be identified from topographic database on a regular base once a year.
ES	We have significantly improved the coordination between cadastre and registration, updated the database using new detection technologies and more agile inspection procedures, refined the quality of cadastral cartography to better reflect reality, improved the valuation system based on an increasingly powerful market observatory, advanced collaboration with other administrations working on the territory and increased interoperability. In addition, Cadastre have greatly improved the attention to citizens and digital services which has allowed us to work at full capacity in the COVID times.
FI	3D cadastral properties, digital Housing Company Register, e-conveyancing of real estates, digital archive and document production, life span concept from unseparated areas to registered property, Lifecycle of parcel etc.
FR	<ol style="list-style-type: none"> 1. Teleacte : development of a system of electronic exchanges between the DGFIP and French notaries ; this system allows notaries to make an electronic transfer of deeds and formalities. 2. RPCU : It's a project which is run jointly by the DGFIP and IGN (State mapping agency). This project aims to geolocalize with greater accuracy the cadastral sheets and



Q 2.1	Major innovations in cadastre and land administration over the last ten years
	<p>should generate a cadastral map with continuity throughout French territory</p> <p>3. Revision of the reteable value of professional local</p>
GR	<ul style="list-style-type: none"> • Digital services for all the range of the cadastral survey • Digital submission of topographic plans • Digital submission of deeds by notaries and lawyers • Digital issuance of certificates
HR	<p>Establishment of the <i>Joint Information System of land registry and cadastre</i> that allows on line, standardized work of all employees in cadastre and land registry. All analogue cadastral maps and all cadastral and land registry data are transformed in digital format. Standardization of production of geodetic documentation by private certified geodetic engineers (in digital form) through the Digital System of Geodetic Elaborates. Implementation and issuance of public documents through a web portal for citizens and public bodies is now connected and automated process.</p>
HU	<p>There is a large ongoing project for introducing electronic land registry/cadastre processes and renewing the entire infrastructure. It will be finished by 2023.</p>
IS	<p>Cadastre boundaries being digitised. Both by moving away from text descriptions of boundaries and digitising existing paper based drawings. Change of laws that control the quantity of land to be owned by a single person/entity.</p>
IT	<p>With reference to the cadastral and land registration innovations, the main projects dealt with the dematerialization of the updating processes, including the development of online services for data research, view and download and for the submission of updating documents. Other specific innovations have been developed with particular regard to the theme “Cadastral parcels”, as provided by the European Inspire Directive.</p>
LT	<ul style="list-style-type: none"> • E-Conveyance of real property implemented; • Mandatory preparation of e-files of cadastral data implemented and cadastral data moved to e-environment; • Real property mass valuation system built on the integrated digital data of real property cadastre and register and fully automated; • Energy performance certification of a building, issuance of a building energy performance certificate implemented; • Spatial open data management portal (Regional Geoinformational Environment Service – REGIA) created; • Integration between the Real Property Register and the information system for construction permits and state supervision of construction “Infostatyba” developed.
LU	<p>Digitalization, open and free authoritative data, publishing via geoportal, digital signature, electronic notarial deed</p>
LV	<p>Unified Cadastre and Land Register procedures have been introduced (inter-institutional service) in 2019, in addition an automatic data exchange with the Cadastre and the Building information system has been established.</p>
ME	<p>Implemented projects on the surveyed part of Montenegro so at this moment for more than 92% of Montenegrin territory there is a complete record on ownership and graphic database. For the rest of 8% (rural part-small number of owners) creation of real estate cadastre register is ongoing.</p> <p>All data of graphic and ownership structure are available at web page In accordance with legislation.</p> <p>Data on ownership structure are online in real time and graphic data are updated on monthly level. Electronic download of electronically signed documents-title of deeds is</p>



