European Commission

Use of new technologies for monitoring Common Agricultural Policy subsidies

Philippe LOUDJANI

"Monitoring agriculture for market management and food security" workshop

EU pavilion Milano Expo 2015
9 October 2015

Joint Research Centre

The CAP

Aim:

CAP purpose is to set the conditions allowing farmers to fulfil their multiple functions in society - the first of which is to produce food.

After fifty years, the EU has to address more challenges:
Food security at the global level, Climate change and sustainable management of natural resources, Looking after the countryside across the EU and keeping the rural economy alive.

How:

Managed and funded at European level
Delegated to Member States

- ***Integrated Administration and Control System*** **(IACS)**

→ Assure that sums are spent properly and that irregular payments are detected and recovered

The CAP

European Commission

Objectives unchanged: … check all conditions for which aid is granted

But conditions constantly evolve

Technology is also evolving

GSD 14,5m **GSD 8m** **GSD 6,5m** **GSD 1m** **GSD 0,6m** **GSD 0,5m**

→ Methods constantly need update if not upgrade

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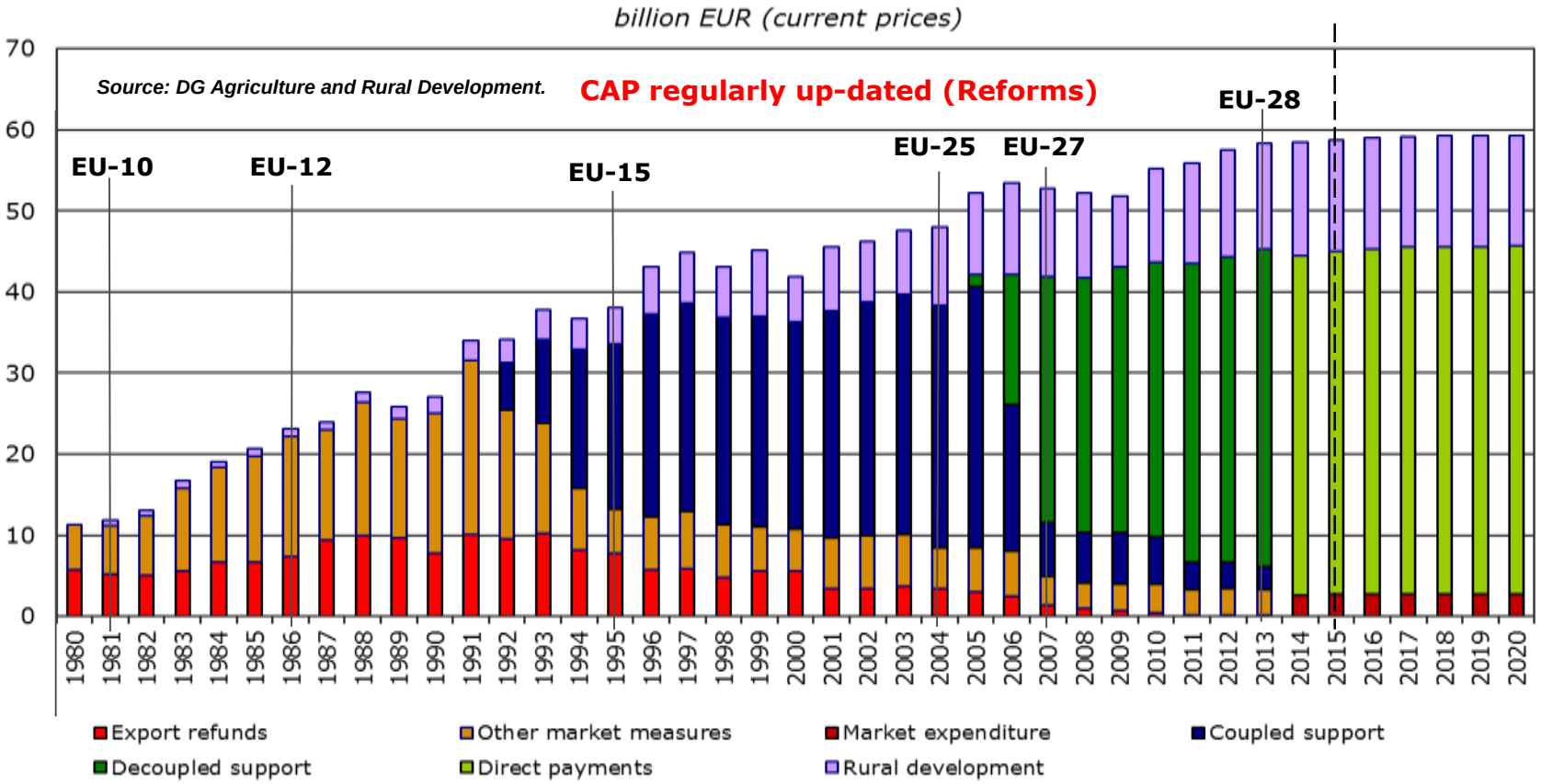
The path of CAP expenditure 1980-2020



