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Innovation Networks for Cork, Resins & Edibles

"Resin resource monitoring & modelling in a context of climate change"

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Pine forests in Tunisia – an opportunity for local employment in resin production?

IBTISSEM TAGHOUTI, MOKHTAR BARAKET

National Research Institute of Rural Engineering, Water and Forests, Tunisia

Coordinator

Partners

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www.incredibleforest.net
info@incredibleforest.net

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Outline

- Forest cover in Tunisia
- Importance of Aleppo Pine
- Main challenges
- Main products of Tunisian Forest
- Resin tapping : Experimental framework
- Perspectives of commercial extraction

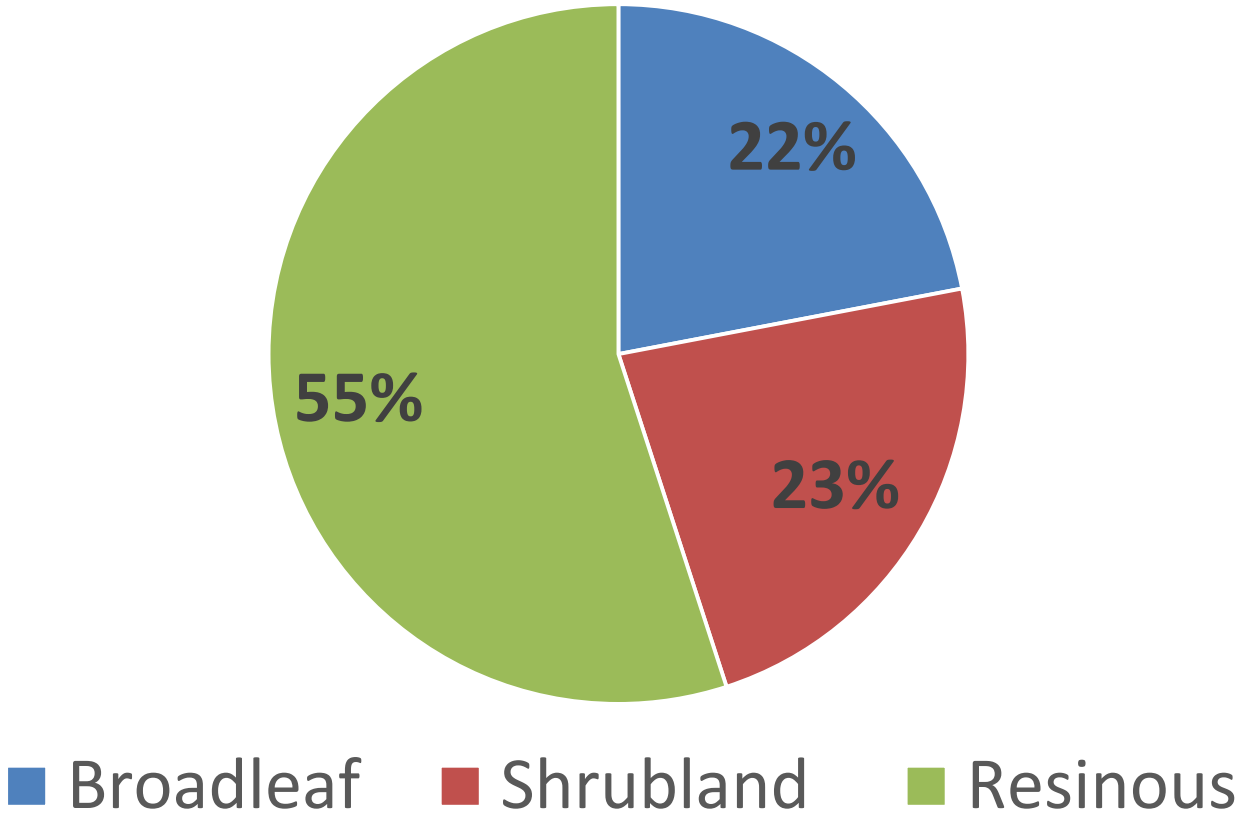
Forest Cover in Tunisia

	Area (1000ha)
Total Land Area	**15536**
Total Forest Area	**1006**
Forest Cover (%)	6
Other Wood Land	**300**
Other Wood Land (%)	2

