

European Forest Institute



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El papel transformador de los bosques: hacia una bioeconomía circular

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Punto de no retorno



El PIB como indicador de progreso?

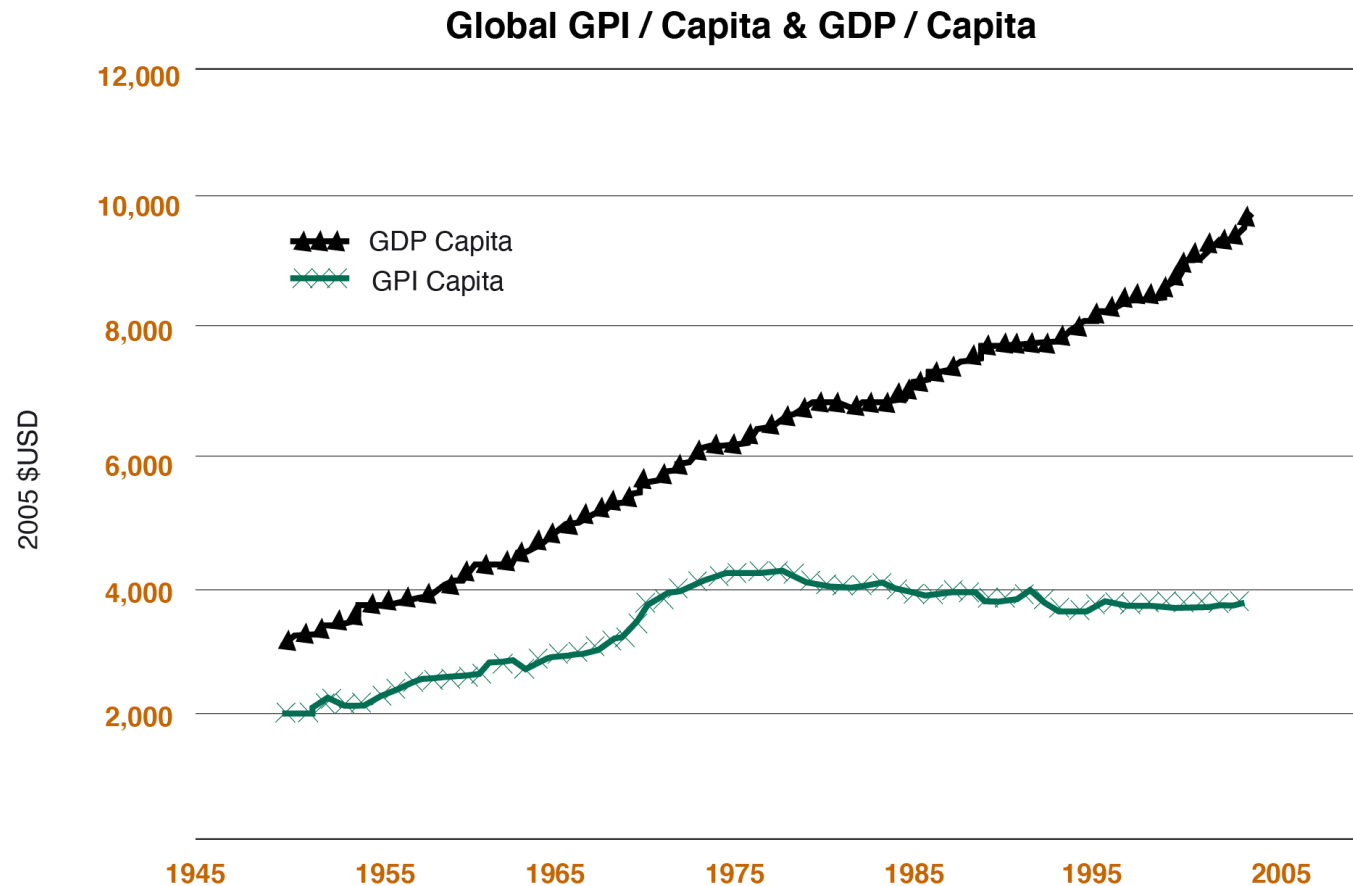
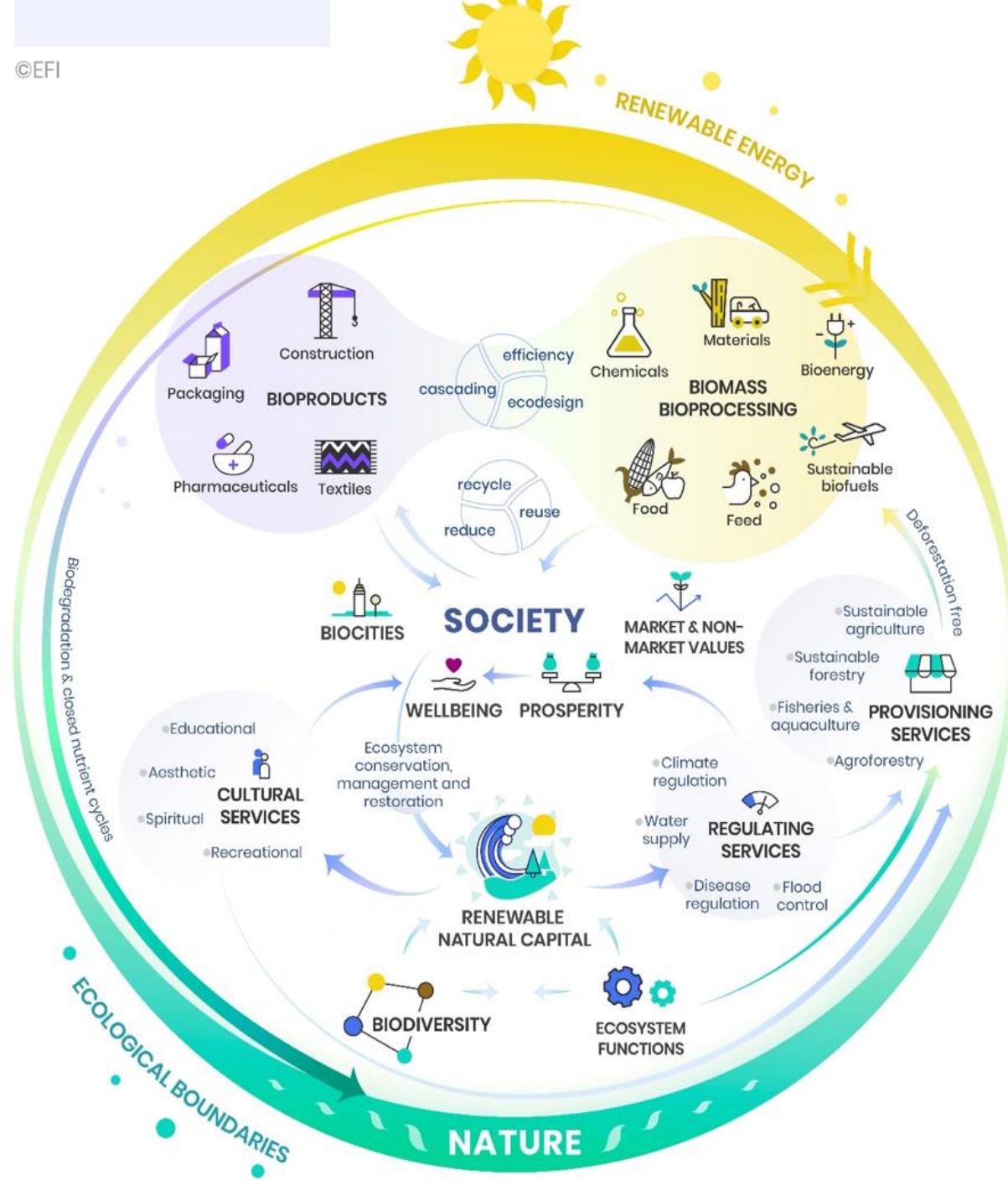