CAP: 58 000 000 000 € / year

40 Billions Direct aids

14 Billions Rural development

Average 250 € direct aids / ha

8 millions EU farmers

Rural areas = 90% EU territory

50% farmed

Integrated Administration and Control System (IACS)

A database system set up in each EU member state to administer and control direct payments and some rural development payments.

An IACS must have each of the following:

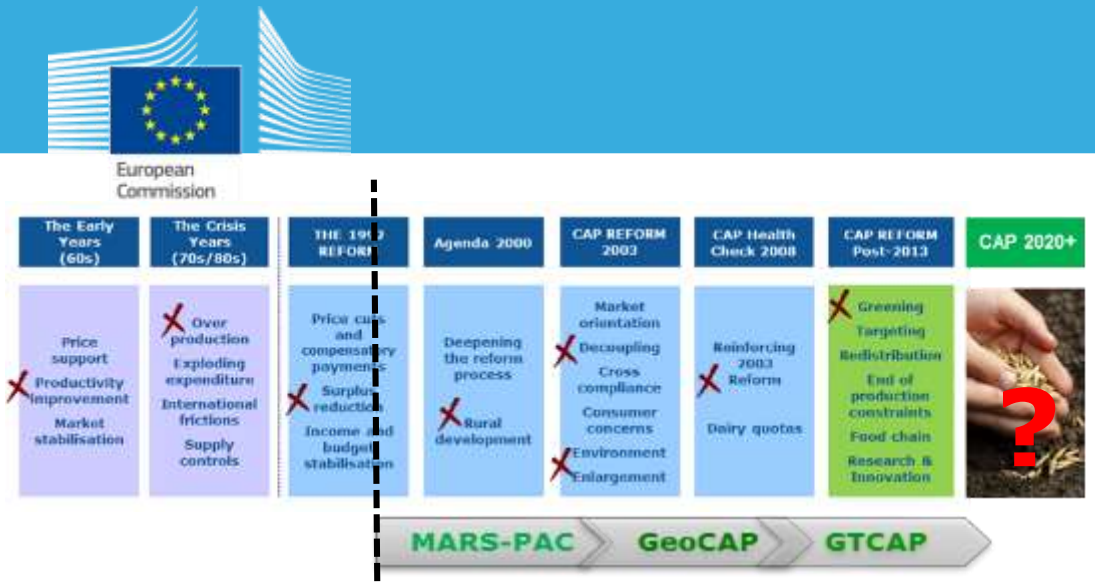
- A computerised database.
- An identification system for agricultural land (LPIS)
- A register of payment entitlements.
- An integrated control system.
- A register of each farmer who submits an aid application or payment claim.
- A register of animals if the member state receives relevant payments.

Member states must carry out

- 100 % administrative checks of aid applications
- At least 5% On-the-Spot checks of applications per payment scheme

Safeguard of EU funds

GTCAP's role



Long standing scientific and technical support to DG AGRI and Member States' agricultural administrations for the effective implementation of all components of the CAP First Pillar legislation.

Assist administrations of candidate and potential candidates' countries to introduce the components of their future Integrated and Administrative Control System to be in line with EU standards.

Unique role, unique entity (no EU agricultural agency or equivalent)

Use of research and innovation to help defining appropriate methods and tools within the legally requested accuracies.

