

Executive summary

State of Land Information in Madagascar

An Open Data Action Framework



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About the Open Up Guide (OUG) reports

The **State of Land Information** (**SOLI**) research and reports seek to provide an overview of available government data and information on key land issues. The aim of the research is to uncover the many different sources of land data and information at the country-level and help to identify data and information gaps. The research also provides a technical assessment against open data criteria derived from international standards. The reports establish a baseline for targeted interventions to improve the information ecosystem. The Land Portal has published SOLI reports for South Africa, Uganda, South Sudan, Tanzania, Kenya, and Senegal. We aim to develop SOLI reports for a dozen countries in Africa by 2024.

Though SOLI reports are independent research products, they also serve as the first step in the implementation of the Open Up Guide for Land Governance.

The **Open Up Guide for Land Governance** is a tool for national and local government agencies with a mandate for or an interest in making their land governance data open and available for others to re-use. The Open Up Guide is the result of a collaboration between the Land Portal Foundation and Open Data Charter.

Project Leads: Charl-Thom Bayer, Land Portal Foundation, charl-thom.bayer@landportal.info

Mercedes de los Santos, Open Data Charter, mercedes@opendatacharter.org

Researchers: Daniel Fitzpatrick, Monash University, daniel. itzpatrick@monash.edu

Fabienne Rafidiharinirina, Consultant, mailprofabienne@yahoo.com

Fabrice Ramamonjy, Consultant, rafaby21@gmail.com

Open Data Consultants: Keitha Booth, Open Data Consultant, keithabooth@gmail.com

Juan Pablo Marín Díaz, Datasketch, jpmarindiaz@datasketch.co Miguel Angel Alor Flores, Datasketch, miguel@datasketch.co

Juan José Rojas, Datasketch, juanjose@datasketch.co

Edited by: Keitha Booth, Open Data Consultant, keithabooth@gmail.com

Neil Sorensen, Land Portal Foundation, neil.sorensen@landportal.info

Design by: Federico Pinci, federicopinci.info

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Executive Summary

This report on the land data ecosystem in Madagascar is the first step towards providing a baseline and diagnostic tool to inform conversations around land and data governance. It aims to complement existing initiatives to improve the accuracy and extent of land data in Madagascar and identify opportunities to improve public access to all forms of land information. As the momentum around international land monitoring initiatives increases, there is an unprecedented global demand for free, accessible, and usable land data and information. Increased digitization of information, internet usage, and growing demand for data transparency are expanding the land information ecosystem. The African Union's *Model Access to Information Law* to give effect to Article 9 of the African Charter on Human and Peoples Rights, 1 supports increased access to information.

Land data in Madagascar is often incomplete and inaccurate. An open land data future requires strengthened support for programs to improve the accuracy and coverage of land information. In assessing the openness of land data in Madagascar this report acknowledges the baseline challenges for improving data quality and the sustained response needed to achieve an effective open data regime.

This report describes Madagascar's legal framework for data governance, examines its international and national commitments to access to information, its instruments for data and information governance, and it summarizes Madagascar's legal framework for opening information. It examines the completeness of available land data and information provided by the government organizations responsible for Madagascar's land administration. The open data assessment evaluates the "openness" of Madagascar's land data and information, by assessing it against 10 criteria for open data, as used by international best practice. The score for openness is provided as part of the assessment and reflects the current situation as well as providing a baseline for future improvements. This baseline assists with understanding the current state of data and supports future usability of data for informed decision making, data-dependent services and to meet the public needs and interests. The report highlights the key findings from this research project and sets out the next key steps to consolidate the sound foundations that have been identified. Finally, this report provides an **open data action framework** that serves as a practical guide for the Government of Madagascar to optimize the management and utilization of land data through streamlining access, promoting collaboration, and building capacity among stakeholders.

