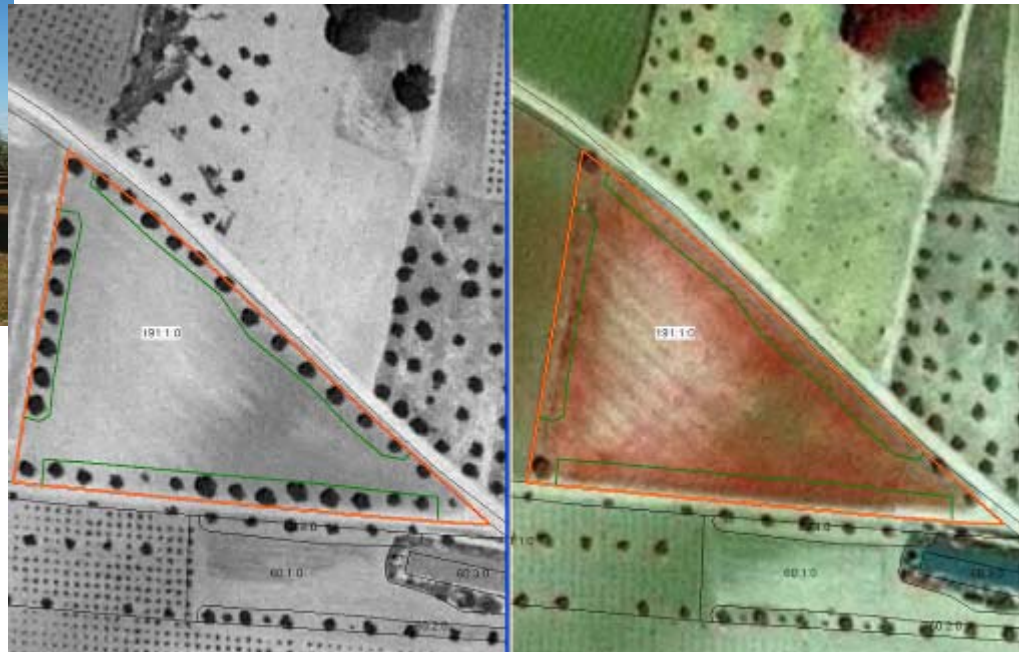


# Geomatics technologies in support to the Common Agriculture Policy



Archive image

Current year image

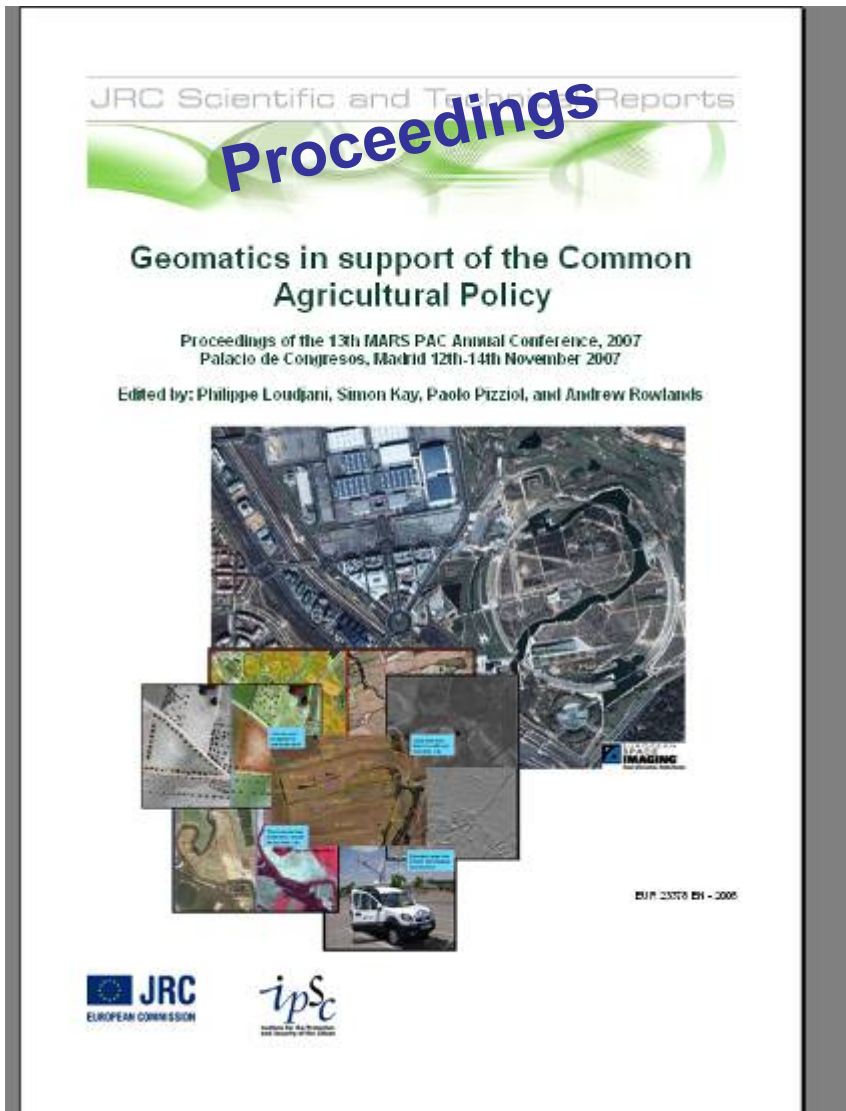