Source : DGF, 2018

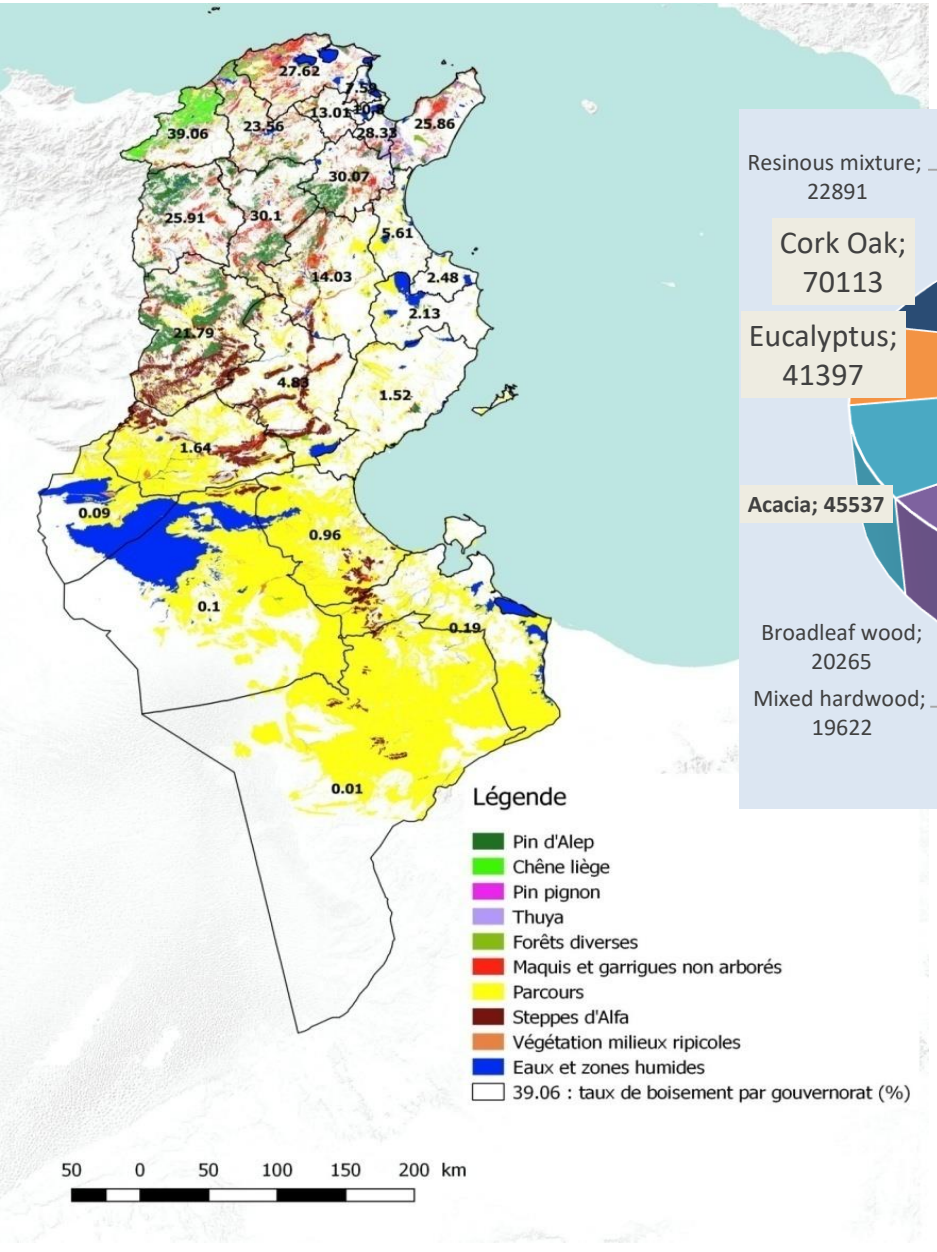
- **Tunisia has 690,000 ha of planted forest**

