



Case Study: Climate change, wildfire prevention and rural development in Spain



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OUTLINE

- I. **Spanish Case study presentation**
- II. **Climate change context in Spain**
- III. **Addressing climate change challenges through RDPs: COMPULSORY MEASURE ACORDING TO SPANISH NATIONAL FRAMEWORK**
- IV. **Assessing the RDP intervention on CC mitigation/adaptation**
- V. **Conclusions and lessons learned**

“Climate change mitigation and adaptation in the RDPs: assessing the scope and measuring the outcomes”



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MINISTRY OF AGRICULTURE, FOOD AND ENVIRONMENT

DG Rural Development and Forest Policy

- “It defines Spanish Strategic Plan”
- “It defines Spanish National Framework containing compulsory measures and common elements for all regional RDPs”
- “It coordinates RDP – MA”

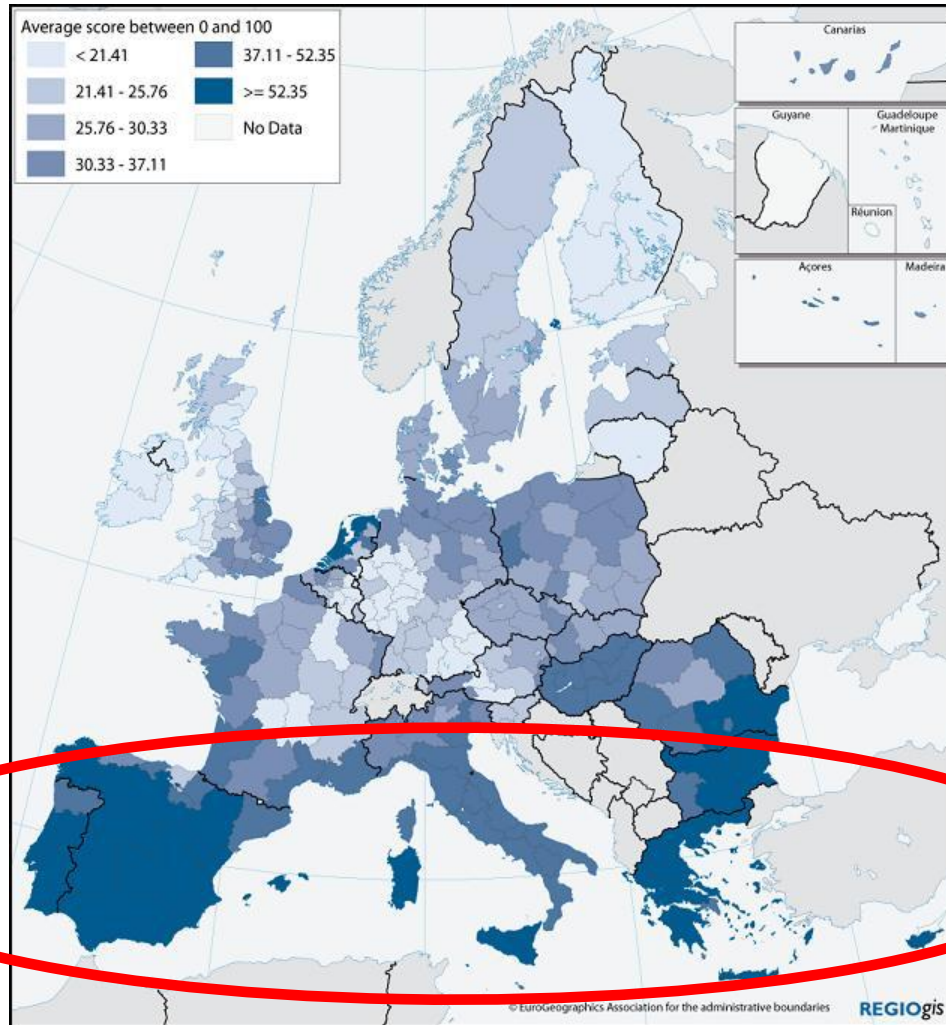
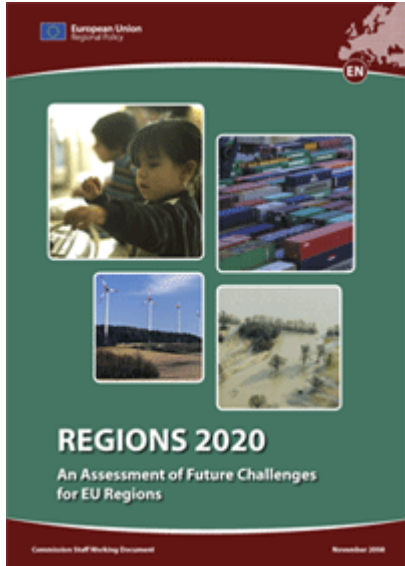
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Climate change:

“...Existing conditions are projected to worsen in the Mediterranean regions”.

