

“Pine tapping in Tunisia: New socio-economic opportunities?”

Science to Practice Event (Webinar INRGREF)

September 8-9, 2020

The French resin sector: back to the future?

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Coordinator



Partners



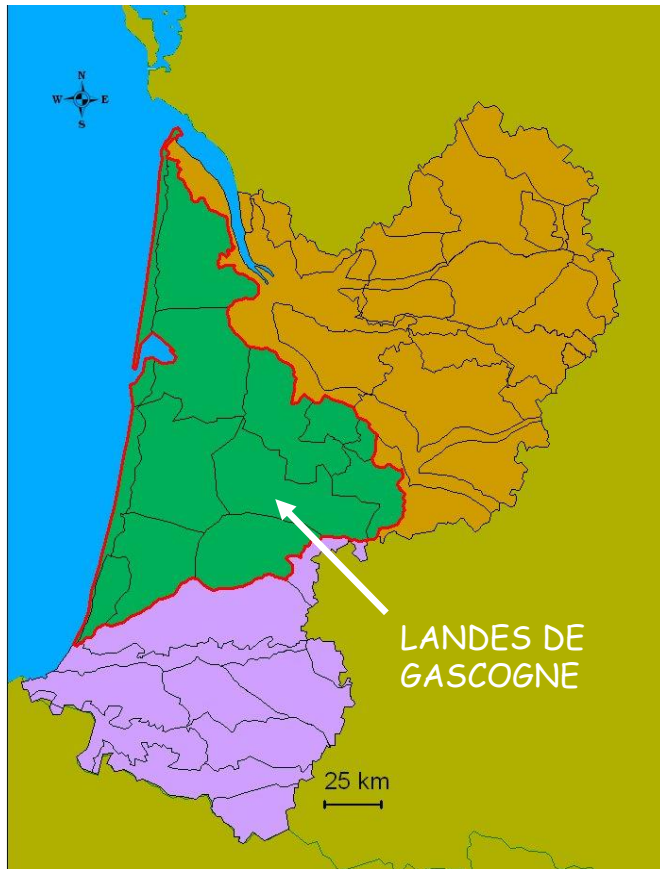
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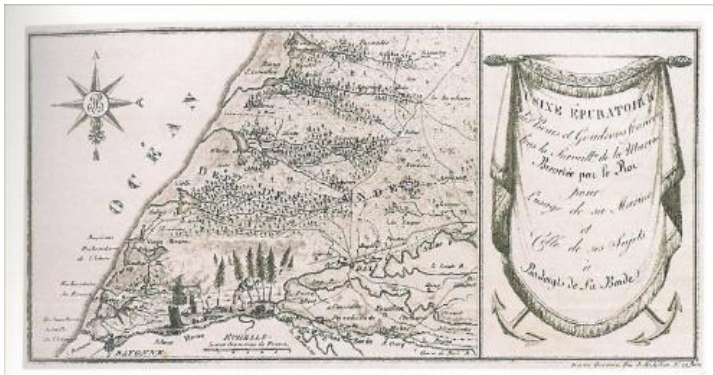
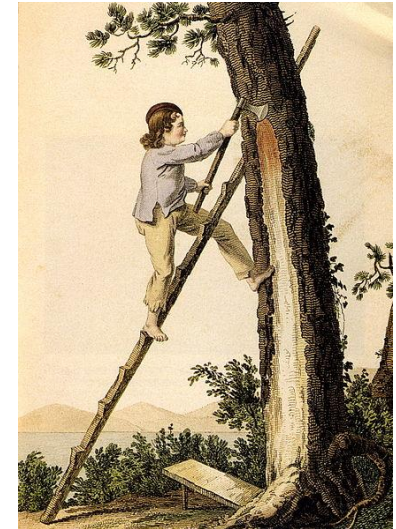
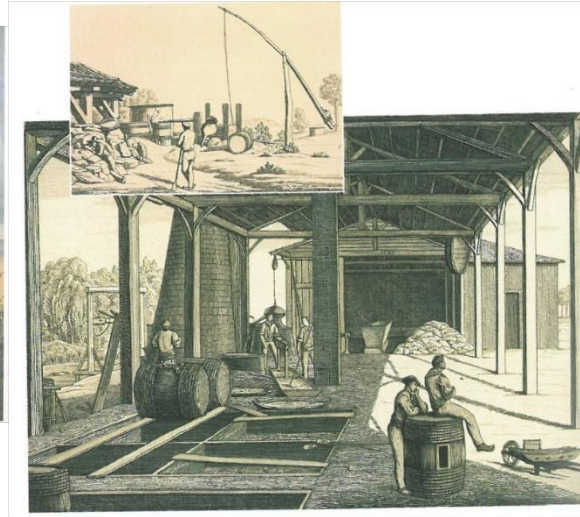
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Zoom on the Landes forest