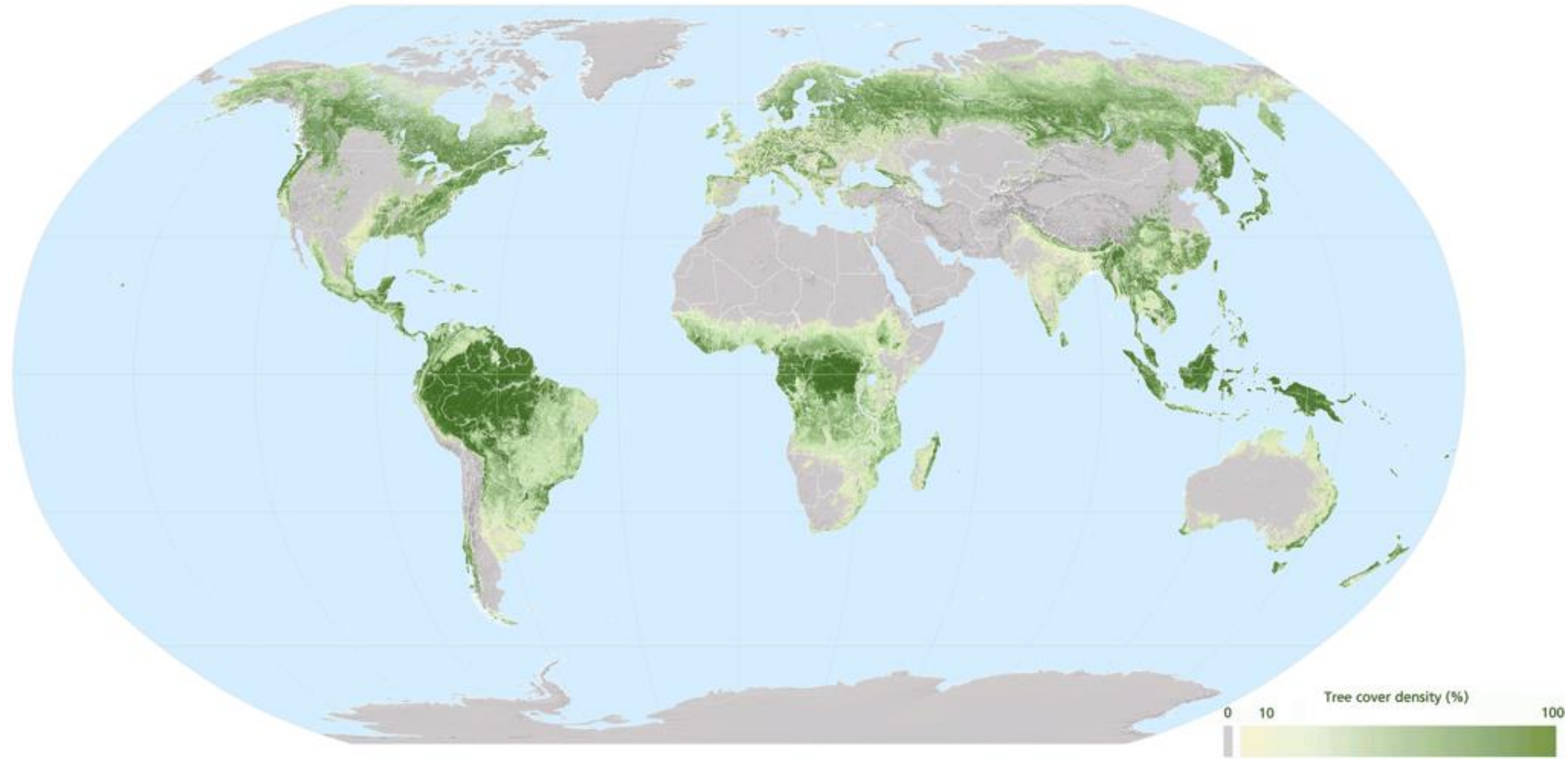
Figure 2. Gross Domestic Product/capita and Genuine Progress Indicator/capita from 1950 to 2004.
Original figure from Kubiszewski et al. (2013)



