

Roots to Riches
**Examining the role of Mediterranean oaks and other broadleaves in
the forest-based bioeconomy**

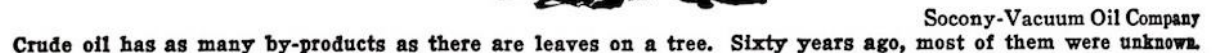
**What role for Mediterranean broadleaves in
the forest-based bioeconomy?**

EFI Annual Confernece
Alghero, September 26, 2018

Inazio Martínez de Arano
Mediterranean Regional Office of the European Forest Institute

www.efimed.efi.int

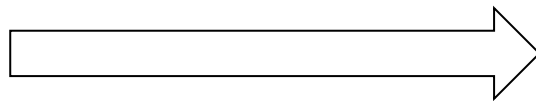




About the bioeconomy

INNOVATION
Social, technological,
managerial you name it

Fuel based
Linear economy



Circular,
Green, bio-based

An economic sector?

The Biologisation of the
economy?

A transformation of main Economic sector?

PRESS RELEASE

Berlin, 10 May 2017

BIONNALE 2017: Biologisation of Industry Brings Opportunities
Development of products and company mergers





What can forest bioeconomy do for greening key sectors?

Main sectors of green economy (UNEP 2011)

- Natural capital
- Renewable energy
- Manufacturing
- Waste
- Buildings
- Transport
- Tourism
- Cities

Main sectors of green economy

(Burkart, K, Mother Nature Network)

- Land management
- Renewable energy
- Green buildings
- Sustainable transport
- Water management
- Waste management



The bioeconomy is fluid concept

Main visiones on the bioeconomy
(Bugge 2016)

- **bio-technology** centred pharma and research/ commercialisation of bio-techs. Solutions for multiple sectors
- **bio-resource** transformation of biomass for food, feed feedstock and manufacturing
- **bio-ecology (agro ecology)** focus on sustainability and ecological processes, local products organic farming....

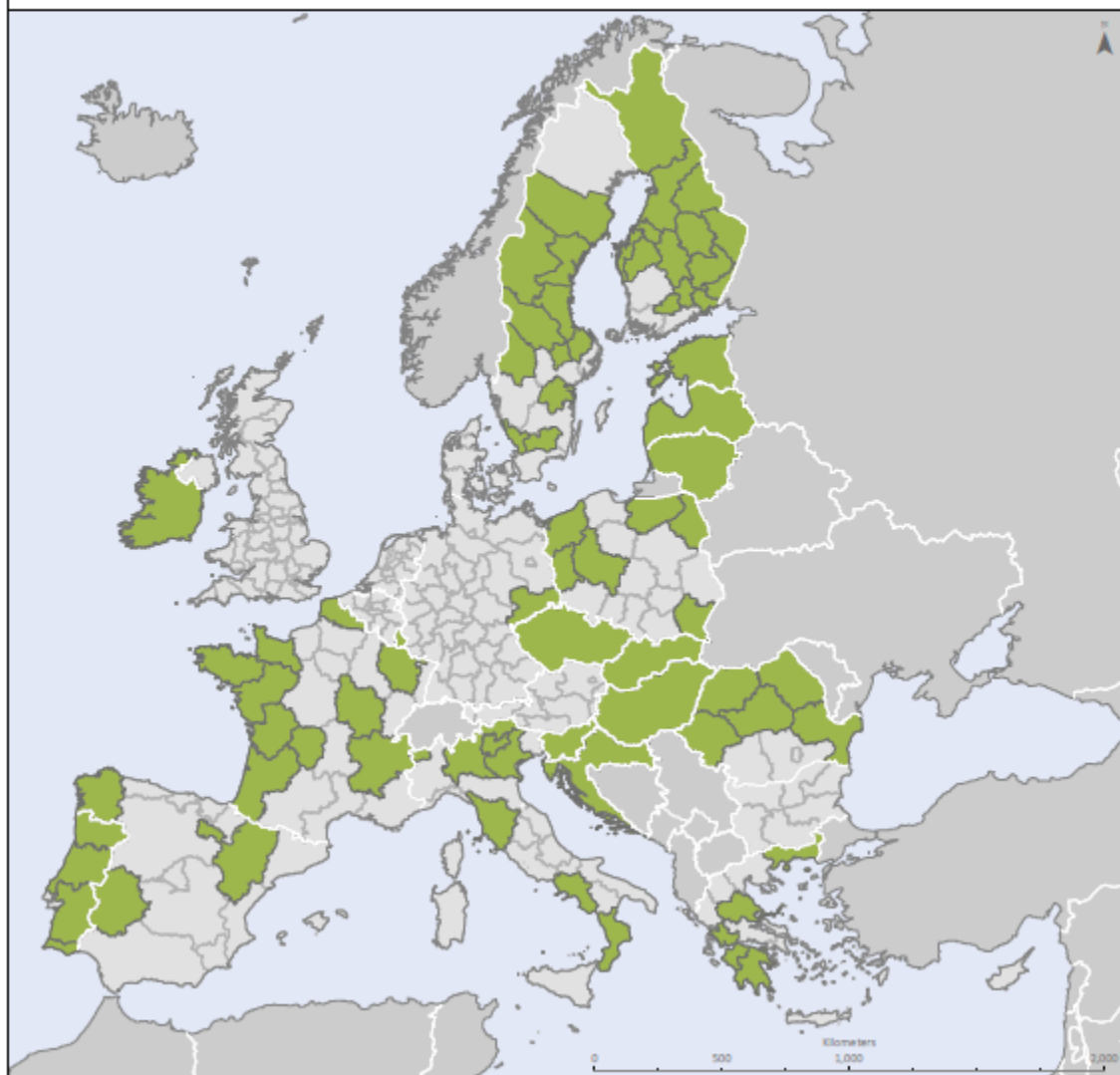




Forest bioeconomy in RIS-3 Smart Specialisation Strategies

Mapping of EU
Member States' /
regions' Research and
Innovation plans &
Strategies for
Smart Specialisation
(RIS3) on Bioeconomy
(DG Research 2017)