- XIX century: plantations of maritime pine (Napoleon III)
- Today: 818 000 ha
- 90% of private forest

Resin in the Landes: an industry steeped in history



The disappearance of a sector

Year	Anual harvest (liters)
1920	178 millions
1959	62 millions
1975	12 millions
1995	n.s



- Large fires in the 1940s
- Hard work
- Unattractive remuneration
- Importation of resin at low price
- Substitution by synthetic products

For the past 10 years, we have been trying to restart resin harvesting in the Landes region.

Rural
Employment

Substitute to
synthetic
products

Forest
valorisation

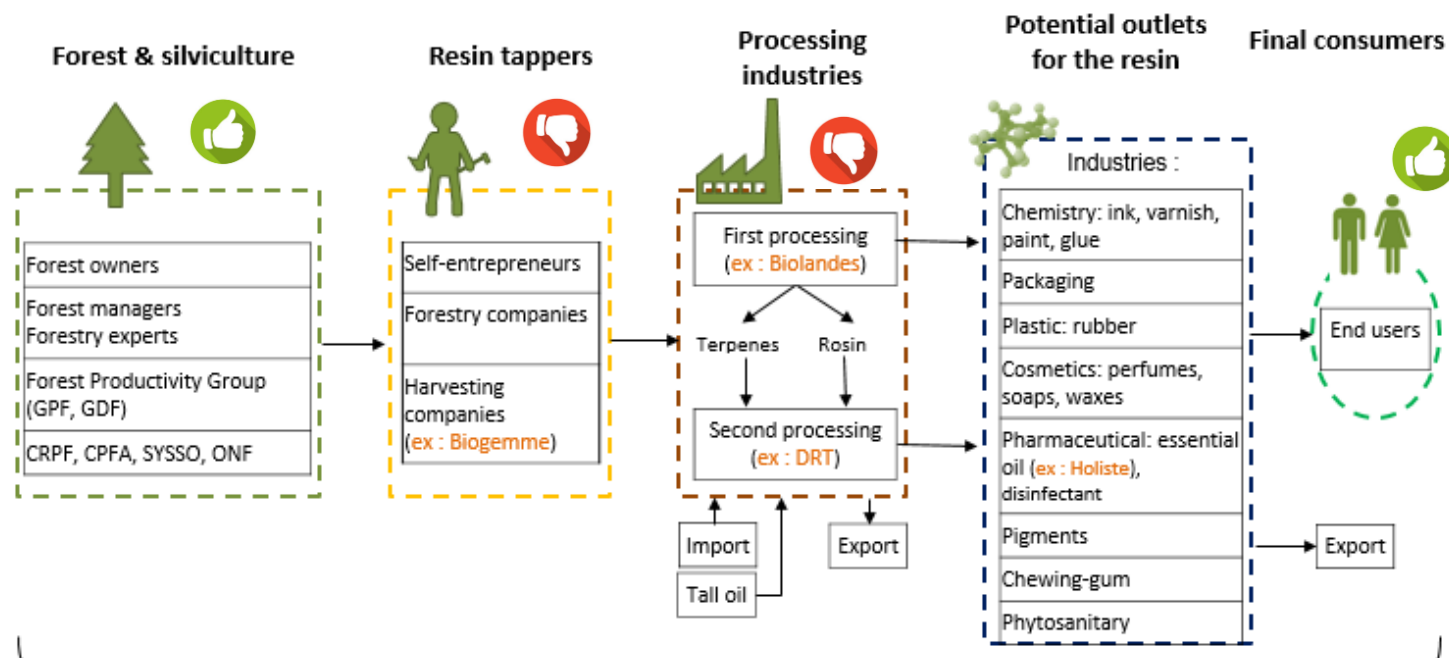


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The resin value chain



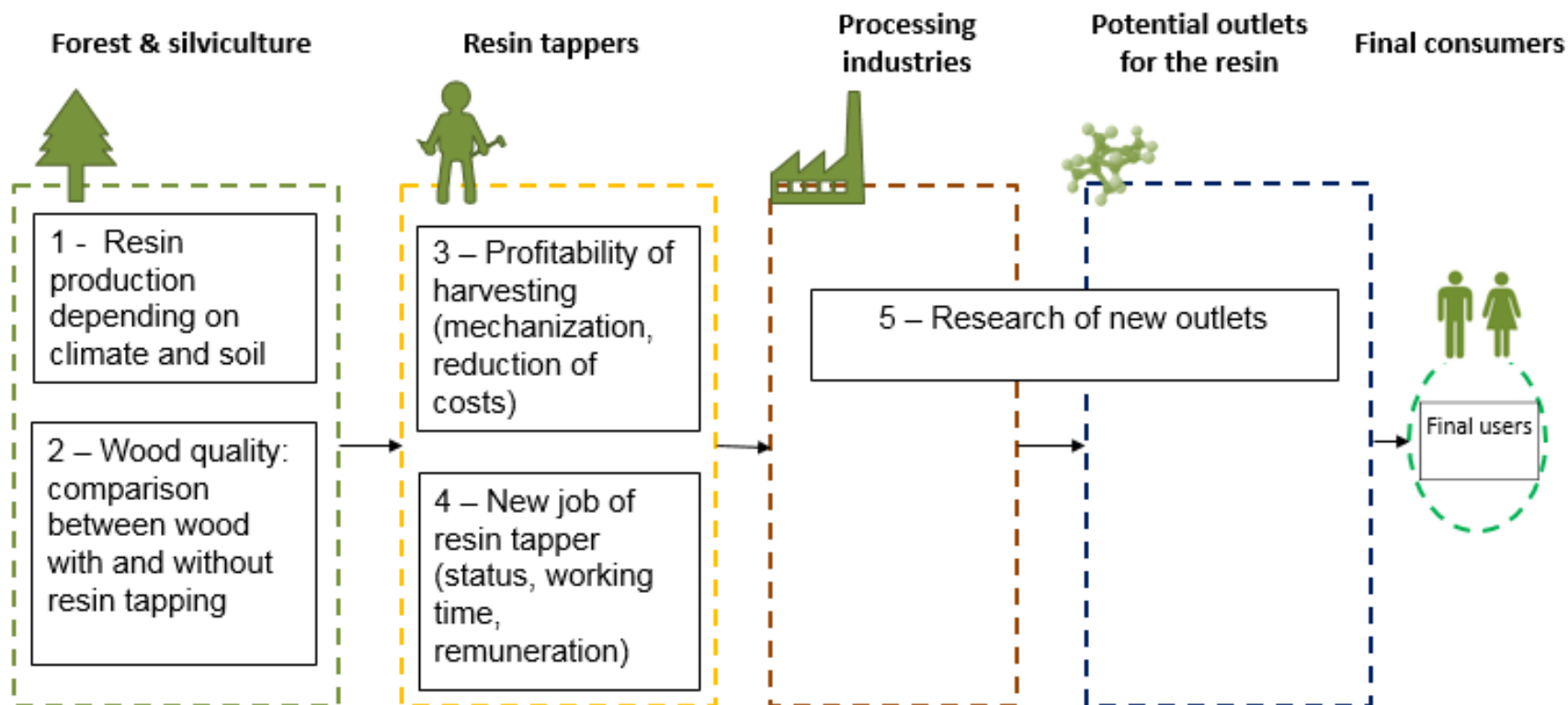
Actors of the sector, research, training and certification:

Association « Gemme la forêt d'Aquitaine », Xylofutur, FCBA, environmental associations (SEPANSO), University of Bordeaux, University of Pau (Bertrand Charrier), Bordeaux Sciences Agro, PEFC, IEFC

Institutional organizations:

The Regional Directorate of Food, Agriculture and Forestry of Nouvelle-Aquitaine (DRAAF), region Nouvelle-Aquitaine, Departments of Gironde, Landes and Lot-et-Garonne.