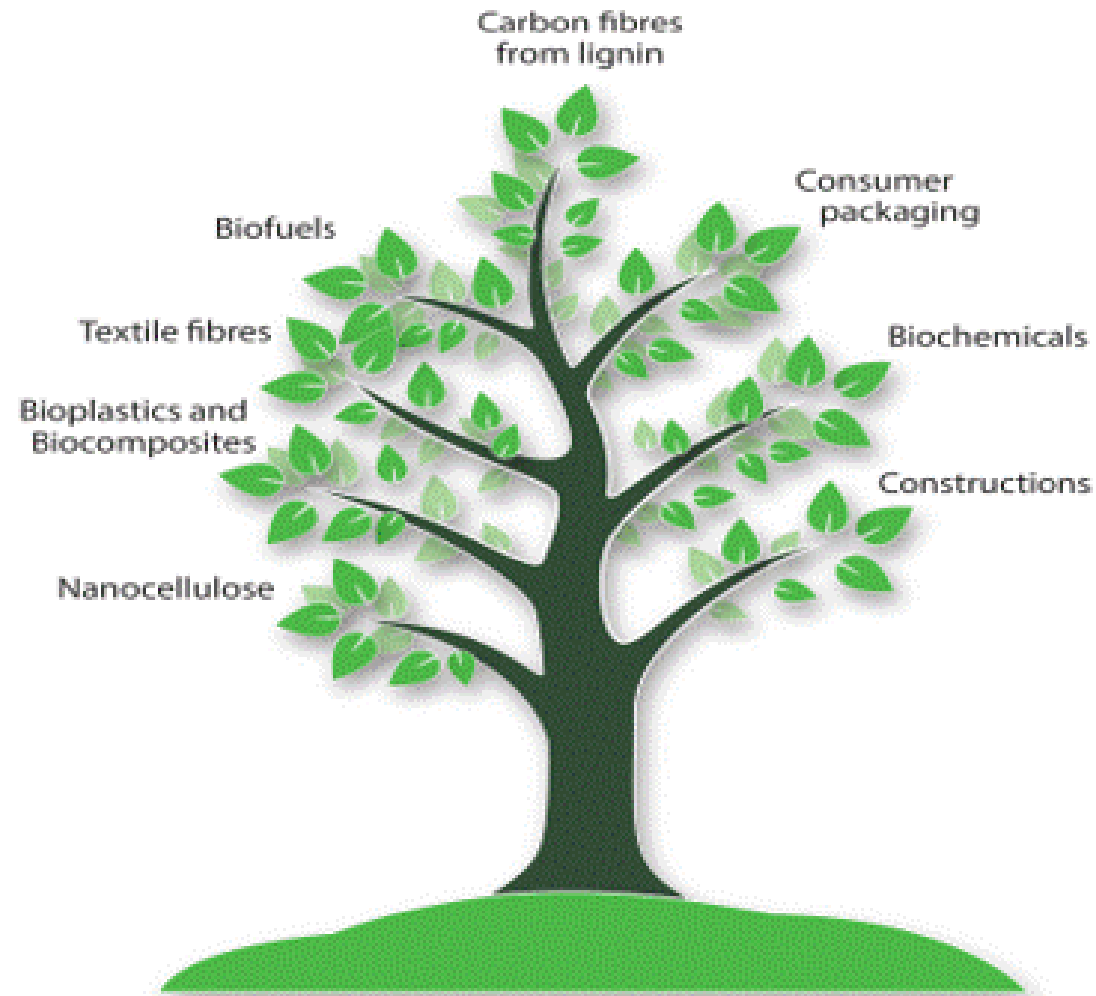
Una nueva economía: Bioeconomía Circular

