CONTRIBUTIONS AND CHALLENGES OF THE FOREST SECTOR TO TACKLE CLIMATE CHANGE
LA RIOJA REGION AND ITS FOREST SECTOR

More than amazing wine

>60% forest land
70% public forests

5,000 km²
Spanish forest administration has been working since 19th century for planting, avoiding deforestation and obtaining goods and services from forests. From 1994 EU CAP´s founds have also contributed to these goals.

- **Goods**: timber, fruits, mushrooms, extensive livestock, hunting, firewood, biomass, etc.
- **Services**: capture of carbon, control of erosion, regulation of temperatures, increase of water resources, prevention of floods, improvement of air quality, etc.
There's still a lot to plant for reducing the erosion in SLOPES, and its importance increases in the context of climate change.

But also on:

- River Banks
- Productive Forests
- Burnt Forests

FUTURE CARBON SINKS = FORESTATION
DIFFICULTIES AND CHALLENGES

INVESTMENT: 90% of forest funds come from:
- **CAP** (Common Agricultural Policy)
- **EAFRD**: EU Agricultural Fund for RD
- **RDP** (Rural Development Program)

WOOD PASTURES NOT FULLY ELIGIBLE YET

**SCENARIOS OF CLIMATE CHANGE IN THE SELECTION OF SPECIES FOR PLANTING**

https://www.larioja.org/medio-ambiente/es/montes
AVOIDING DEFORESTATION

a) IMPLEMENTING FOREST LAWS: 3 limitations: for cutting, plowing on slopes and some changes of land use. Also the obligation to replant after cutting.

DIFFICULTIES AND CHALLENGES:
This public service is not recognized or valued. Yet it’s perceived as a limitation to economic development and individual freedom, rather than a contribution to tackle the climate change.

b) FOREST FIRES PREVENTION AND EXTINCTION: making preventive silviculture and extinguish forest fires we avoid the loss of carbon sinks (trees) and limit the carbon release to the atmosphere during the combustion.

DIFFICULTIES AND CHALLENGES:
- Investment (RDP): expensive actions 2,5M€ extinction and 2,5 M€ preventive silviculture (firebreaks, clearings, pruning and reduce biomass)
- Communication: 3 messages
  - Working all year, not only in summer.
  - Prioritization
  - The truth about the causes
Wood is called to play a key role in the transformation of the current economy based on materials and fossil fuels with high CO2 emissions, to a low carbon bioeconomy based on natural and renewable energies and materials.
NEW USES
NEED RESEARCH+DEVELOPMENT+INDUSTRY IMPLEMENTATION+
A RAISED AWARENESS TO INCREASE DEMAND

El mundo se rinde a los rascacielos de madera
España empieza a despegar en el uso de este material sostenible, que ya es clave en la edificación de algunos países

Wooden windows? New material could replace glass in solar cells and buildings
Published May 31, 2016
Windows and solar panels in the future could be made from one of the best — and cheapest — construction materials known: wood. Researchers at Stockholm’s KTH Royal Institute of Technology have developed a new transparent wood material that’s suitable for mass production.

Diario de Sevilla

Las bicicletas de madera ‘made in’ Dos Hermanas que montan en Holanda

Bioplastics and paper by Vibers
Vibers products are made from miscanthus. Miscanthus or elephant grass is a fast-growing crop that captures CO2, four times more than European wood. Miscanthus grows on marginal land and can be processed into bioplastics and biobased materials.

www.vibers.nl
ALARM ABOUT OVERHARVESTING?

NO NEED

SUSTAINABLE forestry: based on forest science
  ✓ Sustainable
  ✓ Planned
  ✓ Integrated

FORESTRY & CONSERVATION integration
  ➢ Conservation is within the principles of forestry
  ➢ Shared territory: Europe: 50% of the Natura 2000 is forest.
    La Rioja: 80% of the Natura 2000 are public forests managed by forest administration.
  ➢ Coordination between forest management and conservation departments
MOBILIZATION OF WOOD AND WOODY BIOMASS

There is margin
(EU: 65%, ES 35%, La Rioja 25%)
Find markets; esp. for hard woods
Diversify and increase the demand
Mobilize owners in unmanaged forests
Facilitate the selling of wood

Application for wood buyers

SIMWOOD PROJECT

Evolution of the harvested timber volumes in La Rioja
SILVICULTURE AS A CARBON SINK

**Development of methodologies:** Forestry is considered as a carbon sink at the theoretical level since the Kyoto Protocol and the successive climatic summits.

- Researchers
- Tech-companies
- Administration

**But methodologies have not been developed to measure it, and so silviculture is not taken into account yet.**

Study carbon sinks (LULUCF sector) in managed forest masses of *Pinus halepensis* and *Pinus pinaster*

http://lifeforestco2.eu/

**Adaptative Silviculture**

There are no new methods but adaptative silviculture reinforces some treatments:

- **Diversify** structures (vertical and areal) and species.
- **Reduce competition** for water through thinning.
- We have to take special care of the smaller plants that have been reproduced. (keep an eye on regeneration)
- Respect certain **extra-old** and **dead** trees.
- **Increase** the age of the final cut.
- Fire preventive treatments are especially important.
IMPROVING EFFICIENCY: DIGITIZATION AND INNOVATION

PROJECT OF FOREST MANAGEMENT CARTOGRAPHY

Gobierno de La Rioja Agricultura, Ganadería y Medio Ambiente

dieroja larioja.org Tragsatec

OPERATIONAL GROUP OF THE EUROPEAN INNOVATION PARTNERSHIP

Real time cutting control

Change is the constant. The continuous learning, the way.

GEDI
High Resolution Laser Ranging of Earth’s Forests & Topography On ISS

eLagri aGriculture & innovation

European Space Agency

NASA
And if we want society to accompany us: **EDUCATION**

Bridge the cognitive gap between **forests** and **products**: through education on sustainable forest management

*Recording video in La Rioja*
ALIGNED WITH INTERNATIONAL FRAMEWORK

EU forest strategy on track to achieve its 2020 aims

The European Bioeconomy Strategy

Renewable Energy Directive EU

COP21 • CMP11

PARIS 2015

CONFERENCIA DE NACIONES UNIDAS SOBRE CAMBIO CLIMÁTICO 2015

The EU Biodiversity Strategy for 2020

SUSTAINABLE DEVELOPMENT GOALS

Reading recommendation: Report EIP-AGRI Focus Group Forest Practices & Climate Change
RESUME OF THE ONGOING MITIGATION AND ADAPTATION FORESTRY ACTIONS IN LA RIOJA REGION:

**MITIGATION**
- PLANTING NEW FORESTS
- AVOIDING DEFORESTATION: IMPLEMENTING FOREST LEGISLATION, DEFFENDING FORESTS FROM FIRES
- SUBSTITUTION: HARVESTING FOR SUPPLYING WOOD TO BIOECONOMY IN SUBSTITUTION OF OTHERS MATERIALS AND ENERGIES SOURCES
- DEVELOPING METODOLOGIES TO TAKE INTO ACCOUNT FORESTRY AS A CARBON SINK IN MANAGED FORESTS

**ADAPTATION**
- ADAPTATIVE SILVICULTURE
- PREVENTIVE SILVICULTURE AGAINST FIRES, STORMS AND DISEASES

CAP funds
Education
Technology
Stay connected, coordinate with other sectors, and in line with international, national and regional strategies. Because only from a joint vision we can act in a coherent and effective way against climate change.

Thank you very much

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