



GDR 3544 “Science du Bois” Academic and Industrial French Partnerships on Wood Science.

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CNRS - GDR 3544 ‘Sciences du bois’

French Research Group on Wood Science

- **Supported by French National Center for Scientific Research (CNRS)**
- **Created in 2012:**
 - **First period from 2012 to 2015**
 - **Second period from 2016 to 2020**
 - **Direction: Joseph GRIL, CNRS**
 - + **Meriem FOURNIER, AgroParisTech (until March 2019)**
 - + **Sabine CARE, IFSTTAR (from 2014 to 2018)**
 - + **Eric BADEL, INRA (from April 2019)**
 - + **Myriam Chaplain, I2M Bordeaux (from May 2019)**
- **About 730 people (including 450 permanent from CNRS units and other organizations (INRA, CIRAD, Culture Ministry, Universities, engineering schools, FCBA, Industrials, etc ...)).**
- **Foreign partners who are geographically or culturally close to French teams and who have established lasting relationships.**

The objectives of GDR "Wood Science" are the followings:



1. To structure wood research in France:

Improve communication (academic institutions, industrials, craftsmen...), skills transfers, cross-team collaborations and multidisciplinary research, Identify issues and challenges.

2. To contribute to the development of training course in wood science

Develop training at M&D levels, coordinating the provision of training, sharing of educational resources.



3. To serve as a relay to the international networks of wood sciences

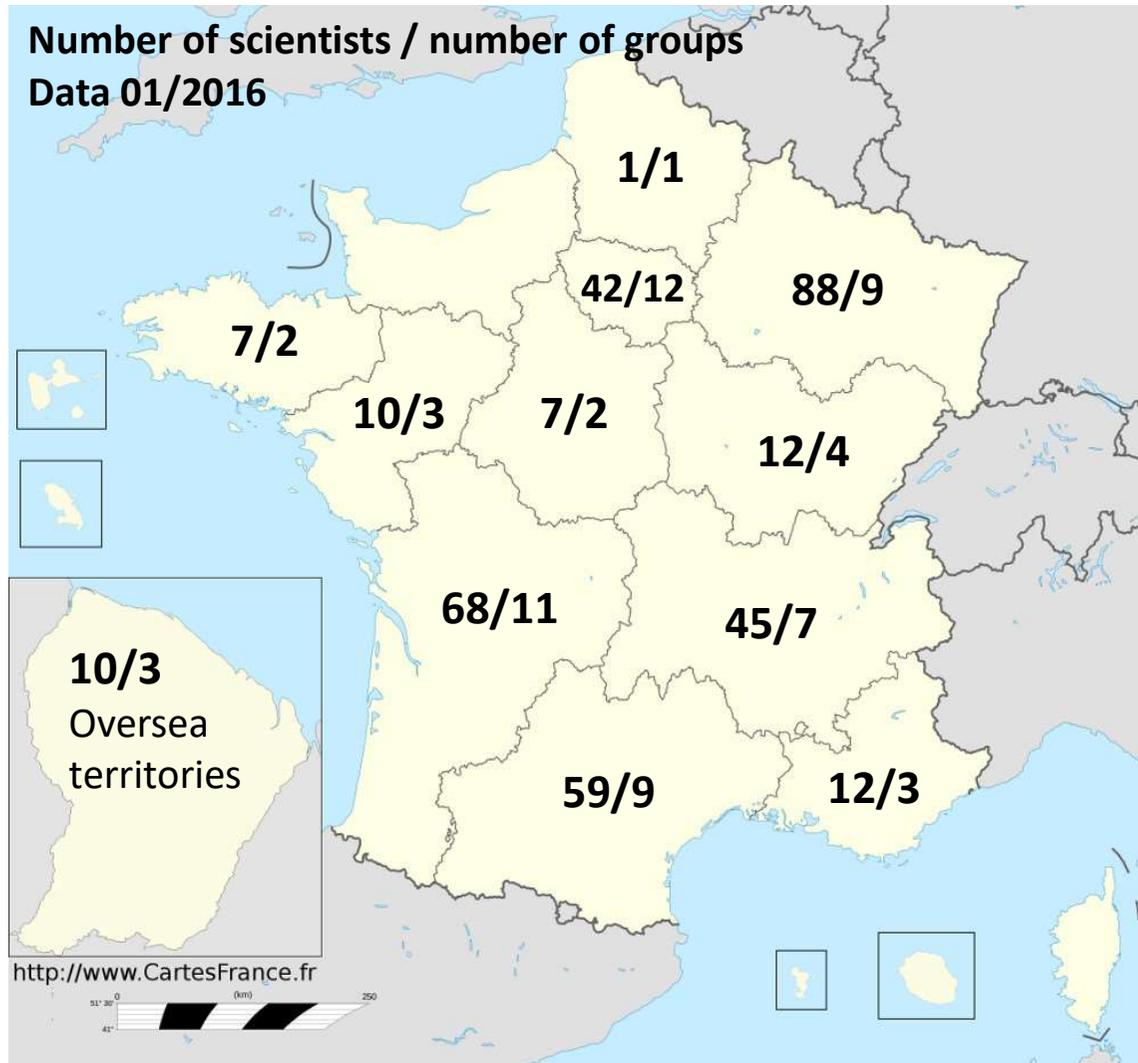
Dissemination of information, promote the implementation of scientific projects.