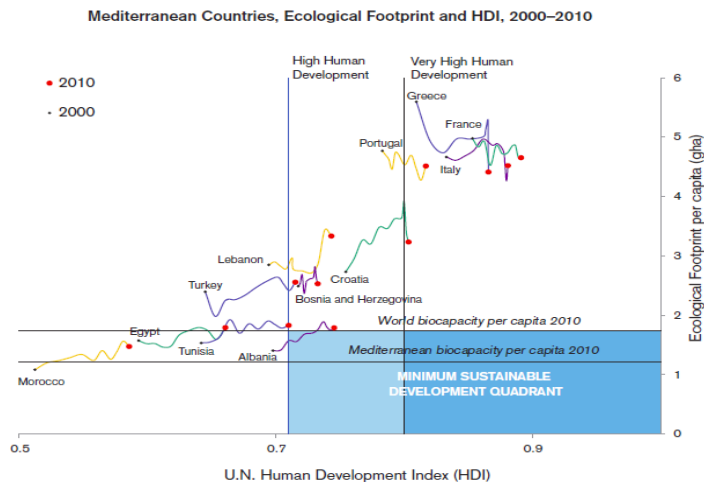
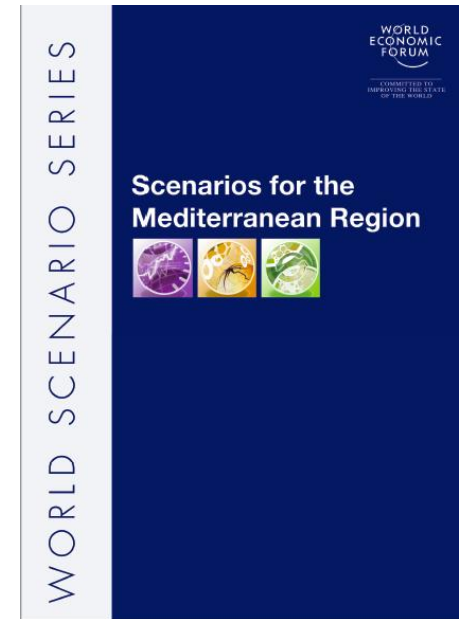
EU-28 regions/Member States with Bioeconomy R&I priorities
(2014-2020) related to Forest-based Bioeconomy





Grandes Retos de la región Euromediterranea

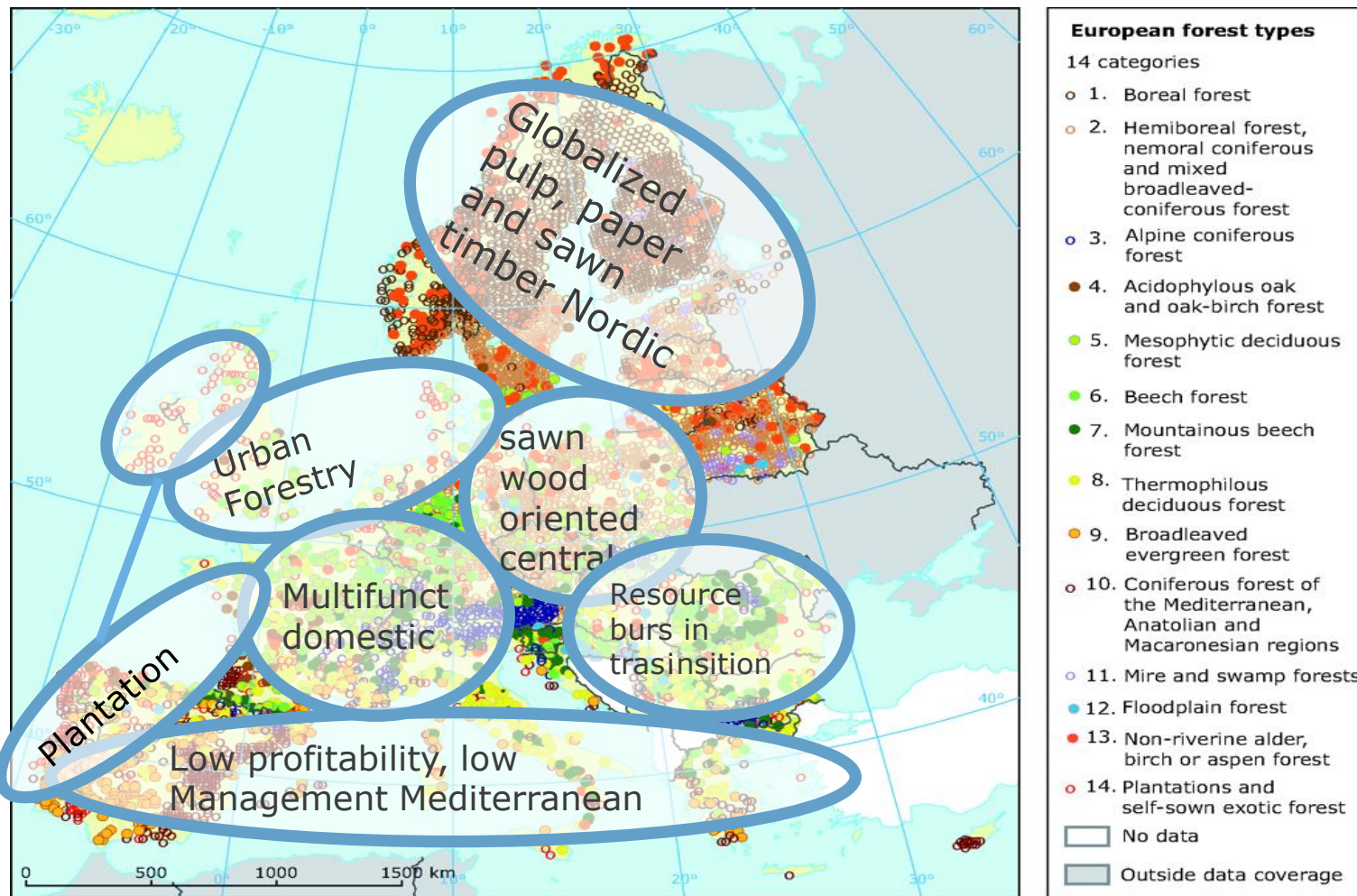
- *Gestion de los recursos naturales*
- *Generacion de empleo*
- *Cambio climatico*
- *Relaciones euromediterraneas*