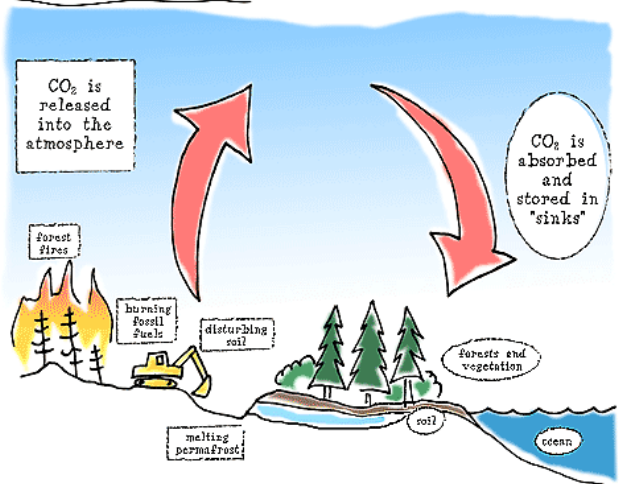
Spain is located in an area particularly vulnerable to climate change



Forests and wooded lands: capital role in Climate Change



The Carbon Cycle:



CC-mitigation
(as carbon sinks)



<storing water>



<purifying water>



<preventing flooding>

CC-adaptation
(as water resources conservation)



2007 Spanish Strategy on CC Adaptation

ESTRATEGIA ESPAÑOLA DE CAMBIO CLIMÁTICO Y ENERGÍA LIMPIA

HORIZONTE 2007- 2012 -2020

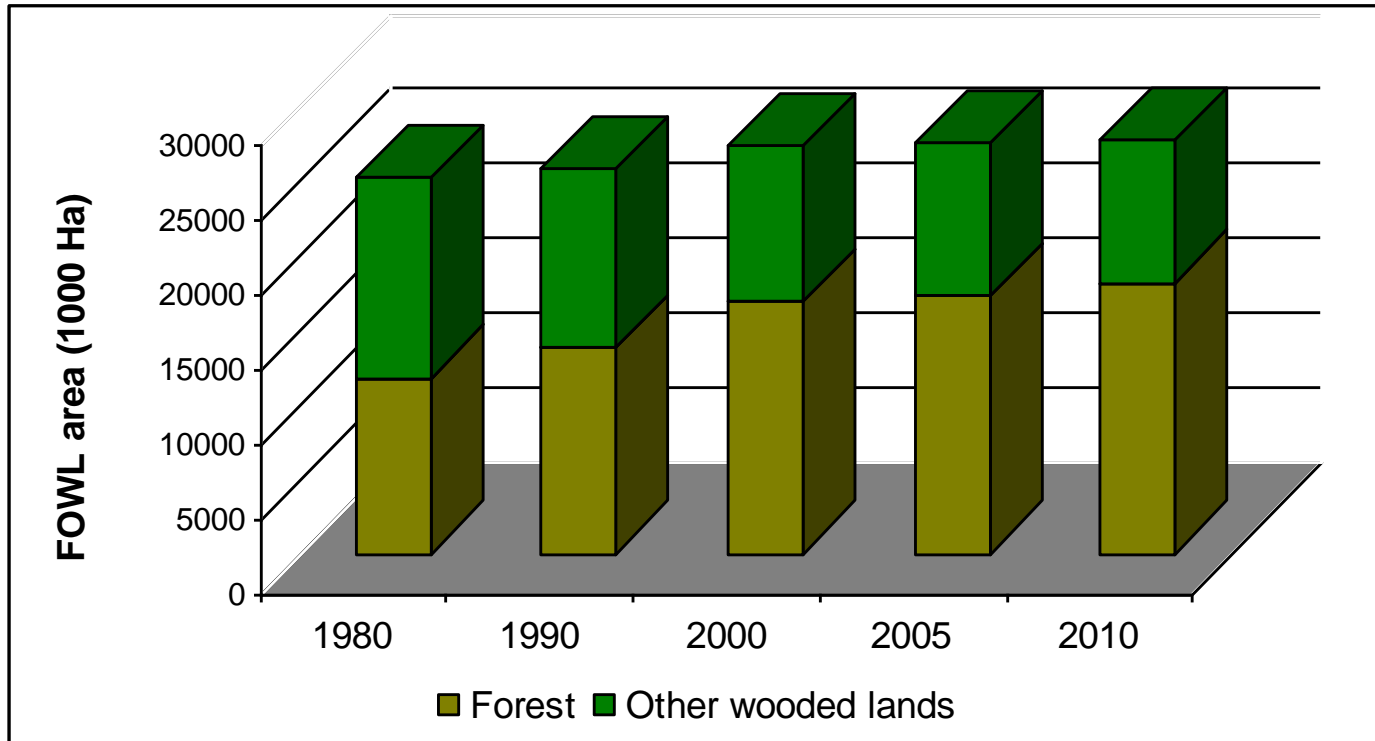


ADDRESSES FOREST FIRES PREVENTION BASED ON FOREST MANAGEMENT
AS A KEY ACTION
(one of them)



Forest and other wooded lands have increased (following FAO standards)