**Philippe LOUDJANI**

**JRC of the European Commission  
MARS Unit - GeoCAP action**



## Conferencia Internacional Información Geográfica y la PAC

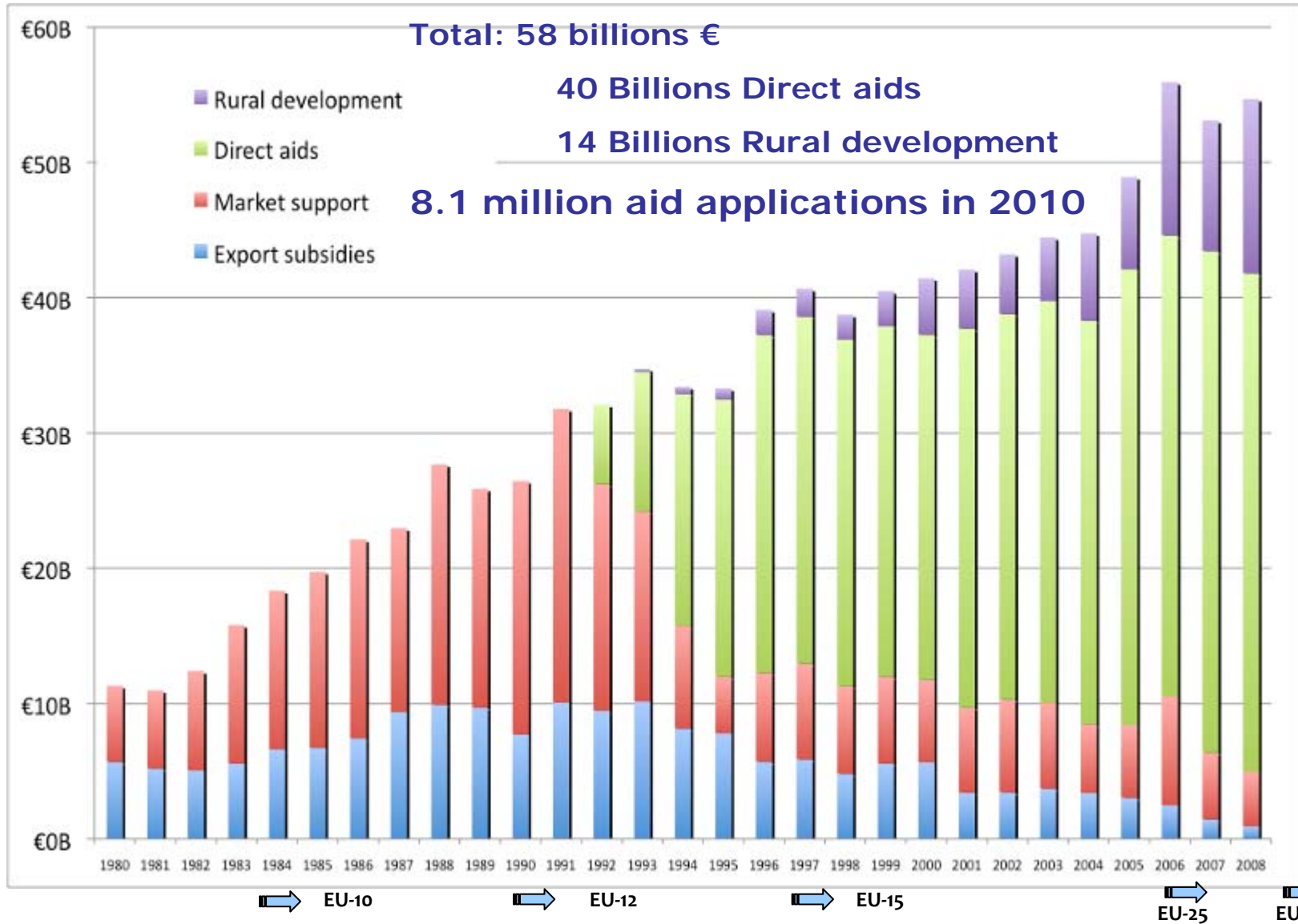
Palacio de Congresos, Madrid  
12-14 Noviembre 2007