Q 2.1	Major innovations in cadastre and land administration over the last ten years
	<p>provided, to all users pursuant to legislation. Quality of cartographic database was improved and implementation of Address Register is ongoing.</p>
MK	<ul style="list-style-type: none"> • The real estate cadastre (REC) is established on the entire territory of the country, the land register covers 100% of the country's territory. • Introduction of the electronic cadastre as a part of the Geodetic cadastre information system is the basic business system for maintenance of the REC, the Cadastre of Infrastructure Facilities and the Register of Prices and Leases, as well as for the issuance of data on them. • Distribution system of AREC represents the only access point to the digital geospatial data. The portal http://oss.p.katastar.gov.mk/OSSP/ provides real estate cadastre data, geodetic and cartographic data, data from the Registry of Spatial units, thematic data (Registry for price and lease, infrastructure objects, urban plans, etc.) for the whole territory of the country. • AREC established a Graphic Register for construction land. • The Register of Prices and Leases enables all interested users to access all information related to real estate transactions. • National geoportal NSDI of the Republic developed. • The registry for property owned by the Republic of North Macedonia and the state bodies. • Graphical Registry of streets and house numbers and collection of descriptive and geospatial data on streets and house numbers as a part of the Address Register • The Register of repossessed properties enables information from one place of the repossessed properties intended for sale.
NL	<p>Innovations have been implemented in the domain of the land registration systems (we have completely renewed our system and allow for automated registration), incorporating public restrictions into the system, registering networks and introducing so-called preliminary boundaries. Within our eGovernment system of key registers we are constantly improving the coupling with other registers (building, addresses, persons and businesses). At the user side, we have evolved from the delivery of data to providing access to data and closer cooperation with municipalities and parties in the land market.</p>
NO	<p>Degree of digitalisation of data capture, enhanced security regarding both data capture and data storage, enhanced access to data, enhanced cooperation between central and local municipalities; Integrated parcel map and tabular data. Common API, stricter validation. External client apps provides integrated functionality to the (local municipality) users. On-line data registration in the land registry. Digitally Interconnected with all major national databases.</p>
PL	<p>In the second half of 2018 GUGiK undertook actions aimed at publishing data on the land and building register directly from the district resources. The services concerned are: KIEG – (National Land Registry Integration) service providing the ability to generate a map of land and building registry for any area of the country; ULDK – (Service of Location of Cadastral parcels) service for location of cadastral parcels.</p>
PT	<p>Reform the Cadastral System, through legislative modernization and decentralization of competences. New cadastre maintenance model, executed by private cadastral technicians (TCP - https://tcp.dgterritorio.gov.pt/).</p> <p>The aggregation of data from the three fundamental information systems for understanding the structure of land ownership through an interoperability platform supported by the unique parcel identification number and guaranteeing communication with the</p>



Q 2.1	Major innovations in cadastre and land administration over the last ten years
	citizen through one focal point named Balcão Único do Prédio (BUPi).
RO	Design, development and implementation of the informatic system in use, with the following main features: centralized, unitary (technically and legally), in real time, based on services (SOAP, REST, etc.) and contextually controlled flows, electronic transport of documents, integrated electronic signature, accessible to all creators and consumers of cadastral data, etc.
RU	Cadastral registration of property units and registration of rights to real property have been united: there is a single procedure (one application for both registrations is possible) since 2017, as well as a single database (Unified State Register of Real Property) since 2020.
SE	Continuous digitalization of information and tools within all core areas (e.g. e-services, platform, handling systems).
SI	<ul style="list-style-type: none"> • data digitization • establishment of a building cadastre • positional improvement of the land cadastre • mass valuation of real estate
SK	electronic services for surveyors and all clients, digital signatures, payments, WMS services, term shortening of administration, property prices, new register of buildings with statutory approval, electronic cadastral maps for whole territory
UA	The creation and maintenance of the biggest one State Land Cadastre system and the Public Cadastral Map in Europe, the Development of Geoportal for State Normative Voluntary Land Valuation, implementation of the Land Management Documentation Fund, creation of the NSDI Prototype, maintenance of the State Register of Geographical Names, the Portal for E-Services, and Online registration of Land Parcels Service.
UK-EW	Digital exchange of information for our conveyancing customers enabling them to use case work tools and exchange information online, improved the quality of information and speed of service. We have introduced the ability for customers to use digital signatures enabling digital exchange and signing of applications. We have moved our online service presence to the central government hub gov.uk. We have published 12 datasets including our cadastral parcel data, price paid data, which included the negotiation of licence agreements with our data partners. We are also a partner in the Geovation programme providing, investment, training and guidance, data and support for startup companies in prop-tech.
UK-SC	rapid move to full digital submissions for applications due to Covid in 2020

Q 2.2 Describe the impact of these on the economy and society.

Q 2.2	Impact of innovations on the economy and society
AT	Creation of security and trust in administration of real estate; queries are highly automated and are used for legal transactions via programming interfaces directly in read the sales contract (no write-off or transfer errors). Requests to change the property can be submitted online.
BA	Direct users who will benefit from linked systems are property owners (citizens and the private sector) who will benefit from these improvements as data redundancy and errors in data exchange processes will be mitigated. This results in more reliable and efficient