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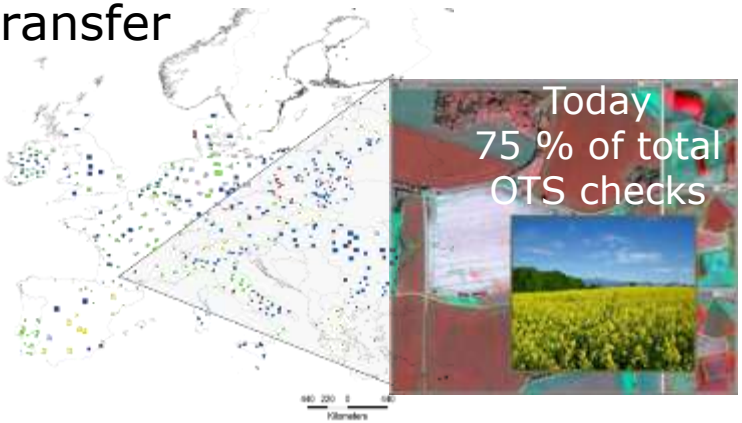
We did it …

- ✓ Tools benchmarking
- ✓ Innovative methods
- ✓ Technology transfer

…



Use of satellite imagery for On-The-Spot checks (CwRS) (since early 90's)

Use of GNSS devices for measurements during On-The-Spot checks (since 2007)

Digital Land Parcel identification System (LPIS) (since 2004)

LPIS Quality Assessment (since 2010)

20 years of Controls with Remote Sensing (CwRS)

We did it …

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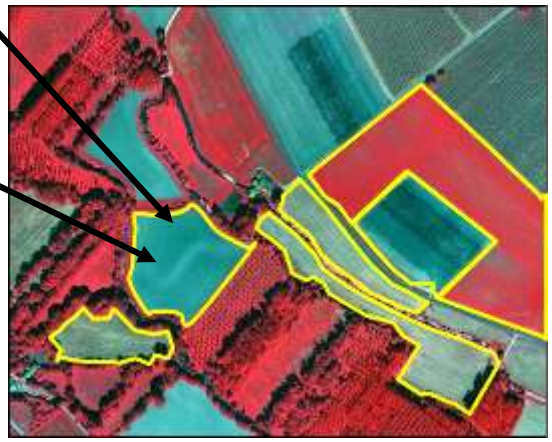
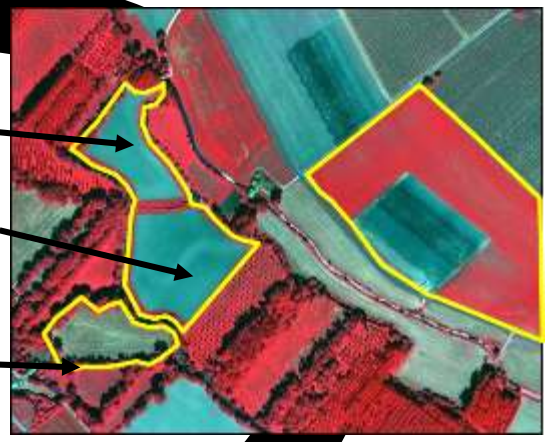
Before 2003 = coupled payments

