

Impact of the Regulatory Framework on the Bioeconomy

FOREST SECTOR

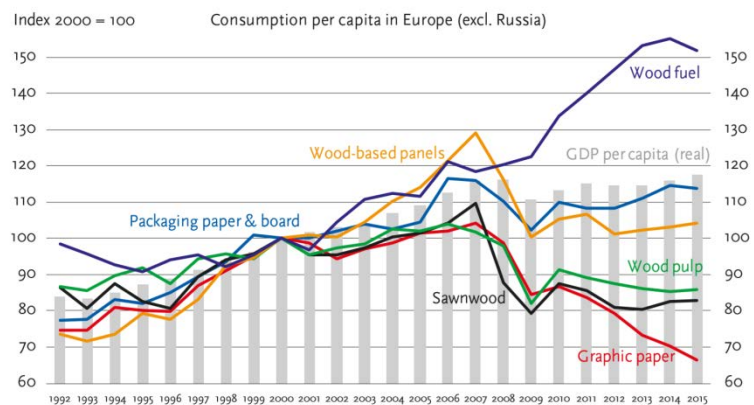
This **fact sheet** discusses the **forest based economy** as a part of the bioeconomy. Forest based economy means all economic activities that cohere to forests and forest ecosystem services.

This fact sheet focuses on the **regulatory framework** and indicates **obstacles** which result from the latter. **Recommendations** to foster a better use of timber products are collected from scientific literature and evaluated.

The EU is one of the largest consumer and producers of timber products in the world [4,5].

The forest sector in Europe is undergoing major structural changes, it develops more diverse and complex.

- **The consumption and production of wood-based products is switching** from previously leading forest industry regions (North America, Western Europe, Japan) **to new ones (China, Brazil, India)**
- **New bio-based products** & boundaries with other industry sectors continue to blur
- The importance of wood-based products is increasing in the bioeconomy
- The **increasing use of wood fuels** risks the crowding out of material uses
- The consumption of **graphic paper is decreasing** due to digital progress [10]



SOURCE: Jonsson, R. et. al. (2017). "What is the current state of forest product markets and how will they develop in the future?"

Germany

- Around **11 million hectares** of the German territory are covered with forests (32%)
- In 2018, 64,5 million m³ wood have been harvested, 15% of it has been used as wood fuel Since 2017 the wood harvesting increased (due to weather and pests)
- Germany exported a value of 518 million € of forestry products in 2018 and imported 718 million € forest products
- Germany is one of the five largest:
 - **sawnwood** producers, exporters and consumers
 - producers, exporters and consumers of **wood-based panels**
 - **fibre furnish** importers and consumers (fibre furnish is used to used to manufacture paper and paperboard)
 - **paper and paperboard** producers, exporters, consumers and importers.
 - **pellets** producers
- Germany is a major importer of **industrial roundwood** [6,8,destatis]

There are many laws and policies which affect the prospects for a forest-based bioeconomy.

Approx. 570 policies in nine 'legislative areas' have an impact on the forest-based bioeconomy [1].

Area	Regulatory Framework & Policies	Impact on the bioeconomy [1]
Forest-focused and agriculture	EU Forest Strategy EU Action Plan on Forestry EU Timber Regulation	<ul style="list-style-type: none"> • limited impact due to lack of liability, mainly impact on primary production of biomass and ecosystem services,
Climate change and energy	EU climate and energy package; EU-Emission Trade System (ETS); Regulation on the integration of land use, land use change and forestry (LULUCF); Regenerative-Energy-Directive (RED); Fuel Quality Directive; Energy-Efficiency-Directive(EED)	<ul style="list-style-type: none"> • significant impact on how wood is being used, positive impact on energy sector
Environment	7 th Environment Action Programme; Resource Efficiency Roadmap; EU 2020 Biodiversity Strategy; Low Carbon Economy Roadmap; Natura 2000 network	<ul style="list-style-type: none"> • (varied) impact on the entire forest-based value chain, potential constraints on the biomass availability
Employment	Working Time Dir.; Strategic Framework on Health and Safety at Work 2014-2020	<ul style="list-style-type: none"> • most parts of the forest-based bioeconomy are labour-intensive and/or characterized by a high-risk work environment, EU employment policies regulate only some basic standards • mechanisation of forest work through European subsidies changes forest-related work structures
Products	Regulation for Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) ; Biocidal Product Reg.; Classification, Labelling and Packaging Reg. (CLP); Construction Products Regulations	<ul style="list-style-type: none"> • set conditions for the production of bio-based products (e.g. biofuels, bio-based chemicals & plastics), • public procurement (e.g. construction policy) is able to foster the use of sustainable bio-based products
Transport	The Sulphur Directive; Waste Shipment Regulation	<ul style="list-style-type: none"> • impact on the logistically intense stages of the forest-based bioeconomy value chain: influence competitiveness and the development of the circular economy (global vs. domestic supply)
Trade	EU Timber Regulation; Forest Law Enforcement, Governance and Trade Action Plan (FLEGT); Phytosanitary Regulations	<ul style="list-style-type: none"> • increasing importance
Competition	Anti-trust procedures; Anti-competitiveness rules; rules on mergers and acquisitions	<ul style="list-style-type: none"> • preserves well-functioning product markets, enables innovations