- *Hemos superado la biocapacidad x 2.5*

The Global Footprint Network (2015)

European forests types, a summary



IIASA
2008
Study of
the Effects
of
Globalization on the
economic
Viability of
EU
Forestry



One of the world most radical *forest transitions*

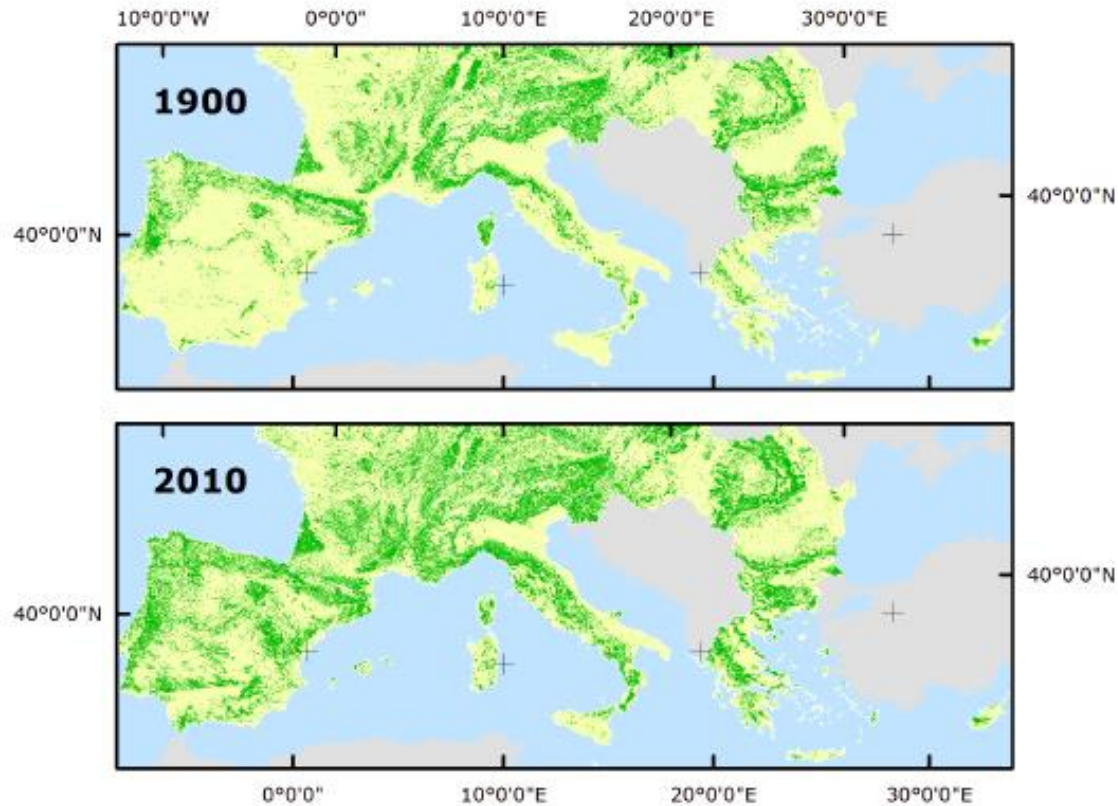
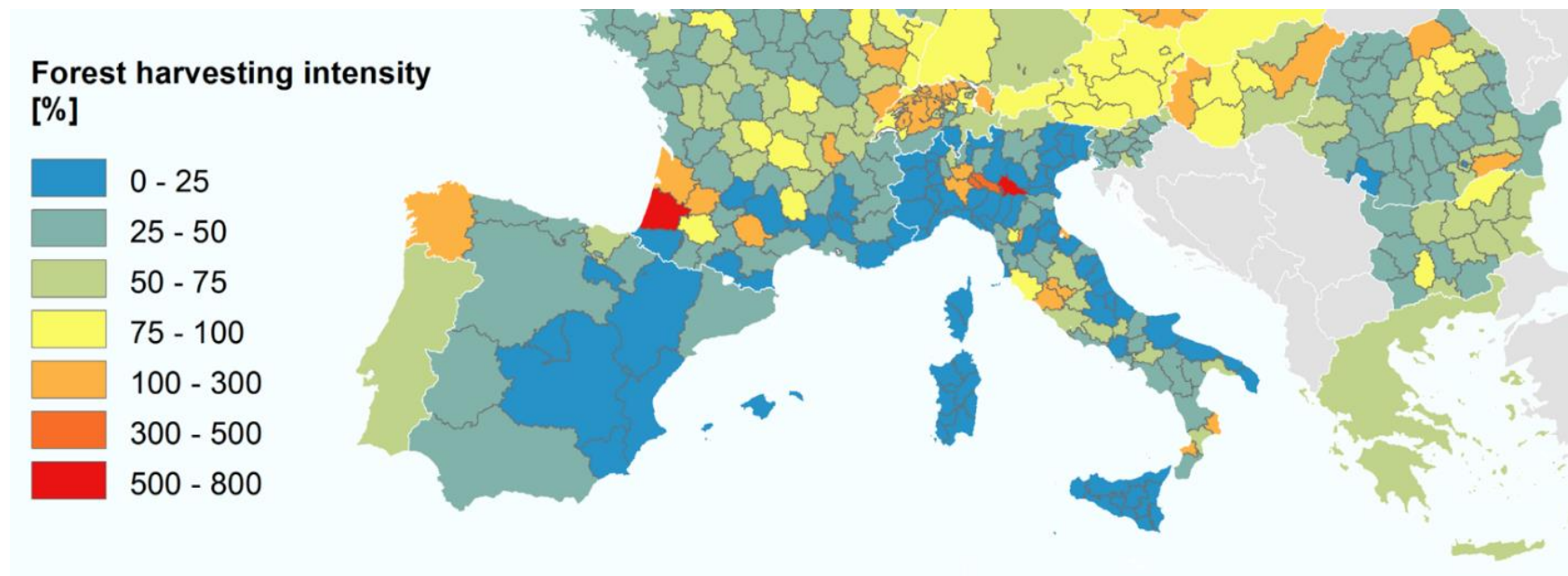