Cropped area

Crop type



After 2003 CAP reform = decoupled payments

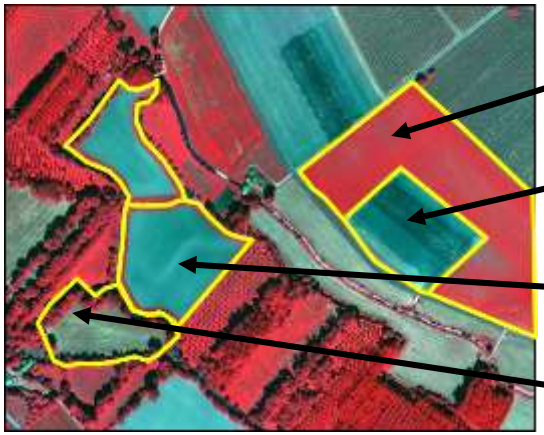


Area

Crop group

Land maintenance
Landscape elements

CAP 2014+



Area

Crop type

Land maintenance

Landscape features quantification

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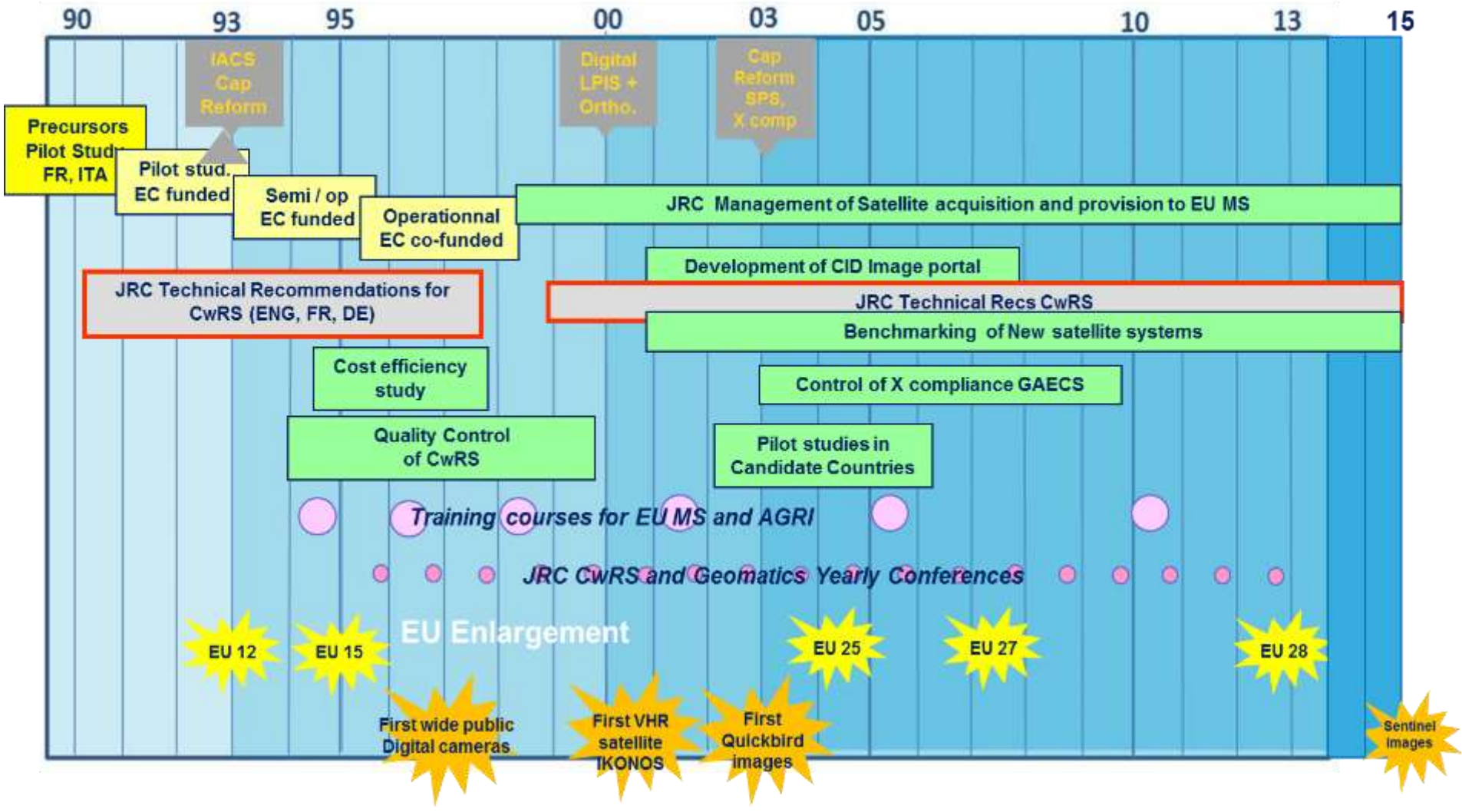
20 years of Controls with Remote Sensing (CwRS)

