Inspire for the greening of the CAP

Powered by Inspire, Brussels, March 4, 2013

Wim DEVOS

www.jrc.ec.europa.eu

Serving society
Stimulating innovation
Supporting legislation

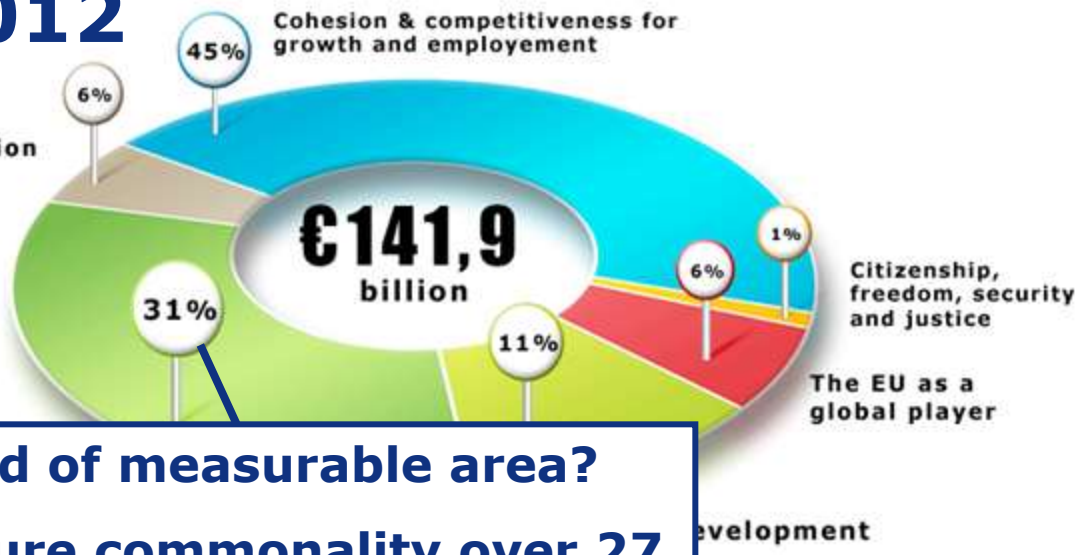
Outline

1. CAP and GIS
2. What did INSPIRE do so far?
3. What will INSPIRE face?

The CAP anno 2012

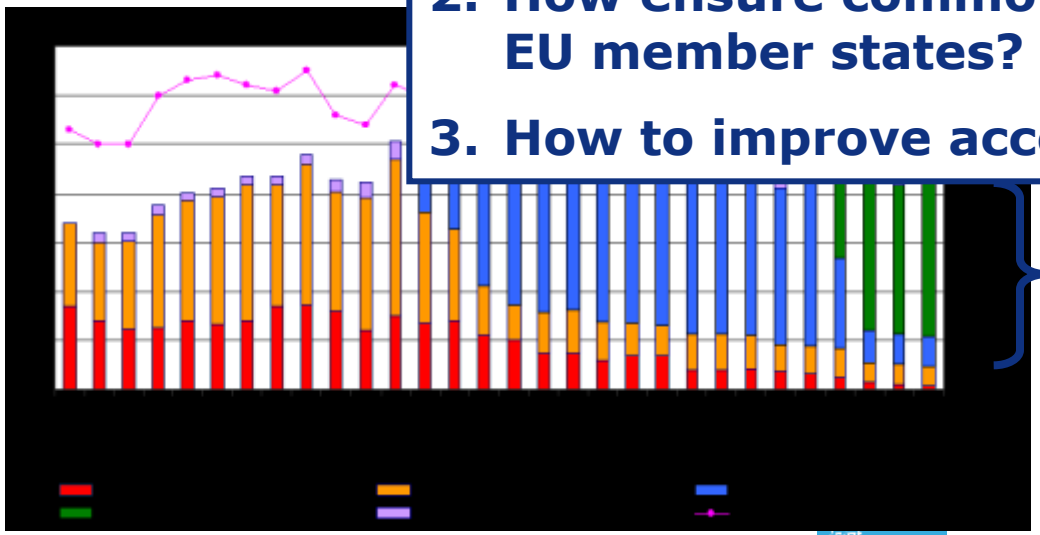
(Common Agricultural Policy)

From an EU perspective…



1. **What kind of measurable area?**
2. **How ensure commonality over 27 EU member states?**
3. **How to improve accountability?**

Over the years….