Figure 1. Estimated expansion of European forests since 1900. Based on data from Fuchs, *et al.* (2013).





Harvesting intensity in Europe



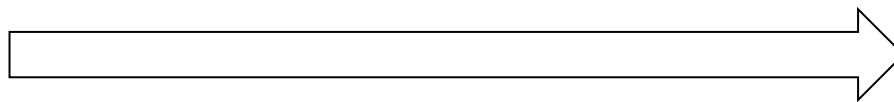
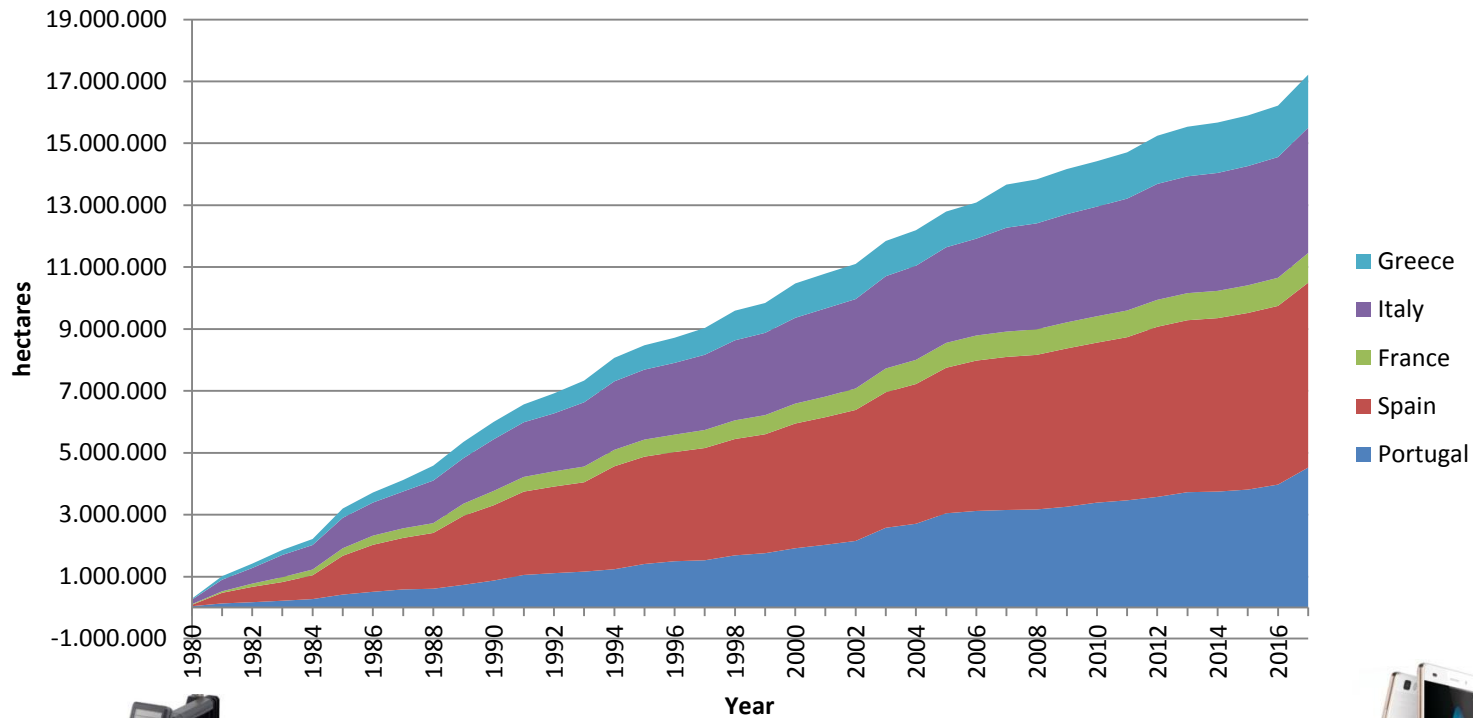
Source: Levers et al 2014





A structural Problem

cumulative burnt area in Southern EU MS



Source EFFIS

Forest fires

- 500.000 ha /yr in Med Europe
- > EUR 2 500 Million /yr in combat??
- Economic and ecological damage