We did it …



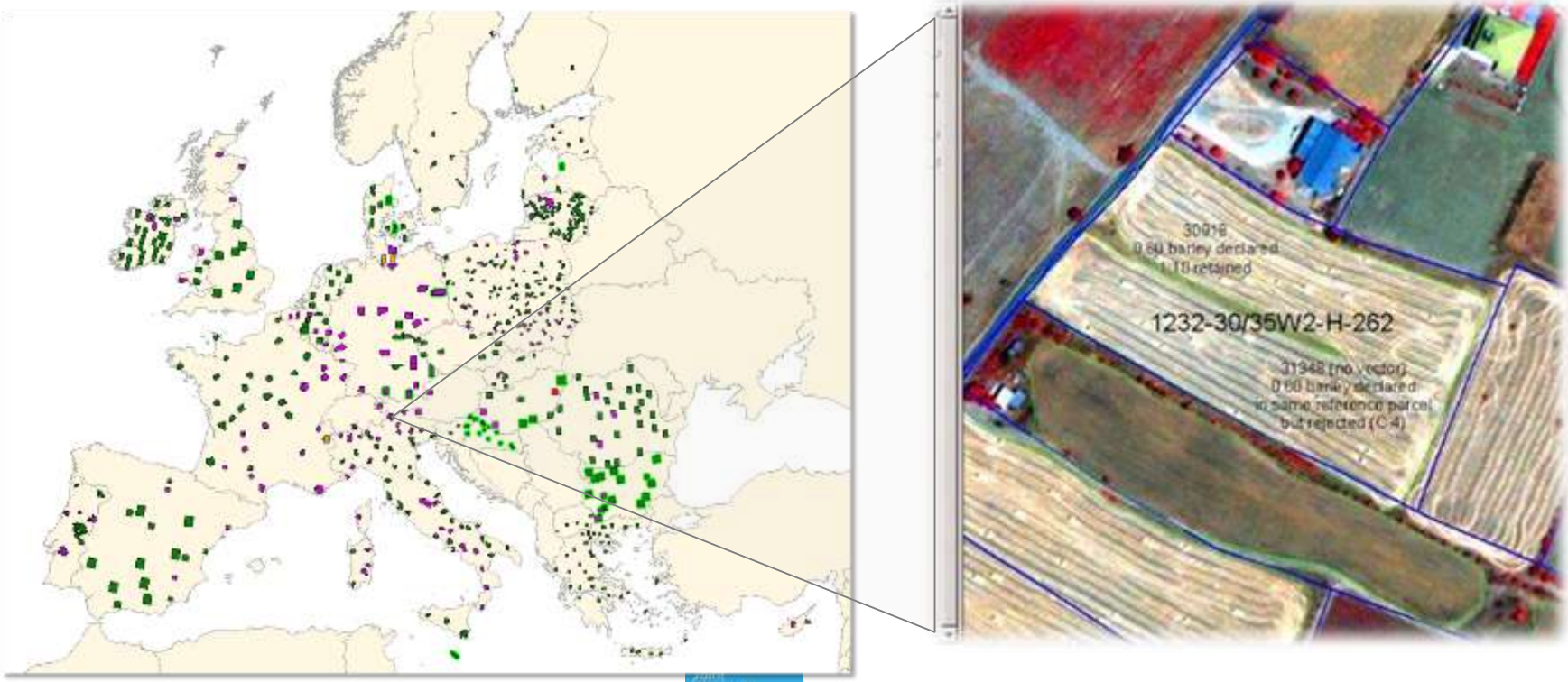
Control with Remote Sensing
We did it …

Initiated end of 90's

2015: used by 26 Member States - 490,000 controls = 75% of total farm controls

per Campaign year:
More than 700 control zones
1000 High Resolution images
490.000 km2 Very High Resolution data
9 million € satellite images purchased in 2015 on behalf of DG AGRI

Check of area, land cover, crop cover, Good AgriEnvironmental Conditions, greening …