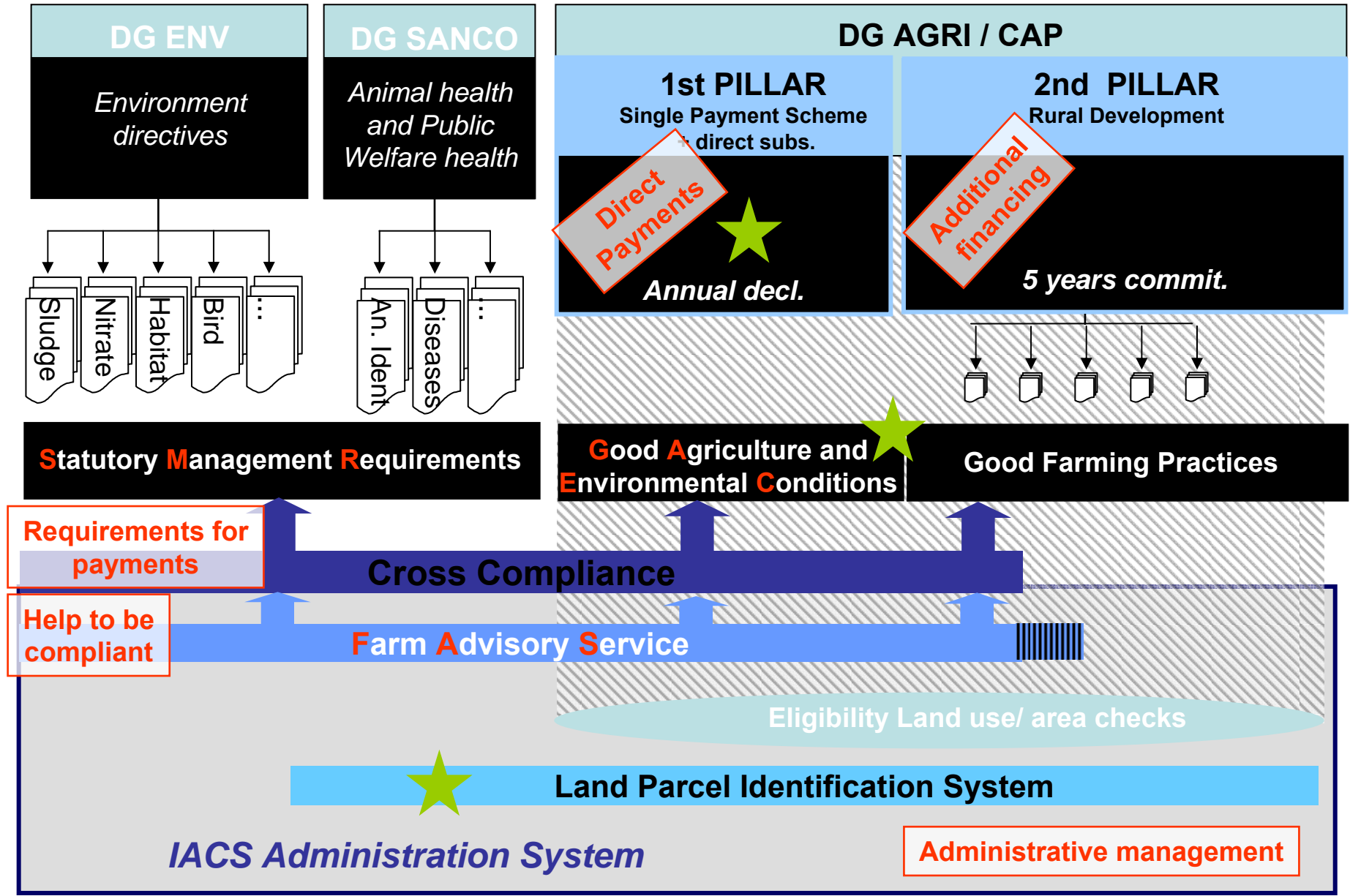


The CAP is the EU's major policy instrument, impacting **agricultural** practices, **environmental sustainability**, and the **economic livelihood** of rural areas.

- Aid payments (1<sup>st</sup> and 2<sup>nd</sup> pillars) still **the largest single component** of the EU annual **budget**.
  - Major CAP goal is the responsible and **sustainable use of rural resources**
  - However, the correct **management and control** of these payments is a major task for Member States and the Commission.
- GeoCAP provides technical support for CAP implementation

## Budget 2010





## CAP legislation (since 2000) requires:

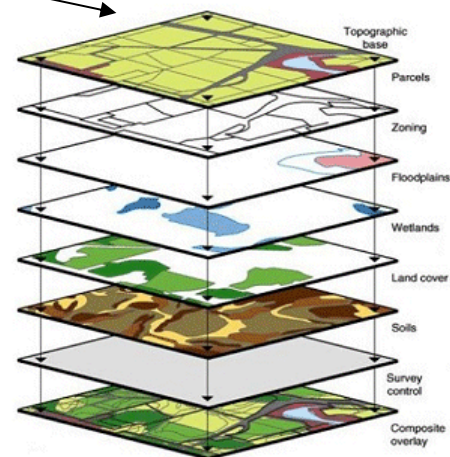
- **geo**-referenced information,
- **on-line**
- supported by up-to-date national **image** datasets
  
- Council Reg. 1782/03, Art 20 requires **GIS use** from 1/1/2005; the **Integrated Administration and Control System (IACS)**.



Imagery (satellite, aerial)



GNSS (GPS)



GIS (LPIS, ...)

