The Future for the French forest-based sector

"Climate Change and the Fate of Forests, 31st October 2024
Helsinki, Finland

HOMO SILVESTRIS EUROPAE

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HOMO SILVESTRIS EUROPAE (since 2021, HQ in Paris, France)

Andreas Nikolaus Kleinschmit von Lengefeld,

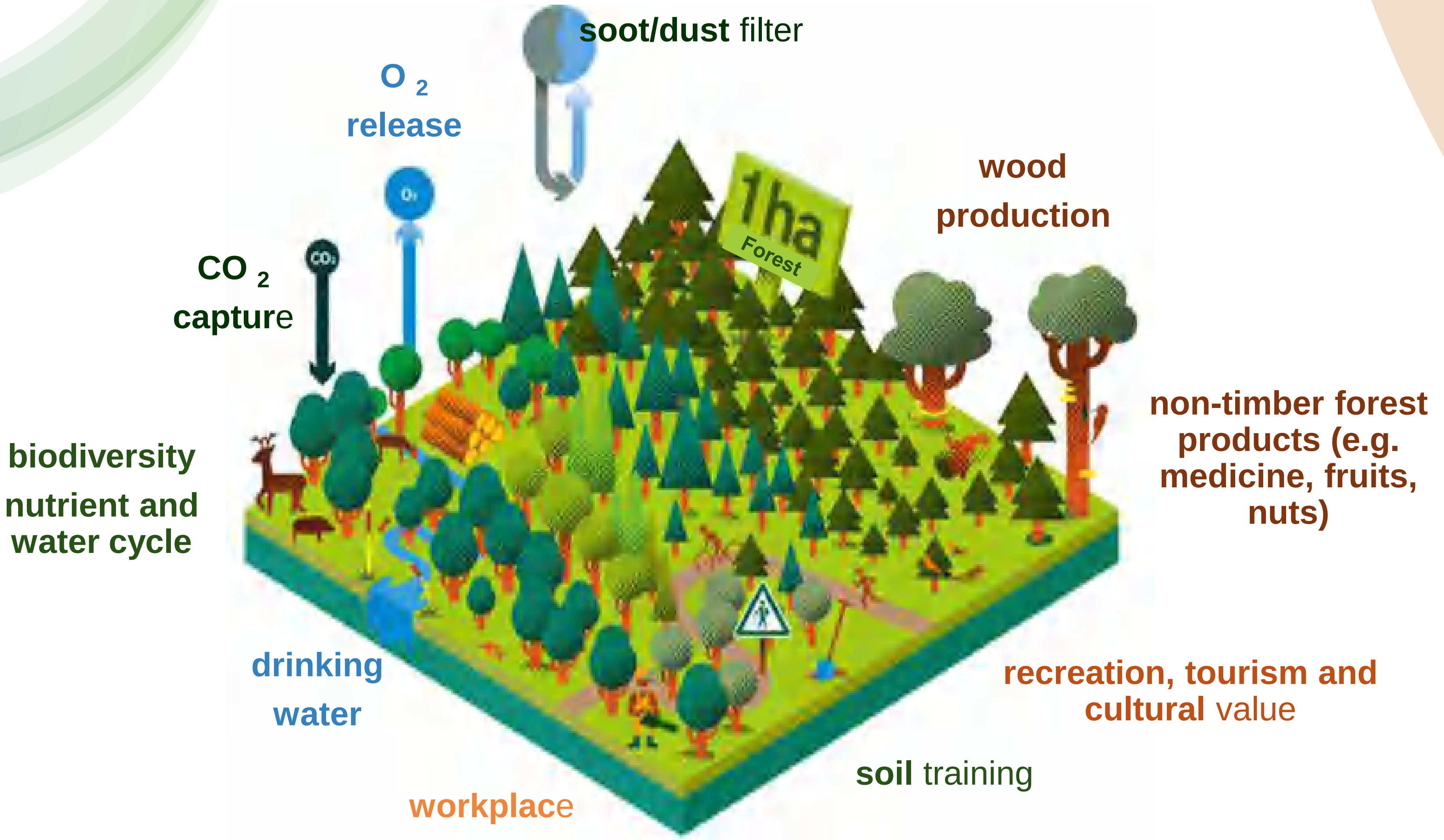
- **founder of Homo Silvestris Europae**

Expert in European Forest-based sector related issues

- **25+ years of experience in forestry and wood value chains**
- **Focus on innovation and sustainability and green transition**
- **Contributing to actual initiatives such as:**
    - woodPoP https://woodpop.eu
    - TeamingUp4Forests https://teamingup4forests.com/
    - Bio2REG https://bio2reg.eu/
- **Skilled facilitator promoting collaboration and market-ready solutions**
- **Committed to advancing the circular bioeconomy**