Trend: area burnt in WE
burnt area in southern EU countries

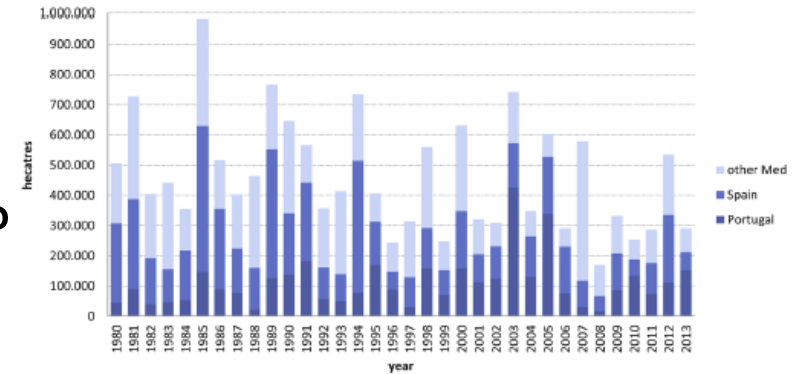
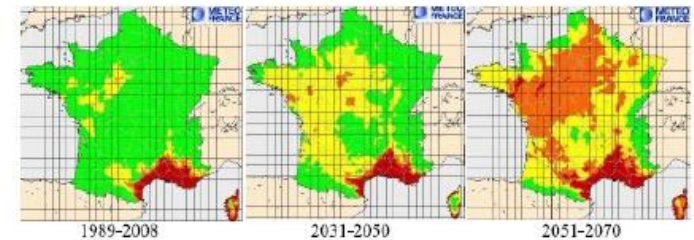


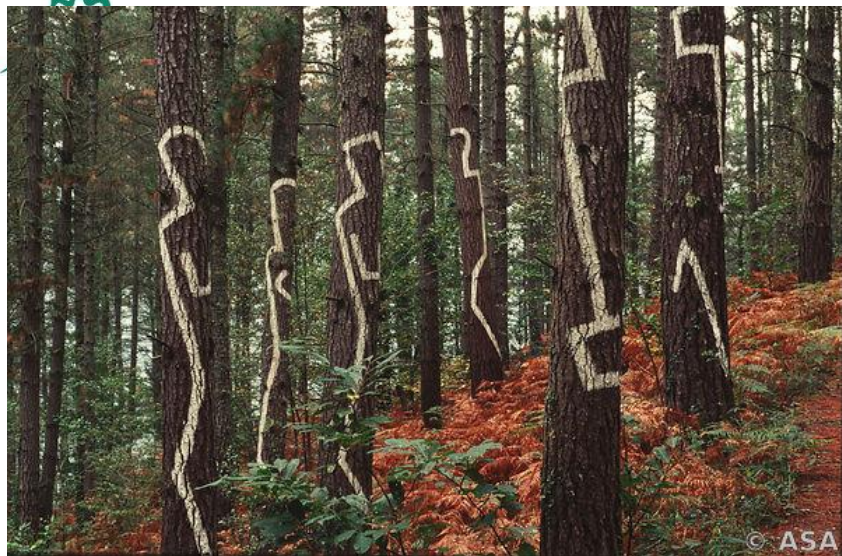
Figure 2. Total burnt area in southern EU countries (PT, ES, FR, IT and GR). Total average for 1980-2014 is 454 000 ha/yr. Data from Greece after 2009 is incomplete. Source: JRC]



France needs + 20%
budget but 2040

mission interministérielle Changement climatique et
extension des zones sensibles aux feux de forêt,
2010





Oliver Strewe Photography





Wood construction in Italy

Drivers

- Energy transition
 - But lack of tight regulation
- Tech developments CTL, NCN
- Seismic & fire performance
- Dry, speedy, prefabricated construction

Barriers

- Lack of strong advocacy
- High inertia (path dependency)
- Main contractors are key element
 - Risk aversion
 - Lack of industrial ecosystems
 - Tendering process

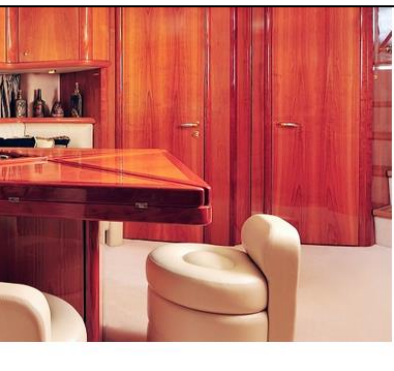
Humerkoski (2016), Fraggiacomio (2017)



garnica

Challenge the ordinary

Garnica has facilities and offices in Logroño, Fuenmayor, Baños de Río Tobía, Valencia de Don Juan and Samazan.



G - Brick S.I.P



G-Brick Deco

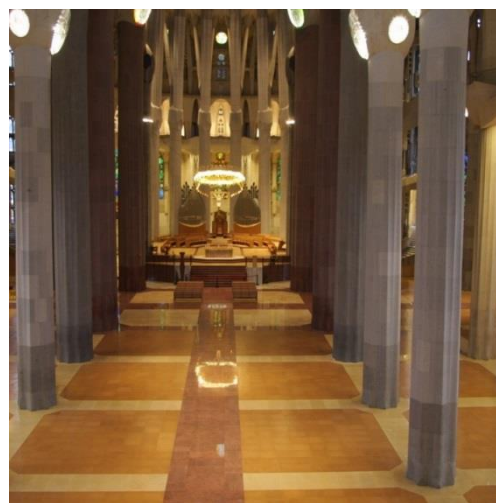


G-Brick Cover





Is Cork !!