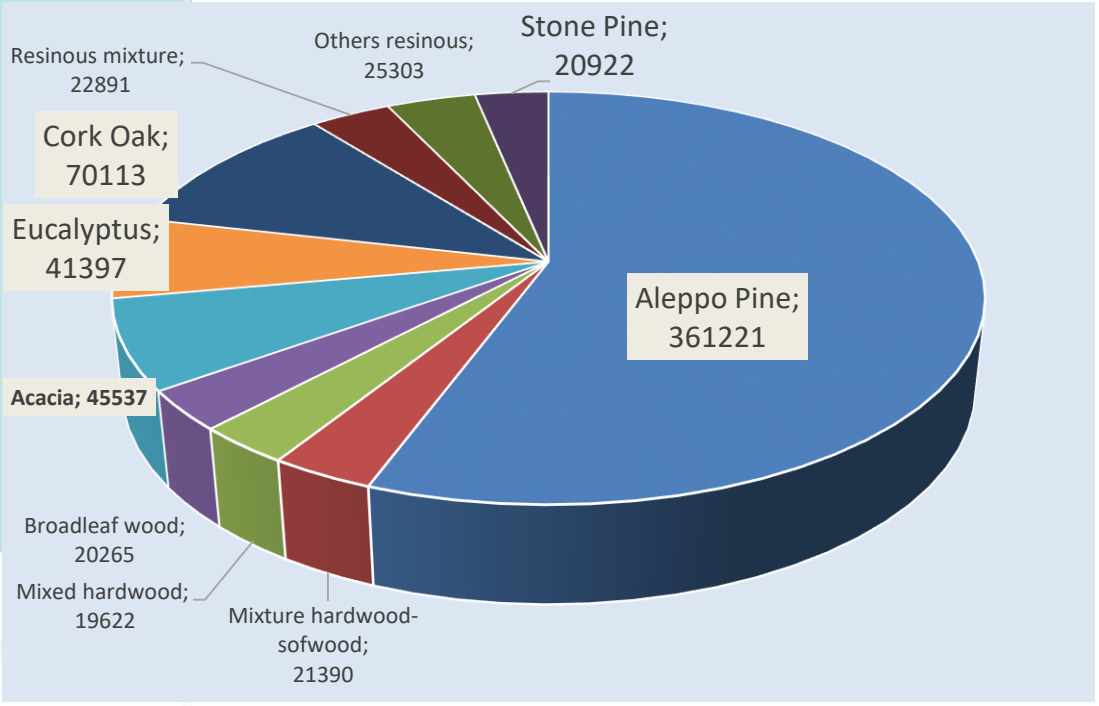
Distribution of forest Cover in Tunisia



Source : ODESYPANO, 2014

Forest Cover in Tunisia : the case of Aleppo Pine





Distribution of forest areas

Pine forest : Species & distribution

The main species constituting the natural forests in the North West

Aleppo Pine
Area : 138097 ha
47% of total forest area

Maritime Pine
Area : 2564 ha
68% of the national area

- Natrural Pine forest in Tunisia is mainly located in the North of the country

Economic importance of Pine Forests in Tunisia

- 220,000 habitants are living within the forest area in North West of Tunisia

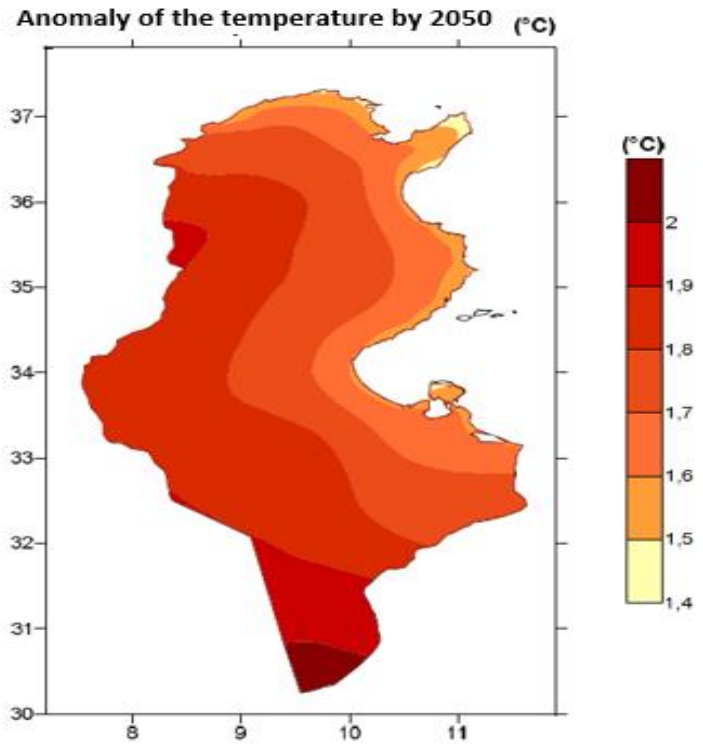
- In 2012 :

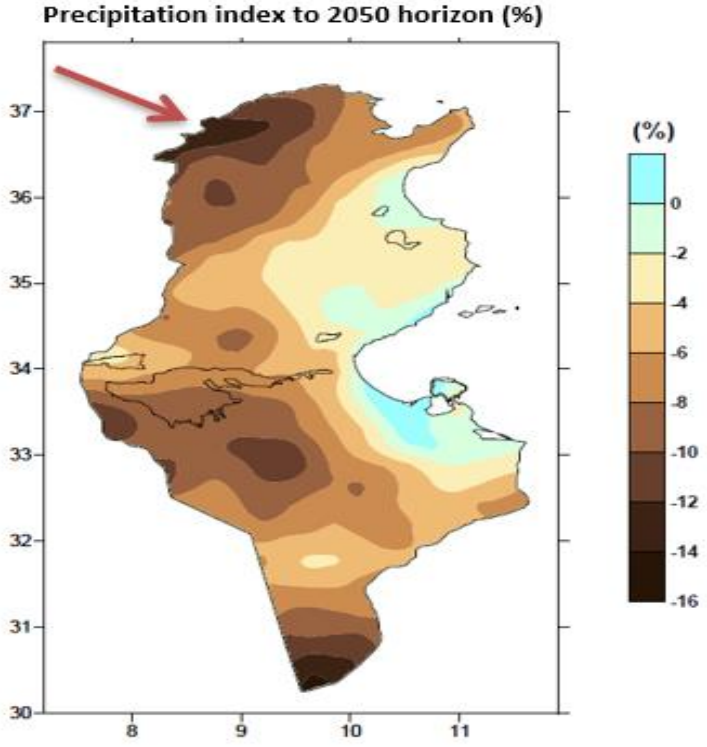
❑ 43% of local population revenue is coming from forest (311 €/habitant)