Digital Land Parcel System
We did it …

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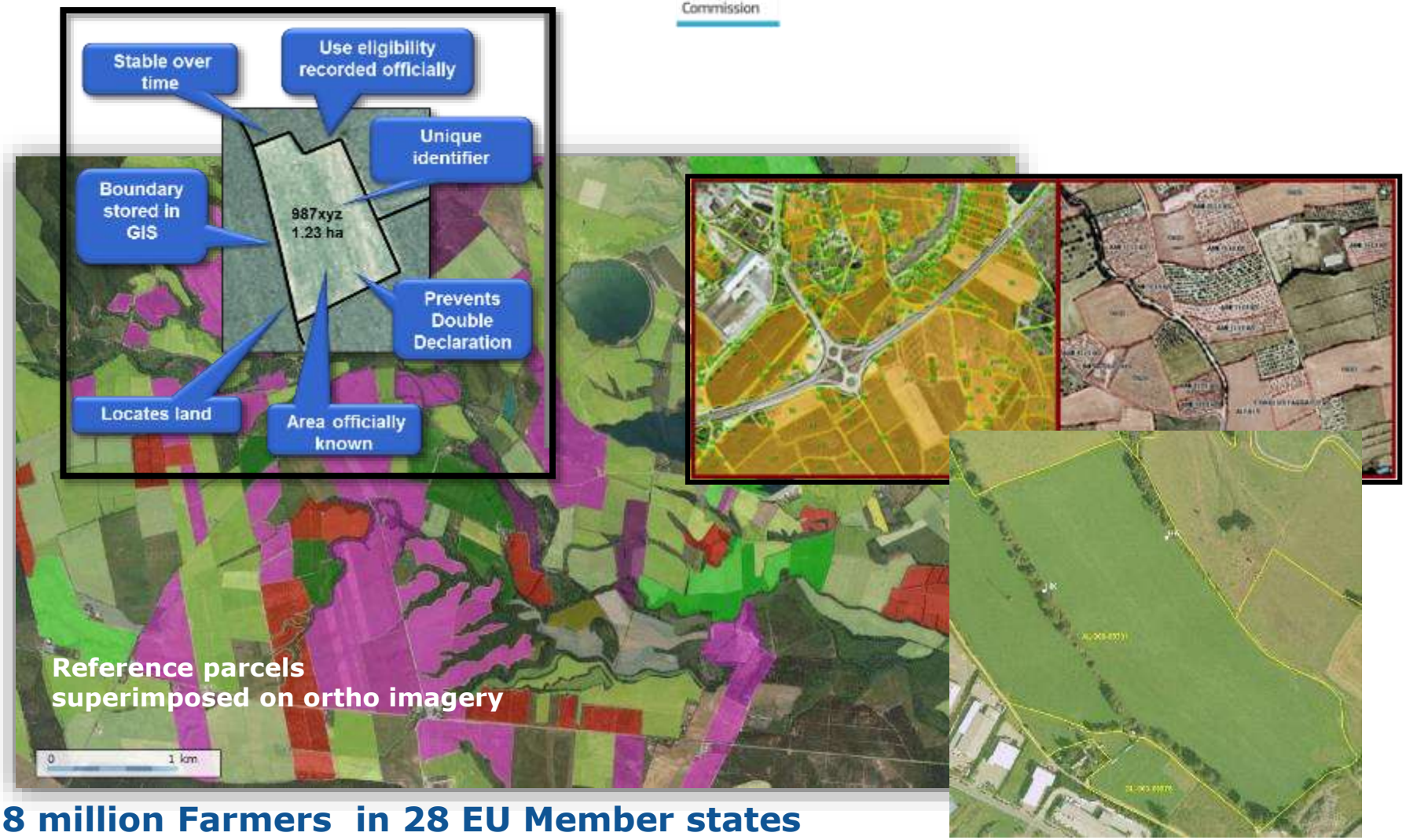

8 million Farmers in 28 EU Member states
Using 140 Million reference parcels uniquely identified

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Annual Report Court of Auditors of the European Communities
Financial year 2008 (Par. 5.13 p. 92)

"Based on the results of its audit work, the Court concludes that for the payments for the year ended 31 December 2008 for the policy group taken as a whole the estimated value of the overall error rate is slightly below the materiality threshold of 2 %."

But what about now?

New CAP: How to ensure commonality over 28 EU member states?

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e.g. On-The-Spot checks (controls)

Objectives: check <u>all conditions</u> for which aid is granted

- Area
- Length
- Different land use / land cover aspects
  - Eligibility of land ('minimum activity')
  - Crop type
    - Voluntary Coupled Support
    - Diversification
    - Permanent grassland
  - 'Exemption thresholds'
  - Landscape feature types
    - GAEC
    - EFA
  - Traditional cropping practices
  - Tree counting
  - Land maintenance
    - Erosion, land abandonment, hedge-tree removal …

