

# AGROFORESTRY INNOVATION NETWORKS

## BIOECONOMY AND CLIMATE ACTION WEBMINAR

Economic aspects of integrating climate change  
mitigating agroforestry in EU farming

M. Rosa Mosquera Losada  
University of Santiago de Compostela  
Spanish Agroforestry Association



This project has received funding from  
the European Union's Horizon 2020  
research and innovation programme  
under grant agreement No 727872.



# Agroforestry



Agroforestry definition



Agroforestry and climate change



Agroforestry and bioeconomy



Agroforestry and CAP

# Agroforestry



**What's  
agroforestry?**



CLIMATE

SOIL

Tree or shrub  
Woody perennials

Silvoarable

Silvopasture



Crop



Livestock

Light

Tree/shrub density, age and distribution



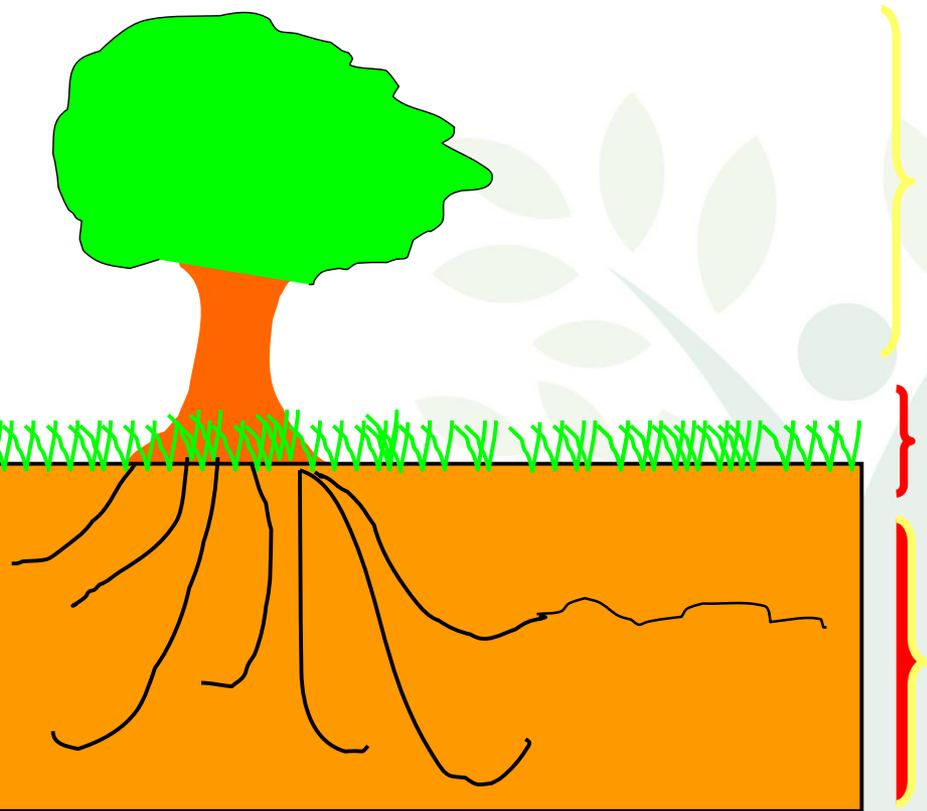
# Agroforestry



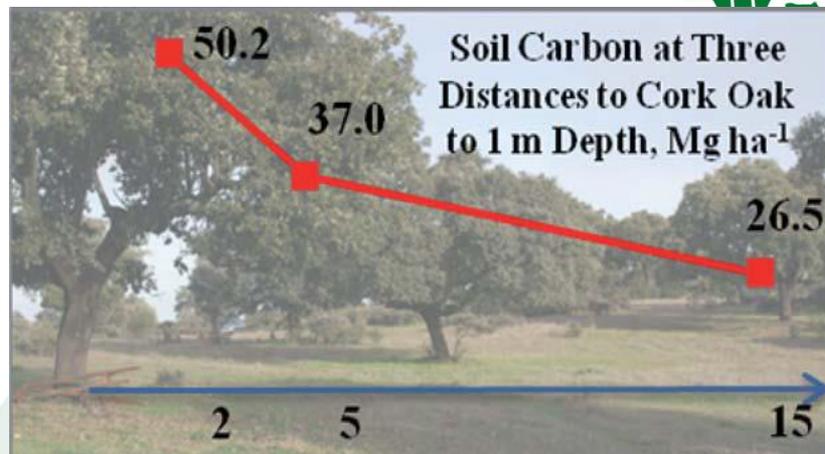
Agroforestry and  
climate change



# Climate change mitigation



Soil Carbon in deeper soil layers



Wildfire risk reduction

# Climate change adaptation

## Summer droughts



## Extreme events



# Agroforestry



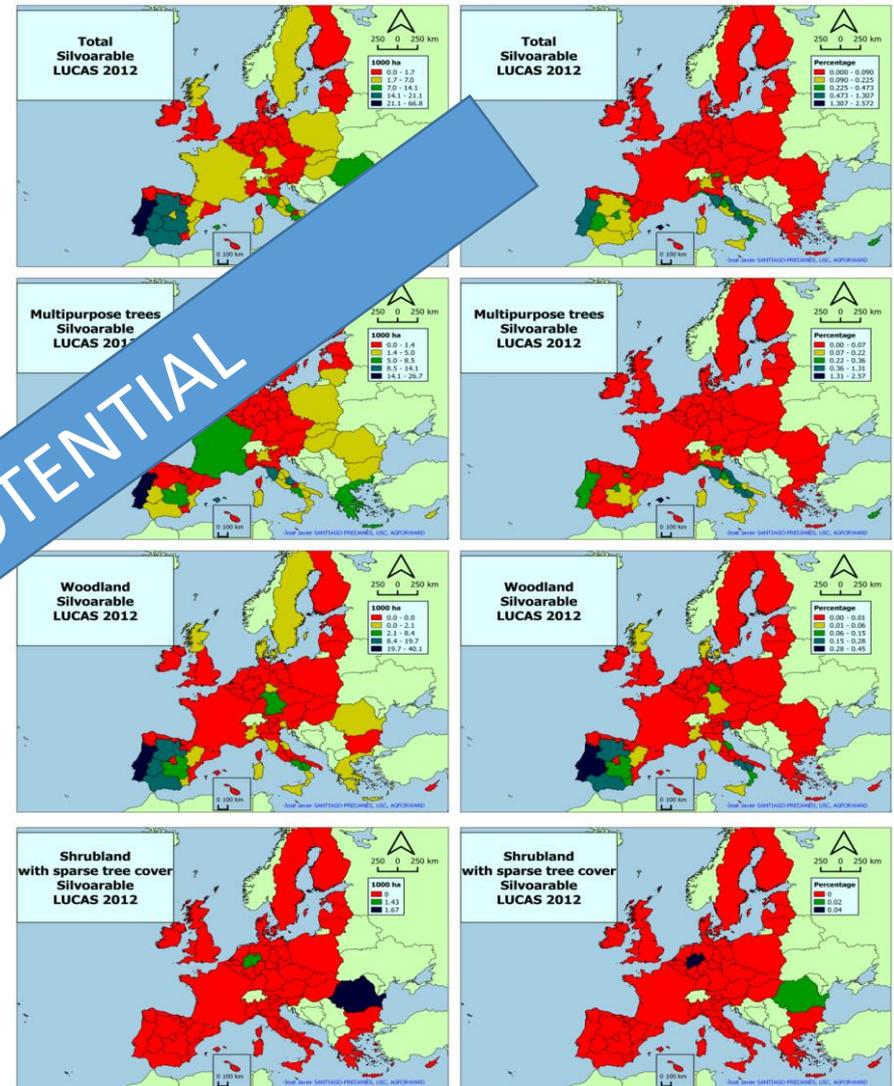
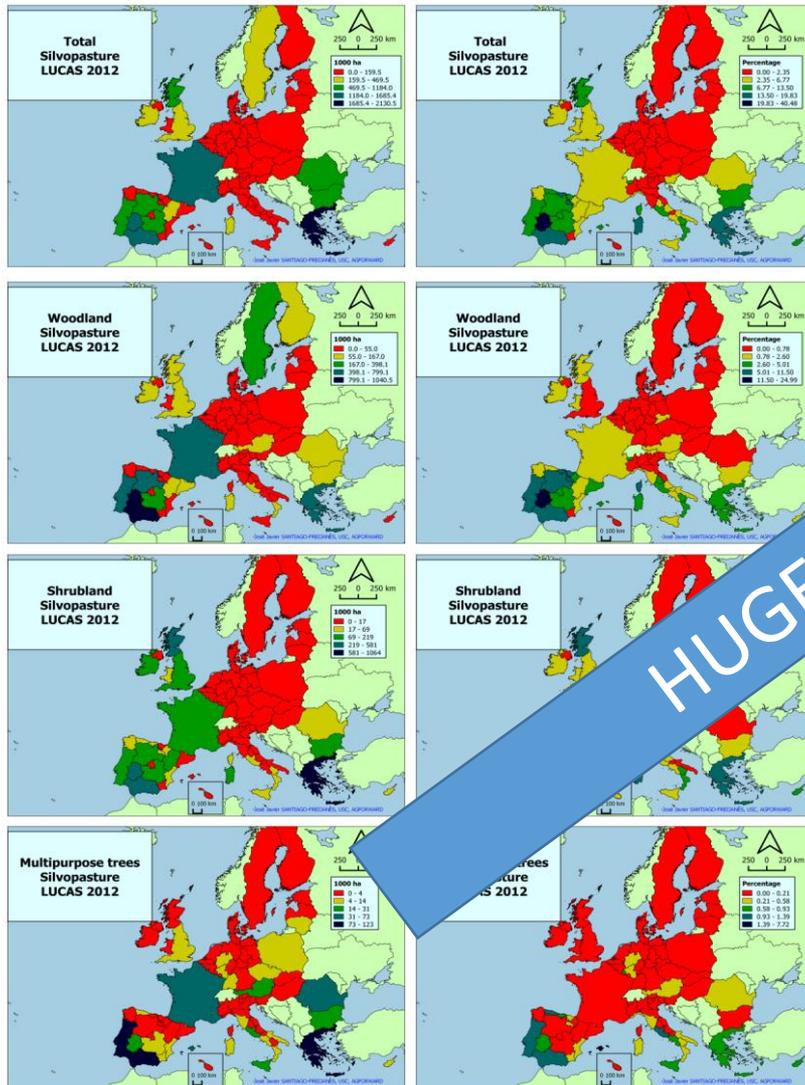
Agroforestry and  
bioeconomy



