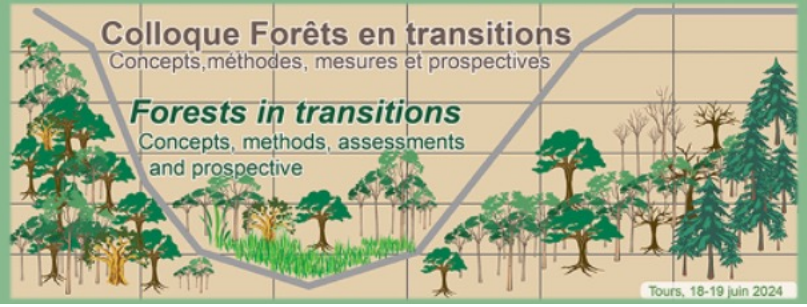

Changes in the sector and local governance for firewood

when the climate issue knocks at the door and comes in through the window

ALLAIN Sandrine
INRAE-LESSEM (Grenoble)

The firewood sector: changes in physiognomy and blind spots

Peter lumberjack (ad France Bois Bûche)

Bois Factory (Groupe Poujoulat)

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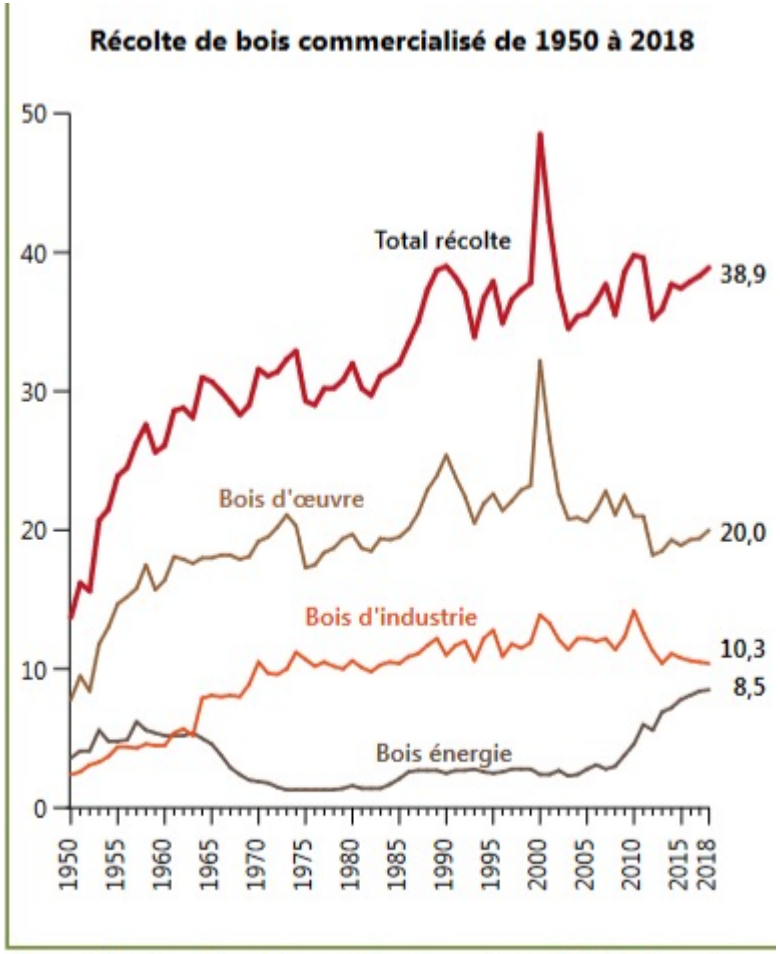

Source: Agreste – Enquête annuelle de branche exploitation forestière

The start of a collaborative research process

- General objective: to observe and understand changes at the local scale, highlighting local specificities
  → Chartreuse Case study

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  - Provisionning system (resource system, production, institutions, users) (Fanning et al, 2020)

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  - Provisionning system (resource system, production, institutions, users) (Fanning et al, 2020)
- Materials : approx 50 interviews (governance actors, producers, consumers)

Case study : the Chartreuse Park

- 865 km2
- Forest ratio: 55% (1/3 public forest)
- 2/3 hardwoods vs 1/3 conifers
- Registerd Designation of Origin for fir and spruce woods (AOC Bois de Chartreuse)