40 bn €/year is area based aid!

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Decoupled aid

A annual income for farmers :

For the land by

1. either activation of **payment entitlements** or declaration of **utilized** agricultural land
2. where **agricultural activities** occur (growing crops, raising livestock, maintain GAEC)
3. upon **agricultural area** (arable land, permanent crop, permament grassland)
4. AND on condition **(≡ cross-compliance)** that the farmer respects
   1. Statutory Management Requirements (EU Directives on health, animal welfare,…)
   2. Good Agricultural and Environmental conditions (local measures on erosion, minimum maintenance,..)

➔ *isn't this a textbook GIS challenge?*
worth 40.000.000.000 €/year ☺

Council Regulation (EC) No 1782/2003

of **29 September 2003** establishing common rules for direct support schemes under the common agricultural policy

Article 20

The identification system for agricultural parcels *(≡LPIS)* shall be established on the basis of maps or land registry documents or other cartographic references. Use shall be made of computerised **geographical information system** techniques, including preferably aerial or spatial **orthoimagery**, with an **homogenous standard**….

How to process area aid?

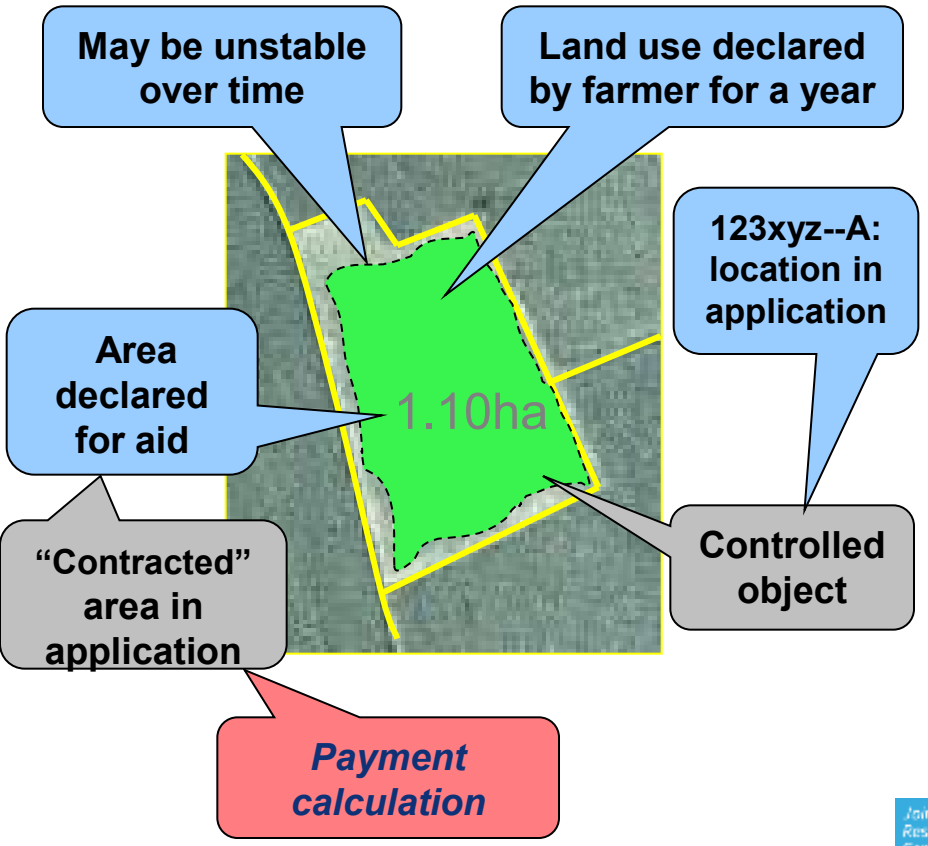
Agricultural Parcel
unit of payment and inspection