- Biodiversidad
- Innovación
- Capital social

Bosques, infraestructuras biológicas clave



Recursos forestales: soluciones renovables



Coche de Nanocelulosa



Fibras de madera para una moda sostenible



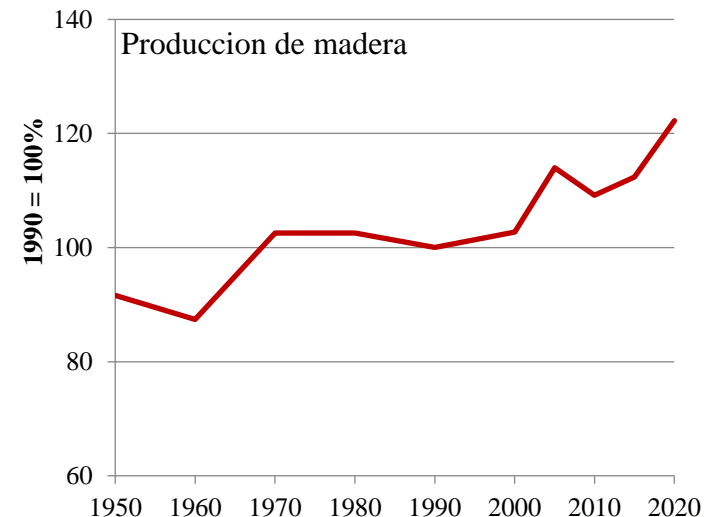
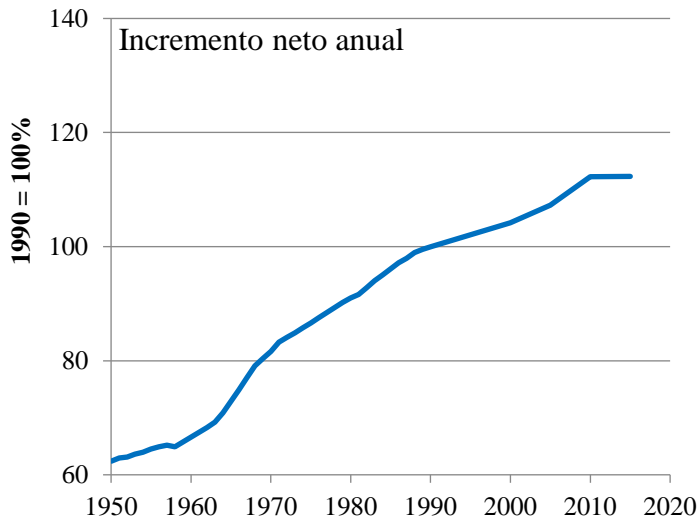
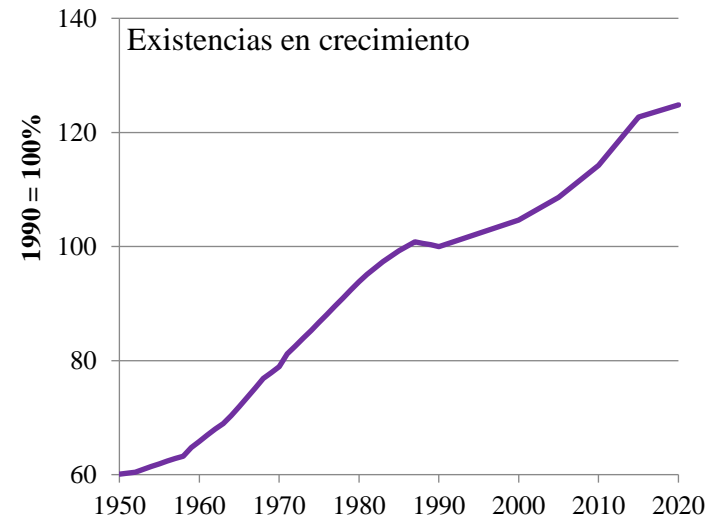
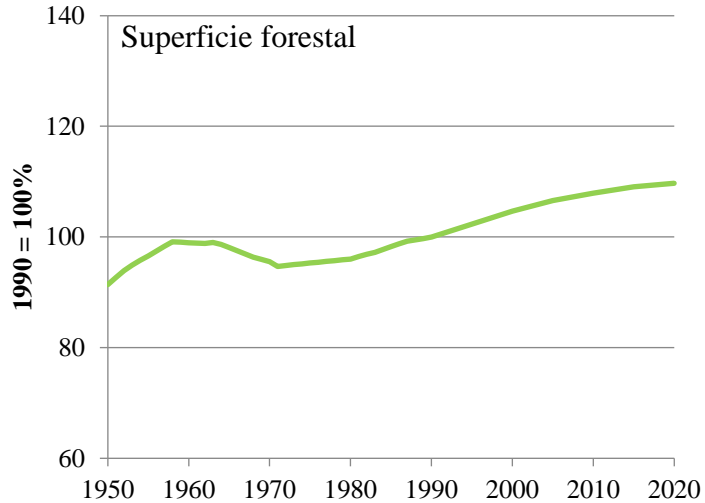




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Los bosques son sistemas complejos que funcionan bajo marcos temporales y espaciales amplios