The critical functions of forests

TEAMING UP 4 FORESTS

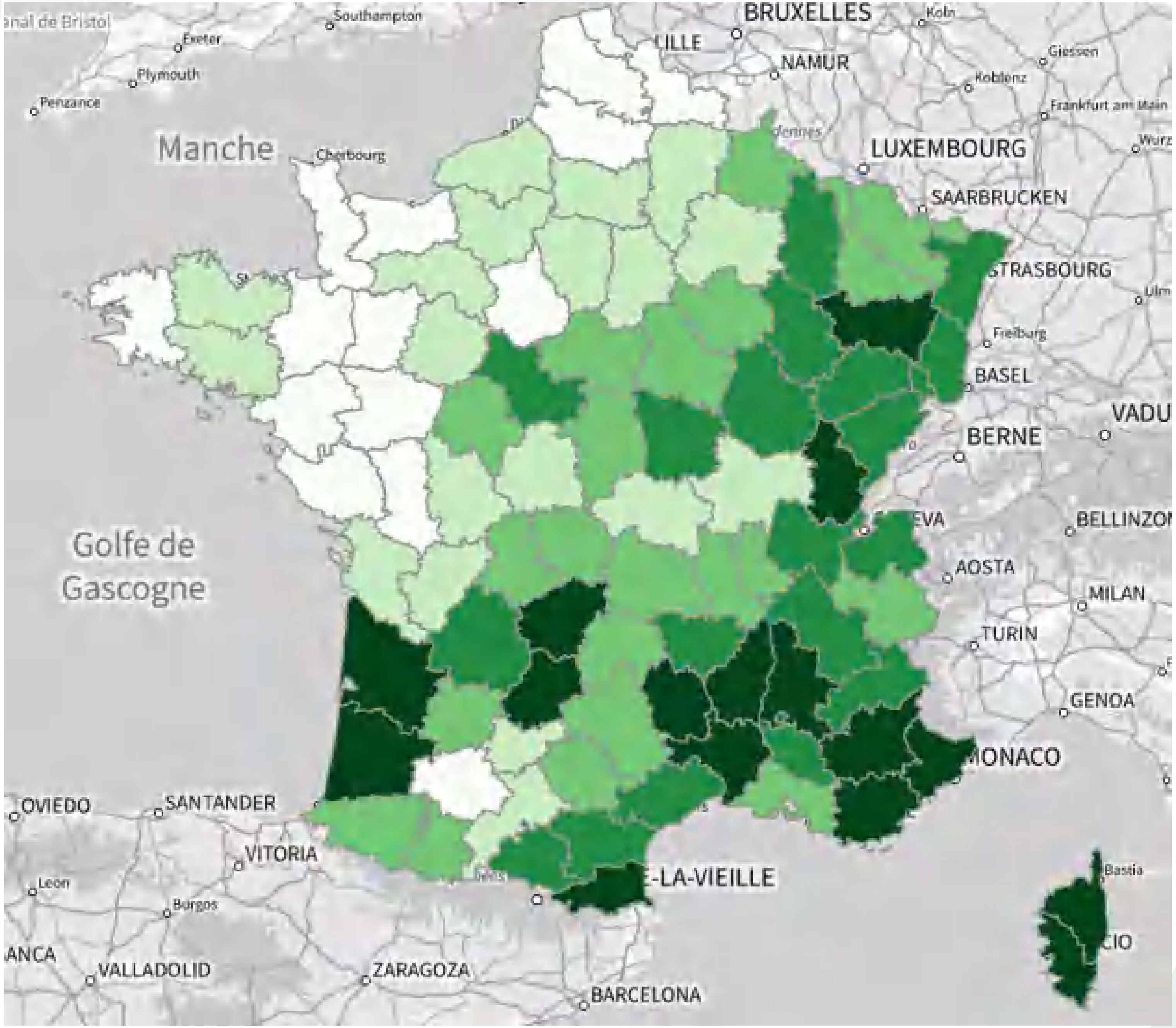


Source: Bavarian State Forests, 2017

French Forests

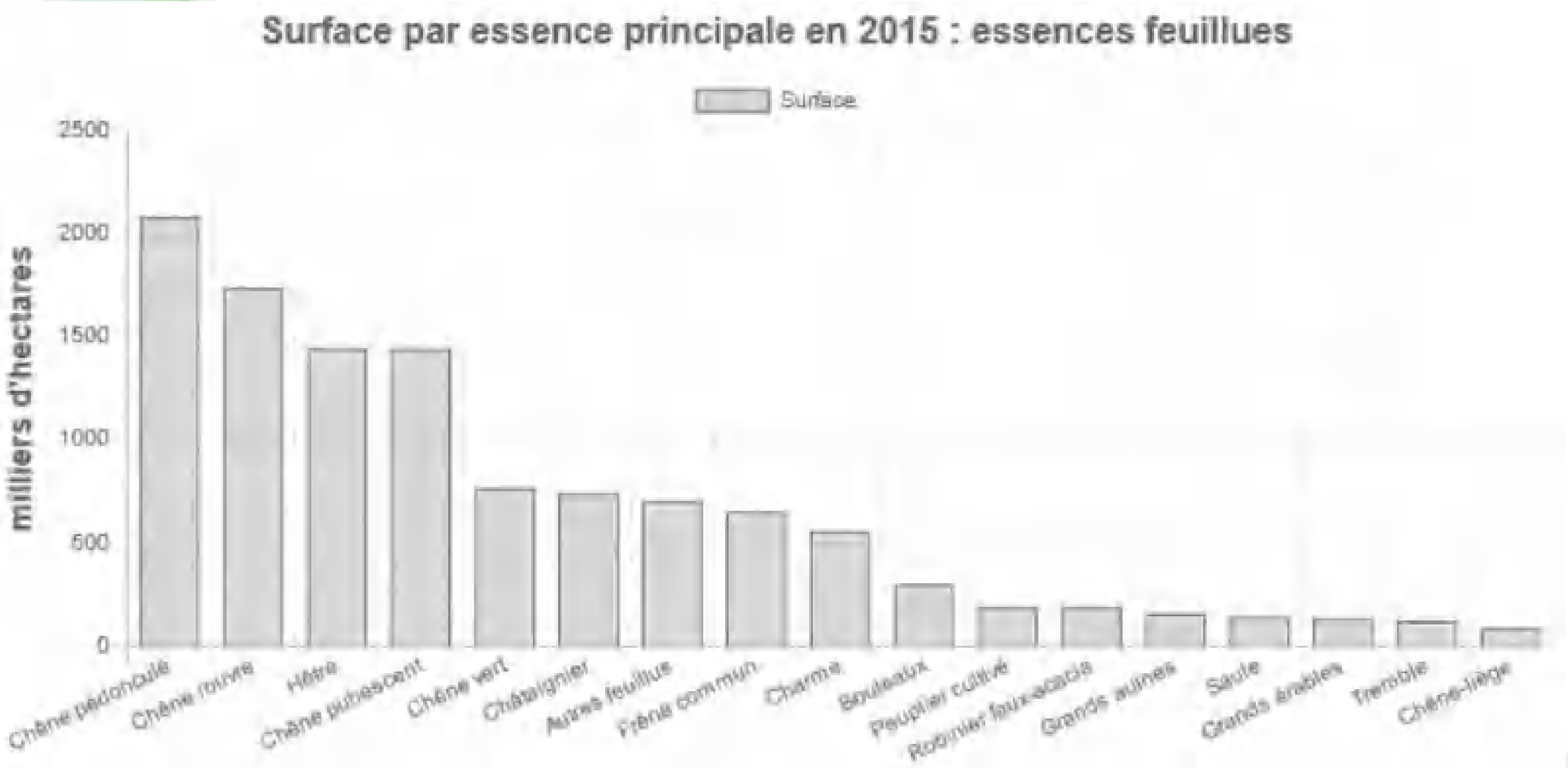
https://foret.ign.fr/themes/la-foret-en-france

Afforestation: afforestation rate by Department



Source: BD Forêt V2, IGN.
The vintage depends on the year in which each department was photographed, between 2005 and 2019.