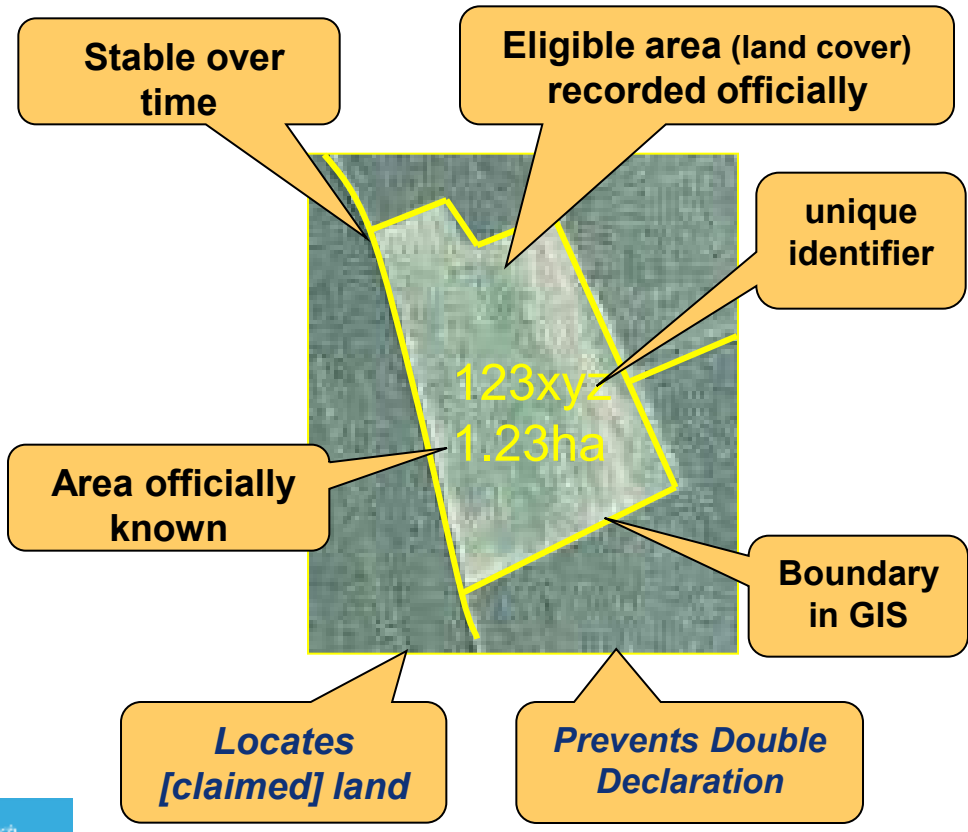
farmer and inspectors

REFERS TO

LPIS Reference Parcel
unit of administration and control

LPIS custodian





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How was it done?

Development of standalone systems

- national design and implementation options
- dedicated contractors (often spin-off)
- parallel development path from UNIX workstations to proprietary client applications

➔ Technologically isolated solutions

By contrast, is a driving force behind imagery (VHR satellite, digital aerial)