Desarrollo recursos forestales en UE

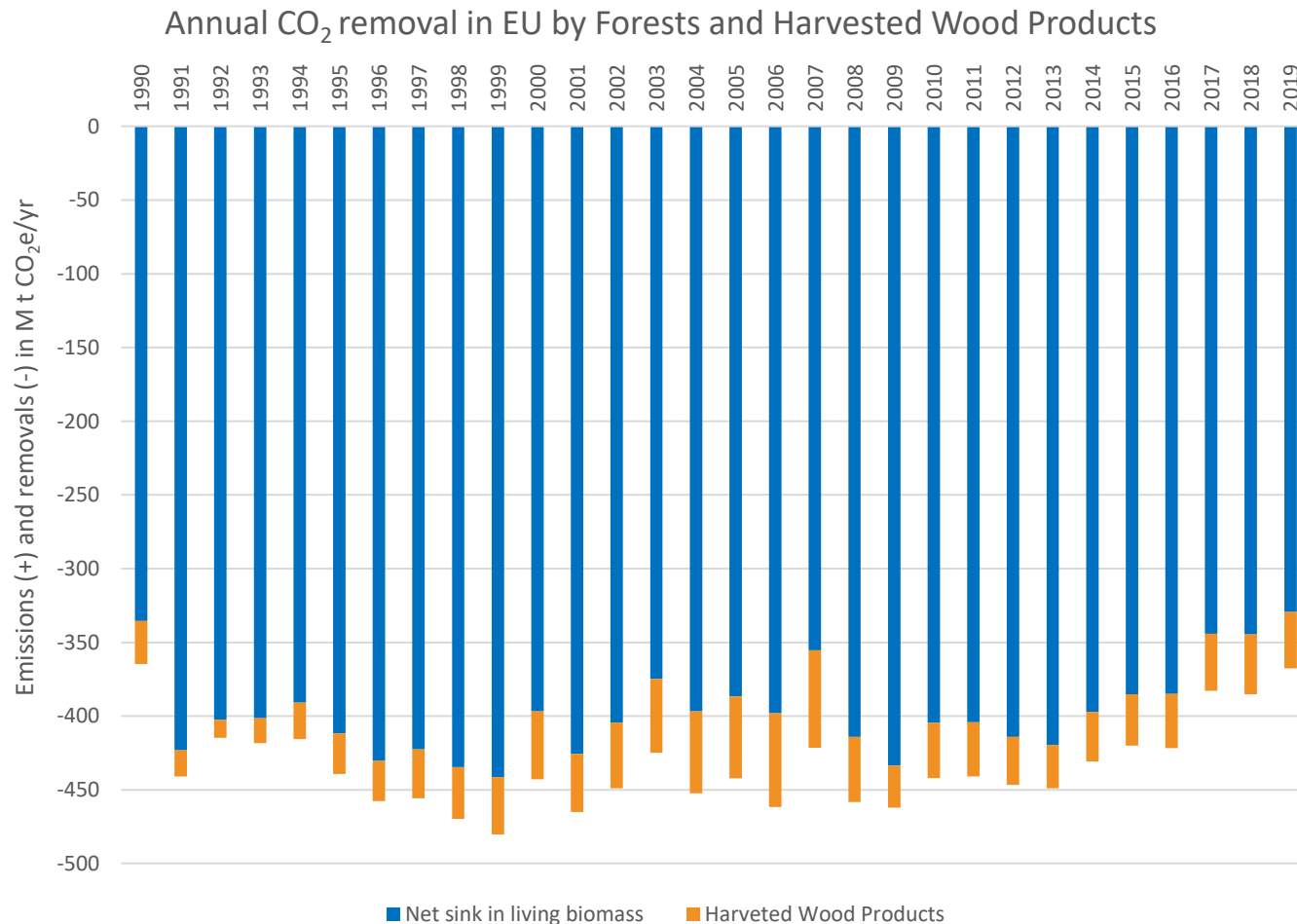


- Gran expansion de los recursos forestales en las ultimas 7 decadas
 - Carbono almacenado > doble
 - Produccion casi doblada
 - Superficie protegida: > 10 veces
- Desde 1990 en UE + UK:
 - Superficie forestal: +10%
 - Existencias en crecimiento: +49%
 - Incremento neto anual: +24%
 - Produccion de madera: +41%

*Long term trends in the graphs are only shown for 21 EU Member States (16 for net annual increment) due historic data availability.

Source: Forest Europe, 2021; Kuusela, 1994; Gold, 2003; Gold, 2006; FAOSTAT, 2022.

“Absorción” de CO₂ de los bosques y productos forestales

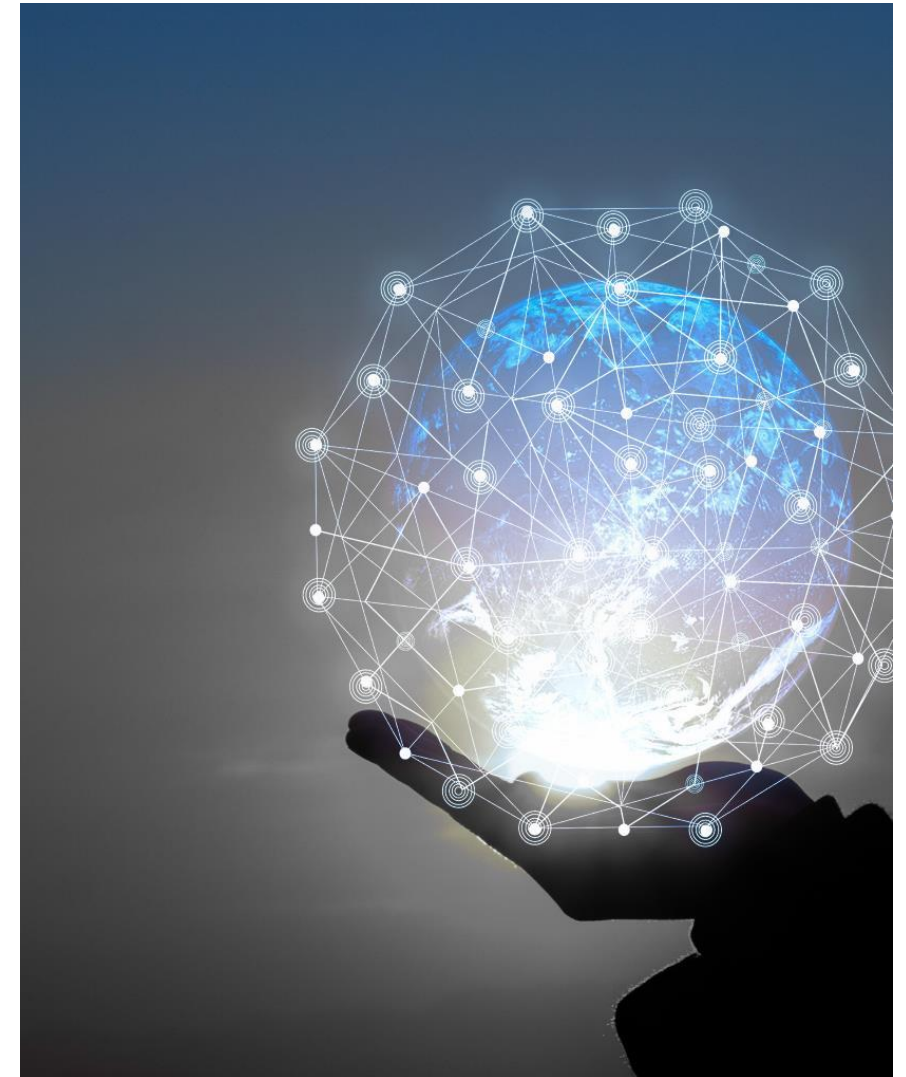


- Absorción de CO₂ en bosques y productos de la UE: estable desde 1990, compensa un 10% de las emisiones de la UE
- Beneficios climáticos:
 - Sumideros
 - Substitución
 - Almacenamiento en productos

Source: EEA, 2022

Mirada global

- Los bosques de la UE: un **4% de los bosques del mundo pero un 40% del valor mundial de exportaciones forestales**
- En 2019, el valor de exportación de los productos forestales de la UE era 17 veces el de Africa, mientras que Africa cortaba un 54% mas de madera que la UE.