# WHERE?

< 10% Grasslands

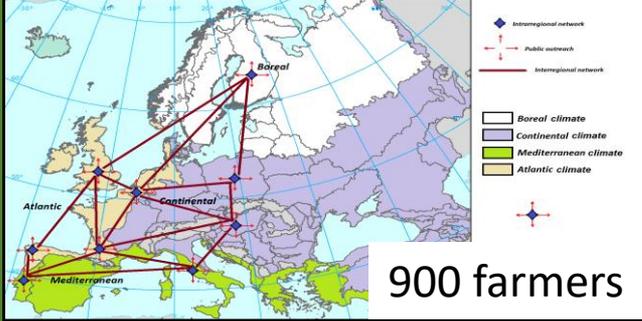
<0.01% Arable lands



HUGE POTENTIAL

Figure 1. Area (left) and proportion (right) of European land use associated with all silvopasture, woodland silvopasture, shrubland silvopasture, and silvopasture with multi-purpose trees

Figure 1. Silvoarable practices linked to permanent crops (top), woodland (medium) and shrubland with sparse tree cover expressed as percentage (left) and hectares (right) per region in Europe



# AFINET

## Challenges

- Technical
- Economic**
- Education
- Policy

## Economic



### Alternative evaluation

- organic AF
- conventional AF

### Bioeconomy development

- New products
- Labelling
- New market types
- Infrastructure

**SOLUTION: INNOVATION DEVELOPMENT**

- Business Plans
- Infrastructure creation
- Cooperatives development

**CAP PROMOTION**

# Agroforestry



Agroforestry and  
CAP

# Agroforestry and CAP What should be done?

## **Pillar I**

- \* Recognized in agricultural lands
- \* Multiple use + woody perennials meaning extra payment (e.g. 20-30%)

## **Pillar II**

- \* Implementing AF measure meaning not to lose direct payment
- \* Develop incentives to foster woody perennials bioeconomy

# GLOBAL Recommendation

A **European Agroforestry Strategy** should be designed to foster agroforestry in Europe. Such a strategy should include aspects related to current promotion, education, innovation and research on agroforestry at a European level, and provide guidance for national agroforestry strategies.

# References

[Mosquera-Losada MR, Santiago-Freijanes JJ, Rois M, Moreno G, den Herder M, Aldrey JA, Ferreiro-Domínguez M, Pantera A, Pisanelli A, Rigueiro-Rodríguez A 2018 Agroforestry in Europe: a land management policy tool to combat climate change. Land Use Policy 76:603-613](#)

[Mosquera-Losada MR, Santiago-Freijanes JJ, Pisanelli A, Rois M, Smith J, den Herder M, Moreno G, Ferreiro-Domínguez N, Malignier N, Lamersdorf N, Balaguer F, Pantera A, Rigueiro-Rodríguez A, Aldrey JA, Gonzalez-Hernández P, Fernández-Lorenzo JL, Romero-Franco R, Burgess PJ \(2018\) Agroforestry in the European Common Agricultural Policy. Agroforestry systems 92:1117-1127](#)

[Santiago-Freijanes JJ, Pisanelli A, Rois-Díaz M, Aldrey-Vázquez JA, Rigueiro-Rodríguez A, Pantera A, Vity A, Lojka B, Ferreiro-Domínguez N, Mosquera-Losada MR 2018. Agroforestry development in Europe: Policy issues. Land Use Policy, 76, pp.144–156.](#)

<https://www.sciencedirect.com/science/article/pii/S0264837717310670>  
[Santiago-Freijanes JJ, Mosquera-Losada MR, Rois-Díaz M, Ferreiro-Domínguez N, Pantera A, Aldrey JA, Rigueiro-Rodríguez A 2018. Global and European policies to foster agricultural sustainability: agroforestry. Agroforestry Systems, pp.1–16.](#)

[Santiago-Freijanes JJ, Rigueiro-Rodríguez A, Aldrey JA, Moreno G, den Herder M, Burgess, Mosquera-Losada MR 2018. Understanding Agroforestry practices in Europe through landscape features policy promotion. Agroforestry Systems, pp.1–11.](#)

[AGFORWARD 2017 Policy Report 1](#)

[AGFORWARD 2018 Policy Report 2](#)

AFINET 2020 [Policy report](#) and [presentation](#)

Agroforestry for farmers: [www.agroforestry.net.eu](http://www.agroforestry.net.eu)

**Thanks a lot!**

mrosa.mosquera.losada@usc.es