Photos : Guillaume Laguet, PNR Chartreuse

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- Close to urban valleys with air pollution issues and regulations

Photos : Guillaume Laguet, PNR Chartreuse

Main results:

	Volume de bûches produit (stères)	Prix ttc bûche 50 cm (euros)	Prix ttc bûche 33 cm (euros)	Rayon d'approvi-sionnement (km)	Rayon de livraison (km)
Moyenne	1047	87	92	28	19
Médiane	825	85	90	22	20
Max	4000	110	110	60	30
Min	170	72	75	5	10

Production systems

High heterogeneity
Less than half dry their logs
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Main results:

Firewood use modalities

Production systems

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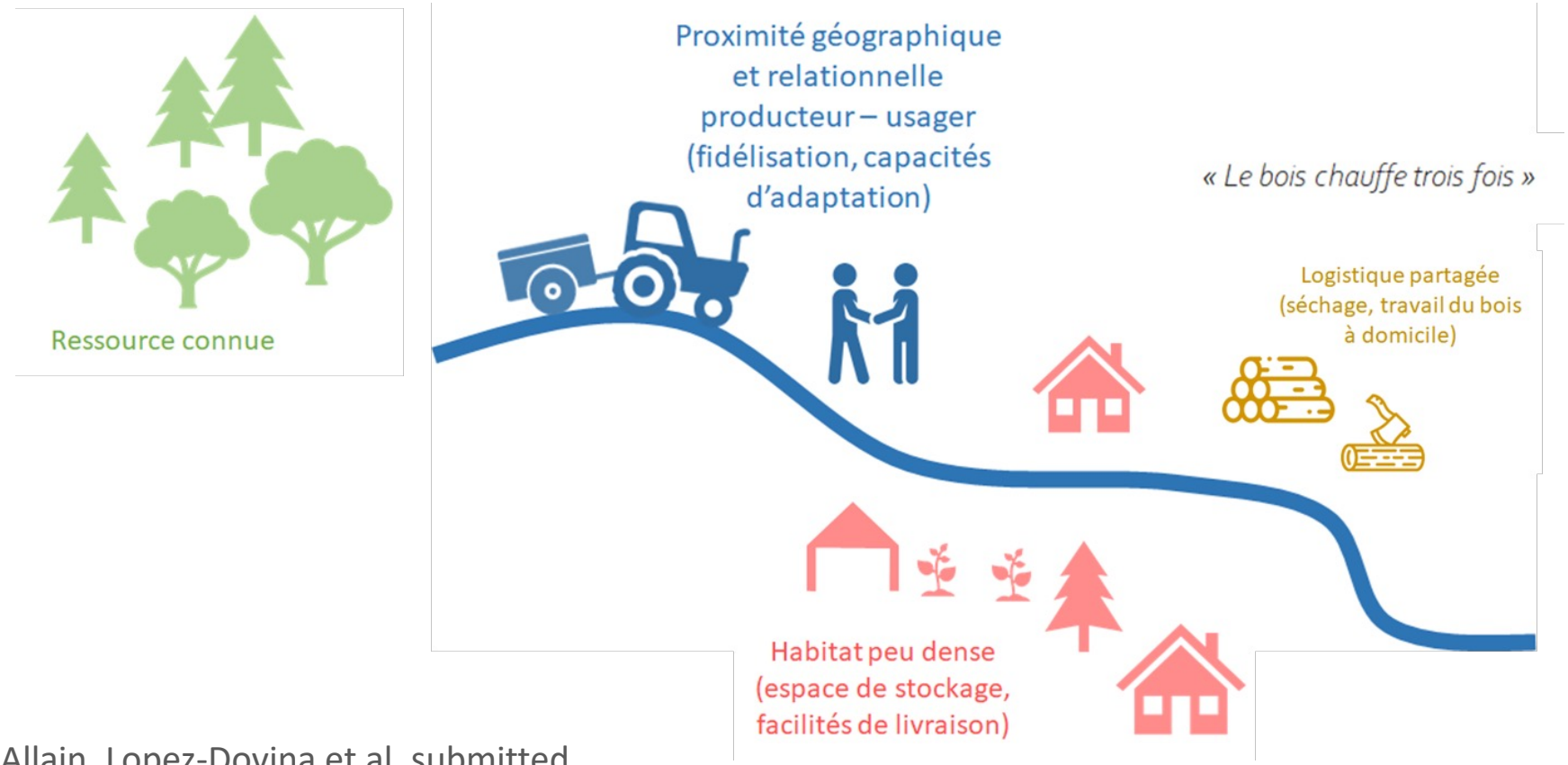
x