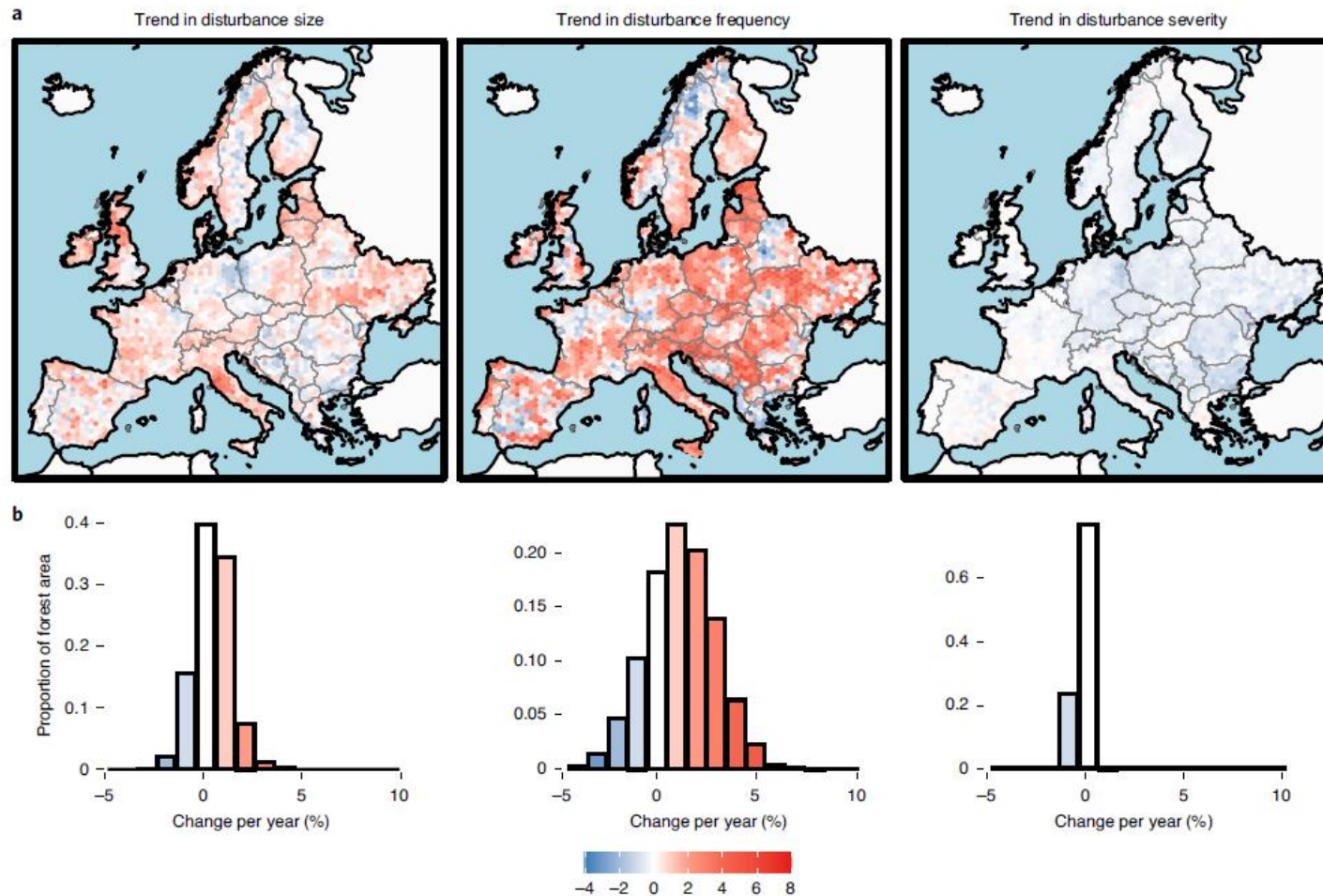




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Futuro forestal sin precedentes...

Impacto del cambio climático

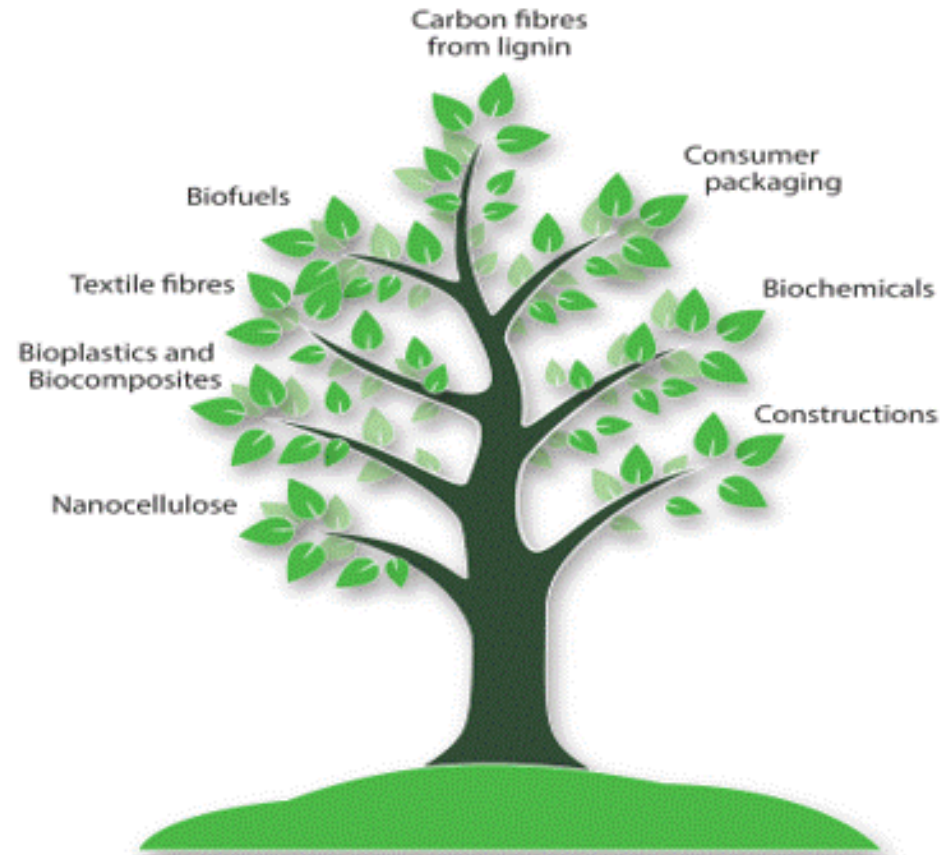


- Desde 1986 a 2016: 17% de los bosques europeos afectados por riesgos naturales.
- **La frecuencia de desastres naturales va en aumento...**

Source: Senf, C., Seidl, R. (2021) Mapping the forest disturbance regimes of Europe. *Nature Sustainability* 4, 63–70.)