Area by main species in 2015 : Hardwood



Source: https://foret.ign.fr/IGD/fr/indicateurs/1.1.4

The French Forest-based sector

The French Forest :

- 17 million ha + 8 million DOM (Guyana and Amazonia)
- *4th largest forest area in Europe*
- 31% of the national territory
- 38 mio m^3 of harvested and marketed / a
  2.8 billion m^3 of standing timber
  378,000 jobs

Marketed timber :

- Timber (logs for sawing and veneering): 19.6 mio m^3/a
  Industrial timber (pulpwood, poles, posts and other): 10.5 mio m^3/a
- Wood energy (firewood and charcoal): 8 mio m^3/a
- Timber contributes to the production of 8.2 mio tonnes/a of related co-products (chips or sources) used by the paper industry and for energy.

Timber :

- Sawn timber: 7,931,000 m^3/a
- Cooper's and sleepers: 207,000 m^3/a
- Veneer and plywood: 255,000 m^3/a

Industrial timber :

- Pulp: 1.6 mio tonnes/a
- Panels: 4.6 mio m^3/a

Source: DGPE, 2019 data
https://agriculture.gouv.fr/infographie-la-filiere-foret-bois-en-france

Forest ownership situation in France today

Private Forests:

In 2023, **75%** of the forest in mainland France = **13.1 mio ha** belong to private owners, of which around a **25% = 3.1mio ha** will be covered by a management plan approved by the CNPF.

Public forests:

Account for a **25%** of the forests in mainland France.

State-owned forests = **1.5 mio ha**

Other public forests = **2.8 mio ha**, essentially communal forests.

The **Grand Est region** is the only one where private forest is in the minority (45%).

Source: https://foret.ign.fr/themes/les-forets-de-l'hexagone-et-de-la-corse

Les Coopératives Forestières

- Half of the private forest have no trace of management or actions
- Forest management with sustainable documentation 3 mio = ha of private forest today (only)
- Waste… there's still an issue
- Climate change: the number one issue.
- Adaptation
- Diversification? How to silviculture?
- Motivation and mobilisation of owners: 5 thousand euros / ha
- Biodiversity (a very broad term):

80% of biodiversity remains in the forest.

Birds less 3% in the forest but -35/-40% in agriculture

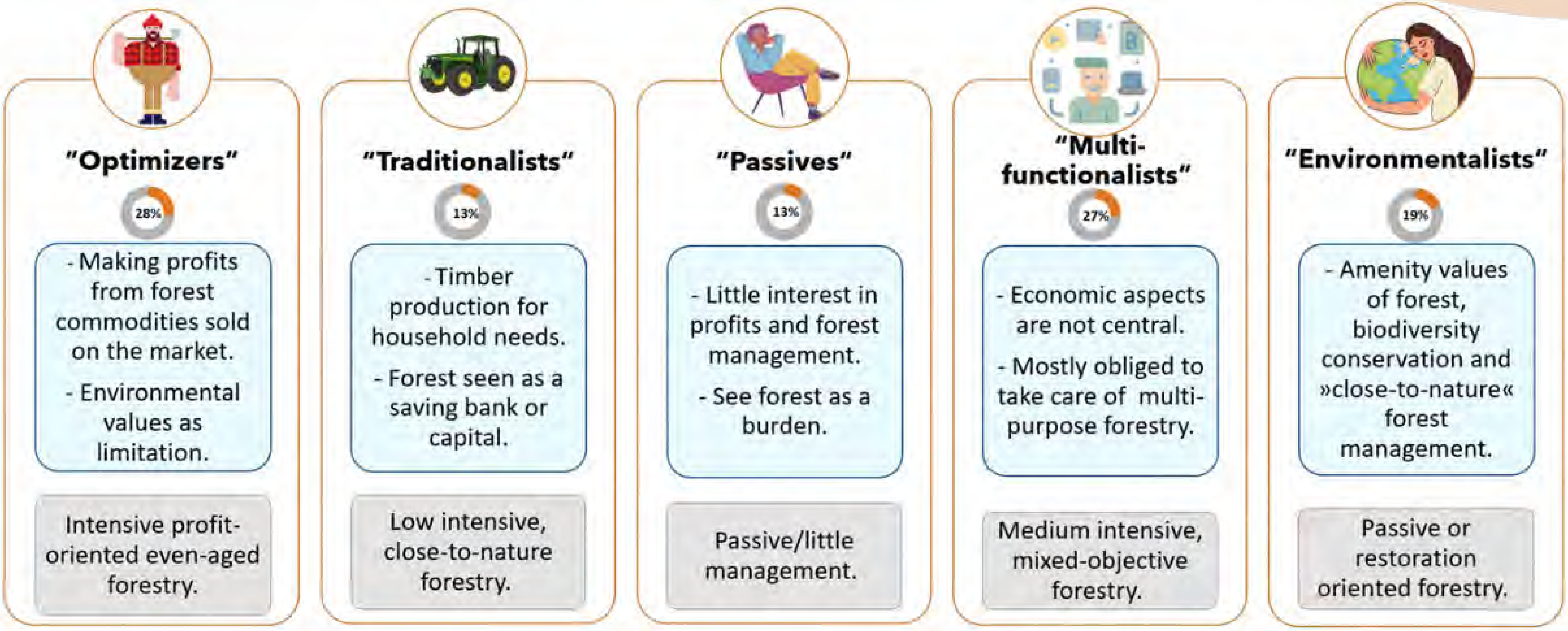
190 tree species: oak 50%, poplar, beech, fir, Douglas fir, spruce, maritime pine 80% use.

