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# SMART SURVEYORS FOR LAND AND WATER MANAGEMENT CHALLENGES IN A NEW REALITY



**e**WORKING WEEK 2021  
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Paper ID 10960

The Cadastre of Public-law Restrictions on landownership in Switzerland

Session 7.2, 22 June, 22:00 – 23:30 CEST

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kadaster



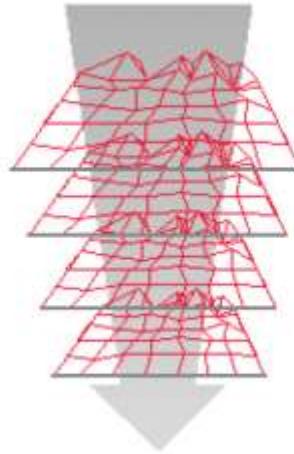
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## Introduction

- Landowners are subject to private and public law restrictions.
  - ~150 public-law restrictions (PLR) in Switzerland
  - Spread between various departments.  
-> loss of time, risk of forgetting and lack of legal safety.
- Issues discussed in the publication of “Cadastre 2014” in 1998 by the FIG.
  - PLR Cadastre: Swiss realization of this vision



## CADASTRE 2014

A VISION FOR A FUTURE CADASTRAL SYSTEM

Jürg Kaufmann • Daniel Steudler  
with the Working Group 1 of FIG Commission 7



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## Introduction

- What is the PLR Cadastre?
  - It's an official information system concerning public-law restrictions on landownership.
  - Developed by the federal Office of Topography swisstopo and the cantons.
  - The project was launched in 2012, and since 2020 covers almost whole territory (25 cantons out of 26)



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## Content of the PLR Cadastre

- The most important public-law restrictions:



### Contaminated sites

Cadastre of contaminated sites  
Cadastre of contaminated military sites  
Cadastre of contaminated sites at civil airfields  
Cadastre of public transport contaminated sites



### Motorways

Project planning zones for motorways  
Building lines for motorways  
Building and distance lines outside the scope of land use plans



### Railways

Project planning zones for railways  
Building lines for railways



### Spatial planning

Land-use planning (cantonal/municipal)  
Planning zones



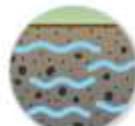
### Airports

Project planning zones for airports  
Building lines for airports  
Security zone plan



### Forests

Forest perimeters (in building zones)  
Forest distance lines  
Forest reserves



### Groundwater protection

Groundwater protection zones  
Groundwater protection area  
Watercourse corridors



### Power supply

Reserve zones for power lines with a nominal voltage of 200 kV or higher  
Building lines for high-voltage installations



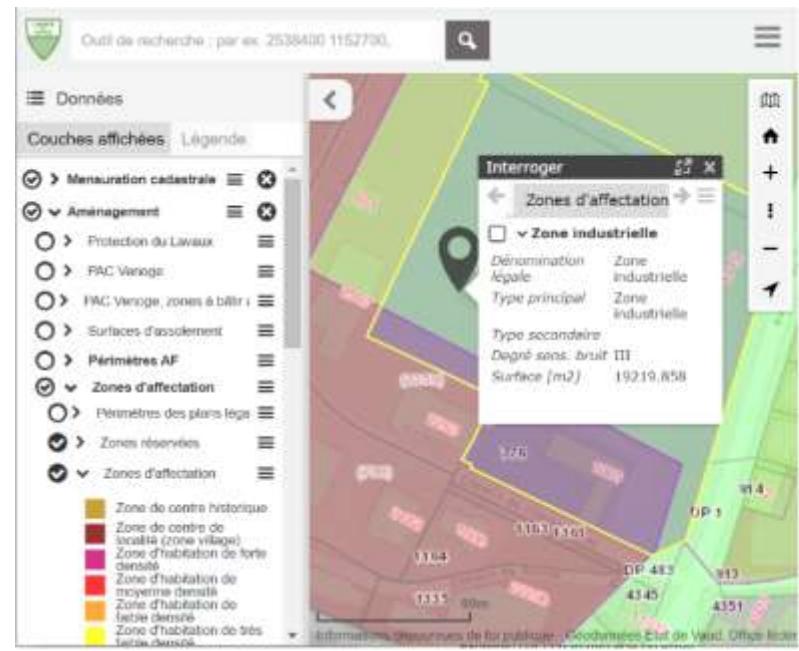
### Noise

Noise sensitivity levels (in land-use zones)