Fig. 3 | Trends in Europe's forest disturbance regimes, 1986–2016. a, Maps of trends in disturbance size, frequency and severity calculated as a 50-km hexagon grid across continental Europe. Background maps are derived from <https://gadm.org>. b, Distribution of forest area among trend classes.

Papel de los productos forestales en la descarbonización de la economía



Políticas e inversiones transformadoras

- Mercados de productos emergentes para financiar las medidas de adaptación y biodiversidad forestal!
- Enfoques integradores para superar la dicotomía entre ecología y economía, Bioeconomía y biodiversidad:
Bioeconomía circular



Cambio de era

“La humanidad pone siempre sus más profundas esperanzas en la **tecnología**, pero sus más profunda confianza en la **naturaleza**”

Brian Arthur



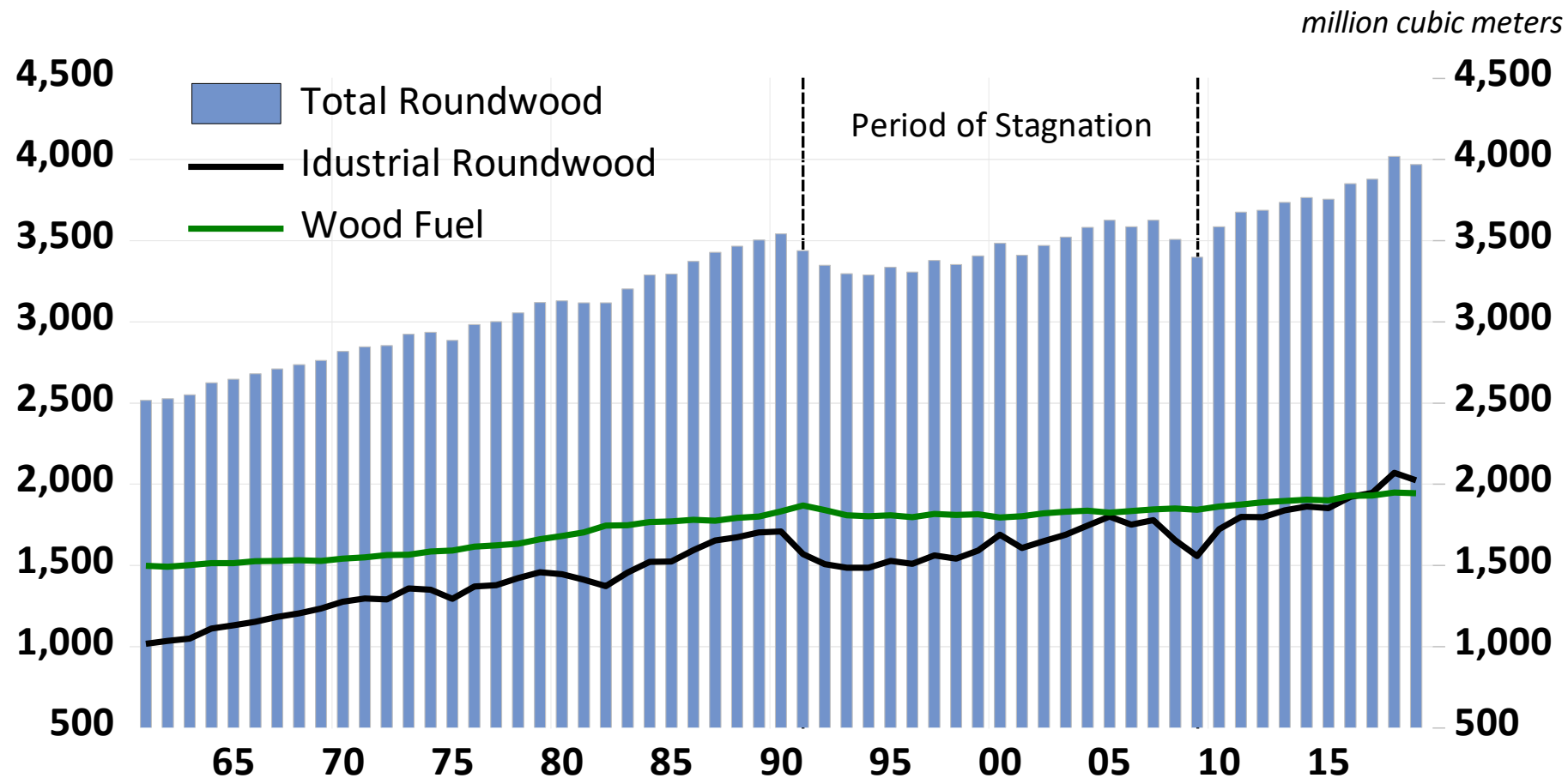


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*Connecting
knowledge
to action*

World roundwood production 1961-2019

Roughly, 50% industrial roundwood and 50% wood fuel (*≈ energy wood*)