New startup from Amorim Cork Ventures applies cork in refrigeration equipment

11/07/2017

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We foster innovation and entrepreneurship in the cork industry

Have an awesome cork idea? **APPLY NOW**



we look for
new ideas in Cork industry



we support
with facilities, mentoring and prototyping



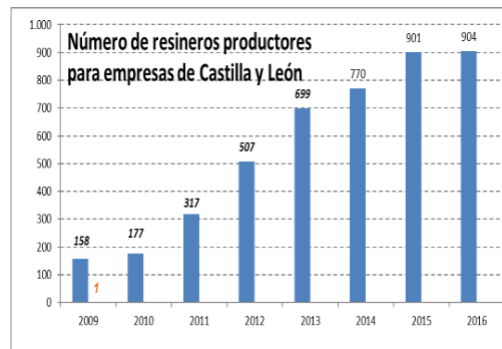
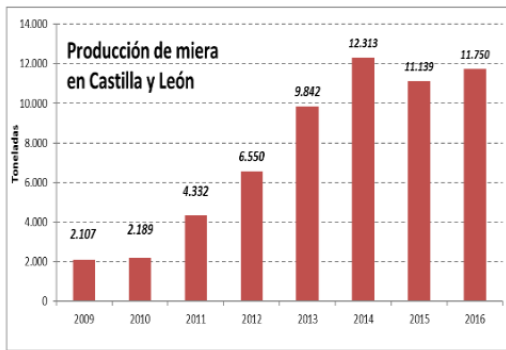
we invest
in startups



Castilla y León has recovered production, created direct jobs and attract investments



GRUPO RB – Luresa Resinas

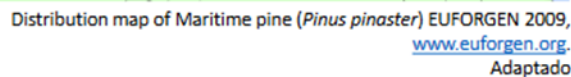


Structural reasons

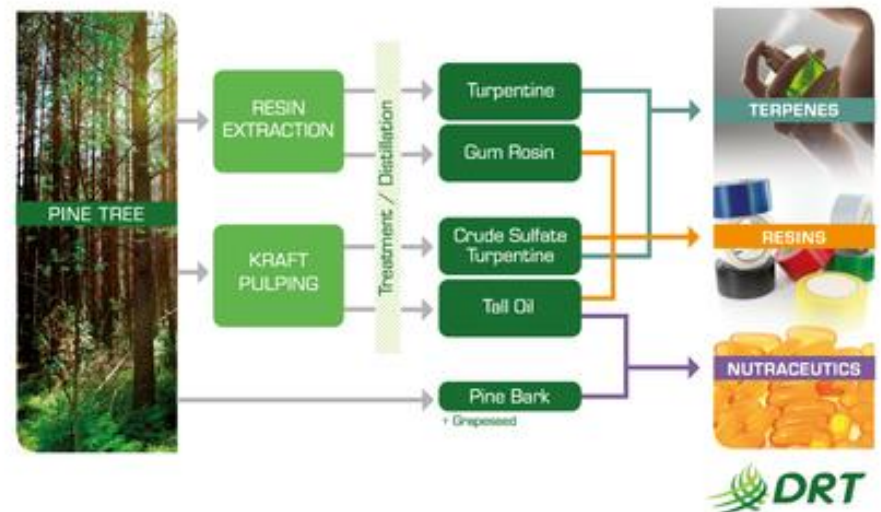
- Chinese forests reaching production limits
- China is building processing capacity
- Green chemistry push
- Economic downturn made the job attractive again



Pinus pinaster



- 1,200 employees
8 production sites in France China (1) and India (3)
- 50 scientists
- 80% export markets
- Importing natural resins



Xylofutur anual conference 2017



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Medicinal mushrooms: Two day educational retreat at Hifas da Terra HQ.

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ONCOLOGY

SKINCARE

GOURMET

EVENTS

EDUCATION

Integrative Oncology: the role of medicinal mushrooms





Is About ICTs *social* innovation and territorial marketing



RED DE
RESERVAS REGIONALES DE CAZA
DE CASTILLA Y LEÓN



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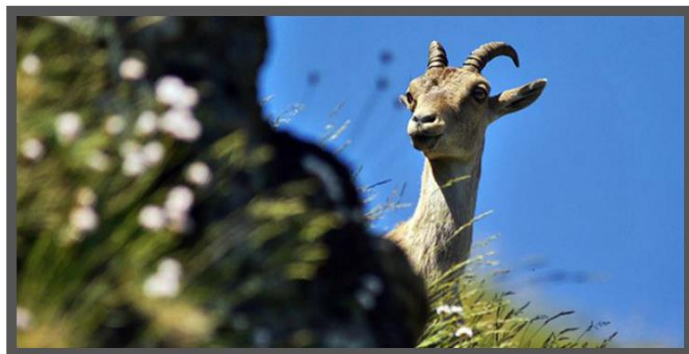
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Reserves

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Fuentes Carrionas
Lagunas de Villafáfila
Las Batuecas
Mampodre
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Sierra de Gredos
Sierra de la Culebra
Sierra de la Demanda
Urbión

Game species





Woodcock
Ibex
Deer



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 Chamois Type A. Code: 376 Headquarters: Guímara. They may hunt chamois with over 78 tax points. ...	Ancares Leoneses	30/10/2015	0 1 18 D H M Tuesday, March 17, 2015 - 12:00	€ 1,800	€ 2,050
 A. Corzo Type Code: 80 Headquarters: Valmala. Permit duration: 3 days. ...	Sierra de la Demanda	12/05/2015	0 1 18 D H M Tuesday, March 17, 2015 - 12:00	€ 500	
 A. Corzo Type Code: 363 Headquarters: Quintanar de la Sierra. Permit duration: 3 days. ...	Sierra de la Demanda	04/21/2015	0 1 18 D H M Tuesday, March 17, 2015 - 12:00	€ 500	€ 550
 Chamois Type A. Code: 106 Headquarters: Cofiñal. May be hunted chamois with over 78 tax points. ...	Mampodre	10/16/2015	0 1 18 D H M Tuesday, March 17, 2015 - 12:00	€ 1,500	€ 2,250



Biomass supply, intensification vs PES

Herdade do Freixo do Meio



New tree plantation set to experience shorter growth times

Posted by [EJays44](#) on Wednesday, June 20, 2016 - [Leave a Comment](#)



Amorim, a leading company in the natural cork industry, is partnering with 10 of the largest cork growers to plant a trial 250 hectares of cork forest that will produce a harvest after an initial 10 years.