Main results:

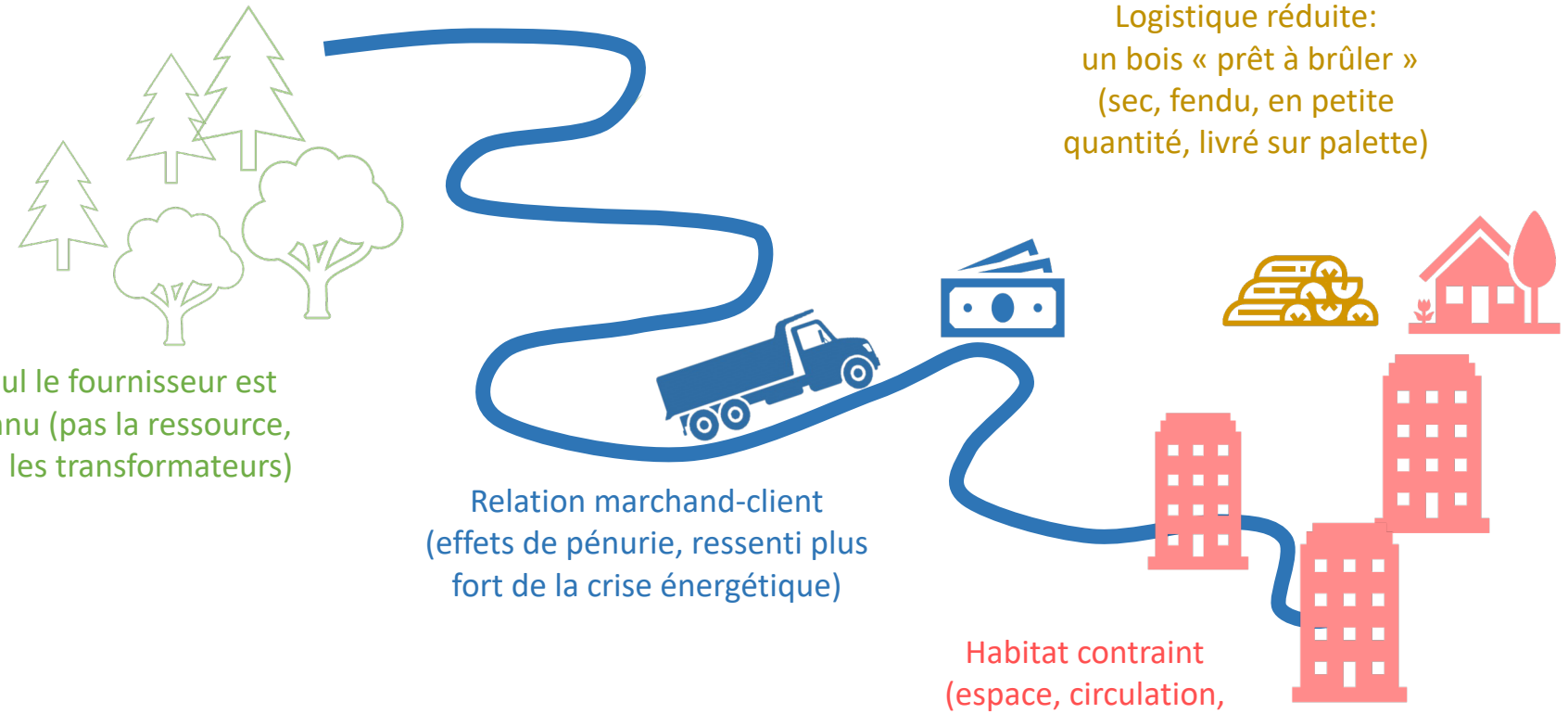
Archetype 1: firewood as a neighbouring product