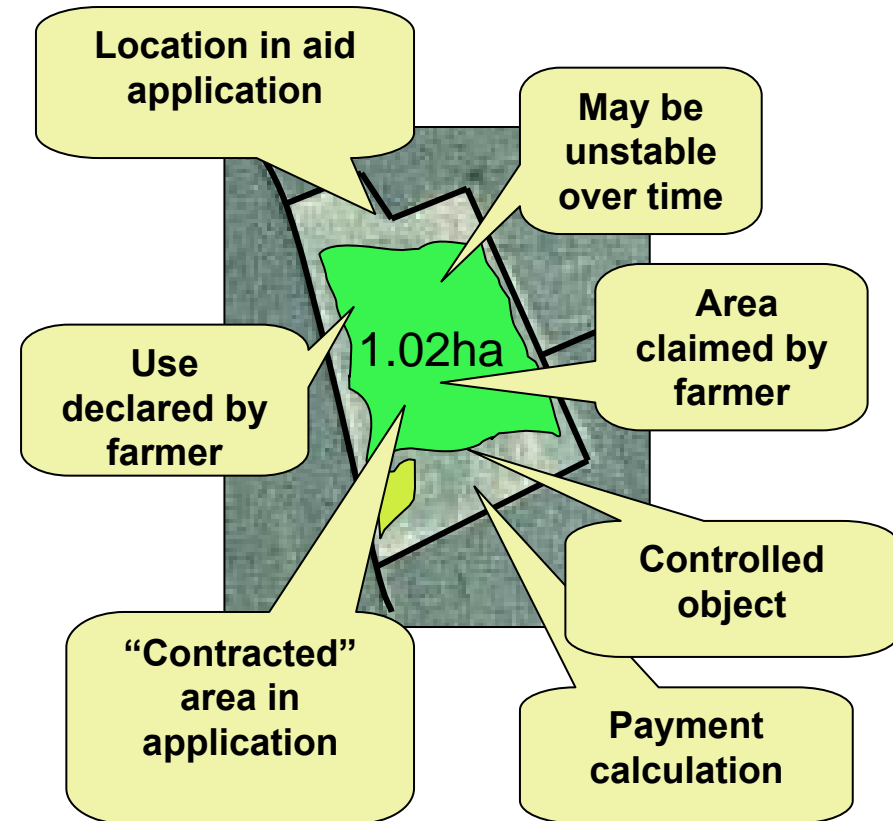
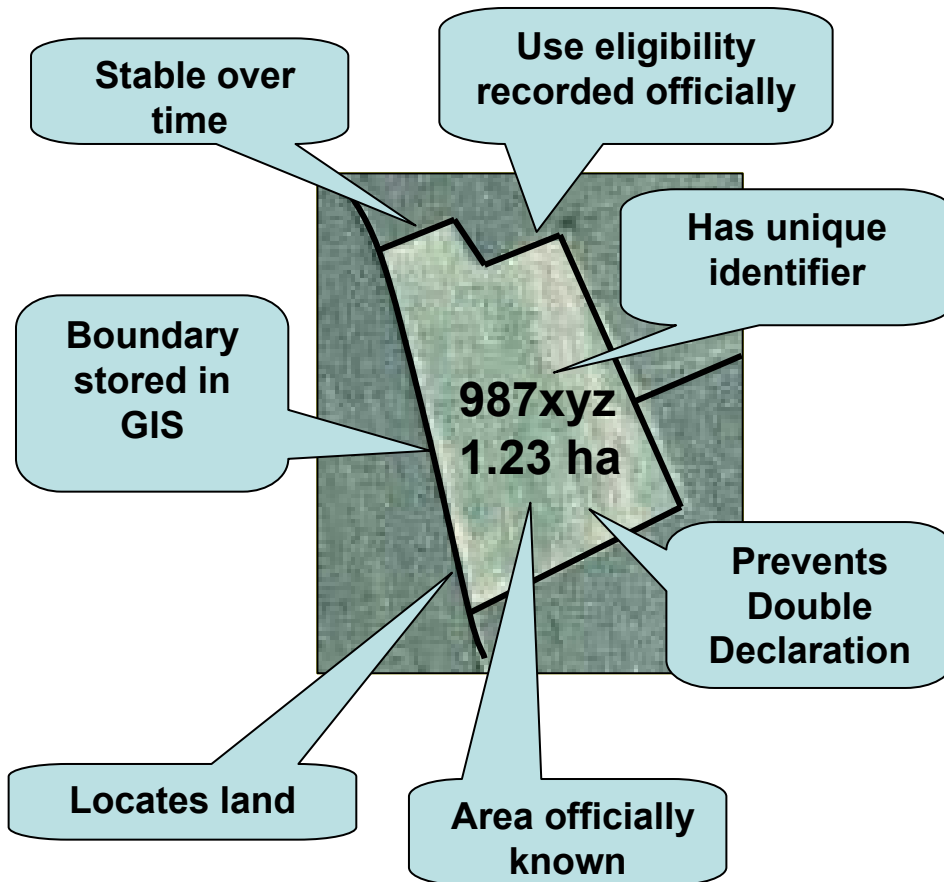
## Reference parcel (Administration)