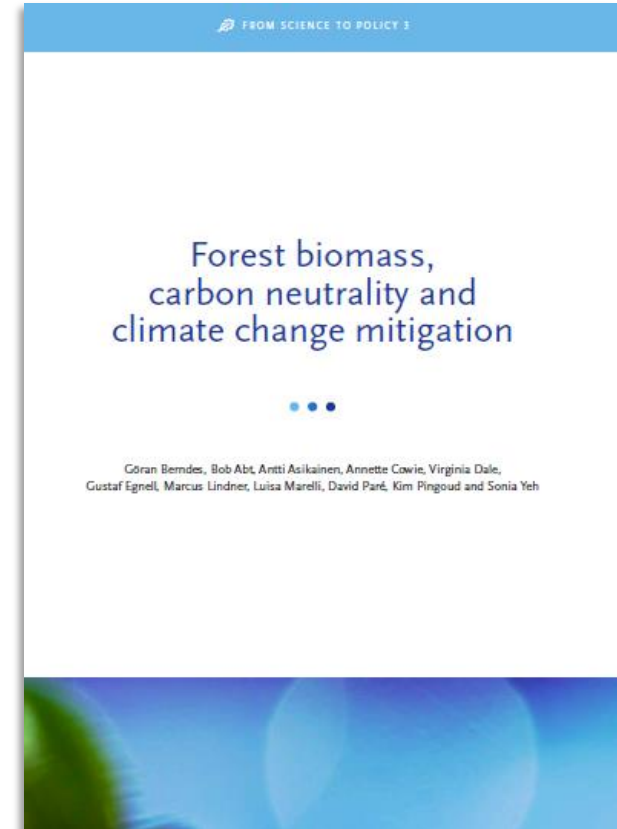
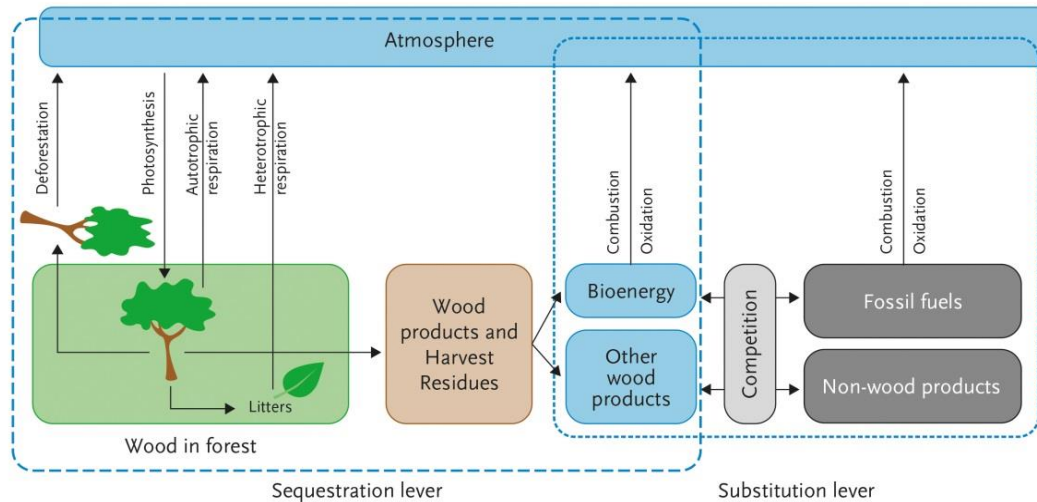
The oak from which cork stoppers is made, *quercus suber*, currently can't be harvested until 34 years after

Drip irrigation
High density
Tree farming
Intercropping (wood/herbs)