Ownership in France 3-4 ha / owner

M. Tammouz Eñaut HELOU
Secrétaire général L'UCFF

Forest owners' profiles and behaviour

TEAMING UP 4 FORESTS



Nearly 80% increase in tree mortality between 2005-2013 and 2013-2021
Spruce, Ash and Chestnut species particularly affected
15 000health observations carried out each year by the Forest Health Department

Government Initiative:
Ecological Planning Forest Roadmap

Goals:
Adapt forest management,
Enhance resilience
(December 2022)

Guides to manage biodiversity in forests:

Riparian management,

Bird management,

Management of old and dead wood,

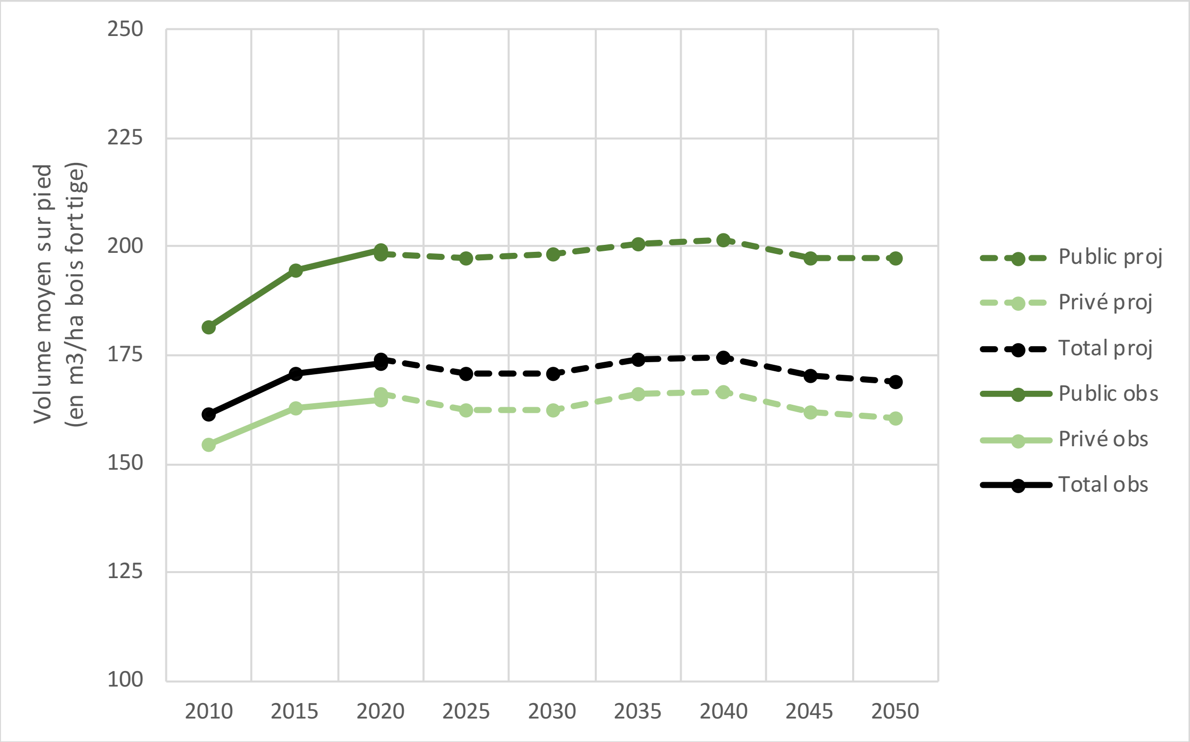
Moss management,

Source: https://foret.ign.fr/themes/sante-des-forets

↓ case à sélectionner

Scénario	B2_R1_C2	Volume sur pied (en Mm3 bois fort tige)					Stock de carbone (en MtC)	Surface (en milliers d'ha)	
		Feuillus		Résineux		Total	Total	Public	Privé
	Année	Public	Privé	Public	Privé				
Obs. IFN	*2010*	*424 ± 16*	*1 202 ± 27*	*288 ± 16*	*603 ± 25*	*2 518 ± 38*	*1 182 ± 17*	*3 930 ± 50*	*11 680 ± 100*
	2015	*438 ± 17*	*1 296 ± 31*	*331 ± 21*	*663 ± 28*	*2 728 ± 45*	*1 268 ± 20*	*3 950 ± 50*	*12 030 ± 110*
	2020	*462 ± 17*	*1 358 ± 31*	*330 ± 21*	*661 ± 29*	*2 811 ± 46*	*1 316 ± 20*	*3 970 ± 40*	*12 270 ± 110*
Projections 2020-2050	2025	471	1 414	312	638	2 834	1 331	3 970	12 620
	2030	478	1 449	310	639	2 877	1 361	3 970	12 850
	2035	489	1 506	307	644	2 946	1 405	3 970	12 960
	2040	494	1 525	307	641	2 967	1 423	3 970	13 010
	2045	487	1 496	297	618	2 899	1 399	3 970	13 050
	2050	488	1 499	295	597	2 879	1 398	3 970	13 060

Changes in growing stock and forest area



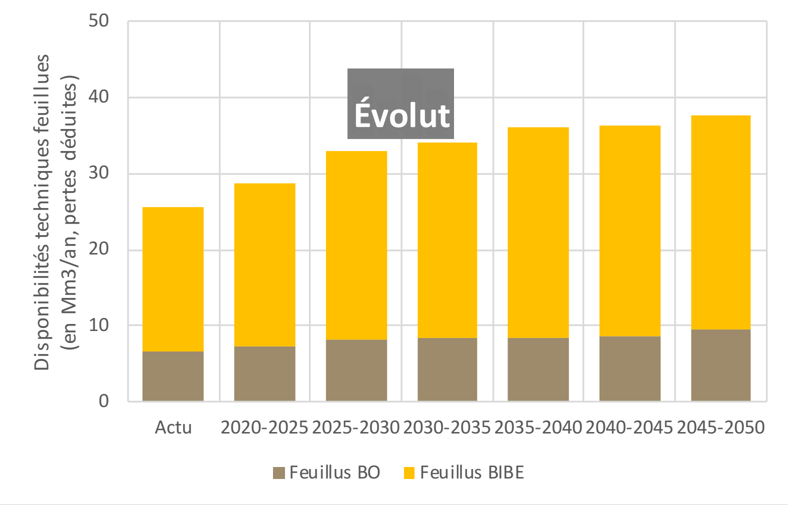
Etude réalisée en 2023-2024 par l'IGN et FCBA