## claimed parcel (Farmers)

In IACS-GIS  
Land Parcel Identification System



Acts as reference frame for  
Aid application

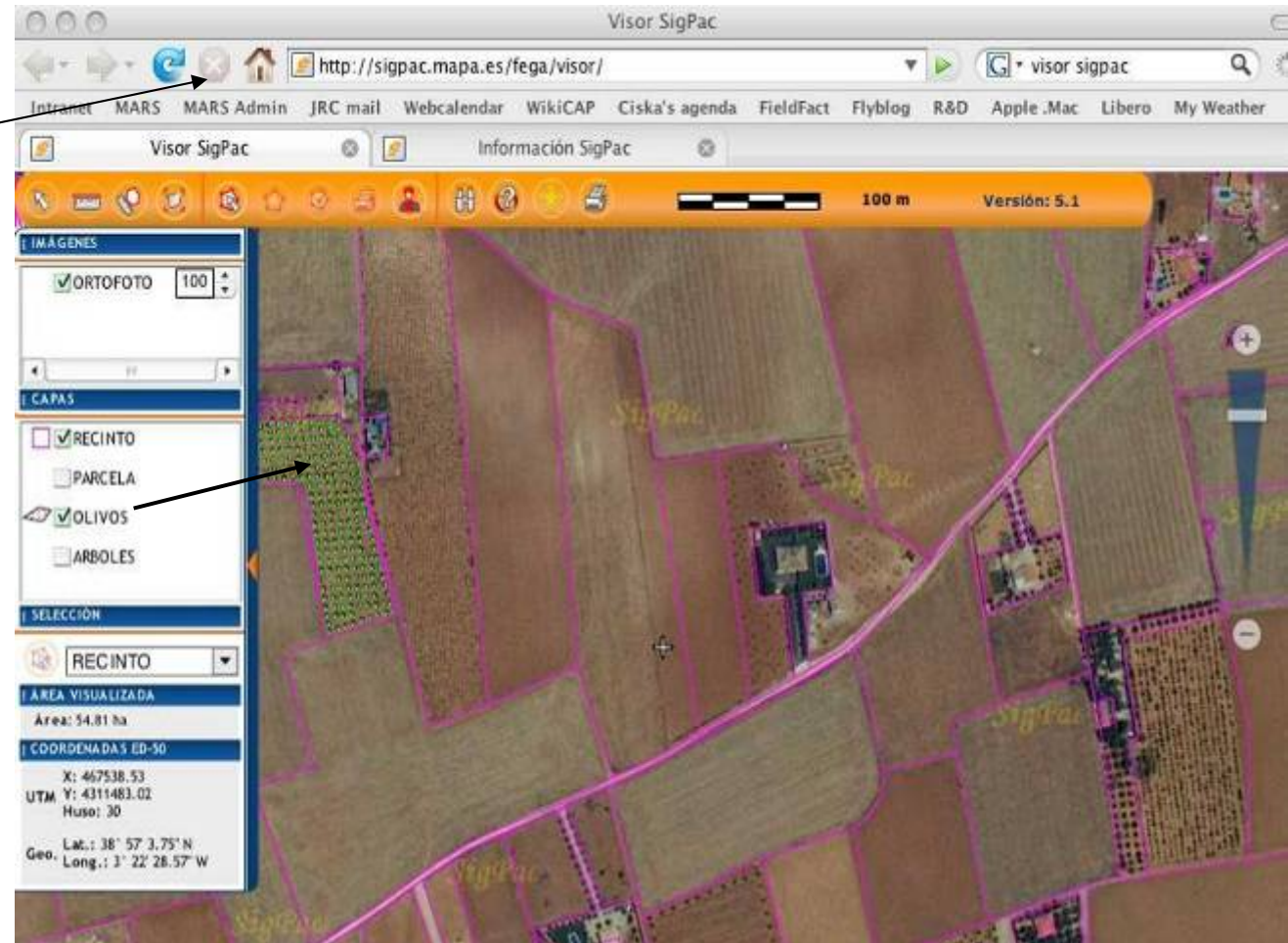


SIGPAC  
Spanish LPIS  
Access via Web

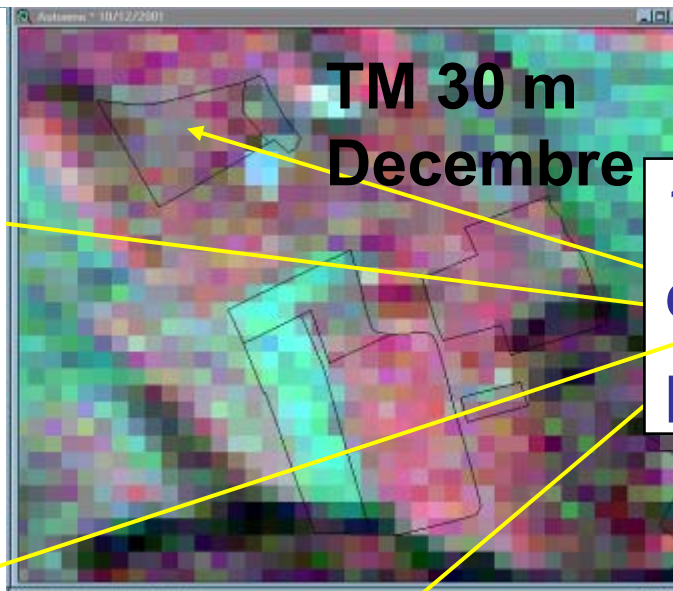
900.000 Farmers

70 millions  
'recintos'  
(reference parcel)

90 millions  
reference parcel  
in EU27



- A key element of the IACS systems
- Improve the sustainable management of the CAP
- Efficient support to farmer and Administration



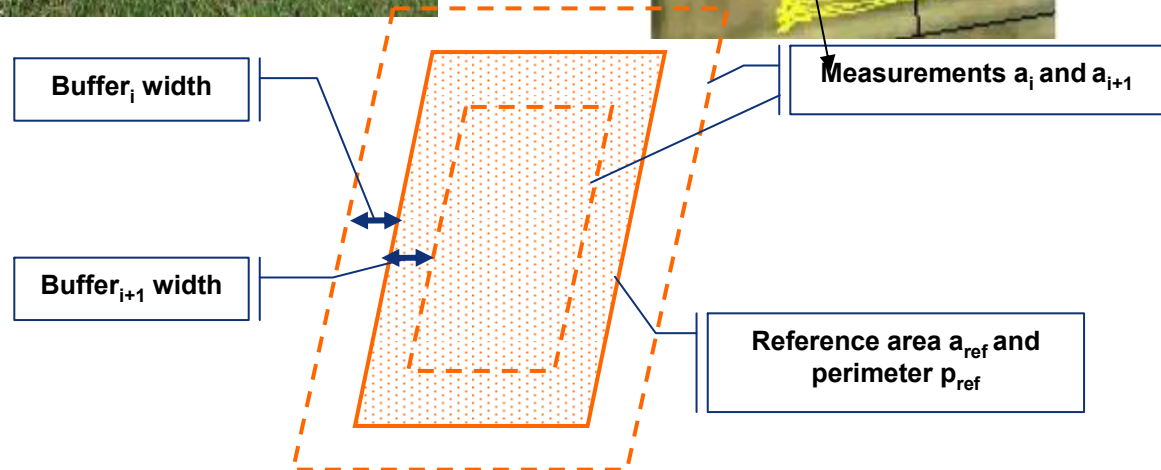
1.6 ha parcel  
declared as  
pasture...