Key questions for the circular bioeconomy

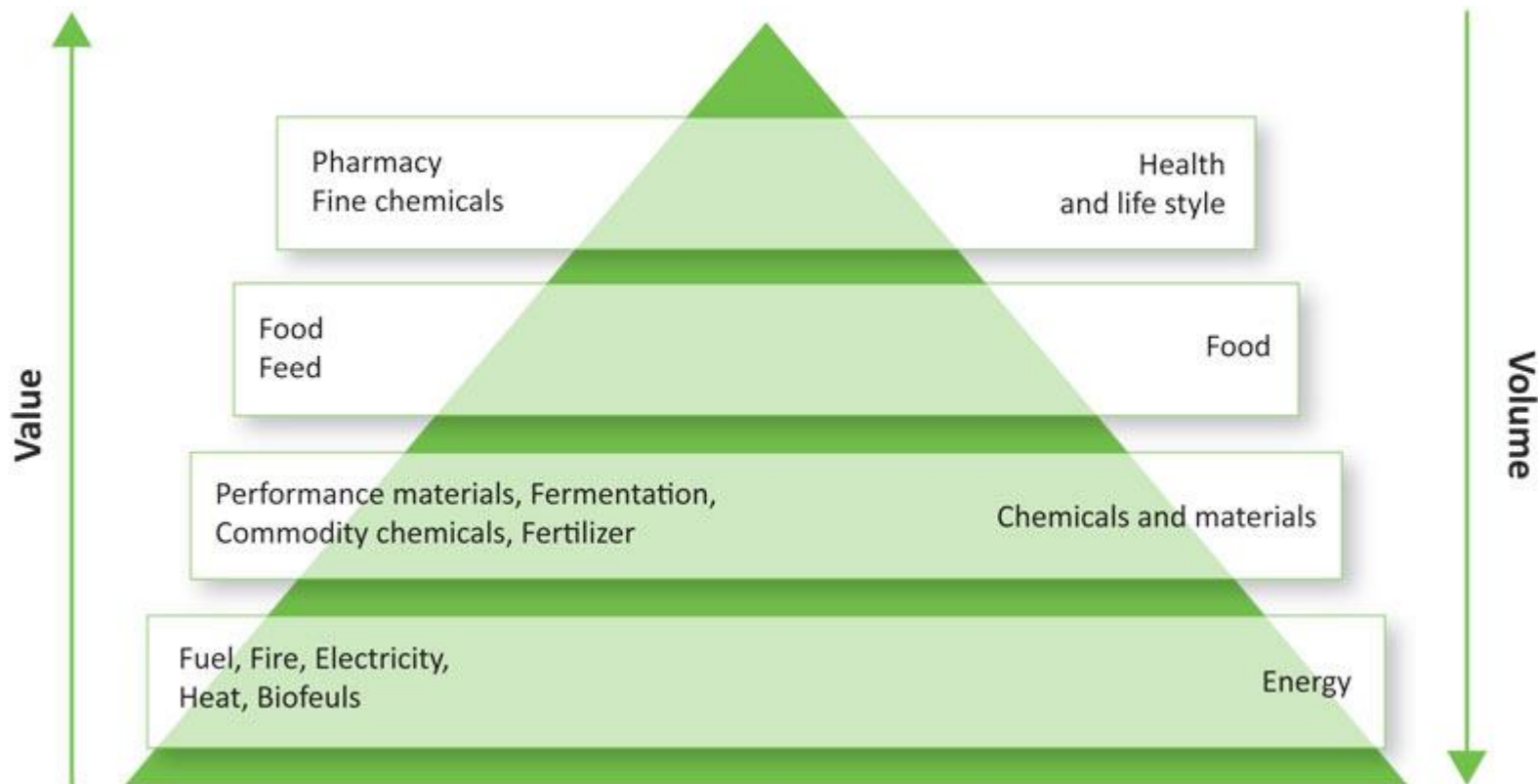
Maximizar beneficios Ambientales

- Carbon footprint
- Water footprint
- Dematerialisation
- Waste...



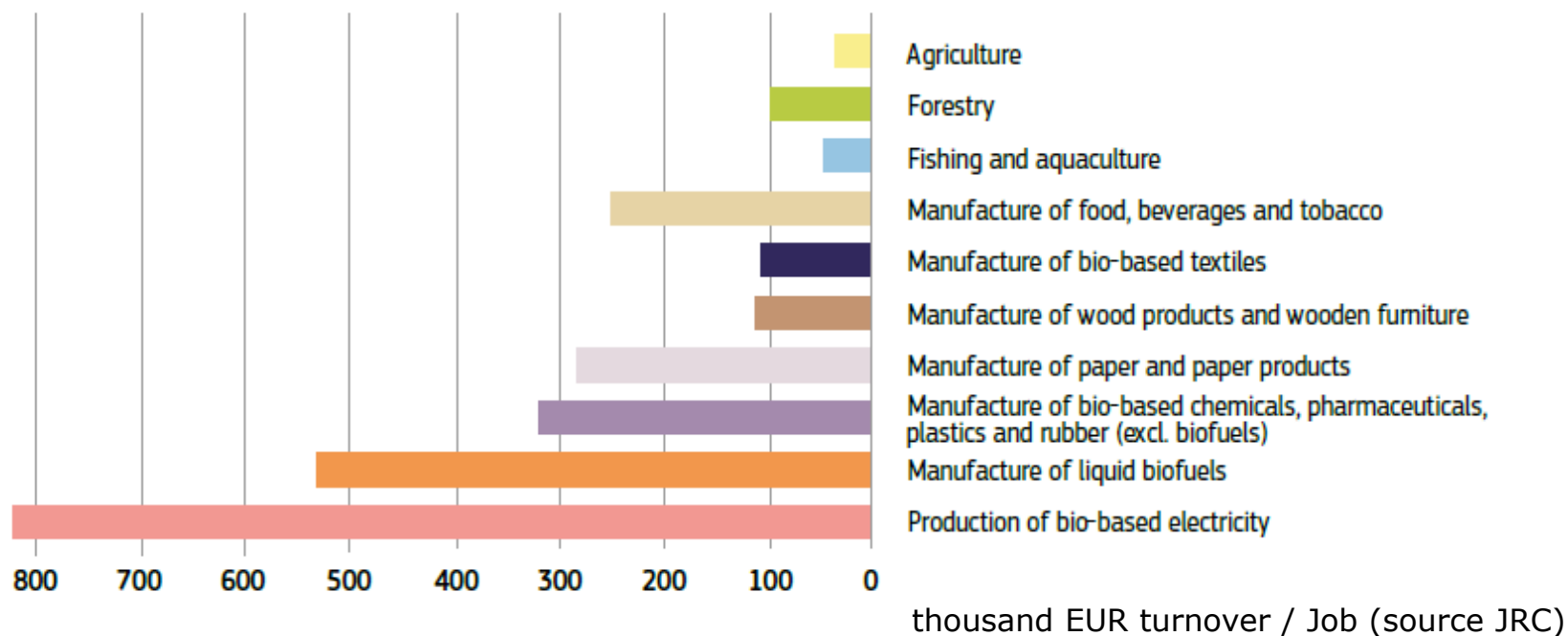
Key questions for the circular bioeconomy

Maximizar beneficios sociales (empleo, prosperidad, bienestar....)



Key questions for the circular bioeconomy

Maximizar beneficios sociales (empleo, prosperidad, bienestar....)





So, again, what role for
Mediterranean broadleaves in the
forest-based bioeconomy?

Thank you!