Allain, Lopez-Dovina et al, submitted

Main results: Dual provisionning systems

Archetype 2: firewood as a ready-to-burn commodity



Seul le fournisseur est connu (pas la ressource, pas les transformateurs)

Relation marchand-client (effets de pénurie, ressenti plus fort de la crise énergétique)

Logistique réduite: un bois « prêt à brûler » (sec, fendu, en petite quantité, livré sur palette)

Habitat contraint (espace, circulation, réglementation qualité de l'air)

Allain, Lopez-Dovina et al, submitted

Main results:

Local public action

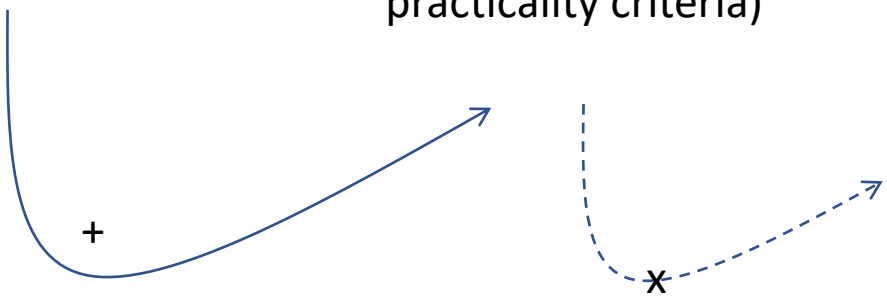
Ambivalent, supporting changes « downstream up »

Firewood use modalities

Emerging new type of demand (quality and practicality criteria)

Production systems

Reluctant to exogenous drivers of change (energy crisis, energy transition policies)



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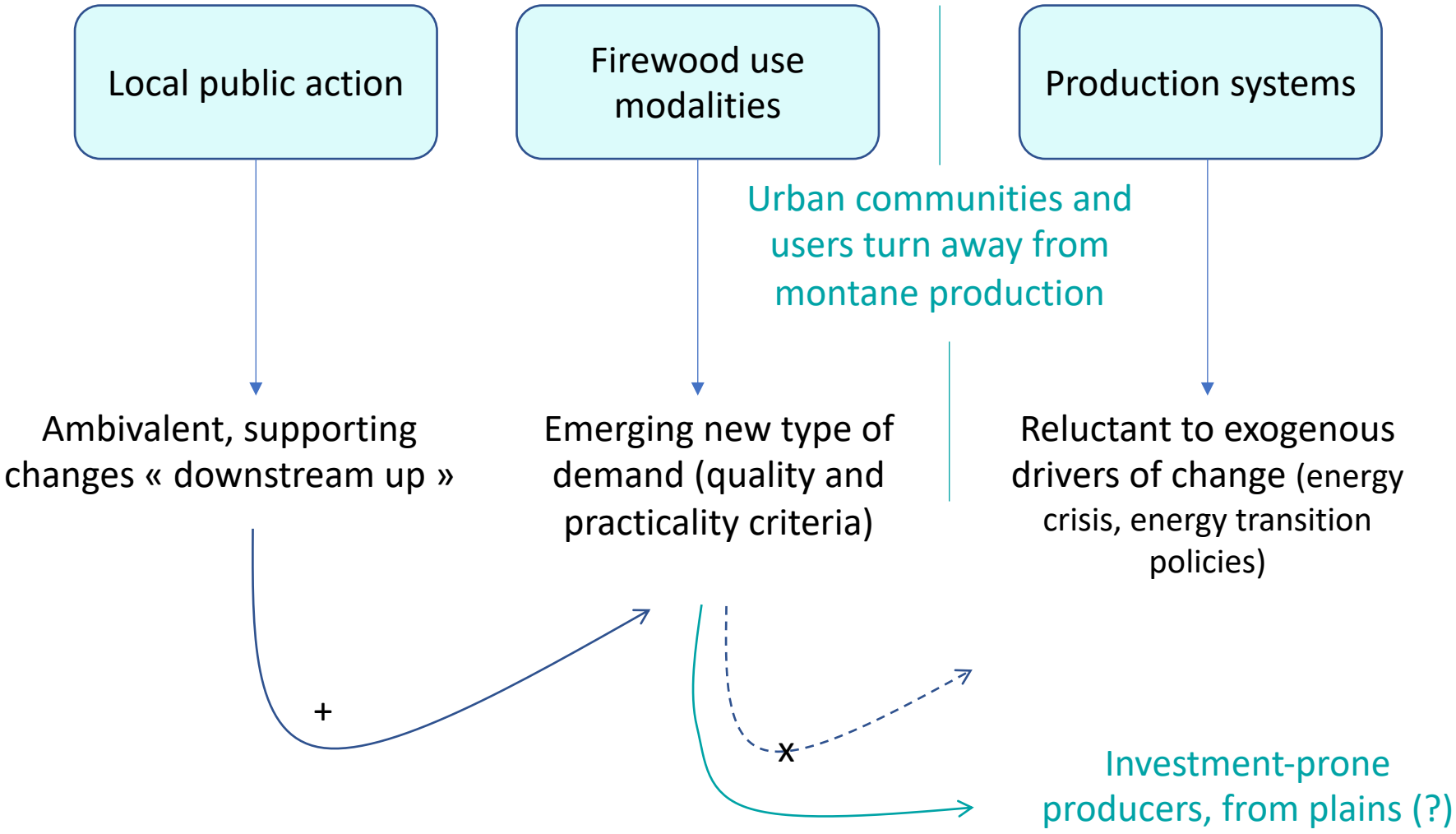
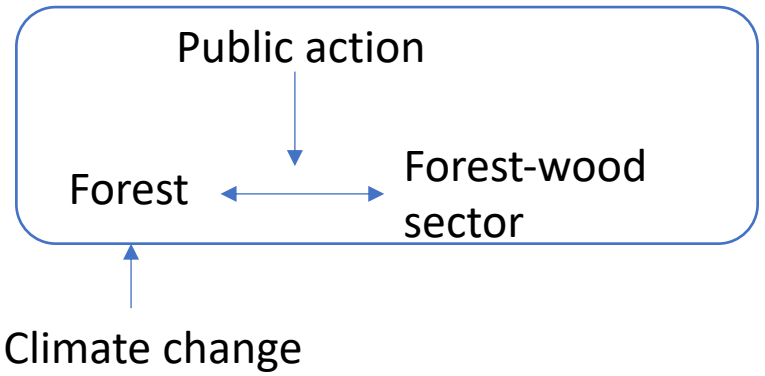