Q 2.2 Impact of innovations on the economy and society	
	procedures provided by the Land administration institutions.
BE	<ul style="list-style-type: none"> • Increase of data accessibility for citizens and partners → possibility for innovators or start ups to develop new businesses • Open data + better understanding of cadastral data by our users • Increasing the efficiency of our partners through webservices and data exchange • Cadastral services free of charge for partners and citizens • Increase legal security for our clients
BG	<ul style="list-style-type: none"> • good planning and management of land resources; • higher investments in land; • standard of living; • reduced administrative burden for citizens and business; • tenure security, exclusive use and safe access to benefits from the land.
CH	Easier access to data and more comprehensive information for the users, better transparency of legal effects on land, more efficient service for land owners.
CY	There is a significantly positive impact on the sustainable economy of Cyprus, the citizen and the society in general.
CZ	<ul style="list-style-type: none"> • significant improvement of the services for citizens, public administration, finance and real estate branch • helpfulness for clients – satisfaction of majority of our customers • certainty in real estate transactions
DE	Higher degree of digitization and interoperability, enhanced efficiency.
DK	The programme has ensured a more efficient property information and administration across the financial sector, the municipalities, state authorities, chartered surveyors, the Land Registry and the Geodata Agency.
EE	Less handwork, less paper consumption, cadastral data are open data and are available for free, quick and cheap performance of land management activities.
ES	<p>Cadastral data are the basis of the real estate tax that is the main source of financing of the municipalities and the improvement of cadastral database has had a huge impact on municipal income.</p> <p>Coordination with the cadastre has made real estate transactions safe and improved procedures, making it easier for citizens to manage.</p> <p>Improving the digital services of cadastral e-office and the tools we have put at the service of citizens facilitate access to data and the processing of procedures. All this has been recognized by society.</p>
FI	More transparent register, clearer object for lenders/mortgaging, better service, customer orientation
FR	<ol style="list-style-type: none"> 1. Teleacte : increasing digitalization on exchanges with real state professional 2. RPCU : greater correlation with the other available geographic data 3. Procedure security for the calculation of the tax
GR	Digital services enabled the operation of registration services and the real estate market during the pandemic.
HR	LA data are digital, transparent and available online, which accelerate processes related to real estate business both in citizens and in institutions.
HU	Client-oriented electronic land registry/cadastrre services, widespread introduction of new e-solutions and communication channels that expand the possibilities of electronic



Q 2.2	Impact of innovations on the economy and society
	administration and communication for the customers of the public administration. It is supported by the reorganisation of the internal processes. The impact is quicker and more efficient procedures for the customers (private, banks, utilities, investments etc.) in land related issues.
IS	More access to accurate property boundaries and control of the consolidation of large quantities of land to few individuals.
IT	The availability and accessibility of cadastral and land registry data creates conditions for the efficiency improvement of several other activities and processes, public and private, for which the above mentioned data are necessary.
LT	The implementation of above-mentioned innovations and solutions, the transfer of activities, processes and services to the electronic environment and partial automation of processes enable citizens, businesses and the state to save money, to perform work faster and simpler. Implemented innovations contribute to the creation of value-added services and products, to sustainable development and maintenance of the national ecosystem of registers and IS, provision of advanced services for the government, business, society and implementation of Digital Agenda for Lithuania.
LU	Digitalization of processes results in better services and access for users, free of charge, therefore increased use of authoritative data
LV	<ul style="list-style-type: none"> • The administrative burden has been reduced ensuring the <i>one-stop agency</i> principle. • The discrepancies between the data of Cadastre and the Land Register have been reduced highly and their occurrence for the future has been prevented as much as possible.
ME	Thanks to implementation of huge part of data important for the public and private sector there were lessening of business barriers, speeding up the procedures of right on real estate registration, data transparency and greater satisfaction of data and service users.
MK	<ul style="list-style-type: none"> • Mandatory electronic submission of applications/requests by professional users enables easy, fast, safe and efficient delivery of the applications and requests in electronic form. The citizen completes the overall work with the professional user. AREC has established a direct cooperation with all relevant state institutions and professional users (notaries, municipalities, private surveyors, enforcement agents, appraisers, ministries etc.) through the service e-Front Desk. The connection with the professional users allows faster and more efficient delivery of applications for registration of changes in the real estate cadastre and the applications for issuance of data. • The registration of infrastructure facilities in the Cadastre of infrastructure enables placing them in legal circulation (purchase and sale, lease, mortgaging). • Graphic Register for construction land enables standardization and unification of all types of urban plans, urban planning documentation and urban-design documentation for the entire territory of the country, located in the central database of the Register. • The registry for property owned by the Republic of North Macedonia and the state bodies provides fast and clear image of the real estate being used by the state bodies of Republic of North Macedonia • The main goal of any land administration and economy is primarily to establish fair taxing, transparency on the real estate market, and also to develop the mortgage and insurance market. The foundation for establishing the mass valuation system is the Register of prices and leases which is continuously being filled with data on the



