



Generalitat de Catalunya

BIO4ECO FINAL CONFERENCE

New perspectives of the Strategy to promote the energy use of forest and agricultural biomass in Catalonia

Oriol Ansón

**General Director of Rural Development and Forest Policy
Department of Agriculture, Livestock, Fisheries and Food**

Catalonia

A Mediterranean country situated in the north-east of the Iberian Peninsula.

A population of 7 million people and a total surface of **32,000 km²**.

Since 1979 has a special political autonomy based on its own Parliament and Government.



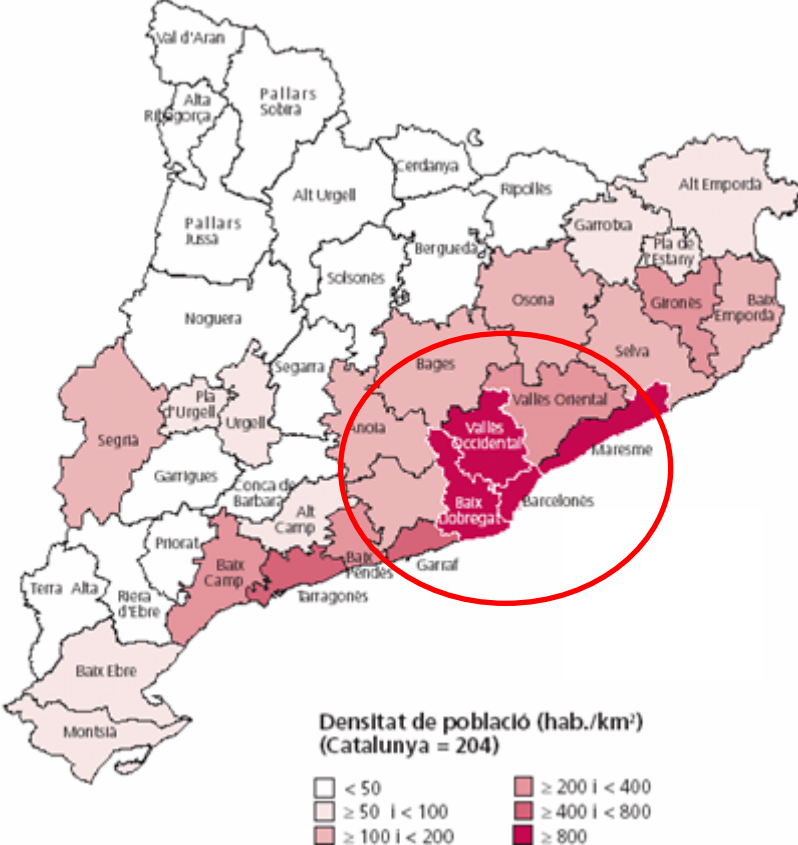


Figure 1. Population density

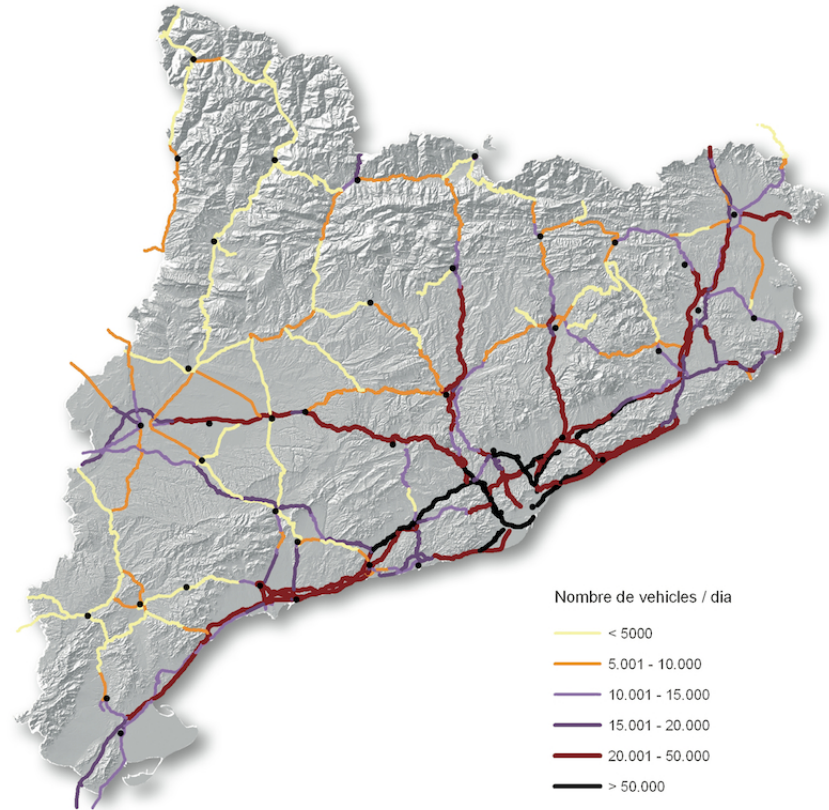
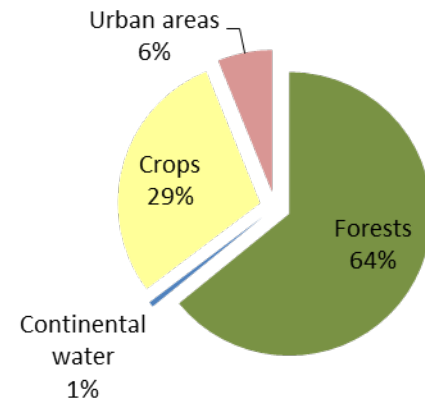
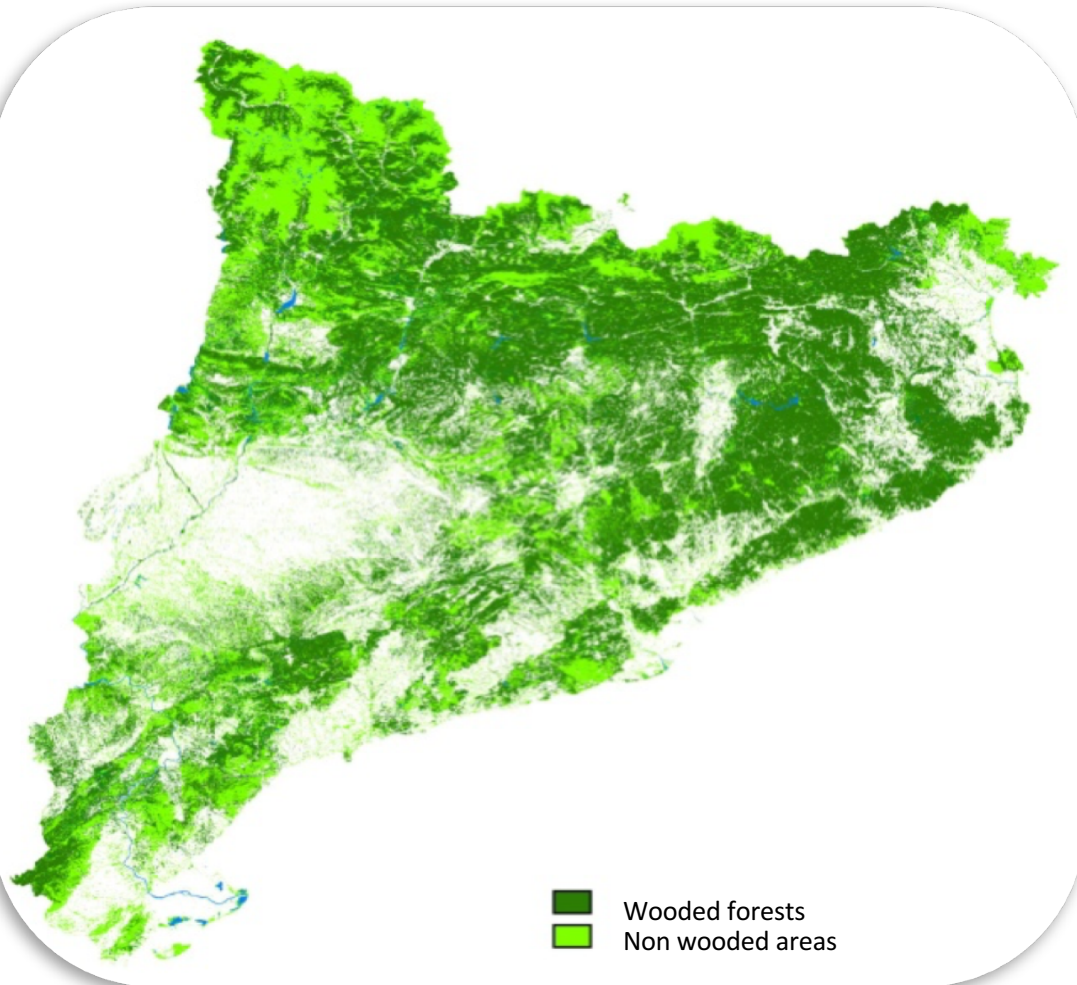