Exploring forest-(fire)wood sector-climate change interactions

- 2 different modes of framing:
  1. Direct interactions, CC biophysical driving force, adaptation rationale



Exploring forest-(fire)wood sector-climate change interactions

- 2 different modes of framing:
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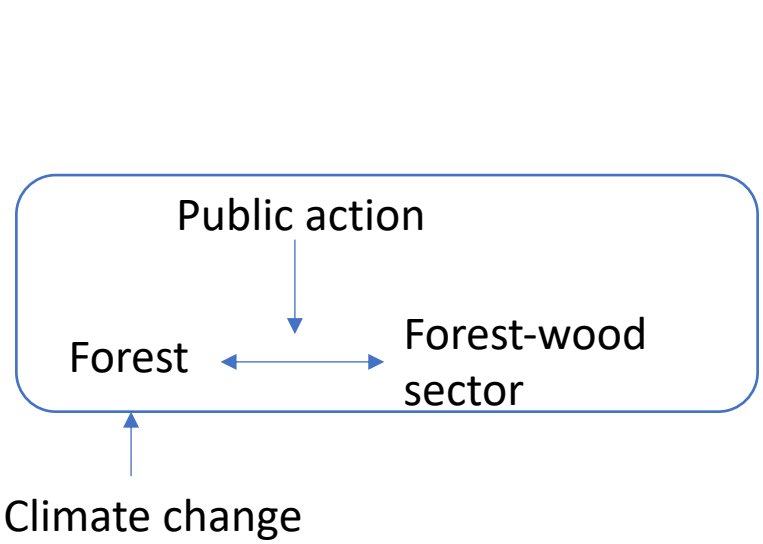
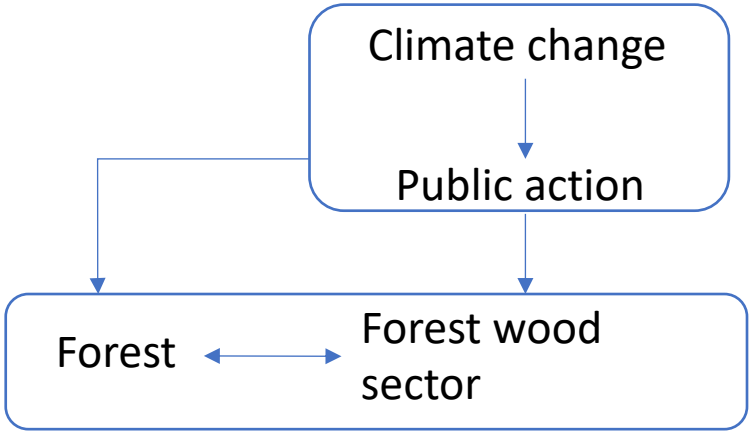
  2. Indirect interactions, CC institutional driving force, « climatization » rationale - Aykut et al, 2017, Granjou et al, 2024)