Q 2.2	Impact of innovations on the economy and society
	<p>real estate based on the conducted transactions. Through this Register every real estate receives its own market value, which can later be used for different purposes.</p> <ul style="list-style-type: none"> • With the establishment of the REC and introduction of the e-kat system and e-Front Desk, important processes in the society were supported, such as the legalization of illegally constructed buildings, the privatization of the construction land, the sale of the agricultural land, etc.
NL	<p>End users experience shorter and fully automated throughput of transactions and easier access to our information. Quality has improved. At the same time, users' expectations develop at a similar pace, but we have been able to even slightly raise the level of customer satisfaction over the past 10 years at the same or lower price level.</p>
NO	<p>Easy access to data and confidence in data quality supports many use cases supporting enhanced public services and lower maintenance cost. More efficient data registration and query. Shorter update time. Better quality. Data more available for the users and the community.</p>
PL	<p>The KIEG and ULDK services have a simple interface and are widely available for official as well as commercial use. The majority of service calls are the result of their use on www.geoportal.gov.pl, but other state and commercial systems are also increasingly using these services intensively.</p>
PT	<p>Streamlining processes and reducing costs. Facilitating citizen and enterprises access to information. Increase the percentage of territory with cadastral coverage, leading to better knowledge and a more efficient management of the territory.</p>
RO	<p>Most economic processes involving real rights interact with data and information managed by the cadastre system. Easy and fast access to this data, accuracy and completeness of data, the possibility of obtaining data derived from the intersection of various spatial information, effectively leads to reducing the total time of processes, increase trust and create a solid basis for public decisions and policies.</p>
RU	<p>Unification of procedures and databases improved the provision of state services and made them more available for individuals and business (e.g. owing to exterritorial operation and decrease of procedure's time). Moreover, it boosted digitalization of the system of property rights and cadastral registration.</p>
SE	<p>Easier access (24/7), increased and more widely used in the society, ...</p>
SI	<ul style="list-style-type: none"> • regulation of owners' rights • spatial planning and construction of facilities • environmental protection and nature • real estate transactions • census performed by registers
SK	<p>money and time saving for clients, electronic services without personal visit of the office for professionals (incl. surveyors) and public, new services, new opportunities for business</p>
UA	<p>Full digitization of all processes and data in Ukraine will lead to the absence of duplication of financial and human resources for similar work will reduce budget costs on national, regional and local levels, ensuring effective public administration and public control.</p>
UK-EW	<p>The move to digital information exchange has been a significant enabler, simplifying the application process, moving services to an online focus rather than asking customers to attend offices in a location related to where they live, to support their applications. This</p>



Q 2.2	Impact of innovations on the economy and society
	process has been built on with the acceptance of digital signatures enabling services to happen almost entirely online. HMLR data is being used as a trusted source in the property market in consumer facing services and to support the conveyancing industry. HMLR data is being used by a number of startup firms in the prop-tech sector.
UK-SC	allowed the housing market to continue to work in lockdown

Q 2.3 What future innovations or developments do you foresee in the next couple of years?

Q 2.3	Future innovations or developments
AT	renewing the Cadastre database, implement automatic data check and transfer of graphic data; increase services for licensed surveyors and renew the web portal;
BA	Introduction of E-signature to the full extent and use in business processes and service provisioning.
BE	<ul style="list-style-type: none"> • Further automation of the pre-cadastration process and other cadastral processes and further automation of modifications in the cadastral map and parcels • Further digitization of all tools used by our partners and citizens • Artificial intelligence in Land Registry and cadastral system, e.g. real estate valuation, customer services
BG	Addition of other spatial data to the cadastre.
CH	3D data, further integration of more RRRs (rights, restrictions, responsibilities), adapt and streamline data model of cadastral surveying data
CY	Further application developments and further enrichment of data and e-services. The GIS component of the LIS is currently under complete upgrading with modern technology. The Legal/Fiscal component upgrade will start within 2021.
CZ	<ul style="list-style-type: none"> • development of existing information services • helpful and clear communication with clients • support within creation of the application for the registration into the real estate cadastre • improvement of the quality of technical data • including as much as possible public restrictions into the state registry RÚIAN • creation of the digital technical map of regions with support of regions
DE	The DaBaG (Datenbankgrundbuch), Land register as a database, is about to start within the next years and means significant increase of the grade of digitization of the Land Register. This is associated in particular with better interoperability of the land register with third party data.
DK	A continued consolidation of registers containing data of real estate. Including ensuring a unique identification of buildings where the owner of the building differs from the landowner for the benefit of, among others, the mortgagee.
EE	Visualization of all kind of restricted real rights (servitudes, encumbrances) having spatial extent, development of the Land Cadastre to the environment of land procedures (not static register anymore).
ES	The establishment of a transparent, up-to-date and documented system of reference