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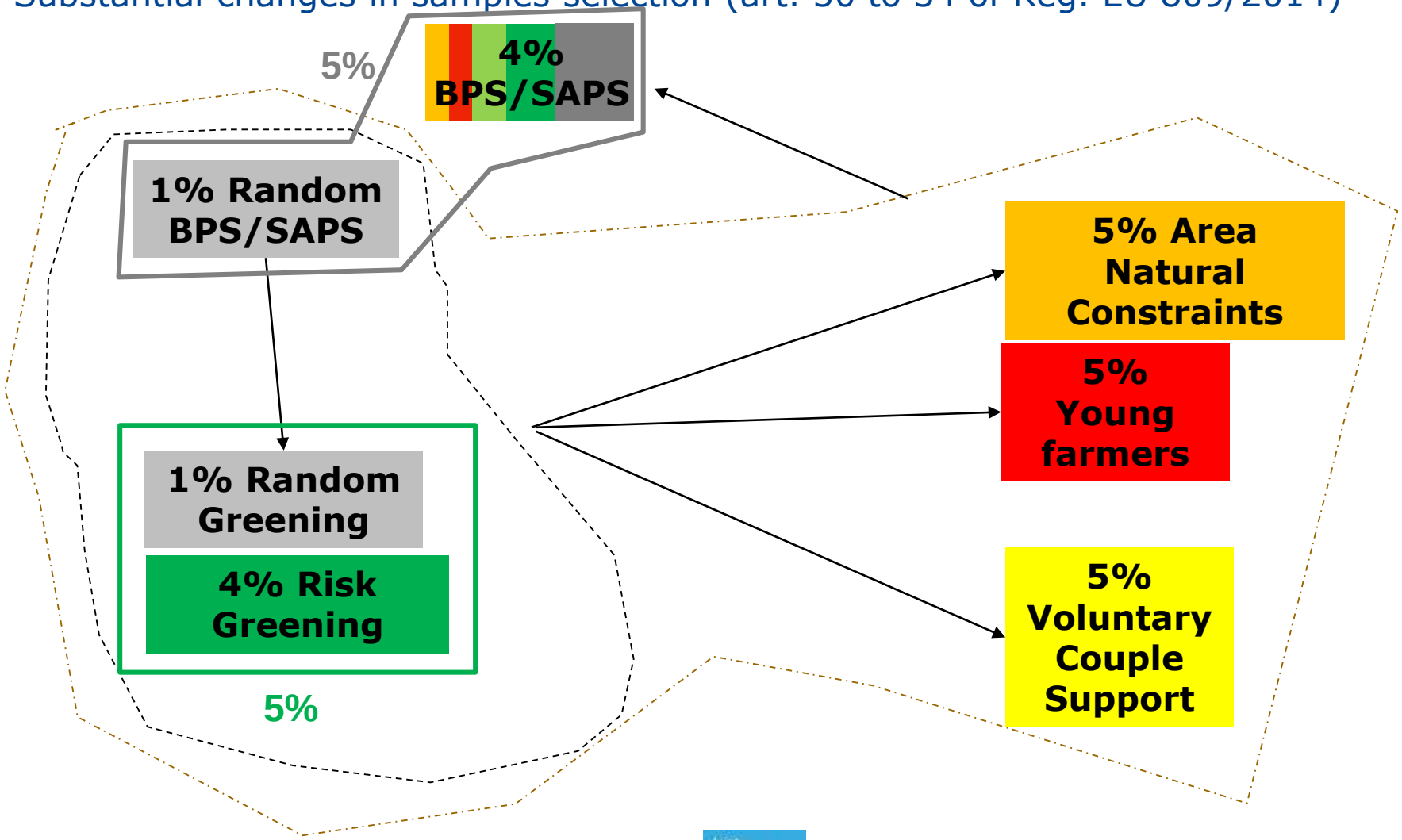
New CAP: How to ensure commonality over 28 EU member states?

Substantial changes in samples selection (art. 30 to 34 of Reg. EU 809/2014)



New CAP: How to ensure commonality over 28 EU member states?