Initial framing of the research (mode 1 : climate change adaptation)

A l'échelle du Parc, les enjeux sont multiples et concernent de nombreux milieux et ressources. Toutes les filières économiques sont potentiellement impactées. Les activités touristiques vont nécessairement devoir s'adapter à la diminution progressive de l'enneigement et aux sécheresses estivales tout en respectant les milieux. Les modèles agricoles développés dans les vallées et les alpages vont devoir se réinventer en intégrant les modifications du climat dans les techniques de productions, en développant la résilience des systèmes et en misant sur la biodiversité. La filière bois va devoir anticiper la fragilisation de la santé des peuplements résineux et intégrer la valorisation des feuillus dans son modèle de développement. Plus globalement, le changement climatique va accentuer l'importance de la préservation de la biodiversité à travers notamment le maintien de zone refuge et la connectivité entre les milieux. Il nécessitera également une vigilance accrue en matière de prévention des risques (périodes plus fréquentes et plus longues de sécheresse, tarissement des sources, etc.).

Charte du Parc de Chartreuse 2023 - 2038

Les ENR sont en plein développement et le bois énergie est intéressant. Attention à bien estimer la ressource pour en calculer **les possibilités de développement du bois énergie**.
Une opportunité existe sur le feuillu qui est très peu utilisé en bois d'œuvre et qui pourrait trouver ainsi plus de débouché. Le bois énergie sur le territoire représente **77 % de la production d'ENR (100 GWh/an)**, principalement pour le **chauffage domestique au bois**, mais aussi par le biais des **78 chaudières collectives**.

Charte Forestière de Territoire 2021-2026

Synthèse

La Chartreuse possède des peuplements feuillus à potentiel. Néanmoins, les dépérissements et les densités démontrent une gestion absente ou du moins très insuffisante. La mise en gestion de ces zones est donc un enjeu majeur pour maitriser la ressource feuillus, au niveau économique et sanitaire

Analyse du potentiel feuillu en Chartreuse (Romain Pernon, 2019)

Initial framing of the research (mode 1 : climate change adaptation)

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Means: improving the road network, extending the « wood culture », supporting a better management of hardwood trees, provisionning contracts, creation of collective wood chip platforms.

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The place of firewood logs is debated within this framing:

- an obvious (historical, socially inclusive) economic outlet for local hardwood stands
- But an uncertain capacity to boost forest management towards new uses

Observed framing of the firewood question (mode 2: air-climat-ization)

Climate change mitigation as a planning work // Abundance of the deciduous wood resource as an opportunity // Air pollution as a contradictory and imposing stake for the case of firewood logs

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Means: regulations, economic incentives towards households, sensitization *(« good equipment, good fuel, good practices »)* and adverstisement.

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→ Emergence of a hybrid compromise around firewood
→ Leaving forest management and local provisioning systems at the margins of the equation

Some conclusions and perspectives

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- Remains difficult to grasp despite renewed interests
- Case of firewood shows different pathways through which public action targeting climate change frames the resource-sector interactions
- Climate change as both a biophysical and institutional driving force, where benchmarks rapidly succeed one another.