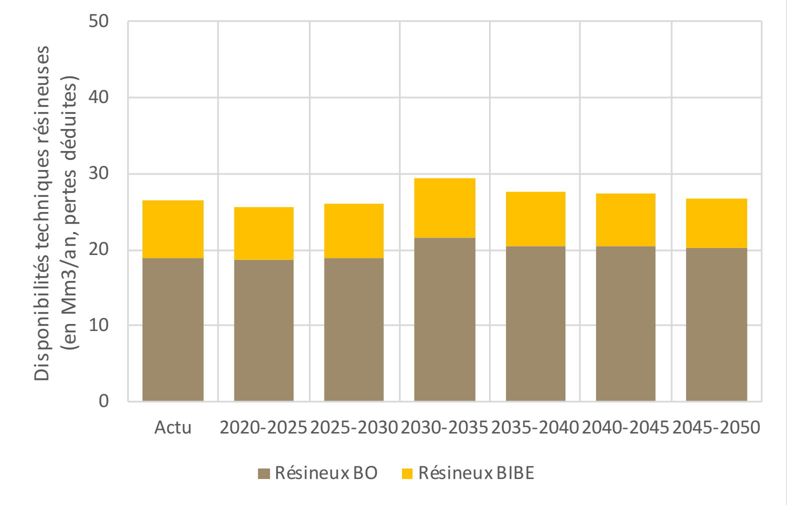
Etude soutenue par le MASA, le MTECT, l'ADEME, FCBA et l'IGN

↓ case à sélectionner

Scénario	B2_R1_C2 Période	Flux en volume (en Mm3/an bois fort tige) – Dispos.	Flux en volume – Mortalité	Flux en carbone (en MtC/an aérien et racinaire) – Dispos	Flux en carbone – Mortalité	Disponibilités techniques (en Mm3/an, pertes déduites) – Feuillus – BO pot. – Public	Feuillus – BO pot. – Privé	Feuillus – BIBE – Public	Feuillus – BIBE – Privé	Résineux – BO pot. – Public	Résineux – BO pot. – Privé	Résineux – BIBE – Public	Résineux – BIBE – Privé	Total	Origine des disponibilités (en % du total) – Coupes liées au plan de renouvel.	Coupes sanitaires
Obs. IFN	*2013-2022*	*51,4 ± 2,7*	*13,1 ± 0,6*	*Non estimé*		*2,2 ± 0,3*	*4,3 ± 0,5*	*5,6 ± 0,5*	*13,5 ± 1,1*	*4,9 ± 0,8*	*14 ± 1,7*	*1,8 ± 0,3*	*5,9 ± 0,6*	*52,3 ± 2,6*	*Non estimé*	
Projections 2020-2050	2020-2025	52,6	23,2	21,9	10,5	2,7	4,6	6,3	15,0	5,4	13,3	1,8	5,1	54,1	4%	10%
	2025-2030	56,8	16,0	24,3	7,5	2,9	5,3	6,9	17,9	5,1	13,8	1,8	5,3	58,9	16%	4%
	2030-2035	61,2	11,2	26,0	5,3	2,9	5,4	7,2	18,5	5,7	16,0	2,0	5,7	63,4	19%	3%
	2035-2040	60,8	17,3	26,6	8,2	2,8	5,7	6,9	20,6	4,7	15,9	1,5	5,5	63,7	0%	7%
	2040-2045	60,8	27,4	26,7	13,1	2,9	5,8	7,2	20,3	5,1	15,5	1,6	5,2	63,7	0%	10%
	2045-2050	61,1	16,8	27,1	8,1	2,8	6,8	7,1	20,9	4,6	15,6	1,4	5,1	64,3	3%	7%

Changes in wood flows, availability and mortality





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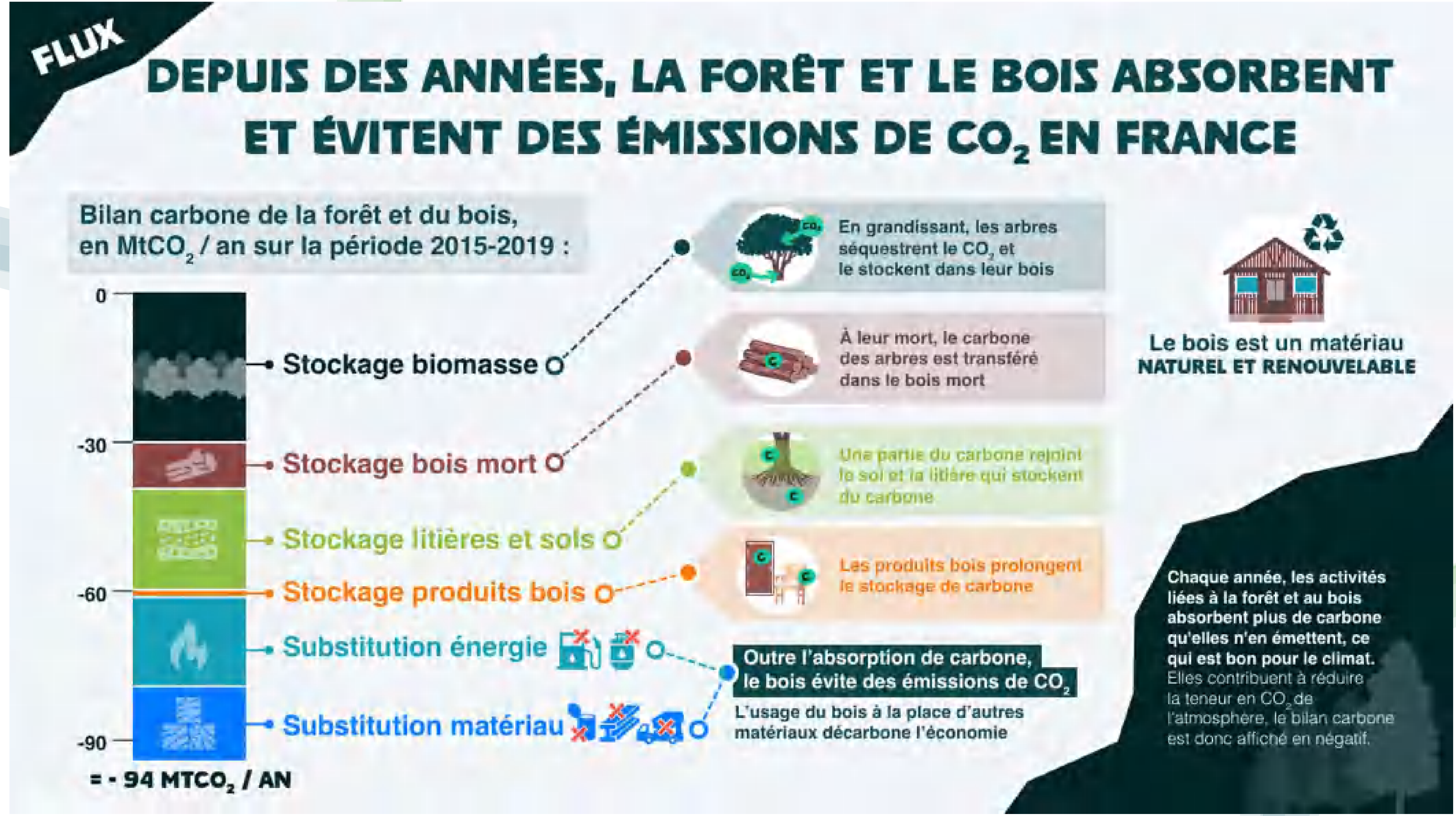
The role of forests in mitigating climate change

