

A Sustainable Bioeconomy:

Key issues and perspectives for bioenergy

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SDGs: The normative framework



from: <https://sustainabledevelopment.un.org/sdgs>

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The SDGs and bioenergy

13 out of 17 SDGs are directly or indirectly linked to **bioenergy, especially**

- 2 (food & agriculture)
- 4 (water)
- 7 (energy), and
- 15 (forests, land)

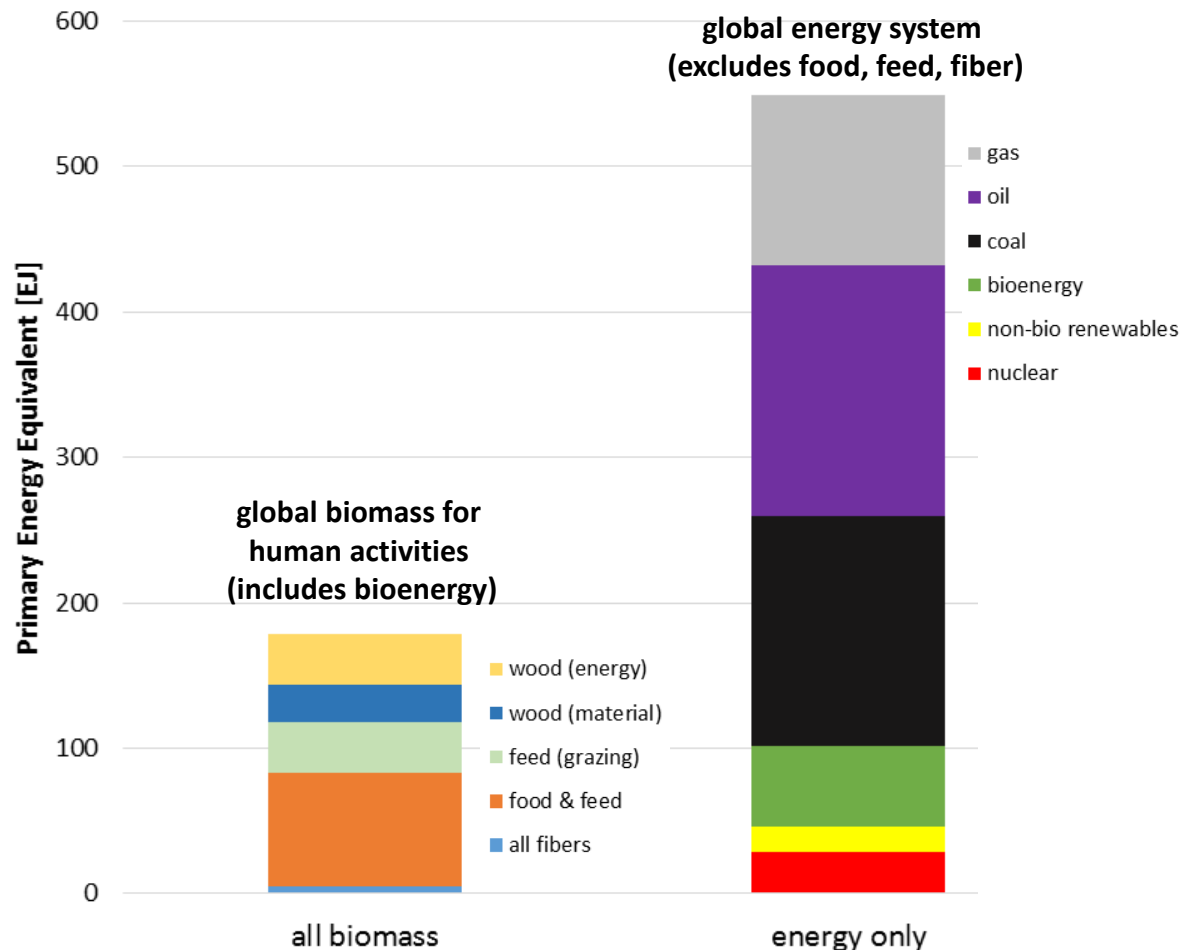
SDG indicators are being set up (until Spring 2017)

SDG	Key wording	Driver	Safeguard
	End poverty in all its forms everywhere	(✓)	(✓)
	End hunger, achieve food security and improved nutrition and promote sustainable agriculture	✓	✓
	Ensure healthy lives and promote well-being for all at all ages		(✓)
	Ensure availability and sustainable management of water and sanitation for all	(✓)	(✓)
	Ensure access to affordable, reliable, sustainable and modern energy for all	✓	(✓)
	Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all	(✓)	(✓)
	Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation	(✓)	
	Make cities and human settlements inclusive, safe, resilient and sustainable	(✓)	(✓)
	Ensure sustainable consumption and production patterns	✓	(✓)
	Take urgent action to combat climate change and its impacts	✓	✓
	Conserve and sustainably use the oceans, seas and marine resources for sustainable development	(✓)	(✓)
	Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss	(✓)	✓
	Strengthen the means of implementation and revitalize the global partnership for sustainable development	(✓)	(✓)