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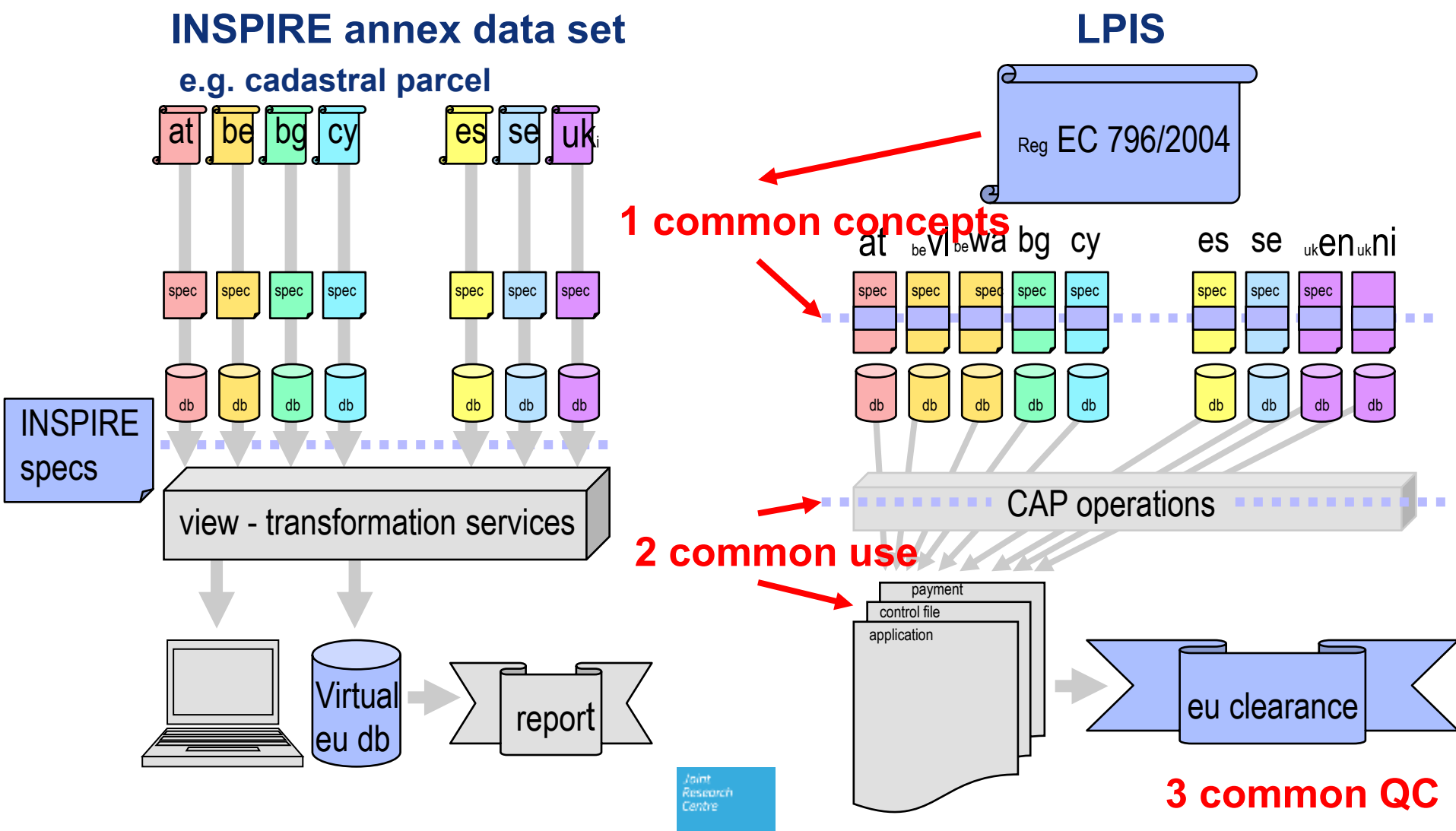
2007: Inspire



What happened ?

The LPIS community took things **on board**:

- application of the Generic Conceptual Model
- adoption of the 20 INSPIRE interoperability elements
- Awareness and application of ISO191xx, W3C and OGC standards
- introduction of the GML and XML exchange formats
- CAP-experts participated to various INSPIRE TWG

Primarily driven to highlight the 3 commonalities that all LPISs share

As a **result**:

- LPIS 'technology' grew out of its isolation and to become part of the mainstream GI and opened up to external data and "clouds"
- Individual custodians started sharing documentation and applications
- The outside world became aware of the existence of LPIS

Common interface

LPIS point zero state	Reference Parcel Sampling	A schema for a point representation of reference parcels (point being inside a parcel)	LpisPointZeroState.xsd	LpisPointZeroState.gml	2010-12-20
LPIS sample pre-selection	Reference Parcel Sampling	A sa se			
Metadata record	ETS reporting package	A d in			
LPIS polygon zero state	ETS reporting package	A p re M			
ETS inspection measurements	ETS reporting package	A E m g			
ETS observations	ETS reporting package	A E si va			
	ETS				


```
- <cap:FeatureCollection xsi:schemaLocation="http://ec.europa.eu/dgagri/cap ftp://mars.jrc.ec.europa.eu/LPIS/Schemas/5_1_LpisPolygonZeroState_20111027.xsd" lpis_code="BE-FL"
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                  205592.33,178269.63 205585.23,178269.46 205576.96,178268.98 205563.29,178267.6 205550.99,178265.92 205546.9,178265.52 205544.63,178265.97
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    </gml:featureMember>
```