The fight against illegal logging demonstrates the interference of ecological, economic and social aspects.

Illegal logging causes deforestation, biodiversity loss and has negative aspects on local communities (e.g. labour conditions). The risk is not equally high in the world, there are some hot spots of illegal logging (e.g. rainforest regions) [14].

CASE: Congo Basin: The world's second-largest rainforest is located in the Congo Basin. Despite the national and international Regulatory Framework which aims to protect the rainforest, NGOs report that companies such as Nord-Sud-Timber are illegally harvesting trees with impunity and that way endangering 75 million hectares of rainforest. Importers like Portugal and France are accused of failing to take action. The government of the DRC did not enforce existing laws [2].

In 2015, the United Nations General Assembly set 17 global goals (**Sustainable Development Goals**).

The forest sector and its regulatory framework are interconnected with several SDGs.

Especially the fight against illegal logging shows that several dimensions are affected. The Bioeconomy which requires as well a holistic perspective is able to be a driver of the implementation of the SDGs by being at the same time a societal challenge and a transformation process [7].

Bioeconomy implicates the following dilemma: On the one hand using natural resources instead of fossil resources seems to be an adequate response on climate change. On the other hand if wood consumption rises, imports necessarily increase and land use changes elsewhere are the consequence. Therefore, bioeconomy must come along with **sustainable forest management**.

► Obstacles

- global differences (hot spots of illegal logging, e.g. rainforest regions)
- organised crime & corruption & tax fraud

► Other aspects

- labour conditions in the forest sector
- impact on local communities



SDG 1

End poverty in all its forms everywhere



SDG 2

End hunger, achieve food security and improved nutrition and promote sustainable agriculture

► Obstacles

- without sustainable forest management environmental services are not protected (e.g. resources, food)
- trade-off: forest vs. crops

► Other aspects

- forests are natural wind shields for fields

SDG 15

Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss



SDG 13

Take urgent action to combat climate change and its impacts



► Obstacles

- deforestation
- habitat and biodiversity loss

► Obstacles

- deforestation accelerates climate change
- change of weather patterns
- forestry causes gas house emission

► Obstacles

- Limited attention in EU strategies
- Relevance differs between various countries and regions considerably [10]

- Environmental impact of the wood-based production / bioeconomy [1]

- Heterogeneous labour conditions in wood producing countries [1,14]

- Risk of crowding out of materials used by energy uses [10]

- Illegal logging and conflict timber [5,7]

► Possible solutions

- recognition of the **rhetorical potential** of the forest-based bioeconomy

- **cascade use**, greater allowance for protection of the forests in the future than previously, focus on regional conditions

- context-specific **Social Life Cycle Assessment**, law Enforcement on international level
- traceability of products, responsibility of importing countries

- improved **forest management** to increase timber growth rates, technical efficiencies in manufacture, cascaded use

- **sustainable forest management** includes the social, economic and ecological dimensions of wood
- products definitions of **legal timber** should include all three pillars
- sustainability certifications deserve support and national checking systems should be harmonized.

► Conclusion & Forecast

Similar to agriculture, forestry is the **most important sector** which provides raw materials for the bioeconomy.

The transition to the bioeconomy depends on **productive and sustainable forestry**. Innovations and accordant adaptations of legislations & policies will be its drivers. One of the main drivers of demand for wood products is population and the global consumption of wood is projected to rise further [4]. Any economic consideration should include a broader perspective which considers **social and ecological effects of activities in the forest sector**, esp. negative externalities.

The **fight against illegal logging** is at the same time a way to implement those SDGs which are related to the forest sector. At the same time, forests play a **crucial role in climate change mitigation**: Deforestation and forest degradation is both a cause and an effect of our changing climate.

SOURCES:

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