Data and Information Governance in Madagascar

At the 2016 Paris Open Government Summit, the Government of Madagascar committed to open government and improved government transparency and access to information. In 2017 it established the EITI data policy on data access, dissemination, and re-use of data in the extractive industries, developed an online Geoportal aimed at linking cadastral and other sector data, and established a multi-stakeholder group to promote the use and adoption of

¹ Ratified by Madagascar in 1992: Retrieved on 22 November 2022 from https://www.achpr.org/states

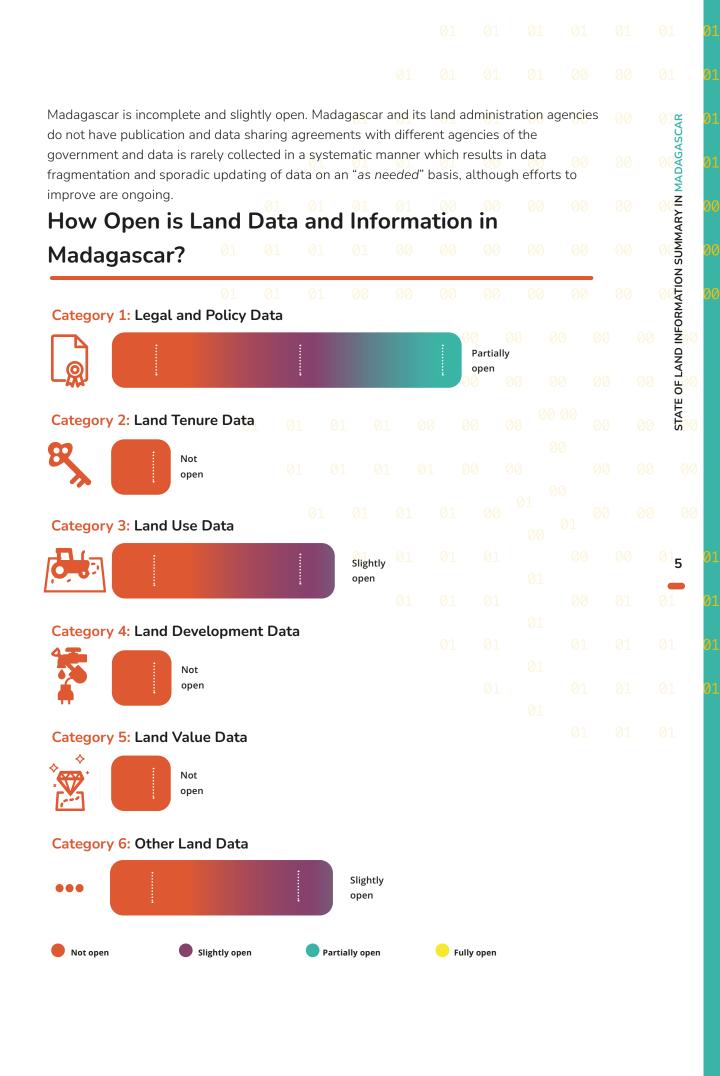
open data. Despite the growing recognition and political will of the government regarding the importance of opening access to information, Madagascar does not yet have an access to information law.

Madagascar's domestic commitments on access to information includes the 2010 Constitution of Madagascar² which establishes a right to information subject to the constraints of public order, morality and other duties and responsibilities, as specified by law (art. 11). This constitutional right has not yet been supported with enforcing legislation. As of June 2023, Madagascar has not adopted legislation to implement the Constitutional right to information. The 2013 Access to Information and Knowledge Sharing Charter³ has no legal force, but does set out key principles concerning the right to information. Although not legally enforceable, the Charter has provided the basis for a draft Access to Information Law, which was finalized in August 2020, but has not yet been submitted to Parliament.⁴ The 2014 Law on Personal Data Protection⁵ sets out relatively broad exceptions to the Constitutional right to information, including personal data, and information relating to national security, defense and public safety (arts. 7, 15, 39). The 2016 Code of Media Communications sets out defense, security and public safety restrictions on the Constitutional right to information as well as establishing the right for journalists to obtain information on facts of public interest. The National Statistic Practices Law No. 2018-0048 provides the clearest expression of open data principles in Malagasy law and requires statistics authorities in Madagascar to develop, produce, and disseminate public statistics. The National Statistic Practices Law has no implementing regulation or decree but a National Statistic System (NSS) for access by citizens, organizations, researchers, companies, media, or any other types of users is being planned. Although the National Statistic Practices Law establishes open data principles in Madagascar, its definition of public statistics does not specifically include data on land governance.