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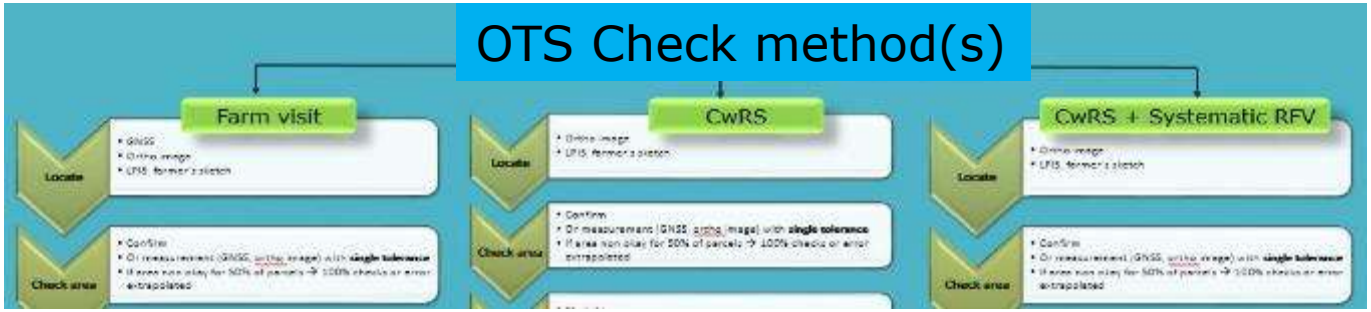
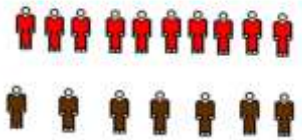


Depends on

- **Landscapes**
- **What to check**
- **Staff / budget availability**
- **OTS Checks Samples**



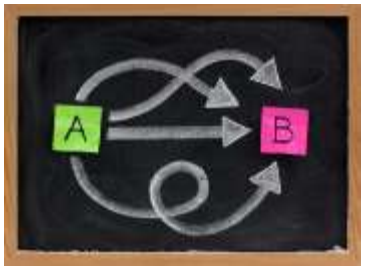
Use or no of imagery

Use of VHR imagery

Use of HR imagery

Use of other tools

→ Choice is on Member States



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fit for purpose

KEEP
CALM
AND
CARRY ON
PERFORMING

Ensure low level of residual errors of CAP subsidies monitoring and controls methods while being cost efficient and robust

Improve financial efficiency
Minimise errors

On-The-Spot checks

Reconsider imagery use and sites selection

Estimate OTS checks methods performance

- Quality Assessment protocol

Benchmarking of new tools

Drones

- measurement, whole farm check, check outside main check period, …

Ancillary data assimilation in IACS processes

- Photos, precision farming captured data …

Big data
Data mining

Availability and use of COPERNICUS data

Set Free

HR data

Drones

- Fast developing technology
- Decreasing costs

- Big farms
- Not easy to access parcels
- Mountainous terrain
- Detailed checked 'live'
- Replacing satellite images

Improve financial efficiency
Minimise errors

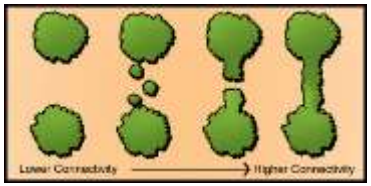
General IACS (Management system)

Conceptual model

- Assessing IACS appropriateness and entirety

Extent use of LPIS data

- Farm level calculators
- Management of Rural Areas (green corridors …)



Extent use of GeoSpatial Aid Application (GSAA)

- Mandatory Green House Gas estimation (LULUCF, Kyoto protocol)
  - Collection of additional information
- Production of crop area estimates

Improve financial efficiency
Minimise errors

Extent use of IACS data (LPIS, EFA layer, GSAA …)

Qualify and quantify landscape features and cropping systems

- Annual status survey (Good Agriculture and Environmental Conditions (GAEC), Ecological Focus Areas (EFA))
- Environmental potential of defined feature
- Provision of Calculators (EFA, …)
- Typology of cropping systems (→ models input)

Carbon Calculator

Improving ecological services

Contribution to Monitoring & evaluation of the CAP (2018, every 4 years)

Conclusions
Needs

Constantly evolving CAP legislation

Require continual update or upgrade of CAP implementation methods
So as to be appropriate and accurate.

Need to work on:

Sample selection methods and strategies
Statistical significance of random samples
Significance of Audit (DG AGRI, ECA) methods

Time to reconsider the whole control process for CAP 2020+ ?

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THANK YOU FOR COMING!

"Have your say"

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