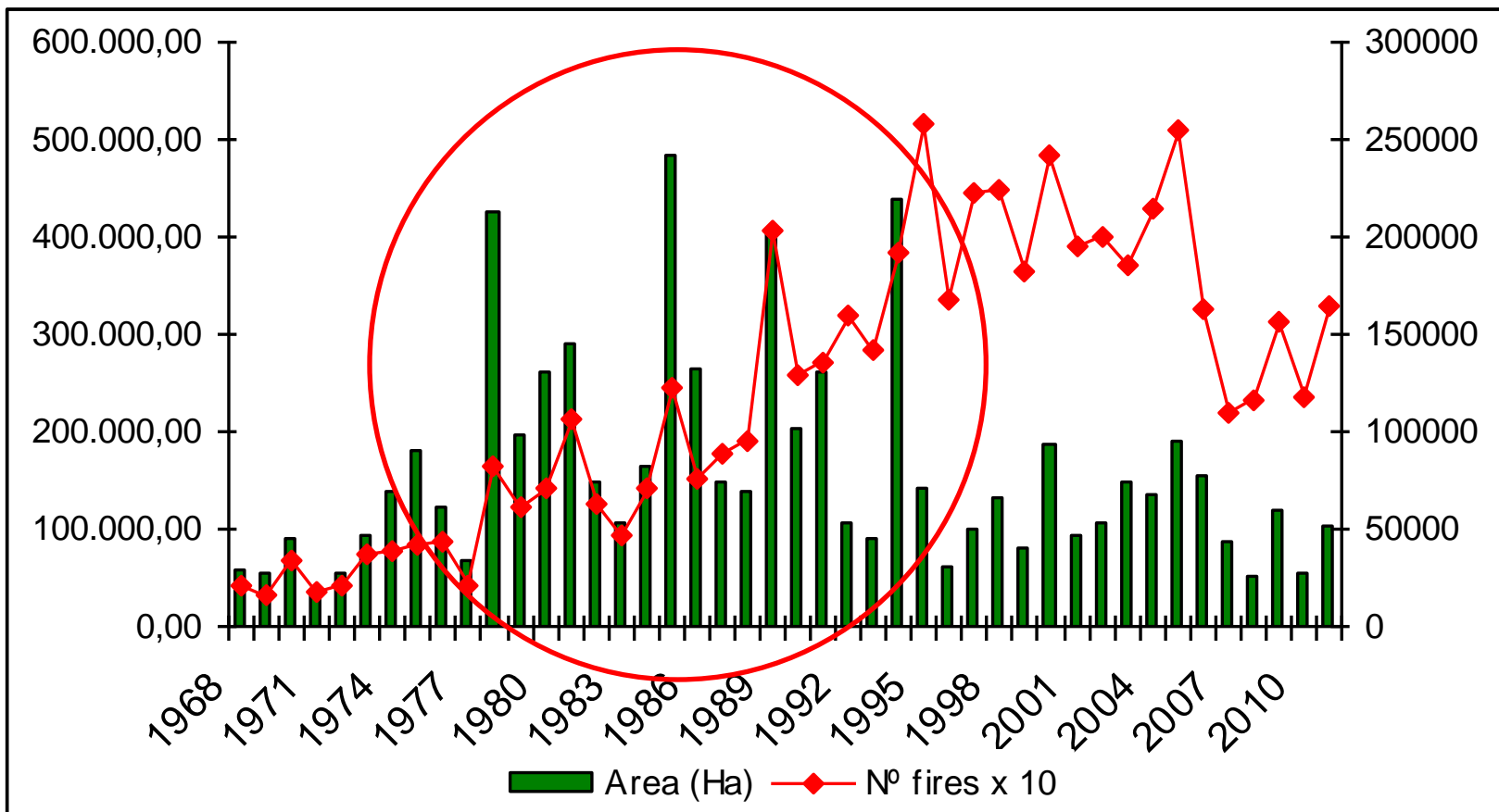
- 1980: 25,29 million Ha (50,04% national area)
- 2011: 27,74 million Ha (54,91% national area)





Wildfires in Spain

Since the end of 70s to mid 90s: some years MORE THAN 400.000 Ha burned areas / per year



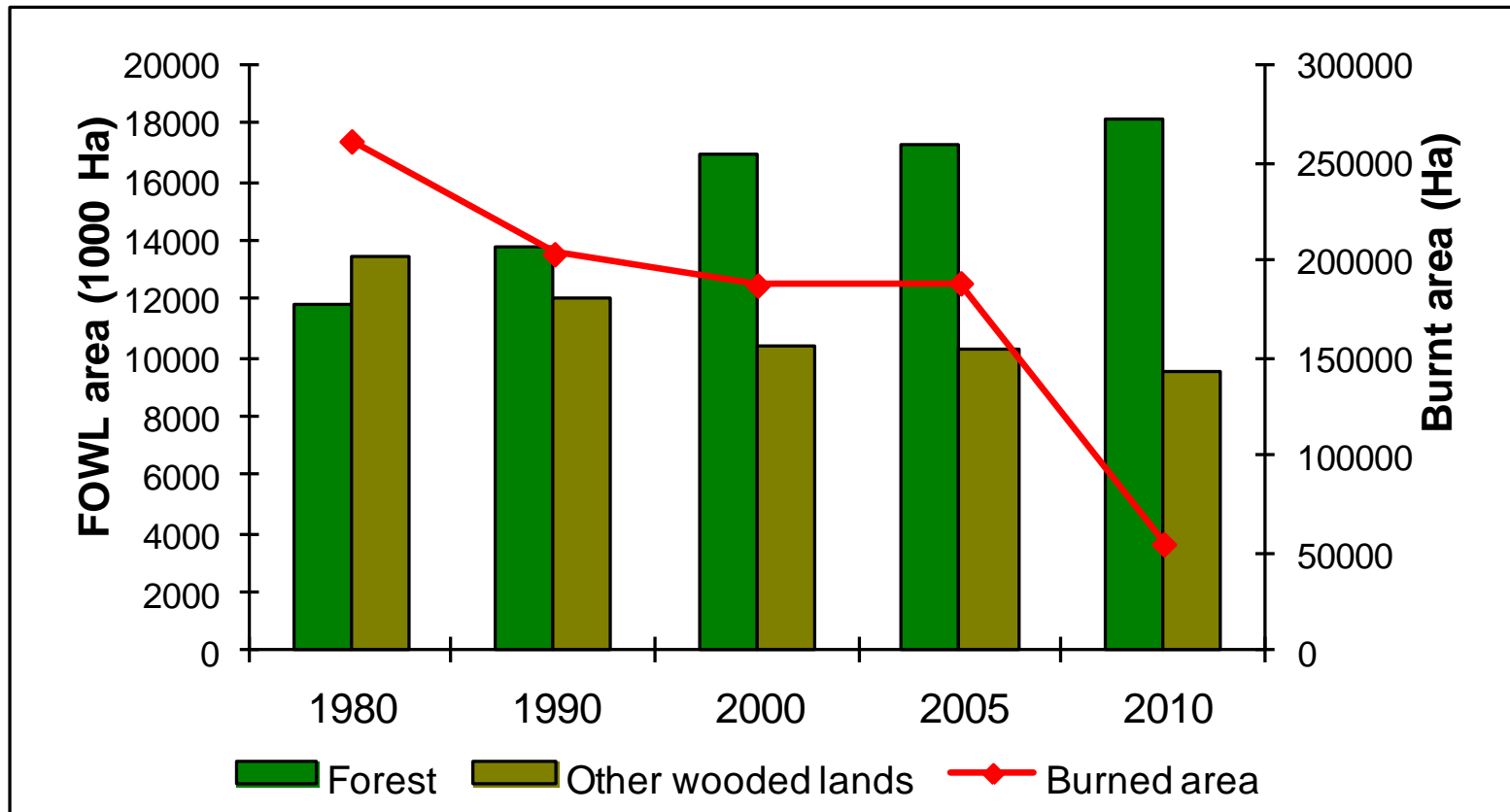
(ALMOST HALF OF CYPRUS AREA WAS BURNT EACH YEAR)