Availability of Land Data and Information in Madagascar

There are a range of land data custodians in Madagascar, the most important of which is the Ministry of Territorial Planning and Land Services (MATSF), but international donor funded projects and civil society also play a major role in collecting and managing land information. Public institutions are the primary land administration service providers to citizens supporting the issuing of land use authorizations, land ownership titles, land valuation and taxation rates, mining permits and construction and development permits. Generally online digital data for

- 2 Retrieved on 14 September 2022 from https://www.constituteproject.org/constitution/Madagascar_2010.pdf?lang=en
- 3 Retrieved on 14 September 2022
- from http://www.csi.gov.mg/wp-content/uploads/2014/05/Charte_acces-l-information_Version-finale.pdf
- 4 Mr. Fetra RAKOTONDRASOAVA General Director of Communication at the Ministry of Culture and Communication Madagascar.
 Medialab Pour Elles close-out event. Louvre Hotel Antananarivo 8 April 2022 by CFI Medias Development.
- Retrieved on 22 November 2022 from https://www.afapdp.org/wp-content/uploads/2015/01/Madagascar-L-2014-038-du-09-01-15-sur-la-protection-des-donn%c3%a9es-%c3%a0-caract%c3%a8re-personnel.pdf
- Retrieved on 22 November 2022 from https://ictpolicyafrica.org/en/document/zyx01ea6bc?page=1
- 7 See Decision No. 30-HCC/D3 of August 12, 2016, Concerning Law No. 2016-029 on the Code of Media Communication. Retrieved on 22 November 2022 from https://ictpolicyafrica.org/en/document/zyx01ea6bc?page=1.
- 8 Retrieved on 22 November 2022
 - from https://www.assemblee-nationale.mg/wp-content/uploads/2019/11/Loi-n%C2%B02018-004_fr.pdf



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on-line in French. The primary official repository of Malagasy laws and regulations is the National Center of Legal and Legislative Information and Documentation (CNLEGIS).9

Laws available on CNLEGIS website are only in PDF format. This database provides access to legislation according to several search parameters including search by type, date, keyword, title, and number. The section 'Domaine' provides comprehensive access to laws and regulations relating to land, divided into categories which include public domain, private domain, and expropriation. Expropriation contains several decrees relating to the specific act of public acquisition for development purposes.10

Legal, institutional and policy data including the constitution of Madagascar is available on-line in French and English. Madagascar's key legislation relating to land is available

Land tenure data in Madagascar is divided into land titles (for titled land) and land certificates (for untitled land)¹¹ with the former being issued by the MATSF and the latter issued by decentralized territorial collectives. Only a small proportion of rights-holders have formalized their rights to property with land services and land offices while most land rights are held informally through *petits papiers* that are not regulated or recognized by law. They are extensive in rural and poorer urban areas and usually list the names of the owner(s), the basis for their rights to the land, surface area of the land, the use of the land, and the names of neighbors. Registration of land is done in three separate systems: a system to issue land titles (the document specifying ownership), a cadastral operation to issue cadasters (the map displaying the boundaries of the land), and a third system for land certification, which issues a "land certificate" document (linking the individual to the parcel). This has resulted in three separate databases under the jurisdiction of separate government entities and data being separated between local land offices and the topographic service.¹²

To address these historical challenges, Madagascar responded by implementing a decentralized land administration and certification system over untitled land through the development of a local plan of occupation (plan local d'occupation foncière – PLOF). The PLOF lists data on state public and private domain land, titled private land, and special category land as well as existing occupation of the land. Members of the public may request a certificate and inspect a local plan of occupation at the local land office without payment of the fee. However, no comprehensive database of PLOFs is accessible to the public. While the National Territory Observatory links to local plans of occupation on its geospatial portal, only two plans were available for on-line viewing as at the date of this report. Madagascar has no National Spatial Data Infrastructure (NSDI) laws or policies to integrate GIS data into other land data systems. This absence, combined with technical GIS data challenges, creates little or no sharing of GIS data among government agencies, and across levels of government. It is still the case that GIS data users must pay to develop project-specific data through sectoral budgeting rather than standardized payment of a fee to FTM.¹³

⁹ Retrieved on 22 November 2022 from http://www.cnlegis.gov.mg/%20page_find_direct_mots/.