Figure 2. Traffic density

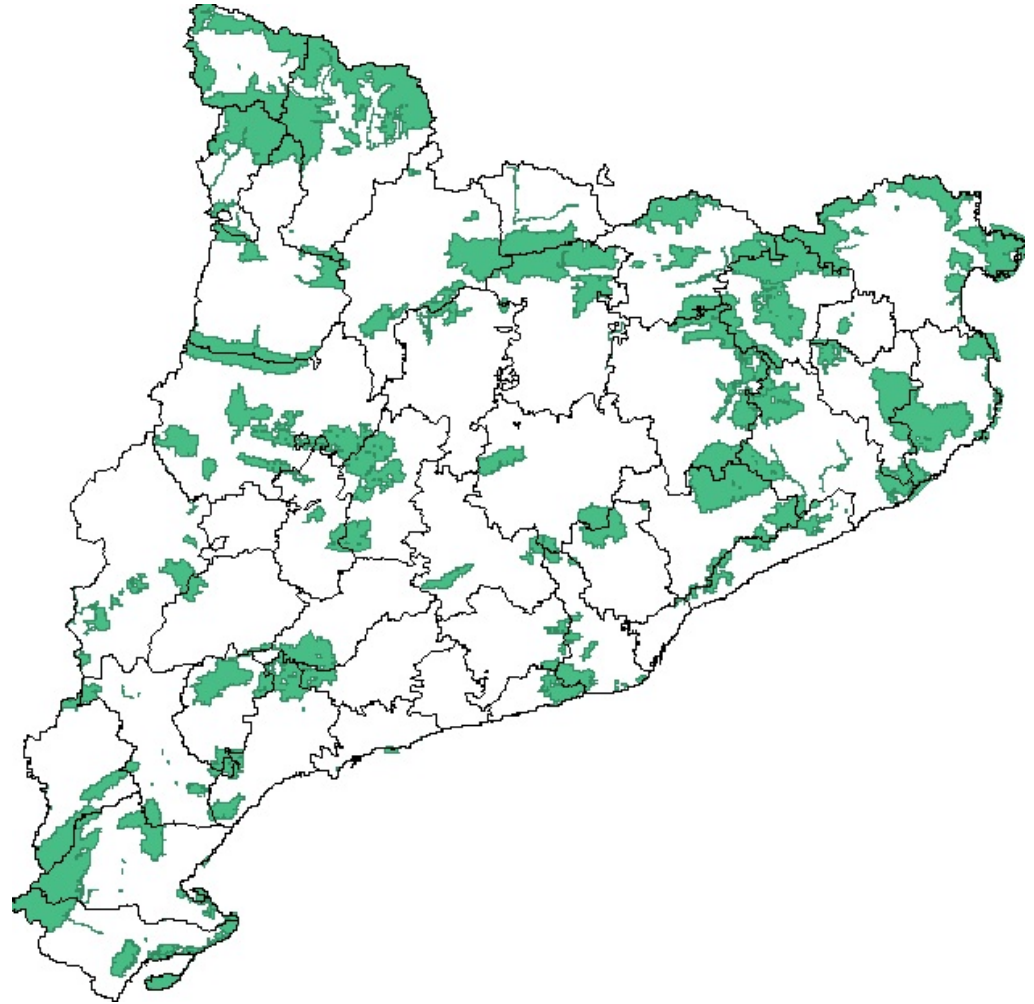
Forest surface



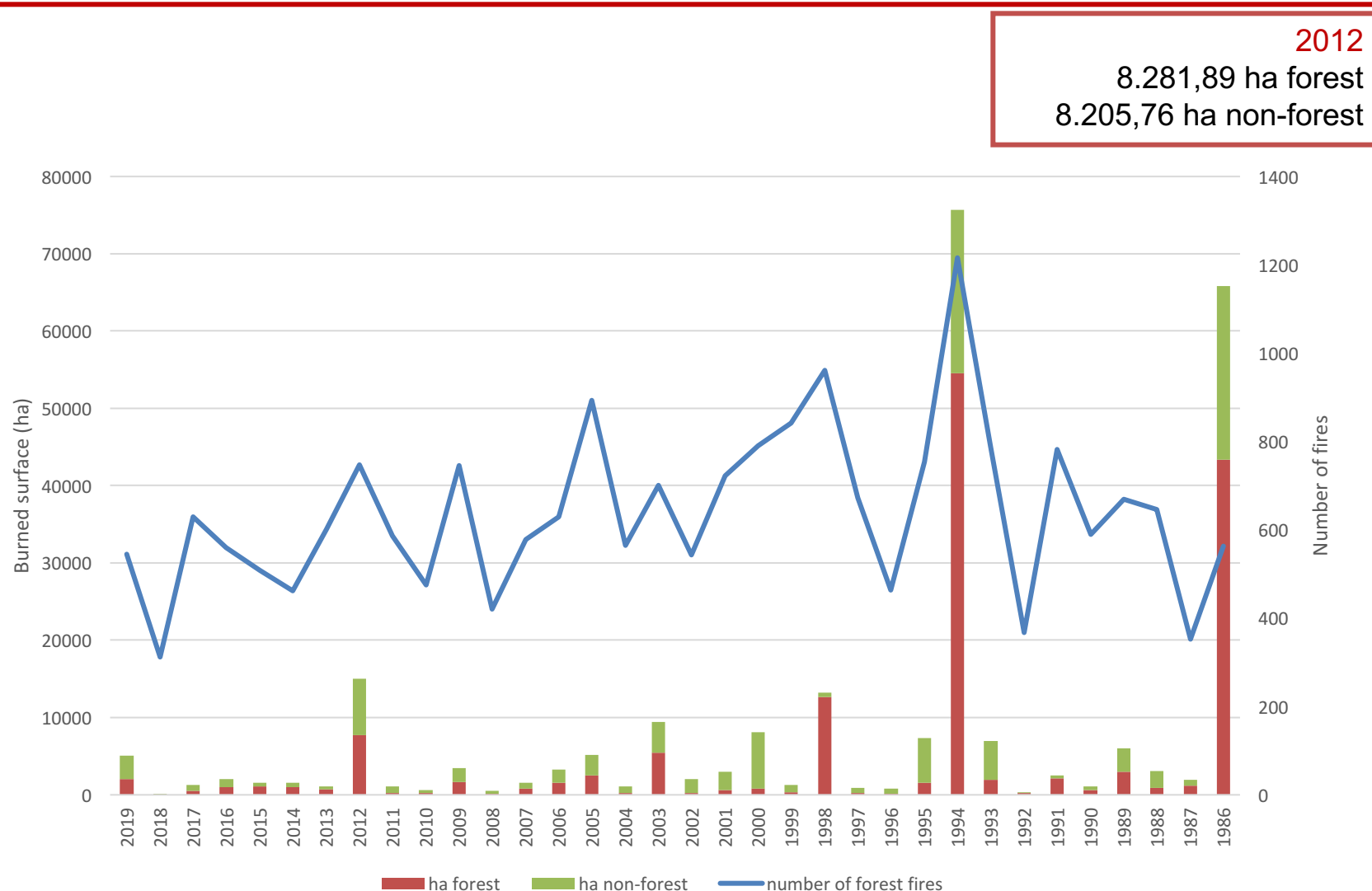
- ✓ **64%** of Catalan territory are forests – 2,060,173.56 ha
- ✓ **40%** wooded – 1,348,000 ha
- ✓ **75%** of the forest surface is private (around 200,000 forest owners)
- ✓ **In Catalonia, 979,169.4 ha (30.4%)** of surface included in the **Nature 2000 network**