1. Can French forests play a key role in reducing greenhouse gas emissions?
2. Possible solutions to promote sustainable forest management, reforestation and carbon sequestration techniques.
3. The importance of the transition to forestry practices adapted to climate change.


FLUX
DEPUIS DES ANNÉES, LA FORÊT ET LE BOIS ABSORBENT ET ÉVITENT DES ÉMISSIONS DE CO_2 EN FRANCE
Bilan carbone de la forêt et du bois, en $MtCO_2$ / an sur la période 2015-2019 :
0
-30
-60
-90
Stockage biomasse
Stockage bois mort
Stockage litières et sols
Stockage produits bois
Substitution énergie
Substitution matériau
= - 94 $MTCO_2$ / AN
En grandissant, les arbres séquestrent le CO_2 et le stockent dans leur bois
À leur mort, le carbone des arbres est transféré dans le bois mort
Une partie du carbone rejoint le sol et la litière qui stockent du carbone
Les produits bois prolongent le stockage de carbone
Outre l'absorption de carbone, le bois évite des émissions de CO_2
L'usage du bois à la place d'autres matériaux décarbone l'économie
Le bois est un matériau NATUREL ET RENOUVELABLE
Chaque année, les activités liées à la forêt et au bois absorbent plus de carbone qu'elles n'en émettent, ce qui est bon pour le climat. Elles contribuent à réduire la teneur en CO_2 de l'atmosphère, le bilan carbone est donc affiché en négatif.

Challenges for the French forestry industry

1. The impact of climate change on the growth and resilience of forests (fire, disease, drought).
2. How to adapt the French forestry industry to the new climate (examples of practices and policies).
3. The importance of collaboration between private, public and scientific players to meet the challenges of climate change.

The French ecological plan

It sets out five areas of work, based in particular on the 25 measures that emerged from the Assises de la forêt (Forest Conferences) held between October 2021 and March 2022:

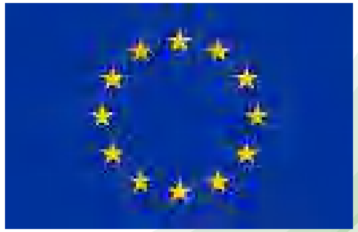
1. Improving risk prevention and fighting fires
2. Adapting forests to climate change
3. Sustainable forest management
4. Restoring and preserving biodiversity, ecosystem services and forest soils
5. Structuring and developing the sector to make better use of wood products

One year on from the conclusions of the Assises, all the measures have been launched and put into practice including:

- continued State funding
- restore and adapt forests to climate change
- creation of a new scientific committee dedicated to the species of the future
- financial support for investment in the seeds and seedlings sector (a key link in forest renewal;)
- roll-out of investment projects in wood processing companies (supported by the State to the tune of €42 million as part of France Relance)
- development of contractual sales of wood from state-owned forests
- acquiring and making available high-resolution Lidar data to gain a better understanding of our forests
- stepping up efforts to raise awareness of forestry issues among schoolchildren.

France 2030

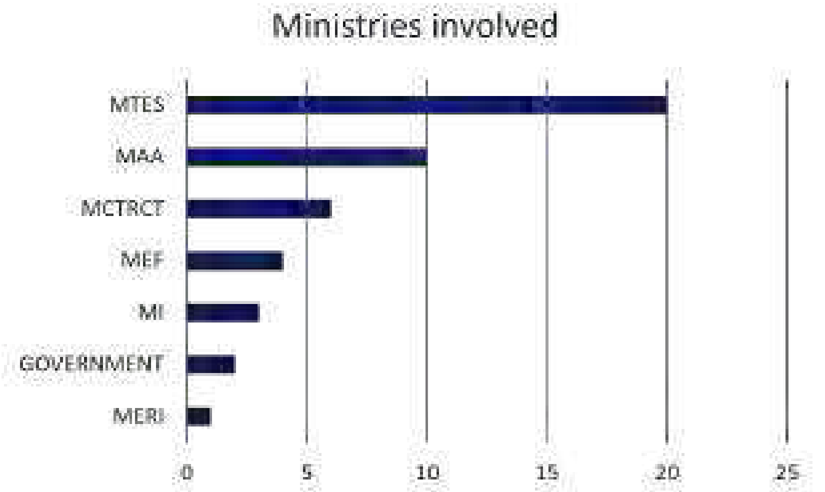
- €500 million has been earmarked for France's forests.
- sum is in addition to the €300 million already deployed in 2021 as part of the **France Recovery Plan** to make the forestry and wood industry more resilient.
- Under the France 2030 plan, **additional funds will be released** to guarantee the sustainability, resilience and production capacity of the French forest, equivalent to the **planting of several tens of millions of trees by 2030**, in addition to the **50 million initiated under the France Relance plan by 2024**.
- ***..., funds will be earmarked to develop a high-performance, innovative production chain in order to strengthen and modernise the production facilities needed to develop wood construction***.
- ..., to optimise the use of resources and support the competitiveness of the industry, the development of ***outlets for all wood co-products*** must be set in ***motion***, particularly in the uses of ***wood-cellulose*** as well as in ***eco-responsible packaging and containers***. To achieve this, a budget will be allocated for **a cellulose plan to create new outlets: energy production, cellulose recovery for green chemistry, etc.**