Source: own elaboration based on SDKP (2015). **Bold text:** SDG related to biomass; (✓) = partially relevant

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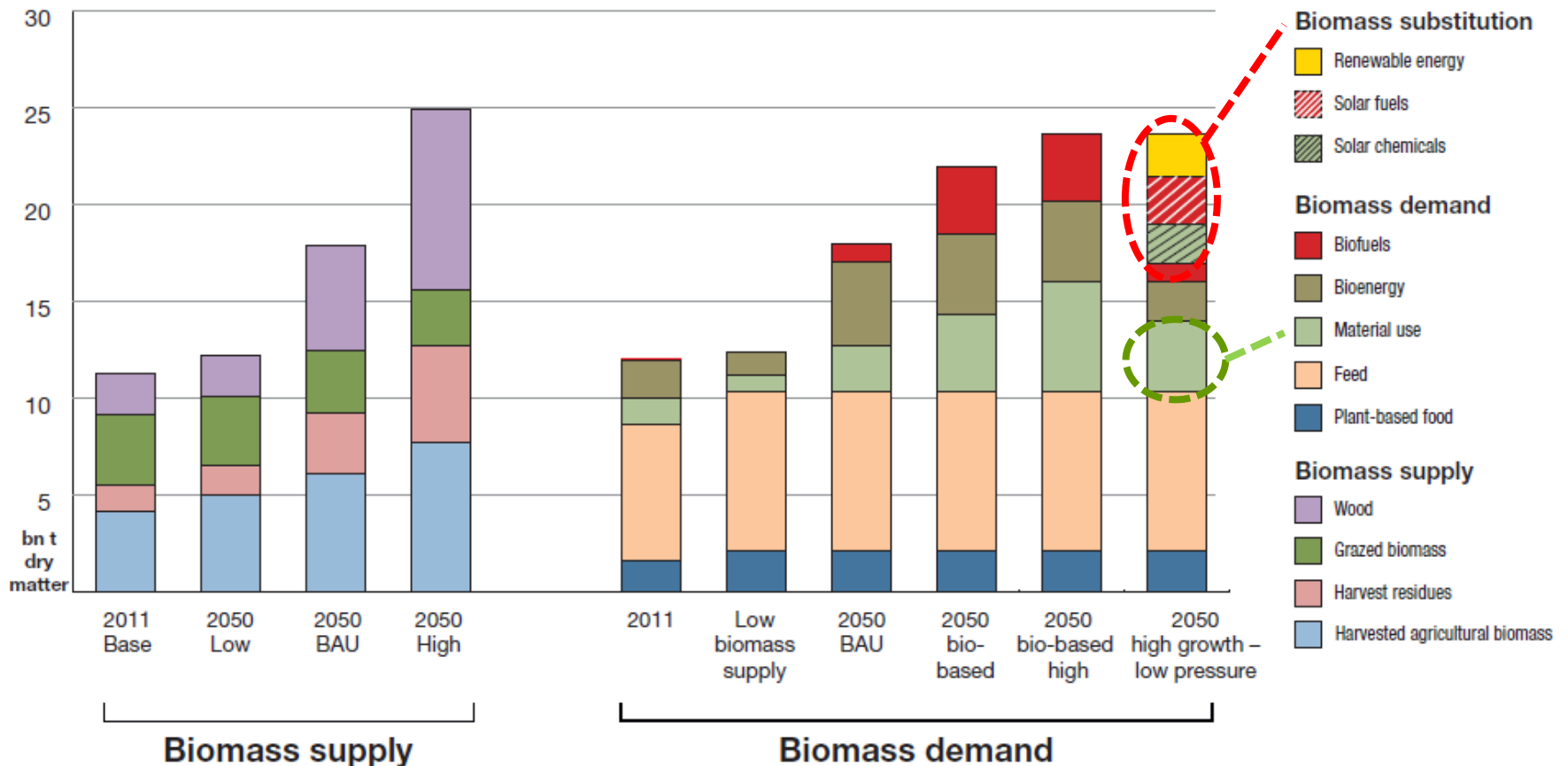
Bioeconomy and global energy



Source: IINAS calculation for 2010 based on IEA (2014) and nova (2012)

