

# Project *brief*

Thünen Institute of Forestry

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## Expansion of forest protection areas in Europe endangers biodiversity globally

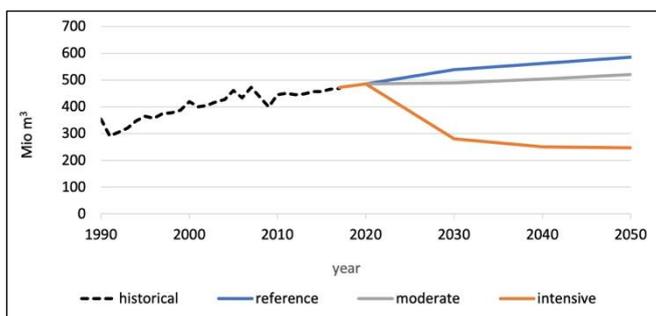
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- The EU Biodiversity Strategy aims to protect and conserve more forests in Europe.
- This will shift timber production to countries where biodiversity is at greater risk than in the EU.
- Forest protection should therefore not be at the expense of wood production in Europe.
- Forest conservation and protection as well as sustainable forest management need to be improved globally, as the threat to species and habitats is generally increasing.

### Wood production under the EU Biodiversity Strategy

The Biodiversity Strategy aims to regain biodiversity through enhanced forest conservation and protection. To estimate its impacts on roundwood production, two scenarios were calculated: one with a moderate and one with an intensive expansion of protected areas within the EU.

The results show a reduction in roundwood production by 65 million m<sup>3</sup> (moderate scenario) or 338 million m<sup>3</sup> (intensive scenario) (Fig. 1). A substantial part of roundwood production is relocated to the USA, Canada, Russia, Brazil, China and the Ukraine (data before the outbreak of war in the Ukraine).



**Figure 1:** Historical and modelled future roundwood production in the EU from 1990 to 2050 under two different forest protection scenarios.

### Vulnerability and risks to biodiversity

Possible risks to biodiversity were quantified based on vulnerability indicators. These were averaged for the EU and those non-EU countries that accounted for the largest shares of the relocated production (Tab. 1). Most of the selected indicators currently show higher vulnerability and risks to biodiversity for the non-EU countries compared to EU countries.

Indicators of species and habitat diversity have deteriorated in both country groups over the past five years.

Biodiversity indicators	EU	non EU
Governance indicator	1.17	0.36
Biodiversity engagement indicator	7.23	6.27
Share of forests with management plan (%)	78.95	64.75
Share of certified forests (%)	62.20	28.27
National share of protected areas (%)	25.49	14.42
Share of strictly protected areas (%)	4.46	5.72
Forest area per inhabitant (ha/pers)	1.22	2.88
Forest area increase (%)	0.12	0.06
Forest biomass (t/ha)	122.63	106.10
Increase in forest biomass (%)	3.08	1.90
Share of intact forest areas (%)	0.79	18.22
Red list index	0.94	0.88
Deterioration of red list index (%)	-0.26	-0.62

**Table 1:** Means of selected biodiversity indicators.

green: lower risk; dark green: significantly lower risk;  
red: higher risk; dark red: significantly higher risk.

### Conclusions

More protected forest areas in the EU lead to shifts of roundwood production to other countries. As long as forest management and forest protection in these countries are less sustainable, this EU strategy can, from a global perspective, lead to a deterioration in biodiversity. Therefore, protected areas in the EU should not be expanded at the expense of timber production. At the same time, increased protection of endangered forests and efforts for sustainable forest management are required worldwide.

### Further information

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#### Publications

Schier, F., Iost, S., Seintsch, B., Weimar, H., Dieter, M., 2022. Assessment of Possible Production Leakage from Implementing the EU Biodiversity Strategy on Forest Product Markets. *Forests* 13

Fischer, R., Zhunusova, E., Günter, S., Iost, S., Schier, F., Schweinle, J., Weimar, H., & Dieter, M. (2024). Leakage of biodiversity risks under the European Union Biodiversity Strategy 2030. *Conservation Biology* e14235