## Content of the PLR Cadastre: added value compared to a classical geo-portal

- Complete overview of all restrictions
- Information completed by the legal provisions and legal bases



*Classical geo-portal*



*PLR Cadastre*



## Content of the PLR Cadastre: added value compared to a classical geo-portal

- Possibility to produce a static extract



**Extrait du cadastre des restrictions de droit public à la propriété foncière (cadastre RDPPF)**



No de l'immeuble: 969  
E-GRBD CHM480357231



**Sommaire des thèmes RDPPF**

[Restrictions de droit public à la propriété foncière qui touchent l'immeuble 969 de Prilly](#)

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[3 Plans d'affectation \(cantonaux/communaux\)](#)  
[5 Plan de la zone de sécurité](#)  
[7 Cadastre des sites politiques](#)  
[8 Degré de sensibilité au bruit \(dans les zones d'affectation\)](#)  
[10 Limites des constructions des routes communales et cantonales](#)

[Restrictions de droit public à la propriété foncière qui ne touchent pas l'immeuble](#)

[Zones réservées](#)  
[Zones réservées des routes nationales](#)  
[Zones réservées des installations ferroviaires](#)  
[Alignements des installations ferroviaires](#)  
[Zones réservées des installations aéroportuaires](#)  
[Alignements des installations aéroportuaires](#)  
[Cadastre des sites politiques - domaine militaire](#)  
[Cadastre des sites politiques - domaine des aérodromes civils](#)  
[Cadastre des sites politiques - domaines des transports publics](#)  
[Zones de protection des eaux souterraines](#)  
[Périmètres de protection des eaux souterraines](#)

[Restrictions de droit public à la propriété foncière pour lesquelles aucun dossier n'est disponible](#)

[Alignements des routes nationales](#)  
[Limites forestières statutaires](#)  
[Distances par rapport à la route](#)

**Plans d'affectation (cantonaux/communaux)**



**Légende des objets inscrits**

Zone d'exploitation de moyenne densité (Zone réservée, non enclavée)	2281 m <sup>2</sup> (15,7%)
Zone d'exploitation (Zone inscrimée)	14104 m <sup>2</sup> (81,7%)

**Autre légende (visible dans le cadre du plan)**

Zone d'exploitation urbaine
Zone d'exploitation à forte densité
Zone d'exploitation à faible densité
Zone d'exploitation à très forte densité
Zone de très faible densité
Zone forestière
Zone d'exploitation à très forte densité
Zone d'exploitation à forte densité