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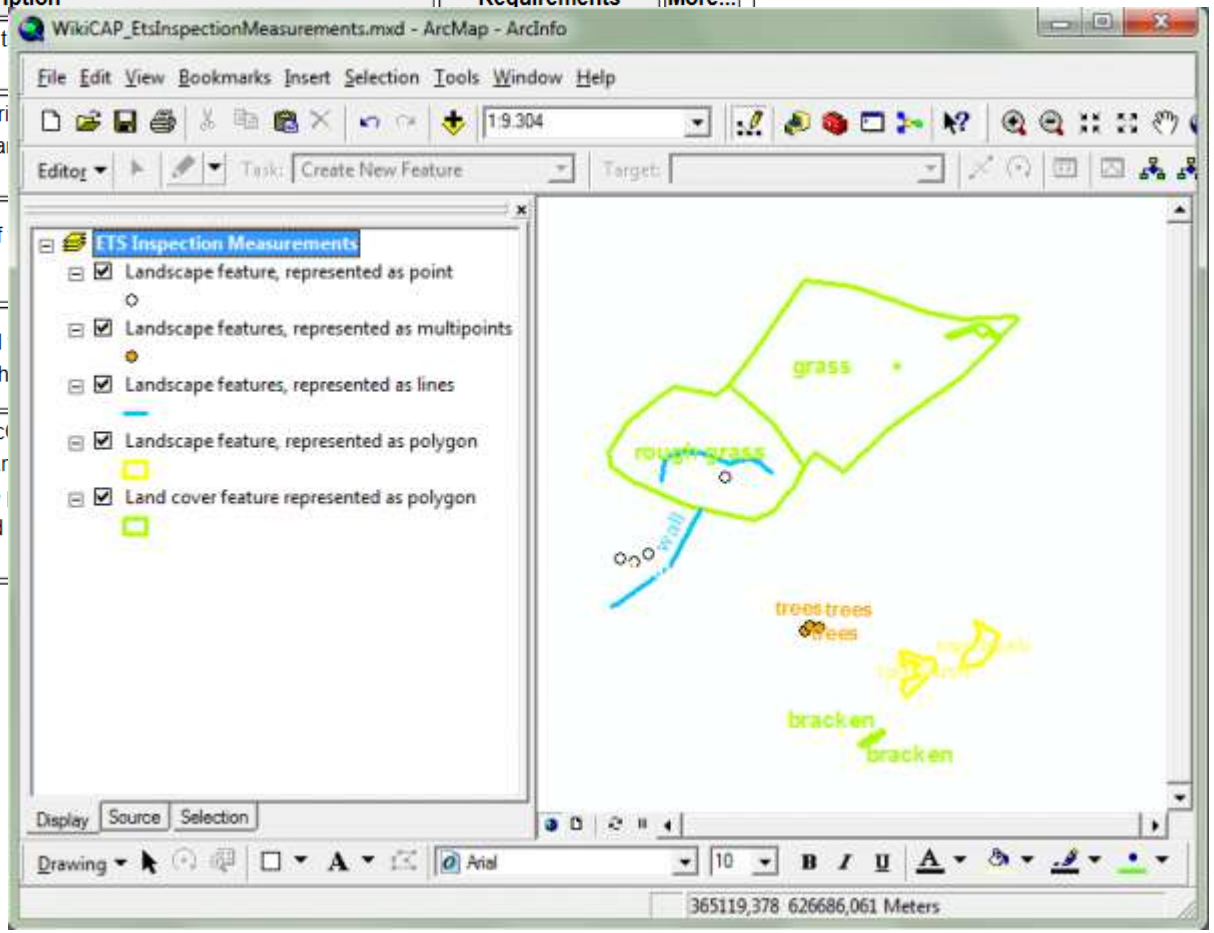
Shared tools

Tool	Description	Requirements	More...
GDV **ETS-reporter**	Java-based stand-alone software application t quality measures (Executable Test Suite).		
Sinergise **TopoCheck**	tool for spatial and meta-data validation of vari inconsistent records, problematic topologies a each polygon.		
Abaco **QA ETS Exchange**	web application providing the import/export of to ETS guidelines		
Abaco **QA ETS Inspection**	web application managing the Quality Control Provides also a tailored ETS GIS editor and th		
Wageningen UR - Alterra **ETS Manager**	The ETS Manager is build as an addin for Arc the Dutch and Northern-Irish workflow, but car specific situation. Multi-user tool for the entire on file-geodatabase usage. For more detailed Inez.Woltjer@wur.nl		



What did not (yet) happen?