❑ Tunisian Forest provides 5 to 7 millions of working days representing 0,3% of GDP

- The economic value of Aleppo Pine forests is estimated to be worth 55€/ha (2016 price)

Main challenges : *New climate scenarios for Tunisia?*

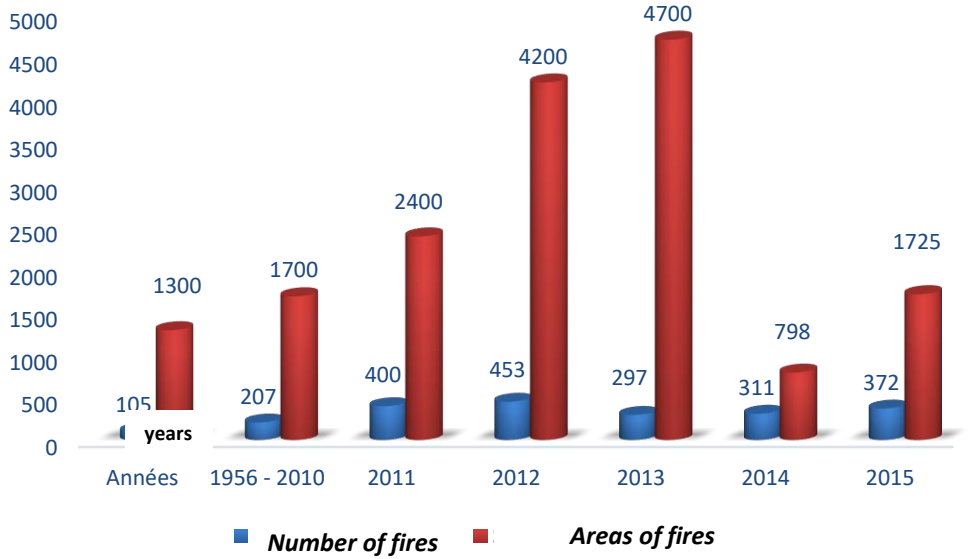




(Ben Ghrissi, 2015)

Main challenges : Wildfire occurrence

- ›50 Fires
- 40-50 Fires
- 30-40 Fires
- 20-30 Fires
- 8-20 Fires
- ≤ 7 Fires
- ≥10 Fires
- 6-9 Fires
- ≤5 Fires
- 0 Fires



Evolution of the number and areas of fires in Tunisia
Source: REF, 2017

Main products extracted from AP forests in Tunisia

- ✓Wood
- ✓AP seeds (Zgougou)
- ✓Essential oils
- ✓Honey
- ✓Forage / grazing
- ✓Tannins

What about Resin ?

Resin tapping in Tunisia : Experimental results

Comparative experiment of various treatments of extraction of resin have been conducted. These experiments used multi-pit and sulfuric acid-activated extraction, the orientation of the mounds, the period of tapping, and the age or size of the extracted trees.

1	2	3
Resin production varies from one tree to another and from one care to another	Resin production activated with sulfuric acid increase the yield compared to the traditional process with reduction of the work of the labor force	the resin extraction skills and experience of the worker has a significant influence on production

(Dahmane,1986)

Resin tapping in Tunisia : Experimental results

4	5	6
the accelerated run-off period is from June to October	the average production was between 1.5 kg and 1.8 kg of gem per tree per year;	Resin production is of great interest for the valorization of Aleppo pine forests in terms of production and employment.

Perspectives toward commercial extraction in Tunisia

DGF and policy makers would provide through extension services trainings and open Doors days for local population to increase their awarness level about :

- ✓ The economic importance of resin
- ✓The increasing demand at the international level
- ✓Employing opportunities

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Thank you for your attention

Ibtissem Taghouti

ibtissem.taghouti@gmail.com

Coordinator

EFI

Partners

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ETIFOR valuing nature esset HRVATSKI ŠUMARSKI INSTITUT CROATIAN FOREST RESEARCH INSTITUTE INSTITUTO SUPERIOR DE AGRONOMIA Universidade de Lisboa unac União da Floresta Mediterrânica University of Ioannina Department of Preschool Education

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