Q 2.3	Future innovations or developments
	<p>values for Real Estate, which is the basis, not only of the municipal tax, but of other taxes on immovable property. New digital services that facilitate the processing and access to data. The use of cadastral data and its services as a tool to fulfil the government's commitment to rural development (much needed in large areas of Spain).</p>
FI	<p>crowd sourcing to achieve better accuracy of the cadastral index map, use of drones and 360 cameras in cadastral surveys</p>
FR	<p>Project Foncier Innovant (FI) : Use of artificial intelligence by using orthophotographic data and cadastral maps in order to :</p> <ul style="list-style-type: none"> • discover the properties not taxed, and perform the procedure for the calculation • update automatically the cadastral map <p>Project GMBI : which enables by the use of the website "impots.gouv"</p> <ul style="list-style-type: none"> • to have a general overview of all the buildings held by each owner • to declare on line the changes for all the built-on properties
GR	<ul style="list-style-type: none"> • Digital research of the cadastral records • Digitization of the land registry archives
HR	<p>Simplifying the process of collecting data on real estate in the field and recording in state registers and ensuring the availability of data on real estate to users free of charge.</p>
HU	<p>Improving the quality of data.</p>
IS	<p>New land management system, consisting of planned changes to law concerning cadastre and land administration, changes to laws and regulation describing the surveying of land, planes to make all land boundaries and ownership of said land easily available.</p>
IT	<p>One of the most important development is aimed to fulfil a full integration of cadastral databases, in order to release new services, for public and private sectors.</p>
LT	<ul style="list-style-type: none"> • To implement open data strategy; • To improve the consolidation of state registers and IS; • To improve data integration with the territorial planning and construction processes; • To digitise real property archives; • To launch the creation of 3D cadastre in the entire territory of Lithuania; • To create a tool for registration and publication of spatial and textual data on the areas where special land use conditions apply; • To automate some of the business processes using RPA technology; • To implement some solutions contributing to the implementation of Green Deal plan.
LU	<p>Parcellisation of public domain, 3D Building database (BIM) for cooperative property.</p>
LV	<ul style="list-style-type: none"> • The State Land Service of Latvia is cooperating with other institutions in order to ensure greater compatibility of information systems. • The reconstruction of the current Cadastre information system is one more challenge to be accomplished. • Another work which must be done in the next couple of years is the use of remote sensing (LiDAR) data in data registration and verification processes.
ME	<ul style="list-style-type: none"> • improvement of the existing data quality, • development and implementation of e-services • implementation of registers under responsibility of our institution
MK	<ul style="list-style-type: none"> • Improving the quality of the real estate cadastre database.



Q 2.3	Future innovations or developments
	<ul style="list-style-type: none"> • Laser scanning of the territory of Republic of North Macedonia (Lidar Project) is ongoing project. The goal is to prepare accurate digital model of the field (DTM and DSM) of the entire state territory, which will be widely used in the realization of projects from multiple areas such as: crisis management, physical planning, environmental protection, geodesy, infrastructure, agriculture, forestry, defence and other. • Establishment of Scan centre. In plan is scanning overall archive analogue material and data from the performed survey of the territory of the country dating back from 1979 until 2015 - the period of mandatory data submission by professional users. With the digitalization of archive material and documentation of permanent value through the existing software infrastructure will ensure speeding up of the digitalized processes for solving cases, inspection and trust of the citizens and for the purpose of improving the quality of services to all end users. • Establishment of centralised Address registry database.
NL	Further integration/connection within the value chain of the land market by teaming up with notaries, real-estate agents, financial institutions and last but not least the buyers and sellers. First step will be to define a shared set of guidelines on the handling of data with the land market ecosystem. Furthermore, we are embarking on a major upgrade of our cadastral map, where we integrate measurement information with the parcel information of our index map. Furthermore, we foresee a shift towards 3D-registration where it is appropriate.
NO	Better integrated services to other both private and official agencies utilising cadastre- and land registry data for enhanced public value. More self-service applications. New methods for data acquisition such as drones and crowdsourcing.
PL	--
PT	Cadastral coverage of the entire territory, leading to a complete interoperability between cadastre and land registration, multifunctional cadastre as a basis for planning, decision-making, valuation and tax payment in all country.
RO	<ul style="list-style-type: none"> • implementation of electronic identity; • carrying out of certain processes directly by the holders of real rights, without intermediation; • extending the integration with the other state authorities and the private environment; • the transition from document processing to data processing.
RU	<ol style="list-style-type: none"> 1. Digital transformation, which aims to increase the share of public services available in electronic form, to improve the quality of services and to increase the efficiency of the Rosreestr's functions. 2. Advancement of geo-information systems and creation of new and more complete geo-services.
SE	Open data, AI/ machine learning, crowdsourcing, gamification (more motivating working environment), improved information quality, extended cadastre content (environment, water)
SI	<ul style="list-style-type: none"> • simplification of data maintenance procedures • introduction of e-business • one real estate database (parcels, buildings all in one database). • establishment of a spatial data portal
SK	land consolidation, extension of electronic services, digitalization

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Q 2.3	Future innovations or developments
UA	Creation of the National Geospatial Data Infrastructure, launching Agricultural Land Market, transition from the Normative Monetary Valuation to the Mass Land Valuation, implementation of land e-auctions, digitalization of Land Management Documentation Fund, creation of digital topographic base map (1:10 000 & 1:50 000) and orthophoto, covered the whole territory of Ukraine.
UK-EW	HMLR are undergoing a transformation to become a digital, data driven land registry. We are currently re writing our casework tools to simplify processes, make better use of data and automate (where processes can be automated). We are evolving our registers, redesigning our land register to make it easier to build relationships between people, places and legal interests. We are also populating our local land charges register to provide a single location for information related to property transactions.
UK-SC	The digital submission process ensures we have digital context on what each application is for. We intend to keep the momentum and look for more structured information being supplied by customers, reducing errors and maximising automation.

Part III – Roles of Public and Private Sectors

Q 3.1 For cadastral activities, what is the contribution of the public sector on the national and regional (province, district) level?

Q 3.2 For cadastral activities, what is the contribution of the public sector on the municipal level?