Wildfires in Spain

Since mid 90s, fire prevention and fighting has reduced the problem

- N^o of fires still HIGH due to forest and other wooded lands still increasing:



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<http://forest.jrc.ec.europa.eu/effis/>

Burnt areas in 2000, nuts 1 (>0 ha)

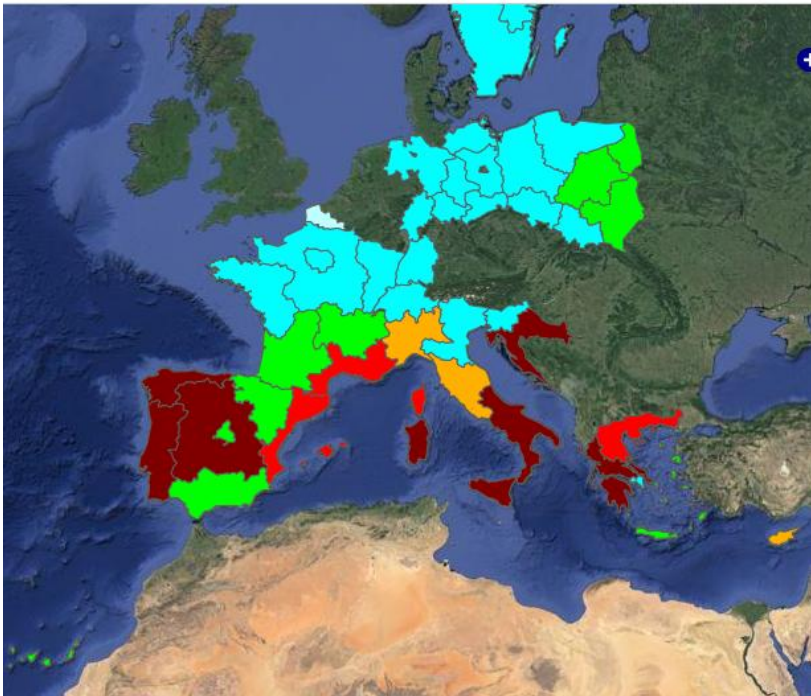
- No Fires
- 1 - 1000 ha
- 1001 - 7500 ha
- 7501 - 50000 ha
- 15001 - 30000 ha
- >30000 ha

◀ - Opacity + ▶

informatio

remov

2000



Burnt areas in 2011, nuts 1 (>0 ha)

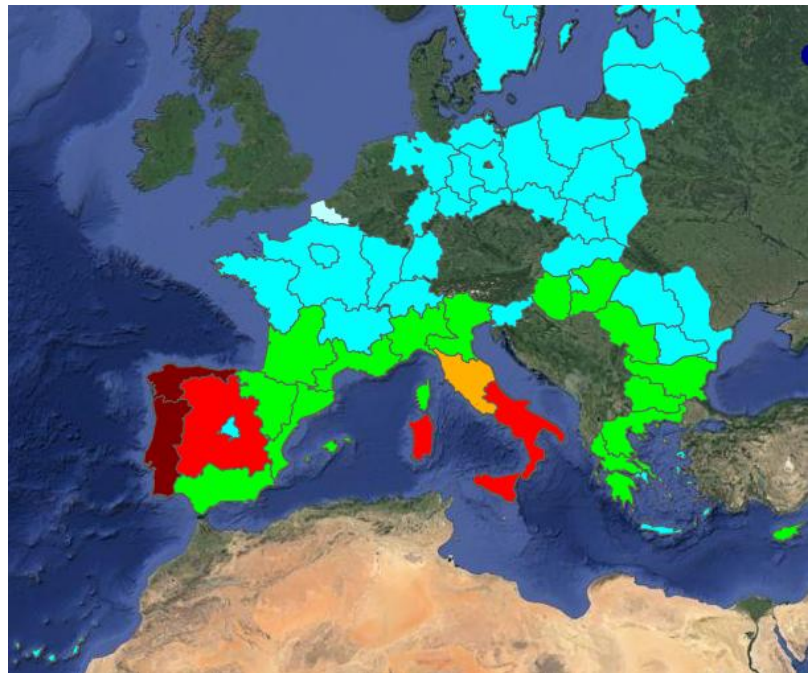
- No Fires
- 1 - 1000 ha
- 1001 - 7500 ha
- 7501 - 50000 ha
- 15001 - 30000 ha
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◀ - Opacity + ▶