Few, if any, MS designated LPIS as a dataset for the INSPIRE annex themes

- There is no explicit obligation to provide metadata
- There is no explicit obligation to make data publicly available
- There is no reporting under the INSPIRE Directive (but under CAP)
- And even if there were, it seems hard to enforce

Despite the many openings at technical level, the potential of this evolution seems not to be fully appreciated during the (ongoing) political discussions of the CAP reform (as considered too technical).

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2014 architecture of DP

Degressivity and Capping
(all layers except Green Payment)

Cross compliance
- Streamlined – Climate change

Coupled support
- Wide range of sectors
- Up to 5% or 10% of DP envelope, to be decided by MS

Natural constraint support
- For areas with natural constraints
- Up to 5% of the DP envelope

Young Farmer Scheme
- Up to 2% of DP envelope
- < 40 years
- For 5 years
- Commencing activity

'Green' Payment
- Crop diversification
- Permanent grassland
- Ecological focus area
- 30% of the DP envelope

Basic Payment Scheme
- National or regional flat rate per eligible hectare
- Regions and criteria to be chosen by MS
- New entitlements in 2014
- Definition of agricultural activity
- Definition of active farmer

Small Farmer Scheme
- Simplification of claims and controls
- Lump sum payment to be determined by MS under conditions
- Entrance in 2014
- Up to 10% of the DP envelope

OR

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What will change?

1. One scheme has become **three** (spatially interrelated schemes), with no opt-out and linked by area percentages
2. the **agricultural activities** are redefined (other uses are possible as long as agriculture is "predominant")
3. the **agricultural area** is fundamentally affected
   1. differentiation for the area values required by the upper schemes
   2. inventory of the newly eligible features
4. the **cross-compliance** conditions became more apparent
   1. partly shifted into the green payment scheme (crop rotation,, retention of habitats, buffer strips → EFA of the green payment)
   2. introduction of spatial features as site-specific conditions to limit erosion and protection of wetland and carbon rich soils
5. Formal link to RD for payments to **areas facing natural or other specific constraints** and **agri-environment-climate** payments:

➔ *This is no longer a simple GIS challenge*

➔ *But still worth 40.000.000.000 €/year*

still 'undefined' spatial CAP concepts

Pre-2014: implied

- Crop = unit of cultivation
- Holding = unit of exploitation / responsibility
- Landscape feature *(≠ topographic element ☹)*

Today: spatial concepts from external sources

- Areas of farming restrictions (LFA, buffer strips)

Post-2013: Greening is area based → identify + quantify land

- permanent grassland
- carbon rich soils and wetlands
- areas that are naturally kept in a state suitable for grazing or cultivation without minimum activity
- 7% EFA? GAEC LF require separate identification (as today) and quantification
- areas with natural constraints / GAEC could require further identification E.g. AECP zones or site specific erosion

INSPIRE's opportunities

All these "green payment" data are essentially environmental.

Applying the spatial data infrastructure and its underlying common approaches become essential and critical:

1. practical definitions and applicable models should be recovered as a national extension on the common data specification.
2. national INSPIRE portals should serve data to LPIS custodian, farmers driven by this real world (financial) use cases
3. as a use case, the LPIS is virtually identical across the national borders. It would provide an exemplary role upon which other cross-border applications can build.

INSPIRE's challenges

CAP in itself does not require cross-boundary exchange of data:

So,

1. Can the INSPIRE SDI set up protocols between data custodians on a national level?
2. When the LPIS-custodian becomes a core 'national' INSPIRE SDI user, the environmental agencies become its data producers. Can INSPIRE facilitate agreements and operations that respect the mutual priorities?

Conclusion

LPIS found itself not under the INSPIRE umbrella, but embraced the SDI parts of INSPIRE. This allowed the community to brake out of isolation and benefit from the technological developments

As the CAP is being “greened”, the need for concepts and data from the INSPIRE communities becomes very apparent

This will require close collaboration between the national stakeholders operating under INSPIRE.

Thank you!

Wim Devos

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