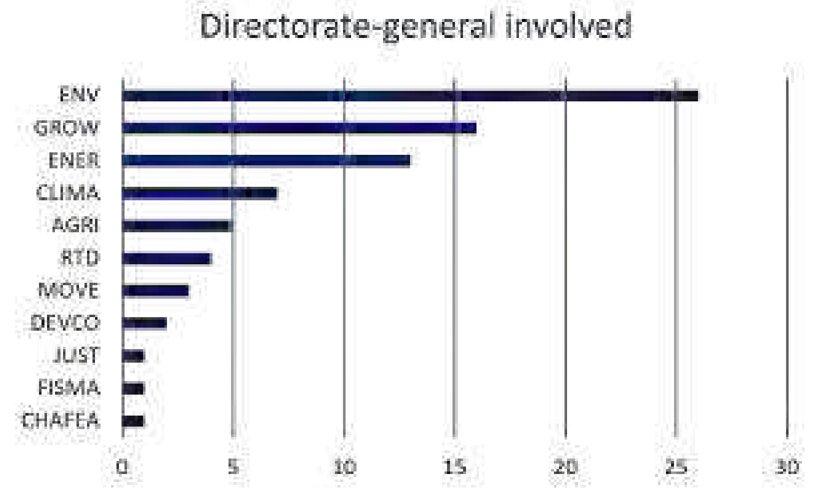


Public bodies of importance for the forest-based sector - FR / EU

Frédéric Bonin

Andreas Nikolaus Kleinschmit von Lengefeld





MAPPING OF PUBLIC POLICIES RELATED TO THE FOREST-BASED SECTOR

December 2018, DOI: 10.13140/RG.2.2.19142.34886
Affiliation: FCBA Institut Technologique

EUROPE'S WOOD SUPPLY IN DISRUPTIVE TIMES

FINDINGS FROM A NEW STUDY REPORT

Factors impacting Europe's wood supply

TEAMING UP 4 FORESTS

ENVIRONMENTAL

- ✔ Forest types and growth
- ✔ Climate change
- ✔ Forest management

POLITICAL

- ✔ EU and national forest-related policies and laws
- ✔ National forest policy priorities
- ✔ Forest property rights

SOCIOECONOMIC

- ✔ Forest ownership
- ✔ Demographic developments
- ✔ Market trends
- ✔ Geopolitics and international trade

TECHNOLOGICAL

- ✔ Innovative wood-based technologies and their developments
- ✔ Emerging wood-based products and their market trends

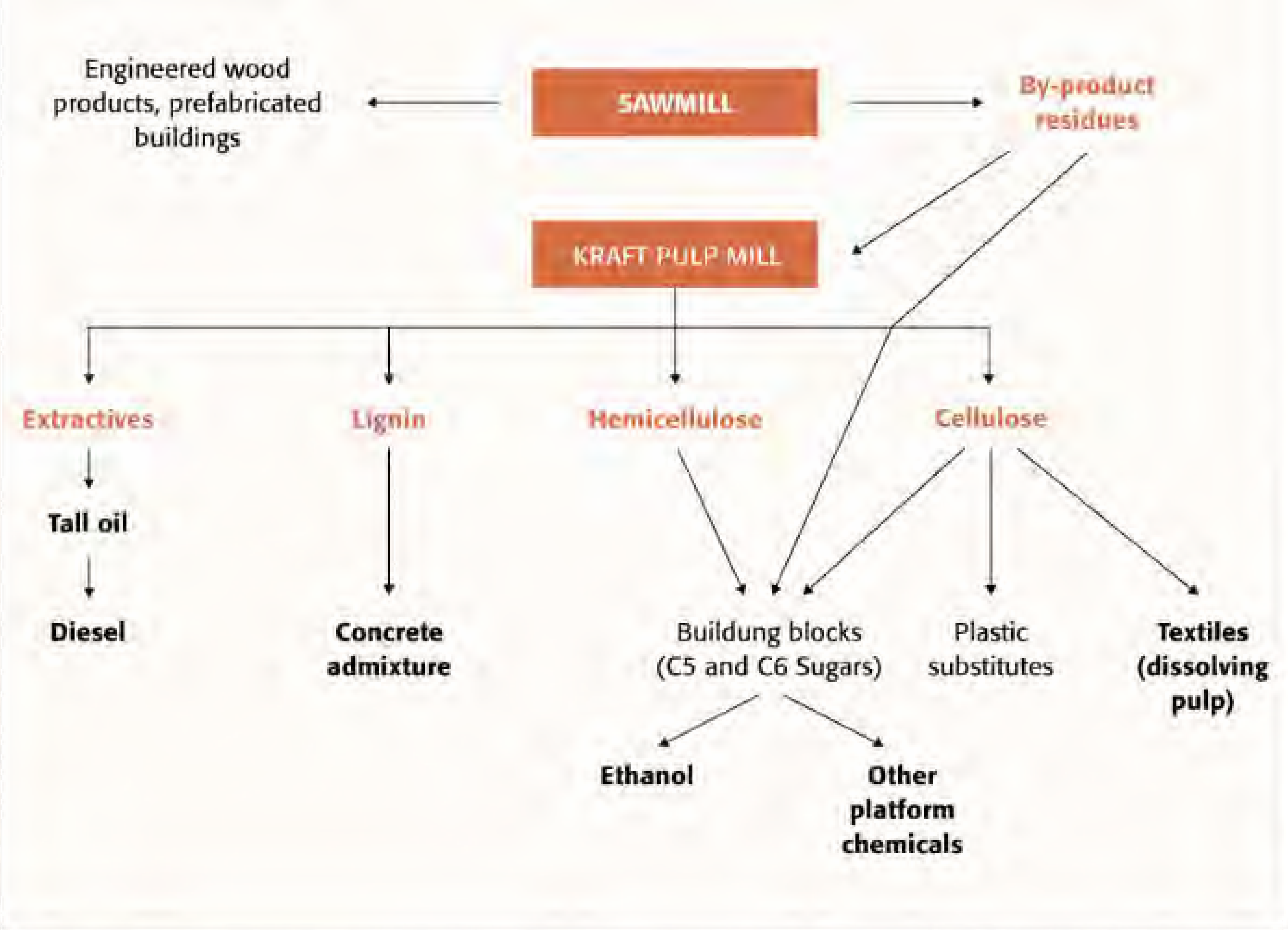
Emerging wood-based products and their market trends