The axes of research to remove the barriers

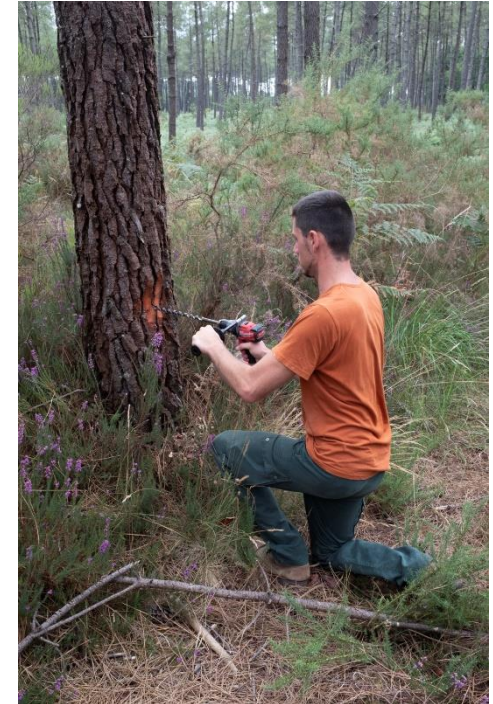


1. Resin production depending on climate and soil

Experimentation SustForest Plus CNPF, IEFC and INIA



Objectives: identify factors that affect yield and determine areas with major productivity



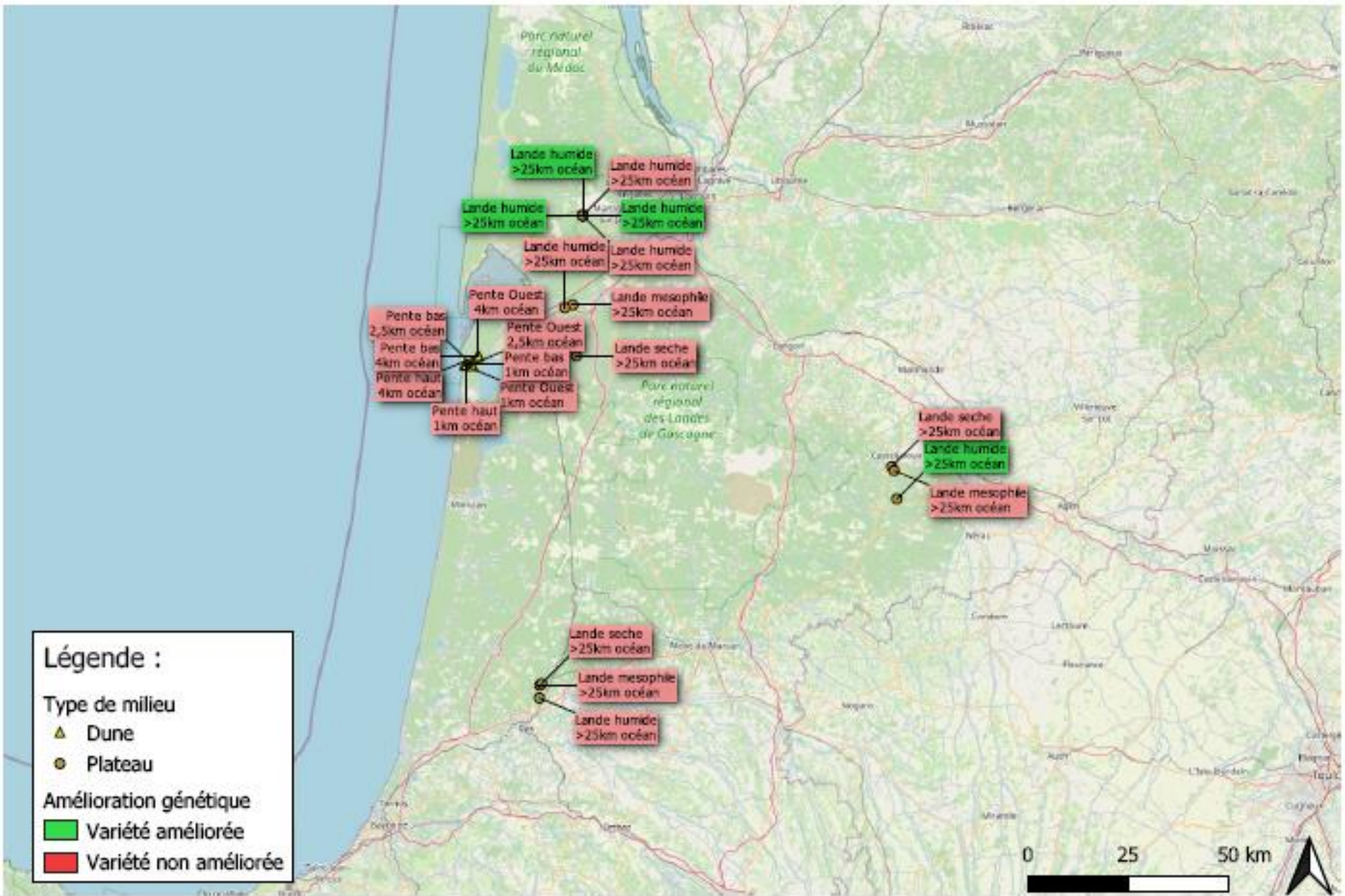
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Placettes en gemmage au sein du massif forestier landais