Protected surface – Nature 2000 network

- ✓ In Spain there are 10.896.600 ha (21,5%) of surface included in the Nature 2000 network
- ✓ In Catalonia, 979.169,4 ha (30,4%) of surface included in the Nature 2000 network
- ✓ 8,98 % of de total surface of Nature 2000 network in Spain is inside Catalonia territory

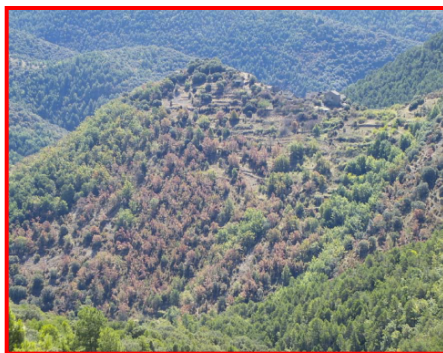
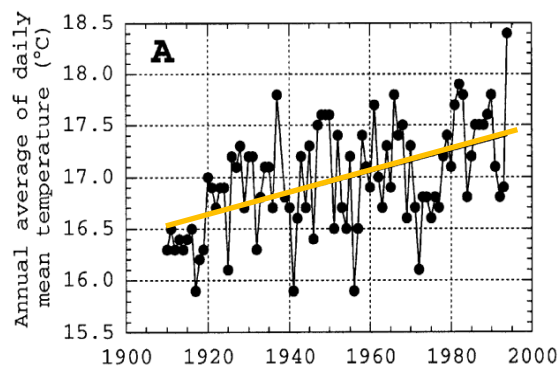


Forest fires Historical Evolution (1986-2019)



Forest sector

- The forest sector represents only 0,06% of the total GDP but forests provide multiplicity of goods and services! (wood, cork, biodiversity, mushrooms, recreation, pine nuts, etc.)
- Management costs are expensive (high topographic contrasts), transformation industry based on low added value products (pallets, etc.)
- Increase 2,9 M de m³/year
- Only 20-30 % of the annual cutting budget is harvested
- Only 10% of annual wood consumption comes from local forests
- Mediterranean climate, forest fires, climate change effects