¹⁰ See Ordonnance n°60-146 du 3 octobre 1960. Retrieved on 22 November 2022 from

https://landwise-production.s3.amazonaws.com/2022/03/Madagascar_Land-Tenure-Ordinance_1960_French.pdf

Untitled land is defined as land that is occupied but is not yet titled or surveyed; and is not private or public domain land, or special category land (arts. 1&2, 2006 Law).

¹² Retrieved on 22 November, 2022 from https://documents1.worldbank.org/curated/en/252091504865351736/pdf/119620-WP-P095390-FRENCH-PUBLIC-7-9-2017-10-13-55-MadagascarFinalReport.pdf

¹³ Eric Thalgott, France: Modernization and decentralization of Land Tenure Services in Madagascar EILAT 2009–ISRAEL FIG Working Week 3,8 May 2009

The fragmented nature of **land use data** suffers from disparities between the actual land use and the specified uses depicted in formal land use data sets. In urban areas, in particular, physical patterns of human settlement are changing rapidly which are not reflected in formal datasets for land tenure planning. PLOFs have emerged as a key 'bottom-up' mechanism to generate data on land use, while also delimiting land tenure and the borders of private, state, and special status land. The key data providers on land use in Madagascar include the **Observatoire du Territoire Geo-Portal (Siloat)**¹⁴, the MATSF, the Ministry of Agriculture with the Center for Geoinformatics Application in Rural Development (CGARD), the Ministry of Public Infrastructures (MPI) and the Ministry of Mining and Strategic Resources with the Bureau des Cadastres Miniers de Madagascar (BCMM)

The main source of land use planning data is the Observatoire du Territoire Geo-portal known as Alphanumeric Siloat¹⁵ which is available on-line and is a work-in-progress. It includes the land use planning instruments established by the law such as: Regional Spatial Planning Plans (SRAT)¹⁶; Municipal/Communal Spatial Planning Schemes (SAC); Inter-Municipal/Communal Spatial Planning Scheme (SAIC)¹⁷; Master Urban Plans (PUDi)¹⁸ and Detailed Urban Plans (PSU)¹⁹ – 11 are listed but there are no hyperlinks to PSU yet in the Geoportal. Other sources of land use data include the Ministry of Environment and Sustainable Development (MESD) which has established the Protected Areas System for Madagascar (PASM) data sharing platform²⁰ which provides a repository of decrees that identify and delimit a protected area. Mining data is available from the Bureau of Madagascar Mining Cadasters (BCMM)²¹ and covers the entire national territory that can be viewed with a visual interface²² to explore spatial and ownership information. This is available for viewing in tabular format but not downloadable and contains more than 500 individual records.

Land development data and information is managed through an on-line system for building permits known as MATAC (Ministry of Territorial Development: Authorization to Construct). MATAC enables the following online tracking of the description of the project, the construction plans, proof of ownership and information concerning the applicant. The automated processing systems of MATAC link application information with relevant land use planning and construction standards and has the potential to act as an open data platform for building permits that is interoperable with land use planning systems. However, most construction takes place without planning permits and estimates suggest that over 80% of new constructions in Madagascar do not have building permits. There is no publicly available data on land development, public purpose acquisition of land or on land conflicts in Madagascar.

¹⁴ Retrieved on 22 November 2022 from https://observatoire-territoire.mg/carte/#/carte/map-siloat

¹⁵ Retrieved on 22 November 2022 from https://observatoire-territoire.mg/siloat/acceuil.php.

¹⁶ Retrieved on 22 November 2022 from https://observatoire-territoire.mg/siloat/outilsplanification/SRAT.

¹⁷ Retrieved on 22 November 2022 from https://observatoire-territoire.mg/siloat/outilsregional/SAIC.

¹⁸ Retrieved on 22 November 2022 from https://observatoire-territoire.mg/les-contenus-des-pudis/

¹⁹ Retrieved on 22 November 2022 from https://observatoire-territoire.mg/pude/#.

²⁰ Retrieved on 22 November 2022 from https://www.parcs-madagascar.com/apropos.php.

