Experiences from ELF
(European Location Framework)

Inspire Land Cover implementation

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What is ELF – European Location Framework

A project which deliver a pan-European cloud platform and web services to build on the existing work of the INSPIRE Directive and enable access to harmonized data in cross border applications.

ELF Land Cover - activities

❖ Analyzing Matching Tables (all themes)

❖ Creating an ELF-specific codelist

   http://159.162.102.171/codelist/LandCoverClassValue.html

❖ Describing the values in the codelist according to ISO 19144-2
   Land Cover Meta Language (LCML)

   http://www.locationframework.eu/documentation/specification
   /landcover/embeddedDescription

❖ Mapping the national codelists to ELF's codelist

ELF application schemas Land Cover
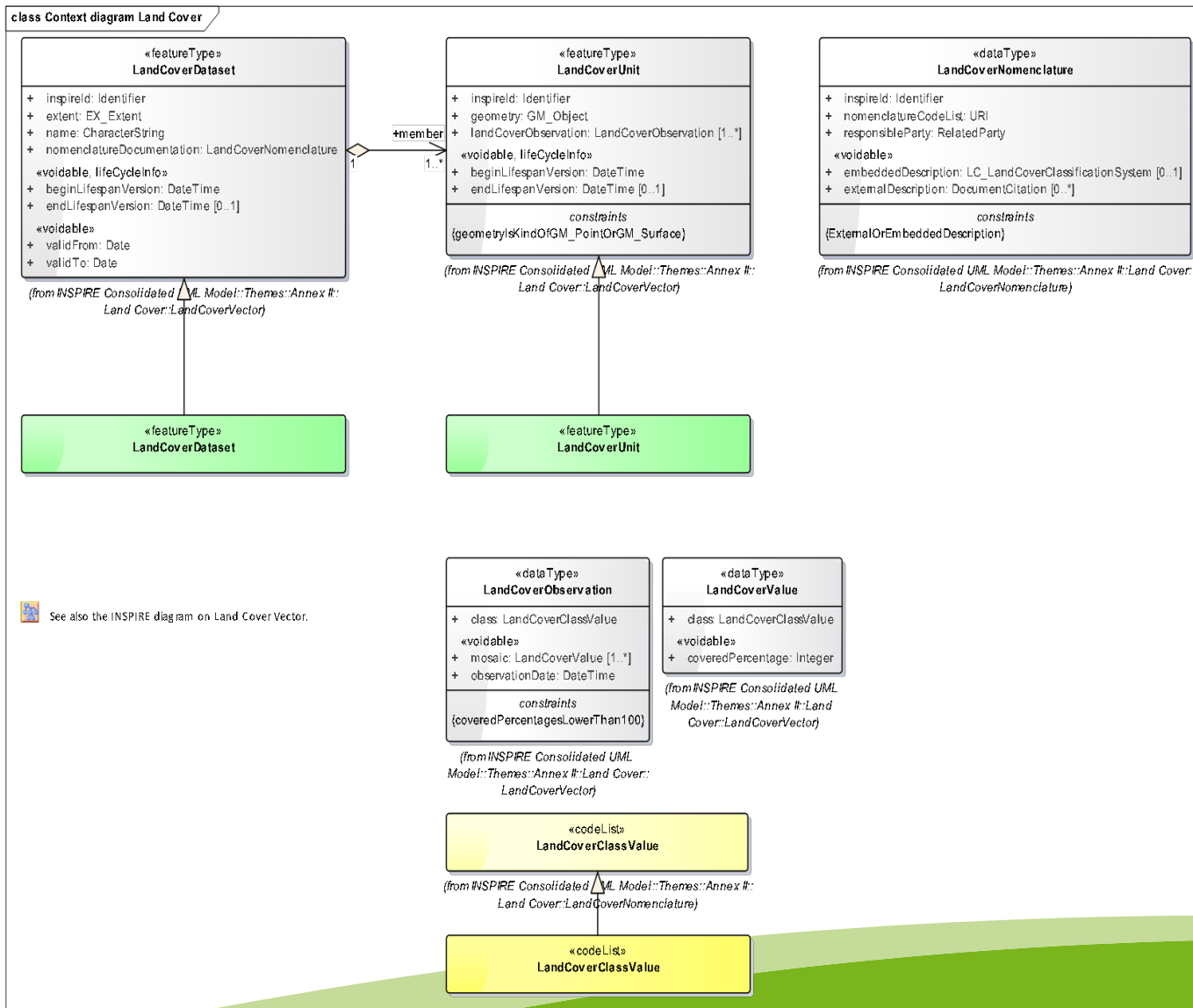
- Based on LC Core Vector schema

- ELFs feature types and codelists are subtypes to corresponding in Inspire

- No additional attributes

ELF codelist LandCoverClassValue - principles

- This codelist is a subtype to to the empty codelist LandCoverClassValue in INSPIRE Land Cover Nomenclature schema.

- A hierarchical codelist based on concepts from **PLCC** and **EAGLE Matrix**, which both are implementations of "ISO 19144-2 Geographic information – Classification systems – Part 2: Land Cover Meta Language (LCML)".

- Values are chosen in order to achieve harmonization across borders. The separate levels are not bound to a specific level of detail, and they are not comparable through the whole classification system. The intention with the hierarchical levels is that every NMCA could use the levels that fit the best with the national systems, though it is not a point to consequently use the same level in the matching work through the entire classification system.

- It is possible and recommendable to use more than one class in the ELF codelist if it is more consistent with any national land cover class. In some cases it is even necessary to combine ELF Land Cover Classes with objects from **Hydrography** or **Sea Regions** themes when translating wetlands and shore types.

- Used for ELF topographic Basemap

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ELF's codelist LandCoverClassValue			
Abiotic/Non-Vegetated	Artificial surfaces and constructions	Residential area	
		Other artificial surface and construction	
	Natural material surface	Consolidated surface	(EAGLE: Bare surface)
			(EAGLE: Hardpan)
		Unconsolidated surface	(EAGLE: Mineral fragments)
			Natural Deposits	Inorganic Deposits
				Organic deposits (peat)
	Water	(EAGLE: Liquid)	
		(EAGLE: Solid)	Permanent Snow and Ice
Biotic/Vegetated	Cultivated and managed vegetation	Arable land	
		Permanent woody crops	Grape
			Olive
			Citrus
			Nut
			Other fruit and berry plantations
			Other woody non-food crops
	Natural or seminatural vegetation	Forest	Coniferous forest
			Broadleaved forest	Deciduous forest
				Evergreen forest
		Open vegetated area	Shrubland
			Dwarf shrub heath
			Grassland

Wetlands belongs to hydrography

ELF EUROPEAN LOCATION FRAMEWORK

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Summary - issues

- Matching:
  - Easy to match classes between application schemas
  - Codelist matching could be tricky depending on national classification systems

- EagleMatrix & PLCC are both compatible with LCML
  - Advantage: Easy to mix and combine with other compatible classification systems

- Description according to LCML:
  - Easy to make (instructive examples in the annnex to LCML)
  - Uncertain how it will work in xml
  - What is needed in xml to make the "embedding" work?
    - An xml-schema for the standard?
    - Other solutions?