1. **Management committee:** monitoring and management of GDR Bois + assistance by a webmaster for communication actions.
2. **Scientific steering committee:** It reflects the variety of disciplines and institutions and gives an opinion on the scientific policy of GDR Bois and the actions taken
3. **A commission “to assess the GDR financial support”:** Evaluation of financial support requests submitted to the GDR Bois
4. **A commission “International relations”:** Disseminate all information to researchers abroad who may be interested in the GDR and its activities.
5. **A commission “Training courses & Formations”:** Coordinate training actions at national level and develop digital resources in wood sciences

'Strict' participation to GDR BOIS

Research staff from French labs, formally registered in the group



135 members of 26 CNRS Units:

- INSIS (9 labs) – engineering
- INEE (7) – ecology, environment
- INC (6) – chemistry
- INSHS (3) - humanities

243 members of 31 other units:

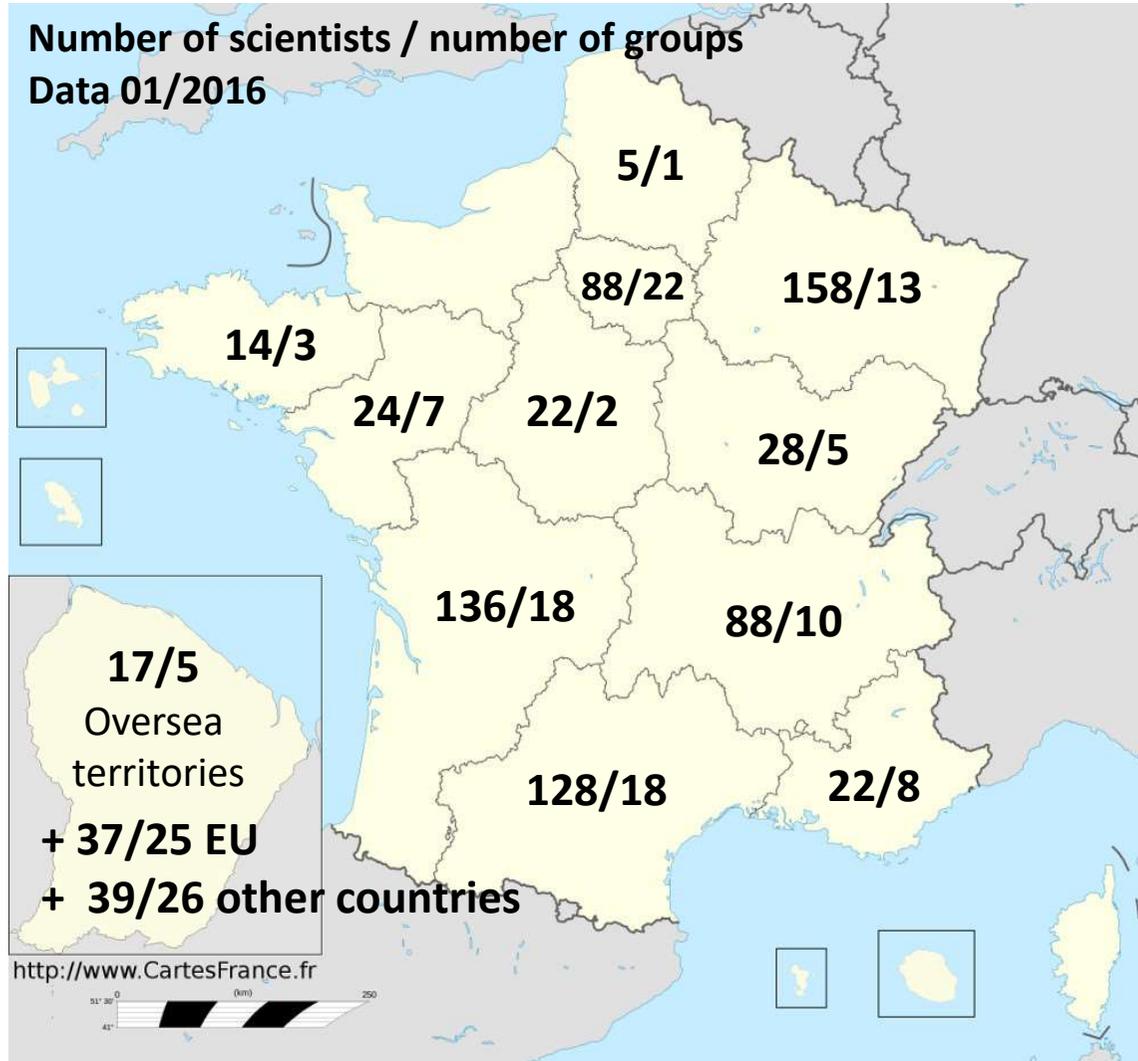
- INRA-APT (10 labs) – agro
- CIRAD (4) – tropical agro
- University only (5): LERMAB, ...
- Engineering schools (4): ENSTIB, ESB, ENSAM, ...
- Culture (4): LRMH, INRAP, ...
- Industrial recherche(2): FCBA, ...

More information at:

<https://www6.inra.fr/gdr-sciences-du-bois/Presentation/Les-equipes/Liste-developpee>

'Broad' participation to GDR BOIS

Members of the diffusion list, including student, technical staff, 'for info...



In 2016:

- 730 Scientists in 100 groups + 75 abroad
- 40 % in 9 groups of +20 people (Lermab, CIRAD, FCBA, PIAF, I2M, Pascal Institut, AGPF, LMGC)
- ½ groups of 1-2 people

More information at:

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Themes

Description

Xylology



Multiscale wood description, measurement of properties, modelling of structure-properties relationships.

Formation and functions in tree



Genetic and environmental control of wood formation, in relation to functions in tree and ecosystem.

Harvest & transformation



Going from tree to industrial components through cutting operations and drying.

Modification & reconstruction



Volume or surface modifications, thermal or chemical modifications, production of wood-based products.

Uses in structures



For optimal use of wood in construction, civil engineering, packaging, mechanical construction including cultural objects.

Uses for energy



Of wood and wood-based wastes, impact of resource quality and environmental consequences.

Uses as archive



Wood as marker of history, pre-history or paleo-history, of cultures, of relations between man and natural resources.