**Focus today is on image products with < 1m GSD  
≈ 1:10,000 mapping scale**



**CwRS = 70% of total On-The-Spot checks (600.000 in 2009; EU27)**

**Nb: OTS checks → > 5% of total farmers' claims**

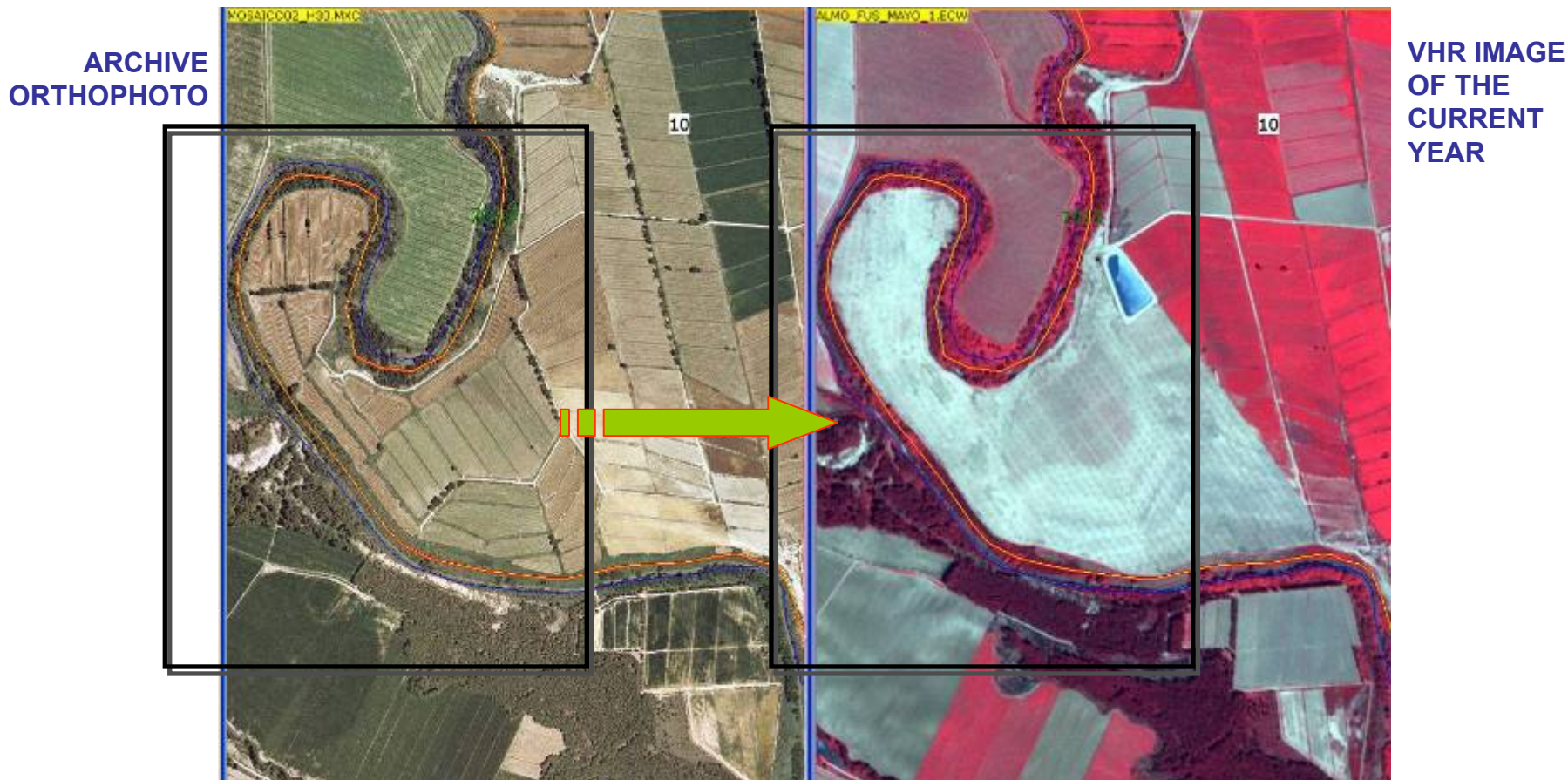


Measuring fields

→ Certification procedures  
(legal requirement)

## GAEC STANDARD:

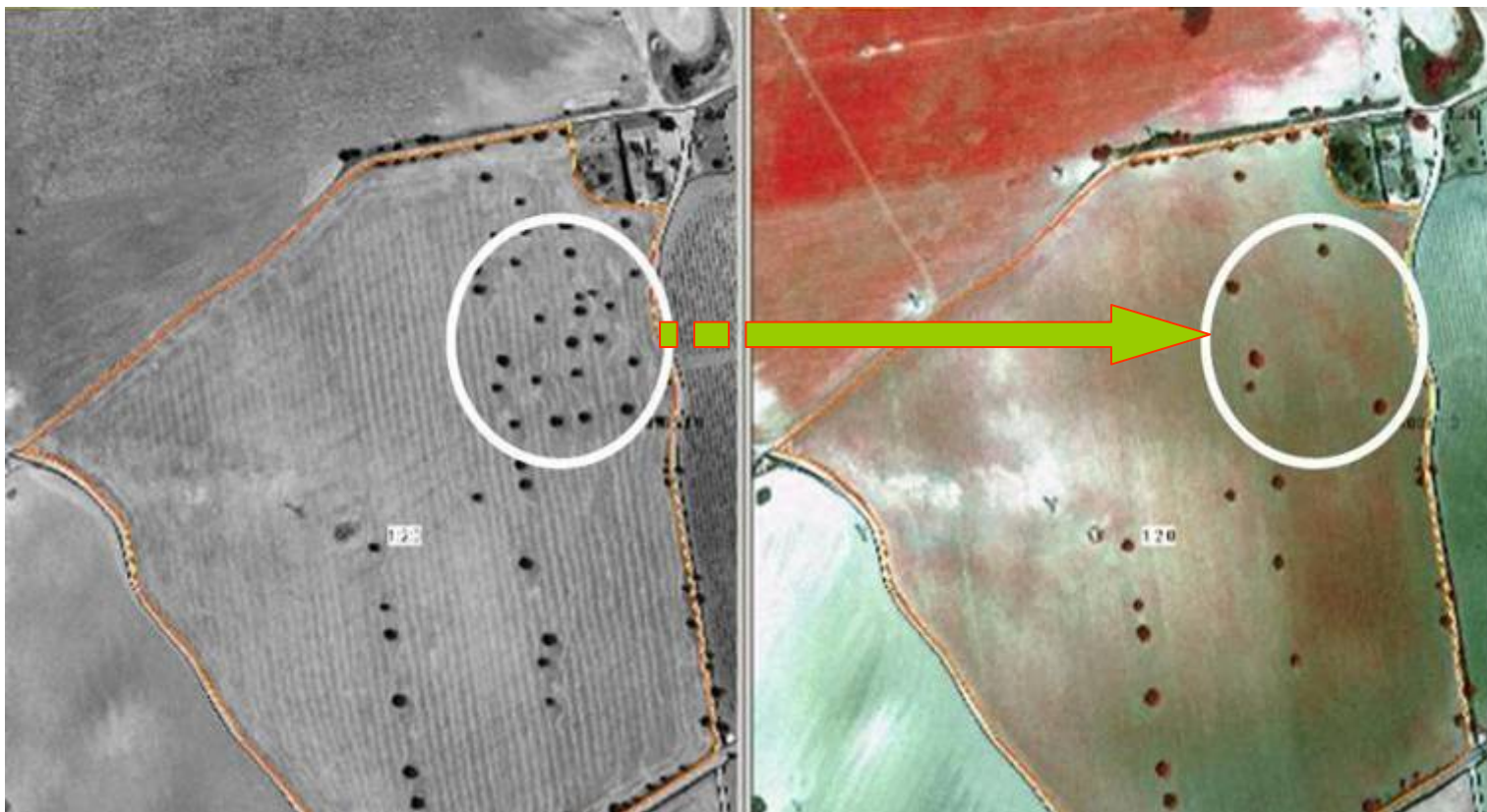
Maintenance of terraces, Keeping their drainage capacity, avoid risk of erosion