information

remove

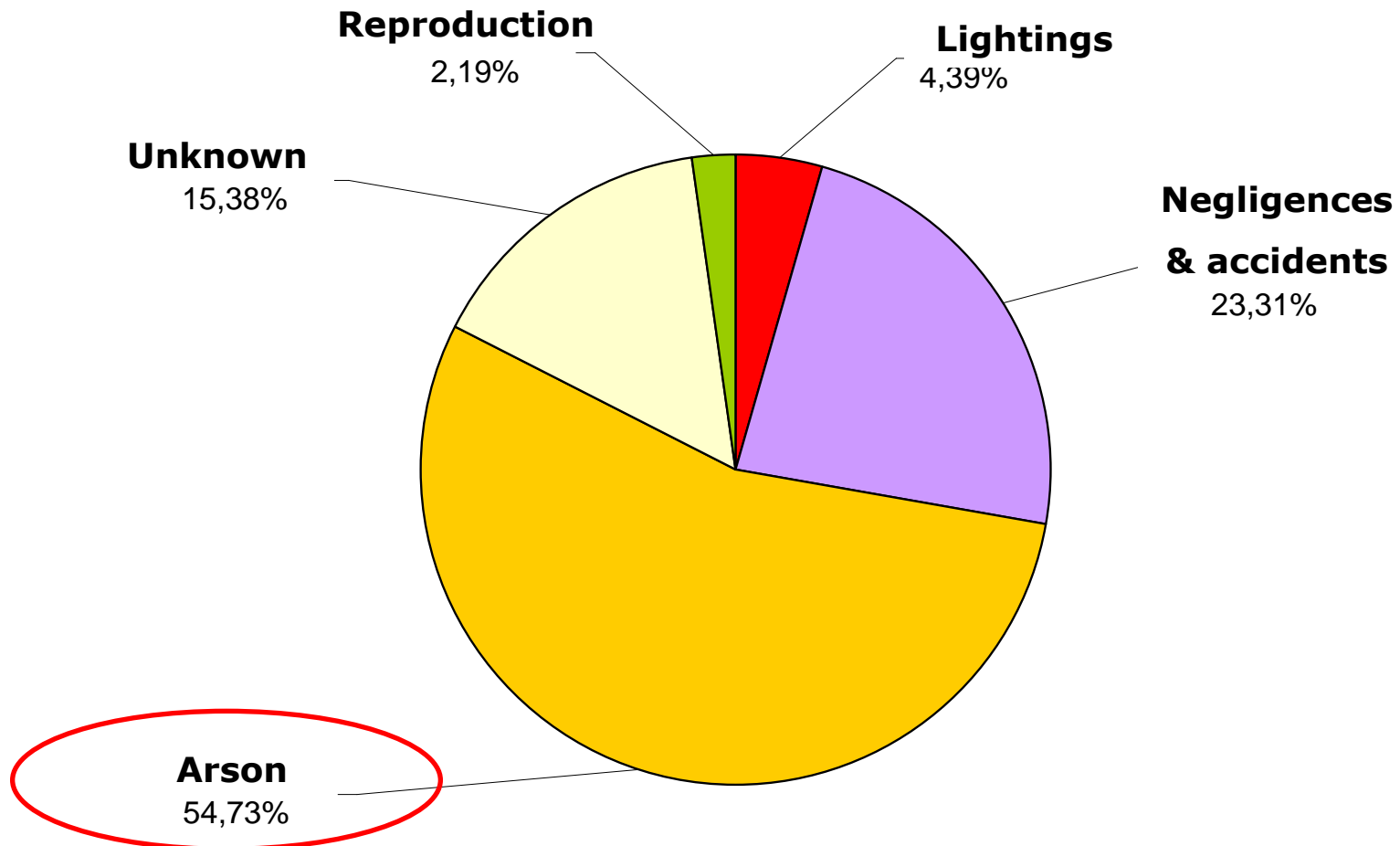
2011





Causes of Wildfires in Spain

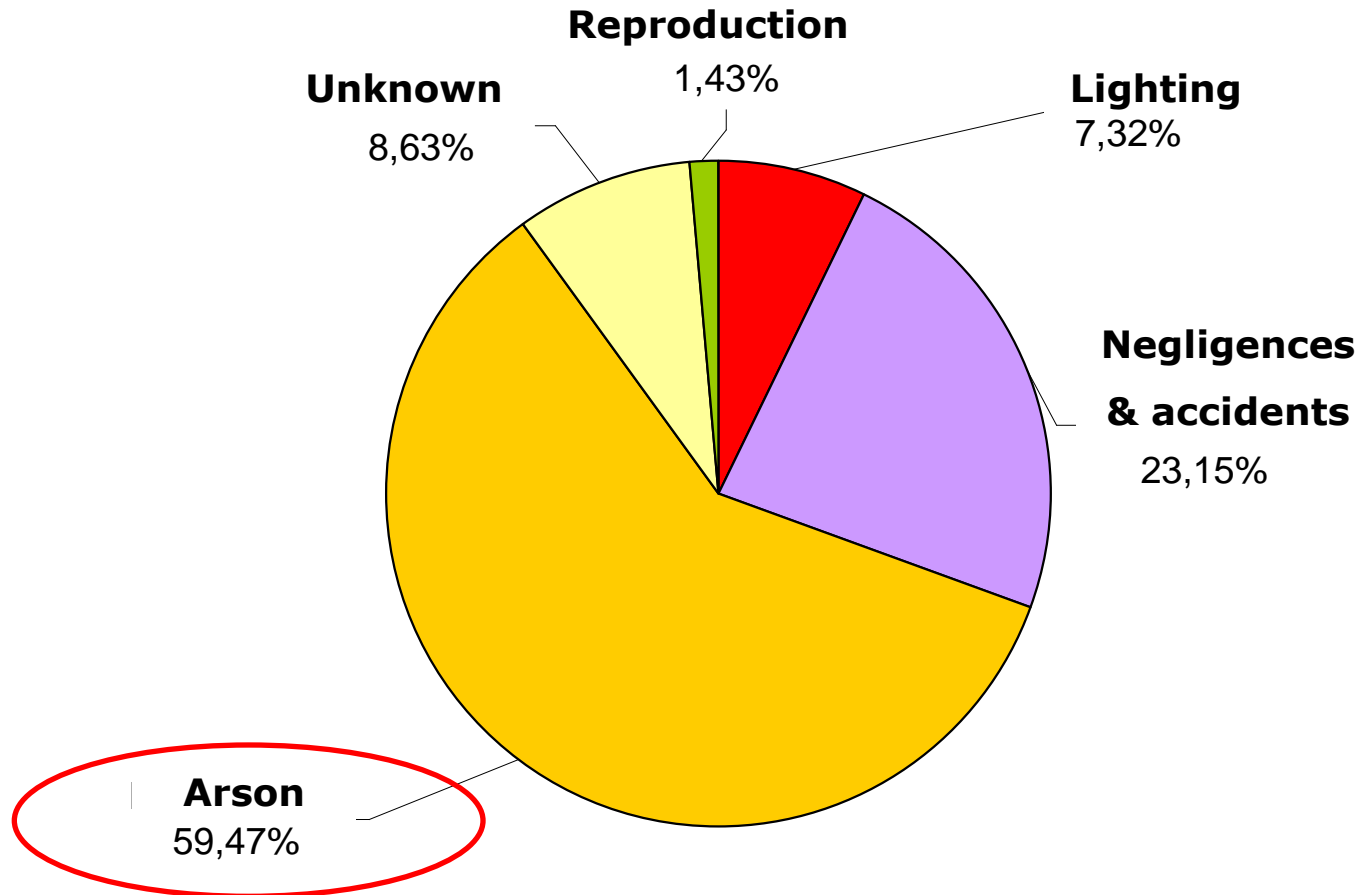
% Fires by causes 2001-2010





Causes of Wildfires in Spain

% Burnt surface by causes 2001-2010





Causes of Wildfires in Spain

% Arson with known motivation (72.91%) in 2009

- Agricultural burning 36.37%
- Regenerate pastures burning 33.02%
- Several others:
 - Vandalism 5.67%
 - Pyromaniacs 4.67%
 - Related to hunting 3.52%
 - Etc.

% Fires due to negligences and accidents

- Agricultural burning 31.2%
- Regenerate pastures burning 16.7%
- Shrub burning 17.4%
- Engines and machines 16.7%
- Others 18.1%:
 - Fireworks
 - Children's games
 - Etc...



Causes of Wildfires in Spain

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- Regenerate pastures burning 33.02%

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Several others:

- Pyromaniacs 4.67%
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- Etc.

Most of fires are related to farming and traditional rural activities

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Looking for solutions:

- To programme forest fires prevention measure as a **COMPULSORY** rural development measure in **ALL SPANISH RDPs 2007-2013**:

→ VEGETATION MANAGEMENT



And



→ ENGAGEMENT OF RURAL ACTIVITY IN WILDFIRE PREVENTION



2007-2013 SPANISH COMPULSORY MEASURE: WILDFIRE PREVENTION

Purpose:

TO REDUCE DESERTIFICATION PROCESSES CAUSED by forest loss due to **WILDFIRE** or natural disasters, as well as **TO REDUCE CLIMATE CHANGE NEGATIVE CONSEQUENCES** on forest and woodland through carbon sequestration and CO₂ emissions avoidance.

Measure programming:

- Linear actions: different types of fire breaks
- Prevention silviculture: clear cutting, forest structure modification, grazing...
- Infrastructures: trails, water points, lookouts...