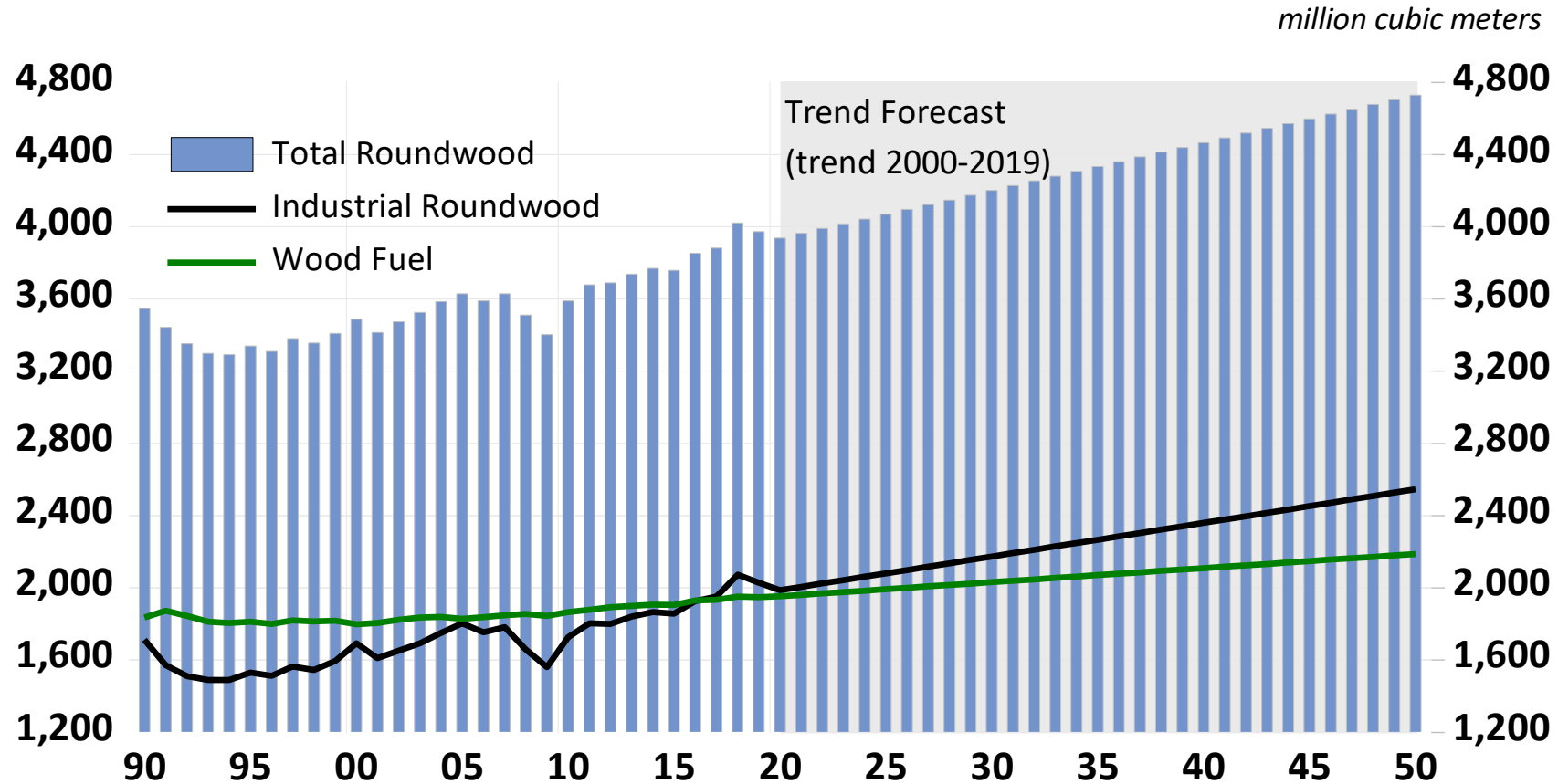
In 2019, world produced 12% more roundwood than in 1990

During this period the world economy grew by **2.2-times***, and world population increased by **2.4 billion, i.e., by 45%**

*Data: World Bank; *constant prices*

Data source: FAOSTAT

If tomorrow was just another yesterday.....



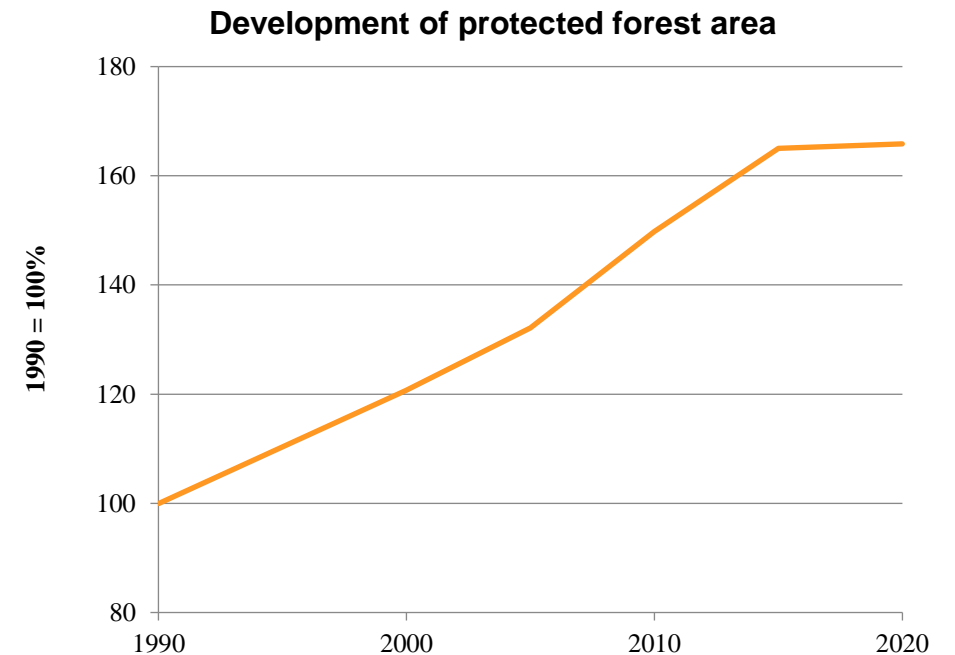
Roundwood production would increase from 2019 to 2050 by **20% or 757 million cubic meters**

At the same time, the world population is projected to increase by 2.1 billion or 27%

Forests and biodiversity

Forests are of key importance to biodiversity

- Remaining primary forests cover 1.4 million ha in 32 European countries (0.7% of forest area); only half strictly protected
- Around 30% of European forests are dominated by single species, mostly conifers, while 70% of forests are mixed forests
- Populations of common forest bird species are generally stable, but trends vary across Europe
- The amount of deadwood (important for many species) has been steadily increasing and corresponds to about 7% of growing stock
- 15% of European forests are protected for conserving biodiversity
 - Increased by >350 thousand ha annually over the past 20 years
 - Strongest increase in protected areas where active management is allowed
- Almost 85% of the protected forest habitats are not in good conservation status.



Source: Forest Europe, 2021