²¹ Retrieved on 22 November 2022 from https://bcmm.mg/

²² This facility was not active at the time of this research. Retrieved on 22 November 2022 from http://bcmm.mg/cartographie/cartographie.php

Retrieved on 22 November 2022 from https://www.matac-madagascar.mg/

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Land value data is not available either in open format or as official research reports and analysis. However, the Ministry of Finance has made available an on-line simulation platform (IMMO)²⁴ for citizens to obtain an estimate of land value. The 2021 General Tax Code²⁵ establishes three types of taxation for land valuation purposes in Madagascar but does not set out rights and obligations to provide open data relating to land valuations and relies on self-assessment of land values by persons subject to land, building, or transfer taxes. The tax system has an online portal and requires the filing of tax information to be carried out digitally. The HETRAOnline²⁶ tax registration system creates an opportunity to streamline and publish land tax data in more interoperable formats. It also makes available in PDF format regulatory and legislative text regarding financial matters, including that related to land taxes and valuation such as registration and transfer fees.

MASTF has **other land data** including a GIS on coastal areas that includes beach delimitation, identification of mangroves, and locations of seaside resorts but is not available online. The Ministry of Public infrastructure (MPI) maintains national data and roads, including location, size, use, and bridges which is only available to the public on request. Openstreetmap Madagascar²⁷ also makes Road data available under an open license on their on-line platform. The information is a product of voluntary work by volunteers throughout the country. The Center for Geoinformatics Application in Rural Development (CGARD) maintains data available to the public on request on satellite imagery on potential agricultural zones. The Société d' Equipement Immobilier de Madagascar (SEIMAD)²⁸ is a mixed private/public entity that maintains a database for five urban areas dating back to 1950. The dataset includes the location of housing along with the names of owners. Members of the public may access the data on request, but the information made available excludes the names of owners (unless there is a Court order for disclosure). The Madagascar Initiatives for Digital Innovation (MAIDI)²⁹ provides an open dataset on airports³⁰ using information provided by the Madagascar Civil Aviation Authority on the OpenStat Madagascar³¹ portal. OpenStat also makes data on a further 83 databases available on three themes related to population, economy, and finance.

²⁴⁾ Retrieved on 22 November 2022 from https://immo.impots.mg/

²⁵ Retrieved on 22 November 2022 from http://www.impots.mg/en/153-n-general-tax-code-2021

²⁶ Retrieved on 22 November 2022 from https://hetraonline.impots.mg/

²⁷ Retrieved on 22 November 2022 from https://www.openstreetmap.org/relation/447325

²⁸ Retrieved on 22 November 2022 from https://seimad-immo.com/fr/accueil/

²⁹ Retrieved on 22 November 2022 from https://www.association-maidi.mg/

⁰ Retrieved on 22 November 2022 from https://www.openstat-madagascar.com/uploads/bdds/6194f319a6cae_liste_des_aerodromes_1er_ semestre_2017.pdf

³¹ Retrieved on 22 November 2022 from https://www.openstat-madagascar.com/

Across all land data categories, the most data are held by the **Observatoire du**Territoire³² and the **PLOF**. Much of the data and information that was uncovered for Madagascar exist digitally but is not openly available online.

Legal, institutional and policy data and information is found to be partially open. The sources of these data are incomplete and varied and the openness may be improved with the improved use of metadata, common standards, and licensing information.

STATE OF LAND INFORMATION SUMMARY IN MADAGASCAR

- Land tenure data and information is not open. All the land tenure data that was discovered is hosted on closed systems by the MASTF.
- Land use data is only slightly open although some of the information is available online on the online portal of MASTF. There exist significant opportunities to make this data more open and accessible.
- Land valuation data and land development data is not considered open.
 There are online systems for managing land developments as well as land taxes and valuations, but these systems are not interoperable and data from these systems is not published or made available. Opening data from these systems has significant potential to improve the data ecosystem.
- Other land data is considered slightly open. Improvement to the openness of existing GIS data on coastal areas and national roads data provide key opportunities for improvement. Private/public partnerships with civil society can further increase collaboration and increase the available open data.

Madagascar has established the foundations for making its land data and information open and available for the government and others to reuse. The establishment of the 01 Observatoire du Territoire and the PLOF are significant milestones.

Despite being at an early stage in opening its land data, there are opportunities to consolidate the data initiatives. Improving constitutional right to information by adopting an Access to Information Law in Madagascar based on the AU model access to information law is an ideal starting point.