Product	Growth trend	Turnover + employment implications	Market situation
Paper	decreasing	big	Mature products
Packaging materials	stable growth	big	Mature and new products
Sawn wood + veneer	slow growth	big	Mature and new products
Engineering products (e.g. cross-laminated timber (CLT))	rapid growth	small	New products
Bioenergy	growth	significant	Established products
Biofuels	growth	small	New products
Biochemicals	growth	small	Established and new products
Textiles	rapid growth	small	Established and new products

Source: Hurmekoski et al, 2022

22

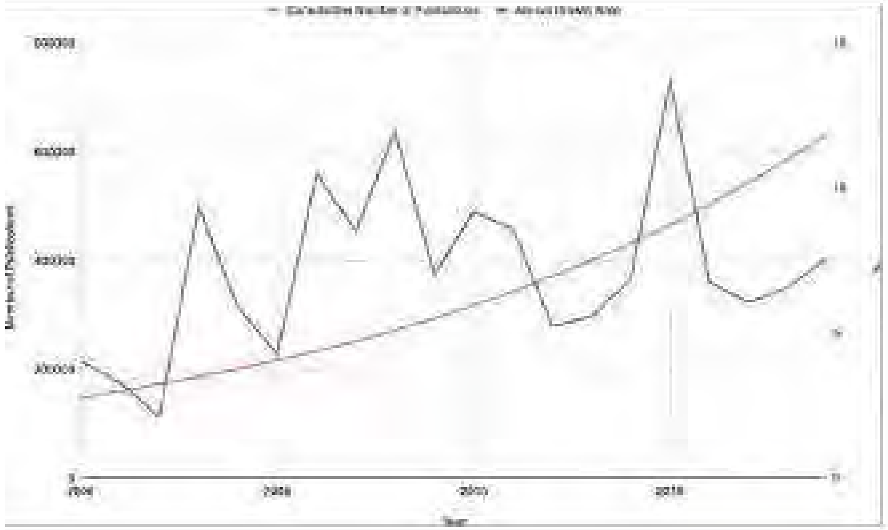
Emerging wood-based products - added value and substitution

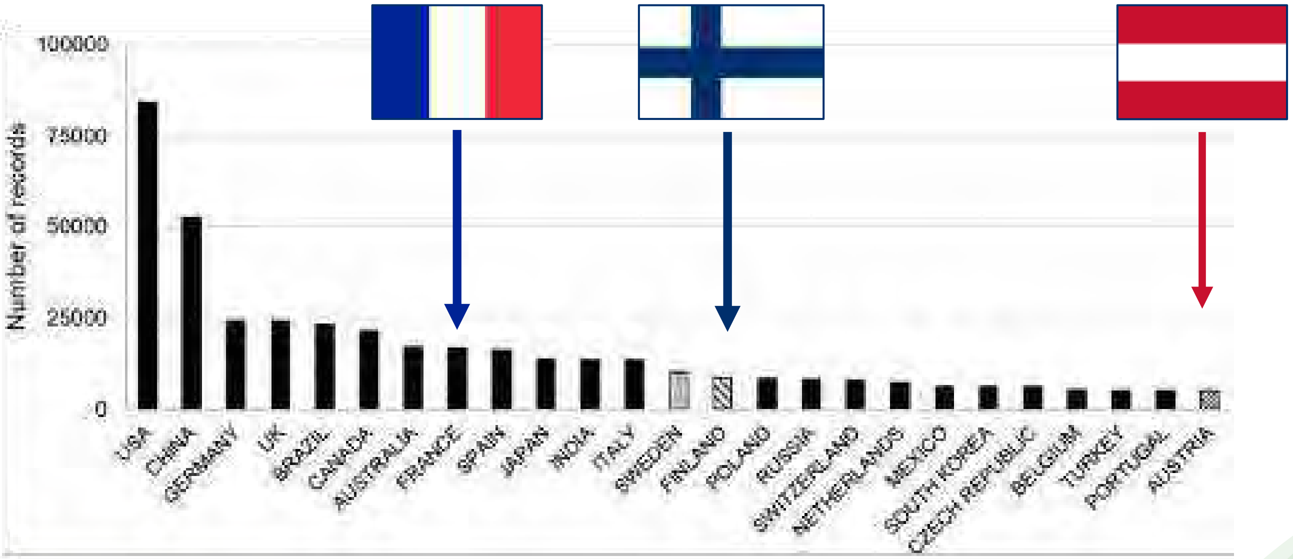


Source:

Hurmekoski et al, 2018

Evolution of forest research





State of forest research in 2010s – a bibliographic study with special reference to **Finland, Sweden and Austria**
Risto Päivinen, Gillian Petrokofsky, William J. Harvey, Leo Petrokofsky, Pasi Puttonen, Jyrki Kangas, Eero Mikkola, Leena Byholm & Liisa Käär
https://doi.org/10.1080/02827581.2023.2189296; Published online: 11 April 2023

Mes remerciements particuliers aux collègues français pour leur soutien dans la préparation de ce colloque

Veuillez trouver la liste des acteurs français de notre filière:
https://www.lecommercedubois.org/p/74/acteurs-de-la-filiere-bois

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