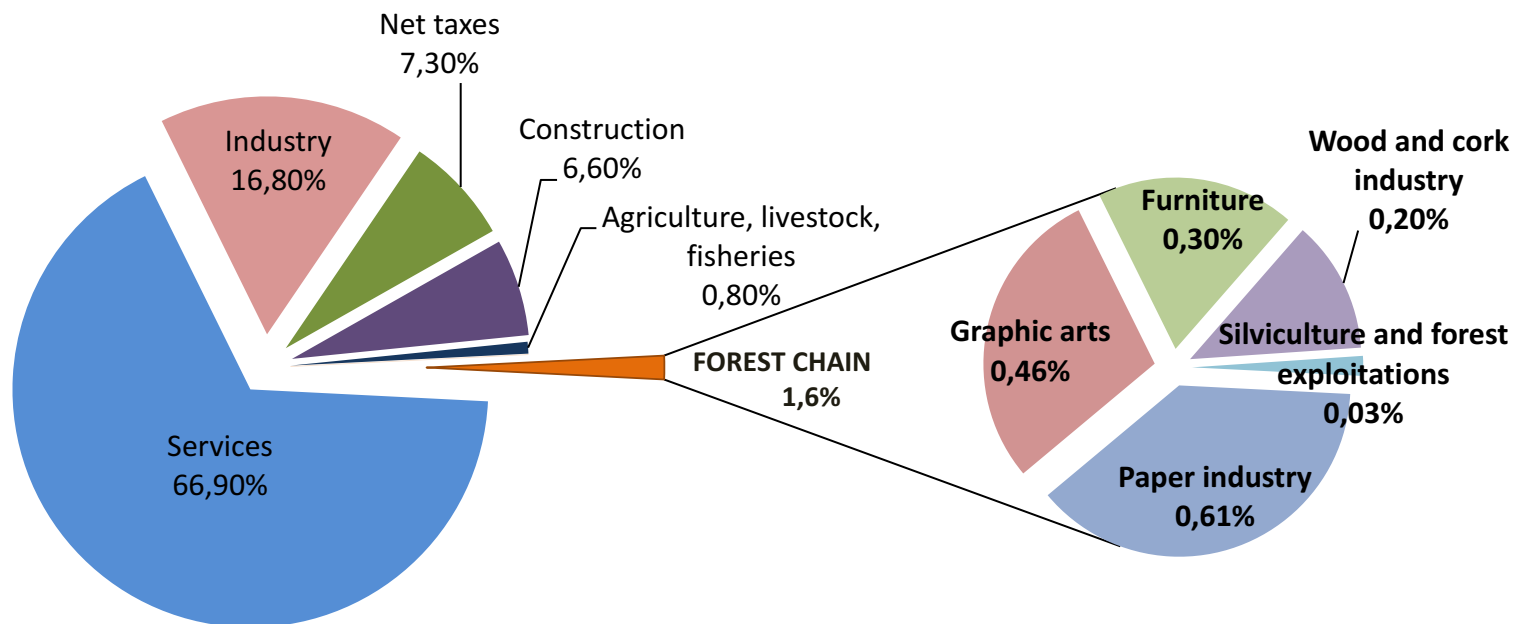


Drought

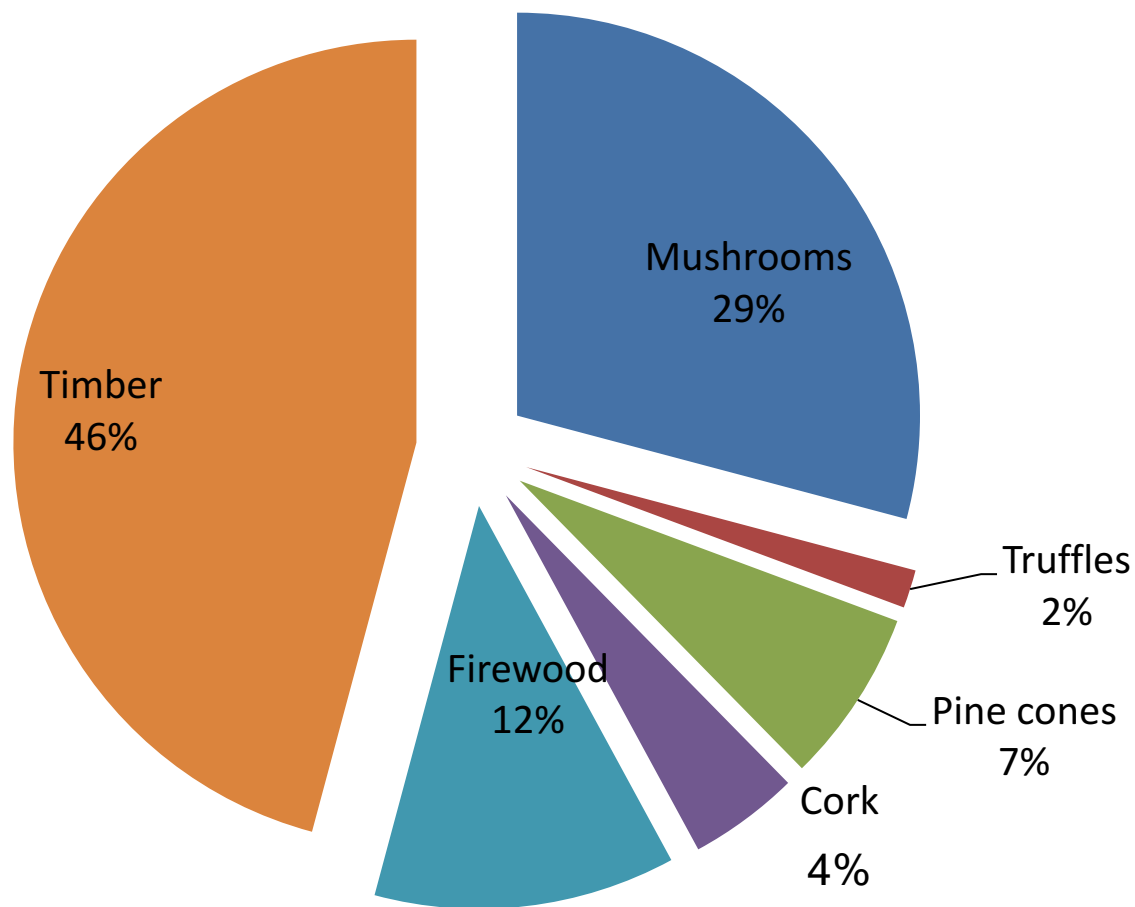


Forest fires

GDP



Economy of the forest products - Nowadays



Strategy to promote the energetic use of forest and agricultural biomass

In 18/02/2014 the Government approved the Strategy to promote the energetic use of forest and agricultural biomass 2014-2020

❑ Objective

To promote the energetic use of local biomass in Catalonia through a combined Government action

Benefits of the Biomass Strategy

❑ ENERGY

- ✓ Decrease the current high dependence of foreign energetic. Biomass is a local fuel.
- ✓ Fuel with competitive prices, renewable, and with high future potential
- ✓ Contribution to the goals established in relation to the uses of renewable fuels



❑ FORESTRY

- ✓ Contribution to forest fire prevention and improve the current state of the forests due to sustainable forest management.
- ✓ Improve forest ecosystem in front of climate change and water availability
- ✓ Contribution to the forest stakeholders economy and rural development

Benefits of the Biomass Strategy

❑ ENVIRONMENTAL

- ✓ Important contribution in the objectives related with climate change mitigation and quality air improvement
 - Avoid 270.000 t of CO₂ (compared to 2012)

❑ SOCIAL AND ECONOMIC

- ✓ High potential in wealth creation, specially in rural areas
- ✓ Futur uses in industrial sector
- ✓ Sinergies/Contribution to the bioeconomy, circular economy and waste treatment
- ✓ Better dialogue between biomass stakeholders and administration bodies

The Biomass Strategy is key to accomplish with the different goals related with energy, forestry, climate and social items in Catalonia