Traceability

Adequacy resource/uses



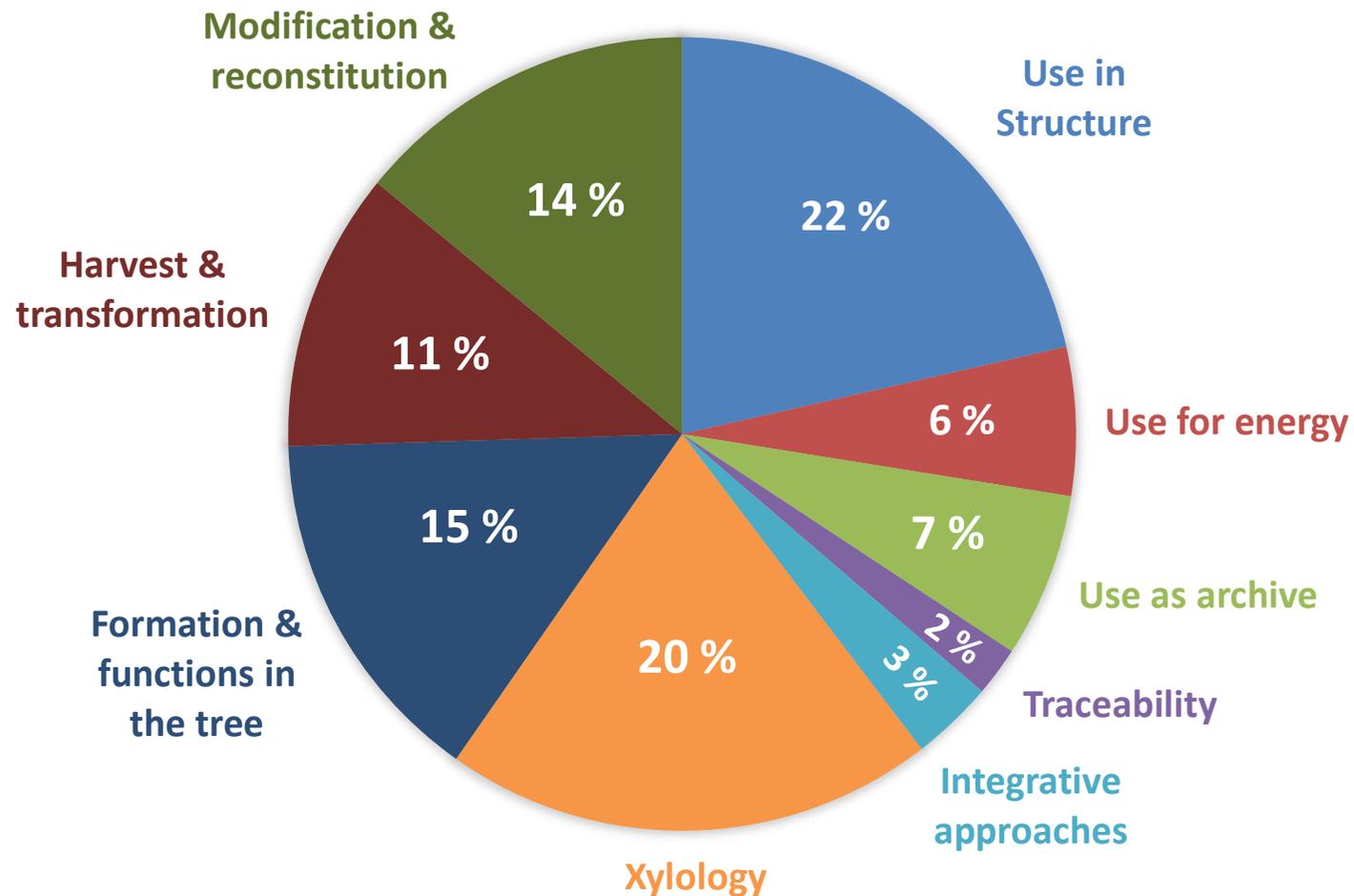
Making use of wood diversity, certification and identification through the whole chain using data and knowledge bases.

Integrative approaches



Multidisciplinary life cycle analysis and environmental assessments of the whole wood chain based on models and data, distribution and dynamic of wood resource.