2. Wood quality and resin tapping

- ❑ Agreement with the FCBA (Technological Institute Forest Cellulose Wood-construction Furniture)
- ❑ Selection of 10 resinous trees and 10 non resinous trees to obtain 150 to 170 boards that will be dried and tested using several methods
 - Harvesting with CRPF : Tag on stems – logs
 - Sawing lumber : on site (mobile sawmill) or in sawmill / Tag on lumber
 - Grading machine : on site (MTG) or in sawmill (XYLOCLASS)
 - Transfert in FCBA (Bordeaux)



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2. Wood quality and resin tapping

❖ Technological characterization of resin and non-resin pine trees

❑ Grading machine

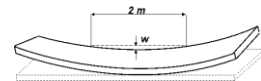
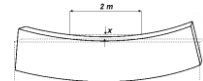


- on site (MTG)
Manual
- Or in sawmill (XYLOCLASS)
Automatic



❑ Transfert in FCBA (Bordeaux)

- Drying
 - 2 batches (maritime pine drying table)
 - resin pine and
 - non-resin pine
 - Measurement
 - Weight in processing
- Mesuarement
 - Deformation
 - Resin pocket



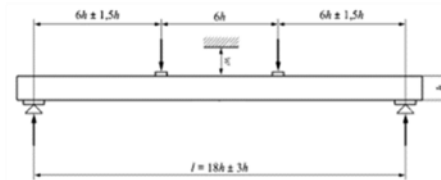
Critères	visualisation
flèche de face (Bow) :	
flèche de rive (spring)	
gauchissement (twist)	
tuilage (cup)	

2. Wood quality and resin tapping

❖ Technological characterization of resin and non-resin pine trees

❑ FCBA (Bordeaux)

- Bending test (EN 408)
 - MOE
 - MOR
- Hardness
 - Brinell test (EN 1534)
- Degradation (ageing) test
 - Same coating on specimen
 - resin pine and
 - non-resin pine



3. Profitability of harvesting and

4. New job for the resin tapper

- Mechanization of the resin tapping: method Biogemme
 - Increase the rentability
 - Reduce penibility
- Training for new tapper
- The tapper can also work in a forestry company
- Remuneration of the tapper: could be profitable if resin is bought 1,4€/kg



5. Research of new outlets

Example:

Study of an organic source varnish based on rosin of maritime pine and linen oil by Bertrand Charrier, professor at University of Pau



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Conclusion

Real politic determination to revive the resin sector, which allows research projects to be carried out accross the entire value chain. The priorities are:

- to find profitable markets, new outlets, a valorization of local production (so as not to compete with China or Brazil...)
- optimize the resin tapper equipment (drill, emptying station) in order to improve the comfort and reduce the drudgery of the work and then market them. In 2020, the tools are being developed by the Holiste company.
- to establish a model of equitable remuneration for resin tappers and forest owners compatible with these markets.



THANK YOU FOR YOUR ATTENTION!

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