[Ref. Sardon, MARS PAC Annual Conf. 2007]

## GAEC Standard:

Retention of landscape features (hedges, pond, trees in line, in group or isolated)



Archive orthophoto (2003)

Ikonos VHR image from 2005.

The more we go the more we need accurate exhaustive view

## Detailed characterization of rural landscapes (Managed through LPIS)

### Landscape features (location, type)

- Hedgerow
- Group of trees
- Isolated trees
- Pond
- Ancient monument
- ...

### Land use / land cover

- Arable land
- pasture
- Forest
- Permanent crop
- ...

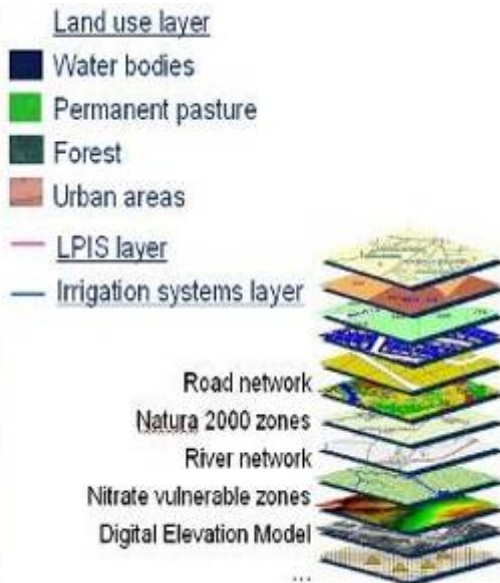
### Eligibility of land

100% eligible



## LPIS + Satellite imagery + additional GIS layers (Digital Elevation Model, ...)

Location of: Parcels in vulnerable zones, rivers and green cover buffer, features ..



3D view of rural landscape

- Provide relevant information** to farmers (digital, paper)
- Increase awareness** on Cross Compliance (**Advice: FAS**)
- Reduce risk** of infringements