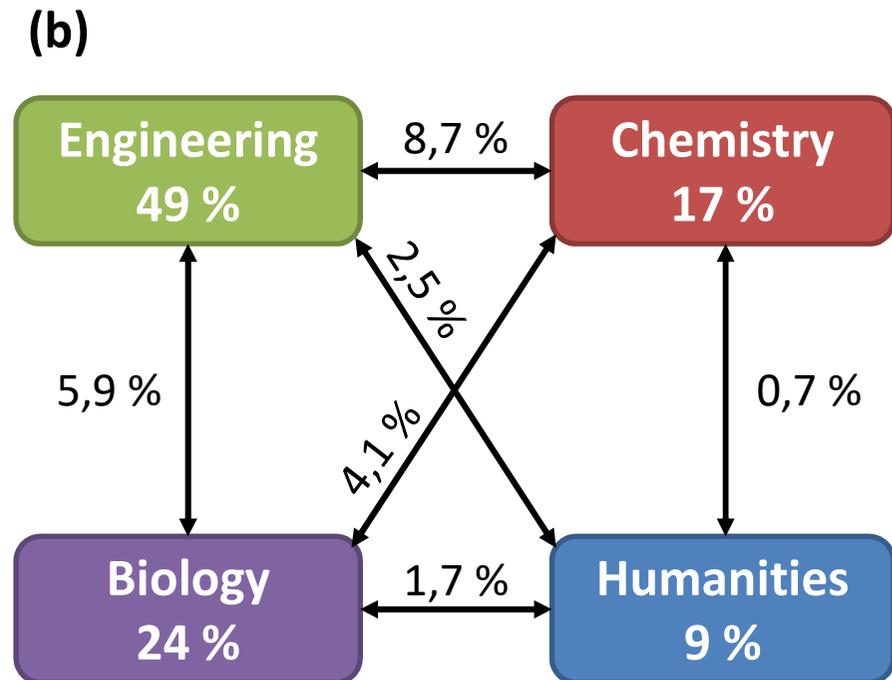
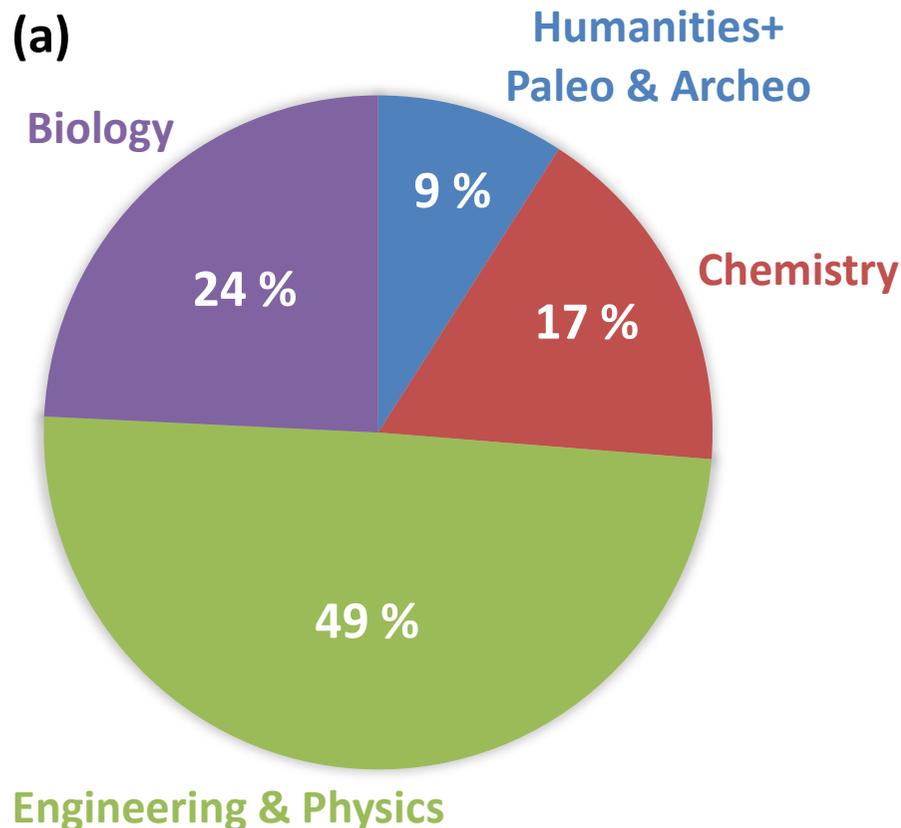
The scientific animation of the GDR is focused on wood as a compartment of the tree, material of the craftsman and the engineer, and as an archive of past events.