Q 3.3 For cadastral activities, what is the contribution of the private sector?

Q 3.1/2/3	Public sector on national and regional levels				Public sector on municipal level				Private sector			
	strategic responsibility	operational control	maintenance, updating	relationship with clients	strategic responsibility	operational control	maintenance, updating	relationship with clients	strategic responsibility	operational control	maintenance, updating	relationship with clients
AT												
BA												
BE												
BG												
CH												
CY												
CZ												
DE												
DK												

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Q 3.1/2/3	Public sector on national and regional levels				Public sector on municipal level				Private sector			
	strategic responsibility	operational control	maintenance, updating	relationship with clients	strategic responsibility	operational control	maintenance, updating	relationship with clients	strategic responsibility	operational control	maintenance, updating	relationship with clients
EE												
ES												
FI												
FR												
GR												
HR												
HU												
IS												
IT												
LT												
LU												
LV												
ME												
MK												
NL												
NO												
PL												
PT												
RO												
RU												
SE												
SI												
SK												
UA												
UK-EW												
UK-SC												

(no contribution / partial, advisory contribution / decisive contribution)



Part IV – Relationship between Cadastre and Decarbonisation

This part of the questionnaire attempts to evaluate if the LAS in Europe contribute to the demanding transition to a Green Europe, in particular, if cadastral activities support decarbonisation issues.

Q 4.1 Is cadastre and property information used in projects/initiatives related to decarbonisation?

Q 4.1	Use of cadastre and property information in projects/initiatives related to decarbonisation			
	Yes	No	Don't know	
AT	X			data about ownership, use of property, ..
BA		X		
BE			X	environmental topics are a regional responsibility; cadastral data in open data format can be used by our regional partners
BG	X			In projects from EU funds for green energy like: energy efficiency projects, green economy projects, the coal-fired power plant projects etc.
CH	X			Solar energy
CY	X			Updated cadastral data are regularly provided to environmental department and agencies for further use. They are also accessible through the National Open Data Platform.
CZ	X			Land consolidation projects, urban planning, registration of public restrictions into the RÚIAN registry
DE	X			Actual Use, part of the cadastre as a mix of LC/LU together with additional information, is used to monitor Germany's 30ha-target, in particular LULUCF-figures (cf. https://euromapgraphics.org/wp-content/uploads/2018/05/EGAR2015-final-web.pdf , page 16). Until the end of 2030 land consumption per day must not be higher than 30 ha. The less land consumption, the less CO2 will be set free and the more CO2-sinks will remain intact.
DK			X	cadastral data is generally used as an administrative basis in eg. urban, infrastructure and environmental planning.
EE	X			Planning activities, land use analyses, conservation of valuable agricultural land etc. Some kind of Building Register data can be used indirectly.
ES	X			Yes it is fundamental. For example in projects as solar panels and wind power installation, and in many others.
FI	X			minimisation of transportation and travel in land consolidation projects, Paikkatietoikkuna (https://kartta.paikkatietoikkuna.fi/?lang=en)
FR	X			All the projects have the purpose to obtain a greater computerisation. Indeed, the computerisation of the system has also led to major productivity gains for the administration and offers new



Q 4.1	Use of cadastre and property information in projects/initiatives related to decarbonisation			
	Yes	No	Don't know	
				services to administration officers, land and real estate professionals, and to the general public
GR			X	
HR		X		
HU			X	
IS		X		
IT			X	
LT	X			Real Property Cadastre data is used to make decisions on the renovation of state-owned heated and/or cooled public buildings seeking to increase energy efficiency.
LU	X			Solar Energy, Urban Farming, Material Cadastre
LV	X			The data of the State Land Service of Latvia are used by other institutions e.g. the Ministry of Environmental Protection and Regional Development of Republic of Latvia, which lately requested the data on the wood-burning stoves.
ME	X			All available data related to cadastre registers, terrain model, digital topographic map as the other available data are delivered in accordance with requests of institutions responsible for this.
MK			X	Geodetic Cadastre Information System - GCIS data are issued for the needs of the ministries.
NL	X			Decarbonisation and energy transition also lead to (new) objects in the land market (be it physical object such as wind turbines, joint ownership) and in the need for information on the physical/energy-related parameters of e.g. buildings. Access to our system of energy certificates is done through our cadastral information systems. Also characteristics of properties are being used by municipalities and regional partnerships in policy making on renewable energy. Thus to achieve the goals in decarbonisation.
NO	X			Provides borders and owners when establishing new nature reserves, windmill plants and for forest administration. Building information with age, size, building material, chimneys, type of use and type of heating, can be used for calculating energy use and rehabilitation potential.
PL			X	
PT	X			For example, landscape transformation, reforestation and transport infrastructure.
RO		X		
RU	X			Rosreestr provides information for the National Inventory of the Anthropogenic Emissions and Sinks of Greenhouse Gases Not Controlled by the Montreal Protocol. The Federal Service for