Balance 2019

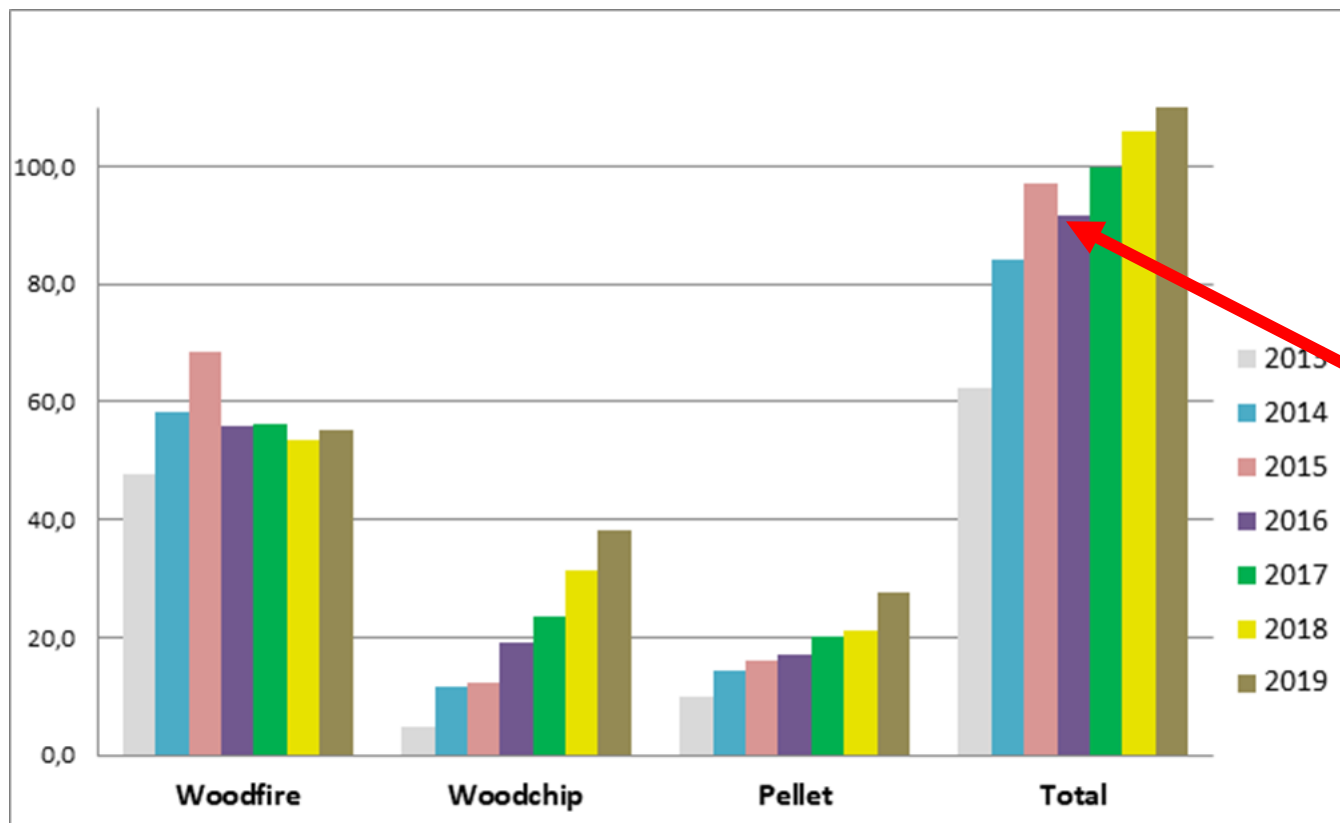
EVOLUTION OF STRATEGY COMPLIANCE INDICATORS

Indicator	2013	2014	2015	2016	2017	2018	2019	D anual 2019	Objective 2020
Forest biomass consum - termical uses (ktones/year)	240,0	319,4	369,1	341,9	367,4	386,6	434,8	12,5%	600,0
Forest biomass consum - termical uses (ktep/year)	62,4	84,3	97,0	91,8	99,9	106,0	121,3	14,4%	172,8
Reduction GHG emissions (t/year CO2) respect 2013	-	53.451	84.600	71.865	91.621	106.61 3	143.91 2	-	270.000
Number of new working places	-	220	150	-	-	-	-	-	1.900
Forest surface (ha/year)	10.000	13.000	15.189	14.200	15.450	16.100	18.115	12,5%	25.000

Consumption of solid biofuels (2019) (firewood, wood chips and pellets) has been 434.8 thousand t for thermal use. Therefore, it has increased by 81% for the period 2013-2019, however, we want to highlight the increase in chip production by 225% and pellet by 175% with constant sustained growth. Firewood has stabilized during this period at an average of 245 thousand tons, with no clear trends in evolution. It is estimated that silvicultural work has been carried out on 18,115 hectares, data also in line with the above figures and below the expected increase.

Balance 2019

Evolution of the thermal consume of forest biomass (ktep)



BIO4ECO start

Taking into account the different types of biomass: pellet and chips show a positive trend to increase, while woodfire does not increase according the targets of the Biomass Strategy.

From 2020

Future goals

- ☐ Increase public thermal installations (COVID 19 funds)
- ☐ Increase sustainable forest management (SFM)
- ☐ Increase forest biomass uses in the industrial sector to enlarge the consume along the year
- ☐ Guarantee local biomass supply
- ☐ Promote forest owners associations to allow bigger and more attractive collective offers

From 2020

Future goals

- ☐ Maintain public subsidies to biomass installations
- ☐ Implement new technologies to obtain products with better added value (i.e. Biorefineries)
- ☐ Spread and promote the use of biomass
- ☐ Include the agroforestry biofuels into the Strategy, in order to raise the biomass availability and to increase the installation's power
- ☐ Redefine quantitative goals depending on the different kind of fuels



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Thank you for your attention

<http://agricultura.gencat.cat/>