**Légende complète**

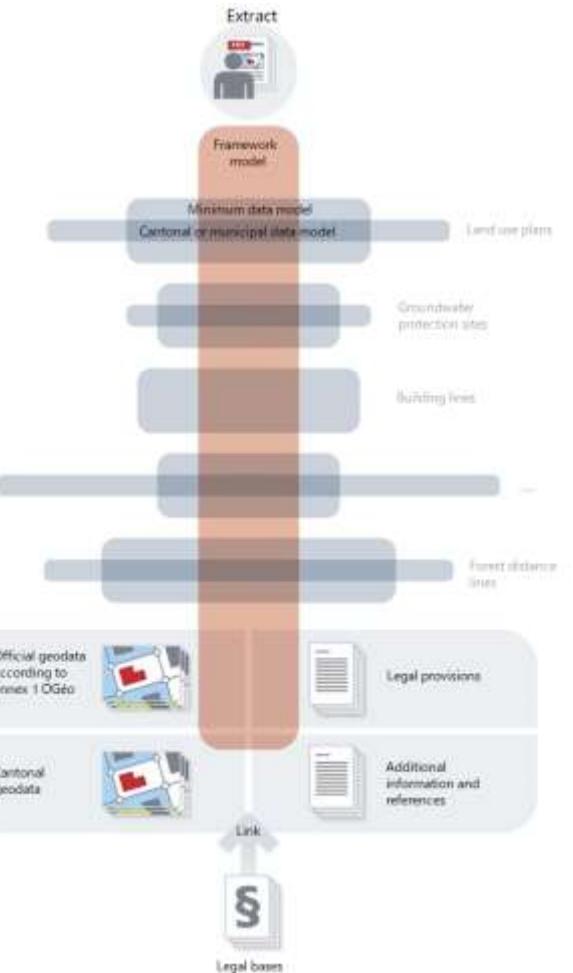
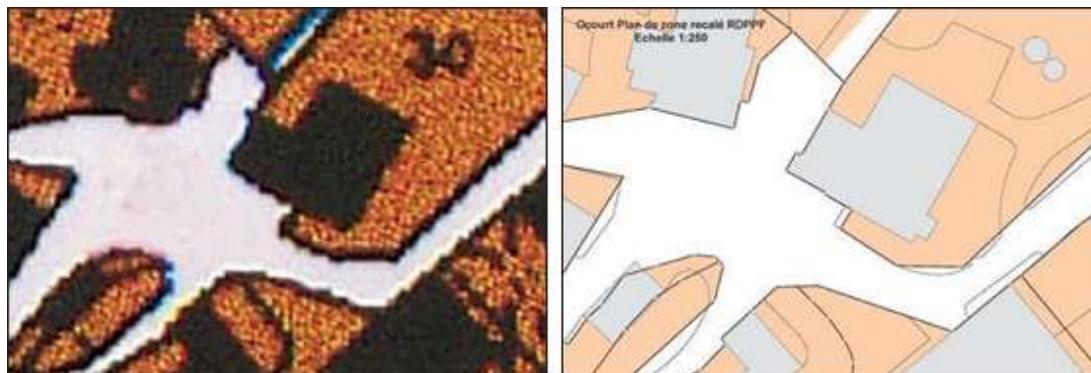
**Désignations juridiques**

**RÈGLEMENT DU PLAN D'EXTENSION PUBLIQUE DES CONSTRUCTIONS (PPEC) DE LA COMMUNE DE PRILLY (version 2011-03-01)**  
[Version 2011-03-01](#)  
**RÈGLEMENT DU PLAN D'EXTENSION PUBLIQUE DES CONSTRUCTIONS (PPEC) DE LA COMMUNE DE PRILLY (version 2010-03-01)**  
[Version 2010-03-01](#)  
**PLAN DES ZONNES (20.03.1994)**  
[Version 20.03.1994](#)  
**Ordre d'attribution des emménagements publics/renouvellement patient D**



## Technical aspects – Challenges faced

- Heterogeneity of the restrictions: need to standardize the data: Framework model
  - Guarantee interoperability between all actors
- Dematerialization of the information
  - Delicate task: need to be accurate in the transcription, and adjusted to the data of cadastral surveying



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## Benefits, limits of the concept and return on investment

- Benefits
  - Centralization of the information and easy to access at all time  
-> Increase legal safety of land property
  - Digital transition: better availability of geoinformation
- Limits of the concept
  - Not all restrictions are available yet
  - The PLR Cadastre does not enjoy public faith
- Return on investment
  - Hard to quantify direct costs savings
  - Evaluated by a survey: Positive impact of the PLR Cadastre: time saving and efficacy shown.

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## Conclusion and prospects

- Essential tool for all operators who work with the landowner property.
- What is planned next for the PLR Cadastre:
  - Expanding to new restrictions
  - Diversifying the kind of restrictions

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Thank you all for your attention!

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