Q 4.1	Use of cadastre and property information in projects/initiatives related to decarbonisation			
	Yes	No	Don't know	
				Hydrometeorology and Environmental Monitoring prepares the inventory on the yearly basis.
SE	X			The information is used for all type of infrastructure developments and for different analysis. E.g. broadband infrastructure making it possible to reduce travel. The information in the Real Property Register indirectly supports environmental goals.
SI	X			e.g. the database of combustion plants uses the basic data of the cadastre of buildings.
SK	X			Plan Green Plan for renewal of Slovakia under responsibility of the Ministry of environment of the Slovak republic and Integrated national energetic and climatic plan for years 2021 – 2030 under responsibility of the Ministry of economy of the Slovak republic
UA		X		
UK-EW			X	
UK-SC		X		

Q 4.2 Do you register information related to carbon emissions of properties or indicators of energy efficiency of properties?

Q 4.2	Registration of information related to carbon emissions of properties or indicators of energy efficiency of properties			
	Yes	No	Don't know	
AT		X		
BA		X		
BE	X			The Cadastre registers certain information on the energy efficiency of property (through energy and emission scores determined by the regions)
BG		X		
CH		X		
CY		X		
CZ	X			According to the Act on Basic Registers, RÚIAN contains, among other things, data on construction objects. Among other things, TEA (Technical and Economic Attributes of a Building Object) is kept on construction objects. ČÚZK, as the administrator of RÚIAN, is interested in the quality and completeness of the data kept in this register and therefore it was decided to determine the TEA during the cadastre revision according to the Methodological and organizational instructions for TEA collection during the



Q 4.2	Registration of information related to carbon emissions of properties or indicators of energy efficiency of properties			
	Yes	No	Don't know	
				cadastre revision. Therefore, the employees of cadastral offices also collect data on the method of heating the building in the field during the cadastre revision
DE		X		
DK		X		
EE	X			We do not register this kind of information in Land Cadastre. But the Department of Geology in Land Board registers data on oil shale and peat deposits, mining sites (peat production areas, oil shale quarries, oil shale mines) and mined quantities. Regarding environmental risks more broadly, we also have data on all other mineral resources (phosphorite, bedrock, limestone, dolomite, sand, gravel, clay, sea mud, lake mud, lake lime). Carbon dioxide records are kept in Environmental Agency under the Ministry of Environment. Information about energy efficiency of buildings is kept in Building Register.
ES	X			Yes cadastral data is used in the reports of energy efficiency. It is obligatory by law.
FI		X		
FR		X		
GR		X		
HR		X		
HU		X		
IS		X		
IT		X		(with specific reference to the cadastral and land registry information, managed by Italian Revenue Agency)
LT	X			Energy performance class of a building is determined during the cadastral measurements of buildings and data is recorded in the Real Property Cadastre.
LU		X		
LV	X			The State Land Service of Latvia registers the energy efficiency of the buildings within the Cadastre.
ME		X		
MK		X		
NL	X			Solar (panel) farms are mostly registered by means of a right of superficies; in order to obtain subsidies usually 50% local ownership is required which is often established by cooperatives or owners associations. Wind turbines and solar farms are also registered/mapped in our topographic mapping.
NO	X			Building information (see above)
PL		X		



Q 4.2	Registration of information related to carbon emissions of properties or indicators of energy efficiency of properties			
	Yes	No	Don't know	
PT	X			The registration is done by the Portuguese Environment Agency and the data can be easily crossed with the cadastral information provided by the DGT.
RO		X		
RU		X		
SE	X			The real property register includes information on buildings. The building object is supplemented with, among other things, data on climate declaration – there are also other data connected to the building object of importance for environmental monitoring.
SI	X			we present data on energy performance certificates for buildings
SK		X		
UA		X		
UK-EW		X		
UK-SC		X		

Q 4.3 Is your agency considering adding information in its systems in order to support decarbonisation issues?

Q 4.3	Considerations of adding information in order to support decarbonisation issues			
	Yes	No	Don't know	
AT		X		
BA		X		
BE		X		
BG			X	
CH		X		
CY		X		
CZ	X			Yes- partly: → See Q.4.2 – it is in process
DE	X			In addition to “actual use” as a mix of LC/LU the cadastral and mapping authorities are planning to introduce LC and LU as a separate part of AAA. With this, more detailed analyses on land consumption related topics can be done.
DK		X		
EE	X			Orthophotos (forestry, false and ordinary, shoreline mapping, bark beetle damage detection, deposit monitoring, etc.) are somehow used to support this goal. Data of the Official Points of Interest Information System (location information of garbage,



