

What are the *governance* requirements for the different uses of *biomass*?

CLAIRE TUTENUIT AND PASCAL FÉREY

Biomass has a wide range of uses: human food, animal feed, agronomy, construction, industry and energy. It also fulfils vital biological functions as a carbon sink, a water regulator, a support for biodiversity and a habitat for species.

Until now, a hierarchy of complementary uses has governed the orientation of flows: in the case of biomass from crops, food has priority, followed by successive uses such as bio-fertilisation, materials and finally energy. A theoretical hierarchy also applies to wood, with the noble parts of new wood for construction or solid furniture, then industrial wood, then energy wood, even if the three, which complement each other, are harvested together and if, given the demand, some industrial wood is used for energy purposes. A large proportion of production is therefore directed towards animal feed and exports.

The ecological and agro-ecological transition should upset these balances, with a considerable increase between now and 2040 in the quantity of biomass needed for energy uses, for industry and construction, to replace fossil fuels and their derivatives, with the use of biosourced substitutes or biomass.



310m
tonnes

310 million tonnes of dry matter of plant biomass produced per year (from 4 components: seeds, fruit and vegetables, fodder, crop residues, wood in and outside forests)

DEFINITION

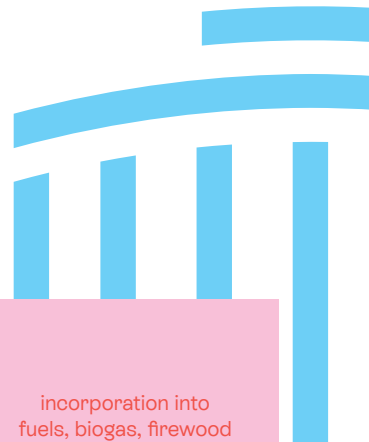
WHAT ARE BIO-BASED SUBSTITUTES?

Products in which fossil resources are largely or completely replaced by biomass resources, limiting dependence on fossil resources for the manufacture of

products by reducing their environmental footprint.

Wood, cork, hemp, straw, flax, biomaterials and bioplastics for construction, agrofuels for aviation or partial

incorporation into fuels, biogas, firewood (pellets, wood chips, etc.) as energy, etc.



How can this transition be supported by better governance of biomass uses?

Even if biomass extraction is set to increase to meet the objectives of the energy transition, the services provided by agricultural and forestry ecosystems (soil productivity, absorption of greenhouse gases and water regulation) must be preserved and even increased. These additional withdrawals must also take account of the impact of global warming and anticipate the effects of global warming, which reduces the availability of biomass.

The integration of these issues by players from sectors used to working separately raises questions of governance: is the energy transition leading to a review of the hierarchy of uses? Where can we find room for manoeuvre without compromising the vital needs of the population? How can we organise ourselves to make collective choices that reconcile the public policy imperatives arising from biomass? The opinion sets out recommendations and options in four areas: encouraging sobriety, enhancing knowledge, building capacity for co-construction and arbitration at national and local levels, and involving and encouraging biomass stakeholders.

What are the *governance* requirements for the different uses of *biomass*?

OPINION

1 ENCOURAGING SOBRIETY

→ **Encourage sobriety in all uses in all components of life:** reduce energy needs and wastage, lifestyles and sustainable consumption. Animal feed and exports, two major uses of biomass from agriculture and forestry that are currently favoured, require particular attention and will be at the heart of the trade-offs.

2 IMPROVE CROSS-DISCIPLINARY KNOWLEDGE OF THE FLOWS AND CYCLES OF LIVING MATTER AND THEIR LIMITS

→ **Strengthen the link with nature,** with an introduction from the earliest age (systematic green/sea classes during schooling), right through to higher education, including agricultural training (strengthen teaching of the fundamentals of agronomy).

→ **Make the governance of the National Observatory for Biomass Resources interministerial and broaden its remit** to include all biomass and the flows to its various uses, including materials, energy and waste, and to take greater account of policies for adapting to climate change. Equip Europe with an equivalent observatory.

→ **Develop research** into the ways in which crops are grown, processed and used, their effects on the environment and ecosystem services, including sociological studies of uses (sobriety, link with living things, etc.) as well as research into nature-based solutions and their economic model.

→ **Inform citizens and consumers, women, men and children,** about the usefulness and scarcity of biomass, the costs of food, the formation of food prices, the health constraints required of the processing sector, the importance of sober consumption for the security they are due.

3 DEVELOP A CAPACITY FOR CO-CONSTRUCTION, GUIDANCE AND ARBITRATION AT DIFFERENT TERRITORIAL LEVELS (rather than building and implementing local, national and European roadmaps together)

→ **Favour regulation by the logic of economic players and markets.**

→ **Involve the public authorities in** ensuring food and energy security for the French, guarantee strategic, food, energy and industrial autonomy, protect the environment, climate and biodiversity by complying with France's international commitments and making them more demanding, and regularly evaluate the National Biomass Strategy.

→ **Two options are offered to policymakers to ensure arbitration capacity at national level:**

- an option in which FranceAgrimer broadens the dialogue with other users;
- an option in which the continuity of this dialogue is ensured by cross-cutting co-supervision: the MTECT, co-supervision of FranceAgrimer, and the MASA, co-supervision of Ademe.

THE RAPPORTEURS

Claire Tutenuit
+33 (0)1 44 43 64 30

represents the Association française des entreprises pour l'environnement (EpE) in the ESEC's Agir autrement pour l'innovation sociale et environnementale group, and sits on the Environment Commission and the Economy and Finance Commission.

Pascal Férey
+33 (0)1 44 43 64 01

represents the Permanent Assembly of Chambers of Agriculture (APCA) at the ESEC in the Agriculture Group. He sits on the Environment Committee, the Overseas France Delegation and the Temporary Committees on "Democratic Participation" and "End of Life".

→ **Activate and broaden the remit of the existing Biomass Units** at regional level (regional/departmental/intermunicipal), set up a dialogue between the professional communities, bring about the emergence of roadmaps for the ecological, energy, industrial and agricultural transition between economic and social players (local authorities, Chambers of Agriculture, decentralised services -FranceAgriMer and Ademe-, DREAL, DRAAF and DDT at departmental level). Build resilience to climate change, including adapting farming and forestry systems.

→ **Take a global approach to foreign trade issues** (reduce the EU's and France's footprint on the global environment by including import ceilings for wood, feed proteins or meat in European and national strategies to combat imported deforestation), apply safeguard or mirror clauses more systematically to other products in France's and the European Union's international trade

3

INVOLVE AND ENCOURAGE BIOMASS STAKEHOLDERS to ensure that collective and, in particular, environmental interests prevail

- **Introduce incentives** that leave as much room as possible for local initiative in the direction of biodiversity restoration to avoid excessive pressure on biodiversity resulting from new needs.
- **Create payments for environmental services (PESs)** so that stakeholders on the ground have an incentive to preserve biodiversity and ecological infrastructures (e.g. pasture-based livestock farming provides numerous services in terms of biodiversity, carbon storage, soil enrichment).