 Table 1: Overall Results of the Open Data Assessment for Madagascar's Land Data





















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	Online	Accessible	Free	Timely	Metadata	Standard	s Downloadable	Open licence	Machine readable	Linked Data (URIs)	TOTAL	0
Legal	Partially Online	Fully Accessible	Fully Free	Very Timely	No Metadata	No Standard	Partially Downloadable	No Open License	Not Machine Readable	No URI	Partially Open	0
Land Tenure	Not Online	Not Accessible	Not Free	Not Timely	No Metadata	No Standard	Not Downloadable	No Open License	Not Machine Readable	No URI 00	Not Open	
Land Use	Partially Online	Fully Accessible	Slightly Free	Slightly Timely	No Metadata	No Standard	Slightly Downloadable	No Open License	Not Machine Readable	No URI	Slightly Open	
Land Devpt	Slightly Online	Not Accessible	Fully Free	Not Timely	No Metadata	No Standard	Slightly Downloadable	No Open License	01 Not Machine Readable	01 01 No URI 01 01	Not Open	
Land Value	Not Online	Not Accessible	Slightly Free	Not Timely	No Metadata	No Standard	Not Downloadable	No Open License	Not Machine Readable	No URÍ	Not Open	
Other Land Data	Partially Online	Not Accessible	Partially 01 Free	Not Timely	Partial Use of Metadata	No Standards	Slightly Downloadable	Slight Use of Open License	Not Machine Readable	No URI	Slightly Open	
OVERALL	Slightly Online	Slightly Accessible	Slightly Free	Not Timely	Slight Use of Metadata	No Use o Standard	• •	No Use of Open Licenses	Not Machine Readable	No Uniform Resource Identifiers	Slightly Open	

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Implementing an Open Data Action Framework for Madagascar

The MASTF should **optimize** the management and **utilization** of land data in Madagascar by increasing and improving the openness the data in the **Observatoire du Territoire**³³ (the Open Data Platform of MASTF) and the **Plan Local D'Occupation Foncière (PLOF)**.

Unifying the land data resources allows the MASTF to create two data portals; one for secure internal use by government officials to access, share, and manage land data and a public data portal that gives open access to land management legislation and data for the public. This approach streamlines internal land information management and promotes transparency and public accessibility.

The next step is to prioritize opportunities for scaling up data openness by identifying and engaging with other government entities to become open data champions and drive adoption of land data strategies across government. Through working with stakeholders to prioritize high-value datasets, identify data that needs improved quality, open formats, anonymization, and aggregation to protect privacy, and develop data user tools, MASTF can become a data leader in Madagascar.

This will require that capacity building and community building initiatives are prioritized to ensure that data is utilized effectively. It must include a data appropriation strategy and encourage using land data for various applications. Adopting open-source tools for land data processing would allow stakeholders to use cost-effective and versatile tools to analyze and work with land data.

Implementing this land data strategy in accordance with the Open up Guide for Land Governance can contribute significantly to improving the land data ecosystem in Madagascar. Improving the land data ecosystem is critical for a more just and equitable society and the pursuit of more effective land governance and service delivery.



About the Land Portal

The Land Portal Foundation was established to create, curate, and disseminate land governance information by fostering an inclusive, open, and accessible data ecosystem. Over the last decade, the Land Portal has evolved from a simple information gateway to become a knowledge broker, a resource base, a vibrant online community of users and a trusted voice within global land governance.

About the Open Data Charter

The Open Data Charter (ODC) is a collaboration between over 150 governments and organizations working to open data based on a shared set of principles. ODC promotes policies and practices that enable governments and CSOs to collect, share, and use well-governed data, to respond effectively and accountability to the following focus areas: anti-corruption, climate action and pay equity.

About Datasketch

Datasketch is a social technology company that promotes the responsible use of information and data technologies to promote social development. We design and implement data-based interventions and projects to improve evidence-based decision-making processes. Our work creates bridges between data and citizens, incorporating best practices from information science through visualizations, open-source software, and public data to address important issues that improve citizens' 101 quality of life.

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Land Portal Foundation Postbus 716, 9700 AS Groningen, the Netherlands

www.landportal.org hello@landportal.info