Data 01/2016

Based on 715 diffusion list data

The scientific animation of the GDR is focused on wood as a compartment of the tree, material of the craftsman and the engineer, and as an archive of past events.



(a) Disciplines repartition of the GDR "Wood Science"

(b) Interdisciplinarity of research project conducted by the member structures of the GDR.

Working Groups (WG): at the initiative of the GDR members, discussion about scientific obstacles, identification of specific issues and challenges and co-working on project calls.



1. Working Groups "Formation"

Teaching at / by Research in Wood Sciences

New 2018

Preparatory meetings for beginners or thematic schools

2013

Formation / Ressources – Master Level

2014

Working Groups (WG): at the initiative of the GDR members, discussion about scientific obstacles, identification of specific issues and challenges and co-working on project calls.

2. Working Groups "Research"



Wood and Imagery

Wood Machining Group

Xylomat

Xylotheques and collections – Databases

Wood failure

Non Destructive Wood Control and Evaluation (CEND)

Economic, Human and Social Sciences of wood use and processing

Tropical Woods

Wood Construction

Xylogenesis

Scientific knowledge and traditional knowledge



2013

2013



2013

2013

2014

2016

2017

2017

2017

2017

2018

The objectives of GDR "Wood Science" are the followings:

1. Annual scientific conference:

- About 160 French researchers, teachers and PhD students, 20 international scientists and several industrials.
- 4 sessions are organized around invited conferences, flash talks and posters, working groups and/or workshops.



- Next: 18- 20 November 2019, ENSTIB – Epinal (France)

The objectives of GDR "Wood Science" are the followings:

2. Working Groups (WG):

- Organized during the Annual meeting days
- Organization of Summer School:
 - 2019: Optical methods, fracture mechanics, structures. Supported by Wood and Imaging WP. 20-23 May - Egletons (France)
 - 2018: School of microscopy. Supported by the Imagery Wood Working Group. 23-25 May 2018 – Limoges (France)
 - 2016: Summer School on Wood Science. 30 May – 3 June 2016 – Nantes (France)
 - 2016: Workshop on Wood Imagery. 11-12 May 2016 – Paris (France)
 - 2014: Summer School on Wood Science. 2-4 June 2014 – Nantes (France)



The objectives of GDR "Wood Science" are the followings:

3. Training Schools (Pluribois):

Every two years (around 25-30 pers., including trainers).

Implementation of multidisciplinary, interdisciplinary: workshops of project elaboration and management, scientific presentations, company visits...



Pluribois 2015

The woods and their uses: multidisciplinary approaches to diversity.

18-22 May 2015 – Egletons (France)



Pluribois 2017

The woods and their uses, multidisciplinary approaches of the wood material biorefinery.

12-16 June 2017 - Mont de Marsan (France)

Pluribois 2019

The woods and their uses, multidisciplinary approaches of the actions of the temperature and their effects on the wood.

3-7 June 2019 - Fréjus (France)

The objectives of GDR "Wood Science" are the followings:

4. Other Financial Supports:

-> Financial support for member teams:

- Inter-team (Short Term Scientific Mission);
- International mobility (conference participation);
- Support for the conference, meeting and other events organization;
- Master Internship Support Grants...

- 1. This national network responds to a demand by French scientists involved in wood science to be identified as such. Not only foresters and engineers but also by environmentalists, historians, archaeologists...**
- 2. Presently focused on national networking, with communication mostly in French, but with prospect of progressive opening to international connections (InnovaWood, IRGWP, etc.)**
- 3. More interactions with professional and industrial sectors?**
- 4. May evolve into a Society (or association) after 2020?**
- 5. Setting up of a French national master's degree in “Wood Science” and several doctoral training courses (national, international?).**

Web

<http://www6.inra.fr/gdr-sciences-du-bois/>

Twitter

@GdrBois, @Corinne_LERFoB

HAL Collection

<https://hal.archives-ouvertes.fr/BOIS>

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Thank for your kind attention



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