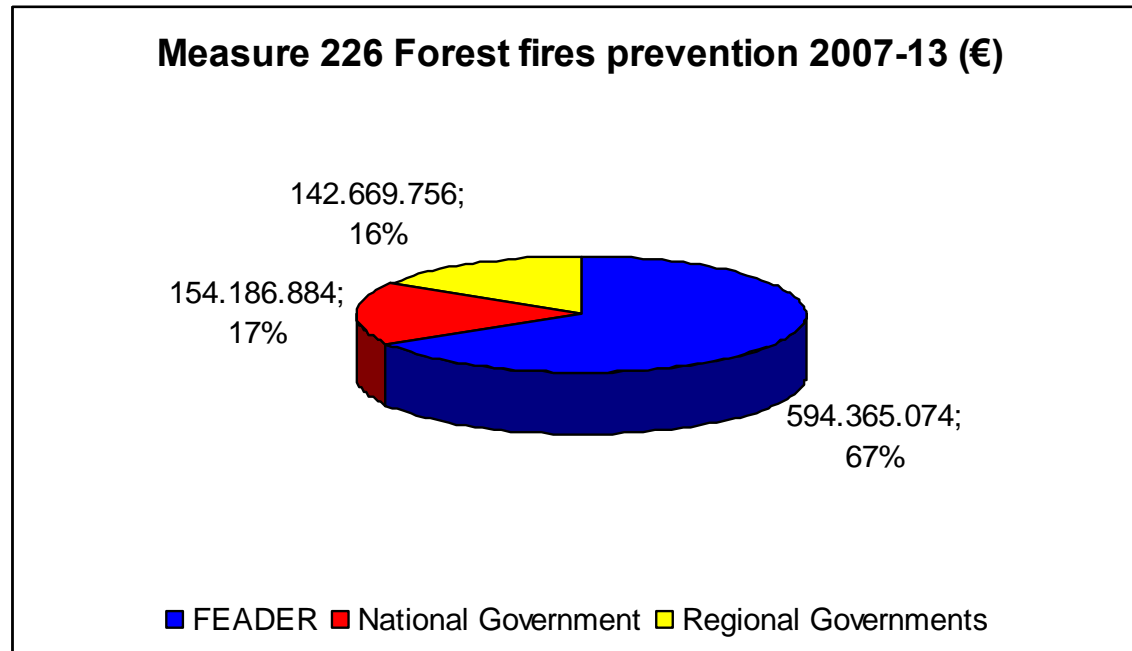
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2007-2013 SPANISH COMPULSORY MEASURE: WILDFIRE PREVENTION

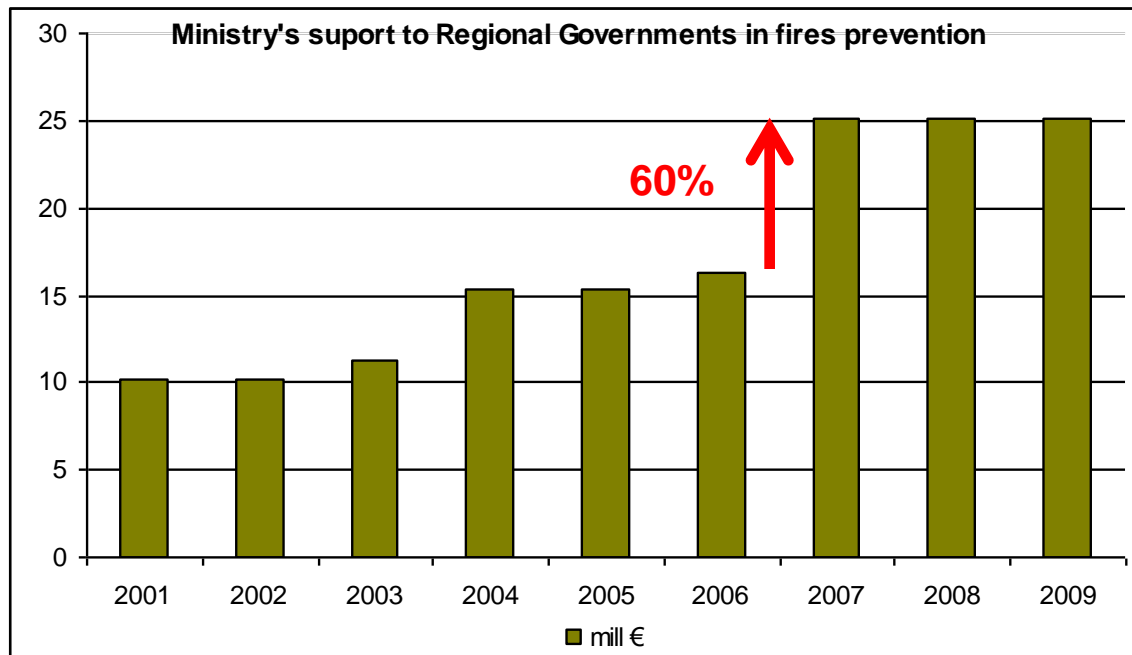
Cofinanced by EAFRD + Spanish Ministry + Regional Governments





2007-2013 SPANISH COMPULSORY MEASURE: WILDFIRE PREVENTION

Spanish Ministry increase its support to regional Governments for fires prevention



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How can monitoring and evaluation framework of fire prevention measures be improved?

Proposal.

A new way to collect information related to this measure would be more useful:

- Type of action = several options (firebreak, trail, grazing...)
- Expenditure (€)
- Unit of measure = several options (Ha, Km, units...)
- Location (Municipality)

It would allow an in depth analysis of operations carried out: effectiveness, efficiency, quality, impact, ...