Q 4.3	Considerations of adding information in order to support decarbonisation issues			
	Yes	No	Don't know	
				water consumption and energy management objects), Register of Restrictions (information related to energy management, water consumption and information on nature protection objects is also collected) have also kind of effect. Deforestation + forest growth volume map layer may be next step to develop. The use of laser scanner point cloud in photogrammetry included to determine the heat loss of buildings has been under discussion.
ES	X			We are planning to do so. Currently we register Public real estate but we are going to include protected sizes and other information in near future as part of the plan to support government's commitment to rural development and coordination with land registry.
FI		X		Finland aims at being carbon neutral in 2035. For that goal, a project (Mammutti) seeks to develop a common data foundation to monitor land use and its changes. The NLS participates in it and wants to develop the national topographic database to better meet the changing demands of the society and at the same time to improve the effect of our topographic data.
FR			X	
GR		X		
HR		X		
HU		X		
IS			X	
IT		X		(with specific reference to the cadastral and land registry information, managed by Italian Revenue Agency)
LT	X			Proposals for a new version of the draft Law on the Real Property Register are currently being prepared and the issues related to decarbonisation will be considered.
LU		X		
LV		X		
ME			X	
MK			X	
NL	X			We are already providing information on the energy certificates of buildings. Furthermore as provider of geo-information we contribute in a partnership with other government agencies combined information to support municipalities, regional governmental partnerships and energy distributors in the process of policy making and execution plans for renewable energy.
NO			X	
PL			X	
PT	X			DGT provides information on land cover, land uses, risk maps and other information, such as the information to support the energy transition.



Q 4.3	Considerations of adding information in order to support decarbonisation issues			
	Yes	No	Don't know	
RO			X	
RU			X	
SE	X			Within the Swedish geodata co-operation information can be combined, there have been thoughts about adding further environmental data in our in close proximity to the register – but no governmental decision yet.
SI	X			The new Real Estate Cadastre Act allows the entry of additional data from other records (consequently also data to support decarbonisation issues).
SK			X	
UA		X		
UK-EW		X		
UK-SC			X	

Q 4.4 Is your agency registering data related to environmental risks?

Q 4.4	Registration of data related to environmental risks			
	Yes	No	Don't know	
AT	X			areas about sliding movement of the ground
BA		X		
BE		X		this type of information is managed by the regions
BG		X		
CH	X			<ul style="list-style-type: none"> slide areas, mainly to document that there might be an issue about the legal landownership boundaries; hazardous waste is included in the PLR-Cadastre; risk of soil erosion is one dataset in the national geoportal (map.geo.admin.ch)
CY		X		soil contamination has earlier been recorded in the cadastre.
CZ	X			registration of public restrictions is planned, land consolidation is ongoing
DE	X			DTM can be considered as data related to environmental risks. In combination with Appraisal-of-soil-data (Bodenschätzung) one can calculate erosion hazard classification.
DK		X		
EE	X			The cadastre itself does not register such a data, but provides public access to the data through various web applications: floodplains, erosion, high-risk objects (railway stations, petrol stations, warehouses), deposits etc.



Q 4.4	Registration of data related to environmental risks			
	Yes	No	Don't know	
ES	X			We are planning to do so also as part of the plan to support government's commitment to rural development and coordination with land registry.
FI	X			flood risk areas, ground water protection areas etc.
FR		X		
GR		X		
HR		X		
HU	X			Environmental protection data are registered.
IS		X		
IT		X		(with specific reference to the cadastral and land registry information, managed by Italian Revenue Agency)
LT	X			The objects causing the establishment of areas with applicable special land use conditions are recorded in the Real Property Cadastre as well as relevant data about these areas are registered in the Real Property Register.
LU		X		
LV	X			The State Land Service of Latvia registers the data of the contaminated (polluted) areas within the Encumbered (Restricted) Territories' information system.
ME		X		
MK		X		
NL	X			Yes, if they are related to public restrictions.
NO	X			related to nature catastrophes, pollution; landfills and hazardous waste dumps
PL		X		
PT	X			Information (risk maps) made available through the National Territorial Information System (SNIT)
RO		X		
RU	X			Rosreestr is responsible for state monitoring of land (with the exception for agricultural lands). As part of the land monitoring, monitoring of changes in the quantitative and qualitative characteristics of land is carried out. It is based on the results of observations of the condition of soils, their pollution, littering, degradation, disturbance of soils, assessment and forecasting of changes in the state of land.
SE		X		No. However, our data is used by other authorities registering data on risks, the real property designation is a key for connecting data, there is also data that can be registered about possible polluted areas.
SI		X		but it is similar to question Q 4.3
SK	X			Real burdens, easements and notes (e.g. ban of building and

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Q 4.4	Registration of data related to environmental risks			
	Yes	No	Don't know	
				mining in surroundings of water sources, protected areas, protected birds territories, national natural parks)
UA		X		
UK-EW	X			Part of the local land charges register, which HMLR are now responsible for contains information on environmental charges, or restrictions, e.g a site of special scientific interest could be a land charge.
UK-SC		X		

Remarks and suggestions

	Remarks
DE	Congratulation for choosing this fundamentally important topic!
FI	Some of the questions (1.8 e.g.) are multi-interpretable
IT	No particular remarks or suggestions, considering that, at the moment, the general topic of the questionnaire does not belong to the mission of Italian Revenue Agency (with reference to the cadastral and land registration services). Please consider the specific notes, for some answers.