→ **Sound management of rural areas (LPIS as cornerstone)**

## Management of Co-existence (GMO – non-GMO)

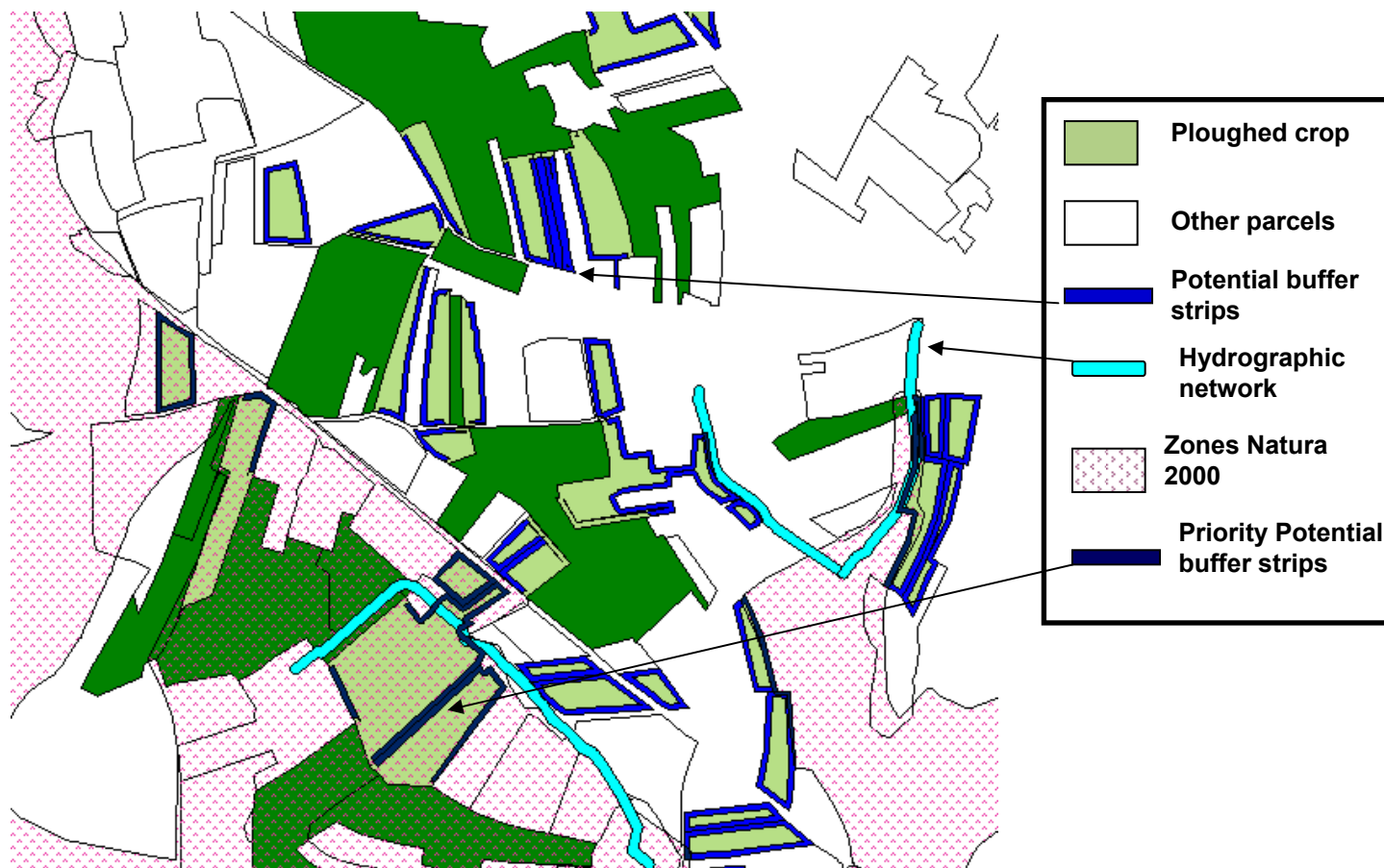
GMO maize field

Minimum buffer  
distance from  
GMO field

Maize field not authorized



## Locate buffer strips to protect water bodies



The more informed is the farmer, the less infringements are expected

Full record keeping of farm activities

→ IACS/LPIS as background



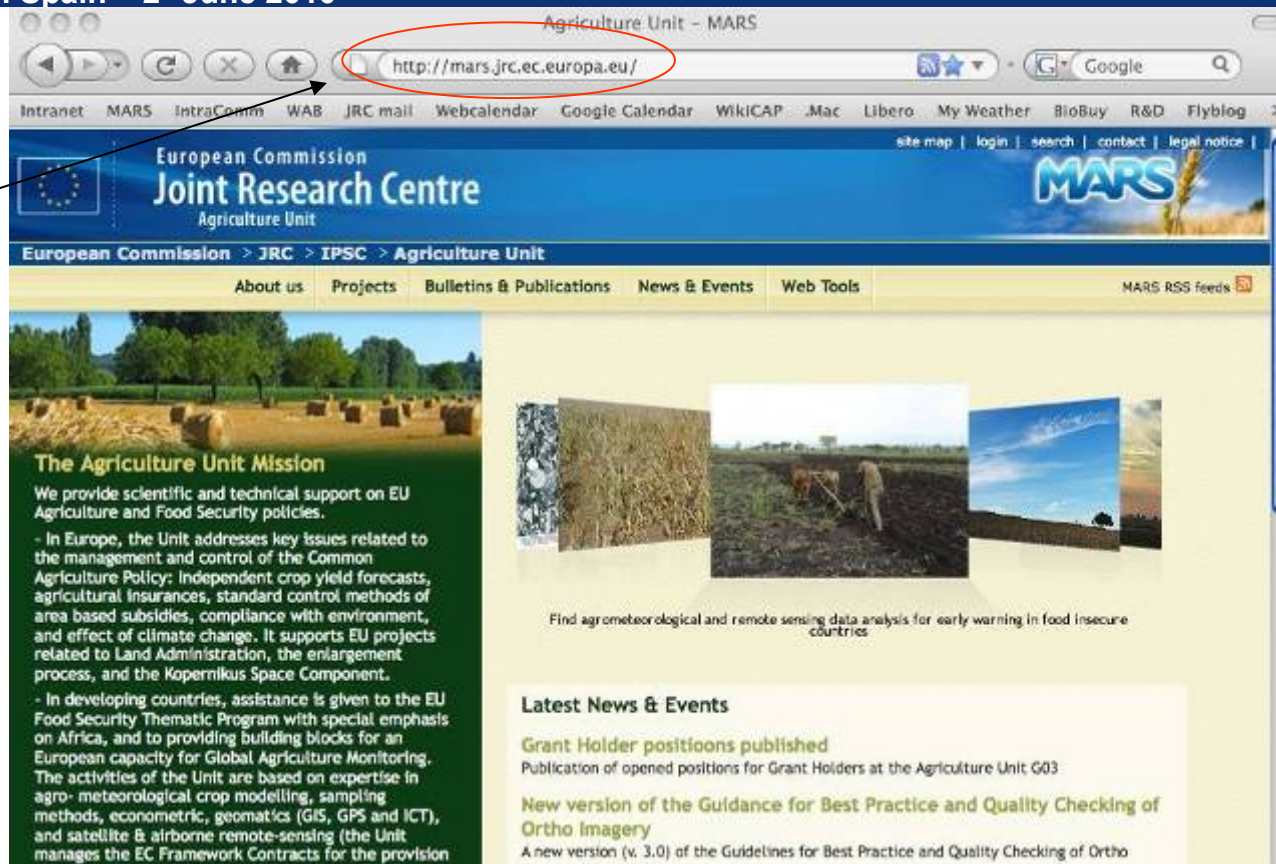
Electronic farm book

- Full geo-traceability of food at farm gate
- Farm Certification (Low carbon farming practice ...)



JRC Information Exchange day in Spain – 2° June 2010

**MARS Website**  
<http://mars.jrc.ec.europa.eu>



**WORKSHOP: APLICACIÓN EN LA UNIÓN EUROPEA DE  
LOS SERVICIOS DE ASESORAMIENTO: EXPERIENCIAS  
Y PERSPECTIVAS DE FUTURO**

Barcelona 10 – 11 Junio 2010

# Muchas Gracias