- FOR EXAMPLE: EFFICIENCY ASSESSMENT (GEOGRAPHICAL INFORMATION LINKED TO WILDFIRE FOREST DUE TO FOREST FIRE NATIONAL STATS PRODUCED AT MUNICIPALITY LEVEL → FIND OUT CORRELATIONS AMONG ACTIONS AND CC ADAPTATION / MITIGATION AND WILDFIRE PREVENTION MEASURES)



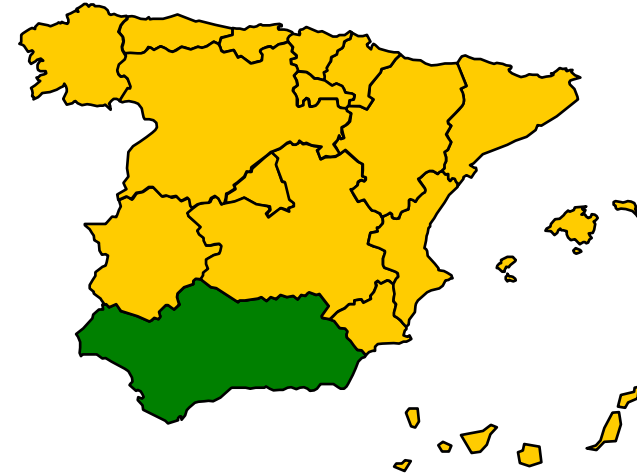
2007-13: Good practices identification-analysis and sharing. A complementary way to Monitoring and Evaluation

Andalucía: RAPCA network

- Hiring local shepherds for grazing in firebreaks

→ Strong scientific base and economic support

▶ 2005:	5 shepherds	520 Ha	1.946 animals
☺ 2010:	67 shepherds	2.200 Ha	34.000 animals

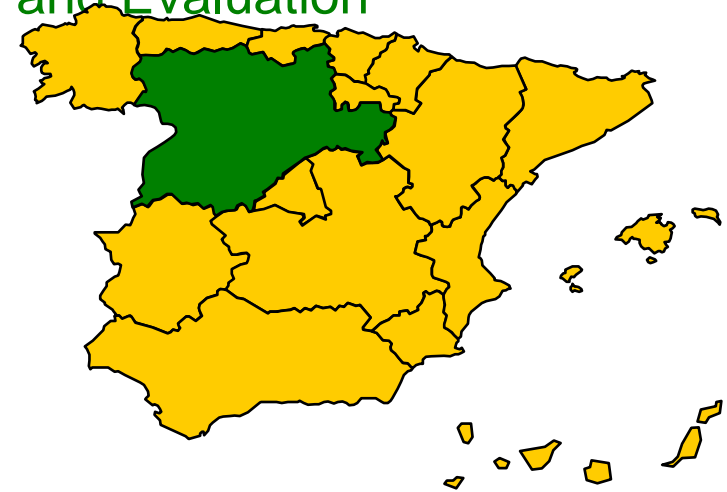


Source: Junta de Andalucía

<http://www.juntadeandalucia.es/medioambiente/site/portalweb/menuitem.7e1cf46ddf59bb227a9ebe205510e1ca/?vgnnextoid=522dbc3b5864b310VgnVCM2000000624e50aRCRD&vgnextchannel=e1d5a5f862fa5310VgnVCM100001325e50aRCRD>



2007-13: Good practices identification-analysis and sharing. A complementary way to Monitoring and Evaluation



Castilla y León: Economic support to define and implement forest-grazing plans

- Farmers are part of vegetation reduction actions, focusing on fire prevention
- Farmers refuse using fire as vegetation control action

→ High landscape and biodiversity improvements

→ High reduction on n° fires

▶ Regional: reduction 6%

☺ Specific counties: ¡39% reduction!

Source: Junta de Castilla y León

[http://www.jcyl.es/web/jcyl/AgriculturaGanaderia/es/Plantilla100/1284176574889/ / /](http://www.jcyl.es/web/jcyl/AgriculturaGanaderia/es/Plantilla100/1284176574889/)

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2014-20: KEEP WORKING!

- Wildfire prevention is still a measure of 2014-2020 Spanish National Framework: COMMON ELEMENT
- New regulations 1305/2013 mentions “grazing” animals promotion as a potential fire prevention measure. It supports Spanish guidelines for fire prevention.
- Challenges:
 - To improve monitoring and evaluation framework. CMEF is not enough
 - To increase number of actions linking fire prevention to population (grazing)

Article 24

Prevention and restoration of damage to forests from forest fires and natural disasters and catastrophic events

1. Support under point (c) Article 21(1) shall be granted to private and public forest-holders and other private law and public bodies and their associations and shall cover the costs for:

(a) the establishment of protective infrastructure. In the case of firebreaks, support may also cover aid contributing to maintenance costs. No support shall be granted to agricultural related activities in areas covered by agri-environment commitments;

(b) local, small scale prevention activities against fire or other natural hazards; including the use of grazing animals;

(c) establishing and improving forest fire, pest and diseases monitoring facilities and communication equipment; and

(d) restoring forest potential damaged from fires and other natural disasters including pests, diseases as well as catastrophic events and climate change related events.



2014-20: To increase number of actions linking fire prevention to population (grazing)



- Carried out by rural population
- Environment friendly
- Cheaper
- Value added to rural livelihoods

VS

- Carried out by public administration
- Some environmental impacts
- More expensive
- Not always provide value added to rural livelihoods





Any questions?



For further information, please contact Jorge Rodriguez
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