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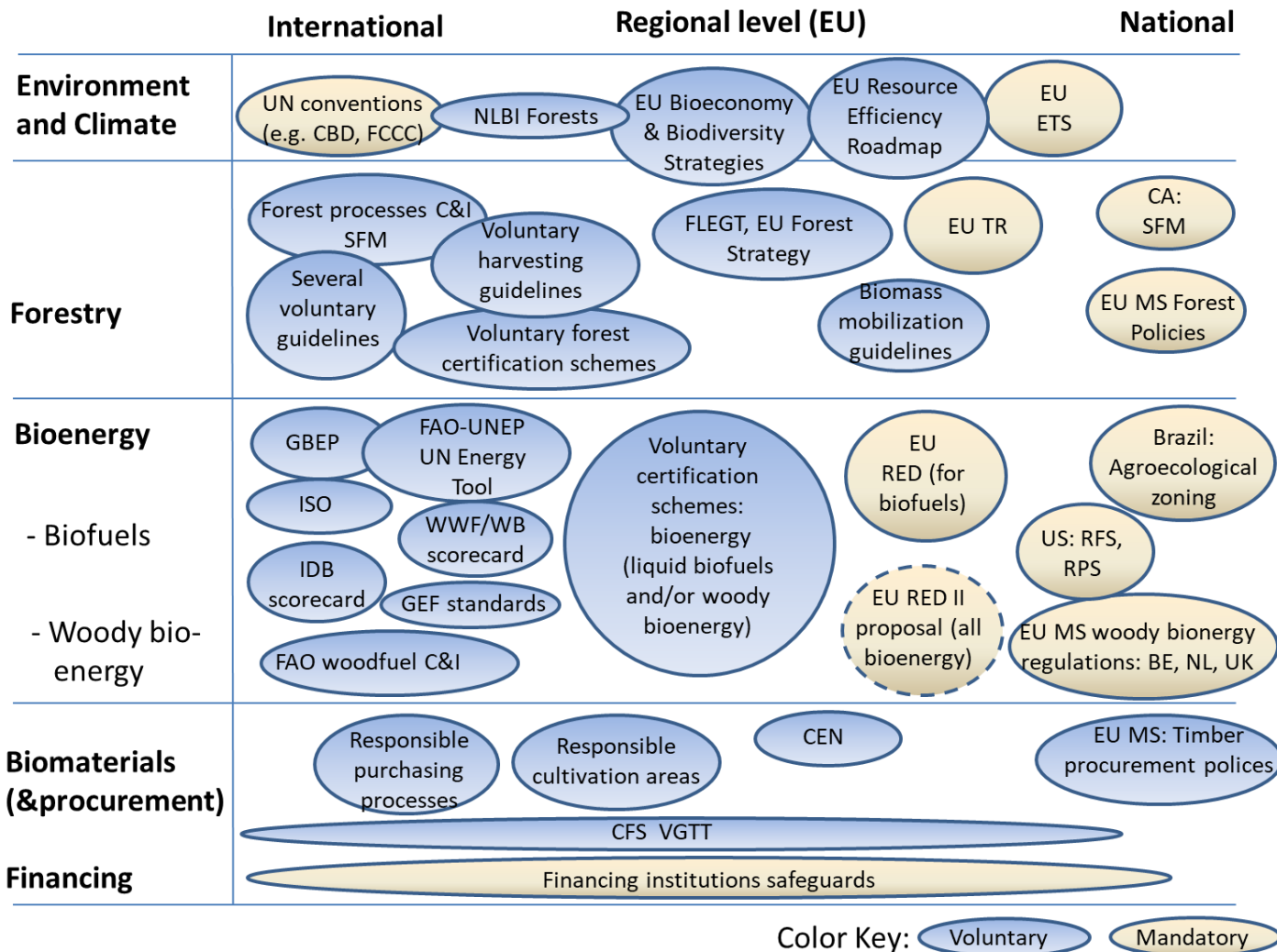
Bioeconomy: Global Scenario 2050



Nova (2015) Global bioeconomy in the conflict between biomass supply and demand. nova paper #7. Hürth
www.bio-based.eu/nova-papers

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Sustainability approaches



→ Need to harmonize sustainability requirements across sectors

Conclusion & perspective

- **Bioeconomy**: **not** food vs. fuel but **resource/land use**
- Wastes (cascading) and residues: **yes**, but consider biodiversity and soil C stocks (straw...)
- Marginal/degraded land: **yes**, but biodiversity and social safeguards → **synergies** (soil, jobs) – yet: **cost!**
- **GBEP Sustainability Indicators** should be used to develop national biomass policies
- **Land** use (agro, forest...) is key: bioenergy as **part of sustainable food systems & landscapes**

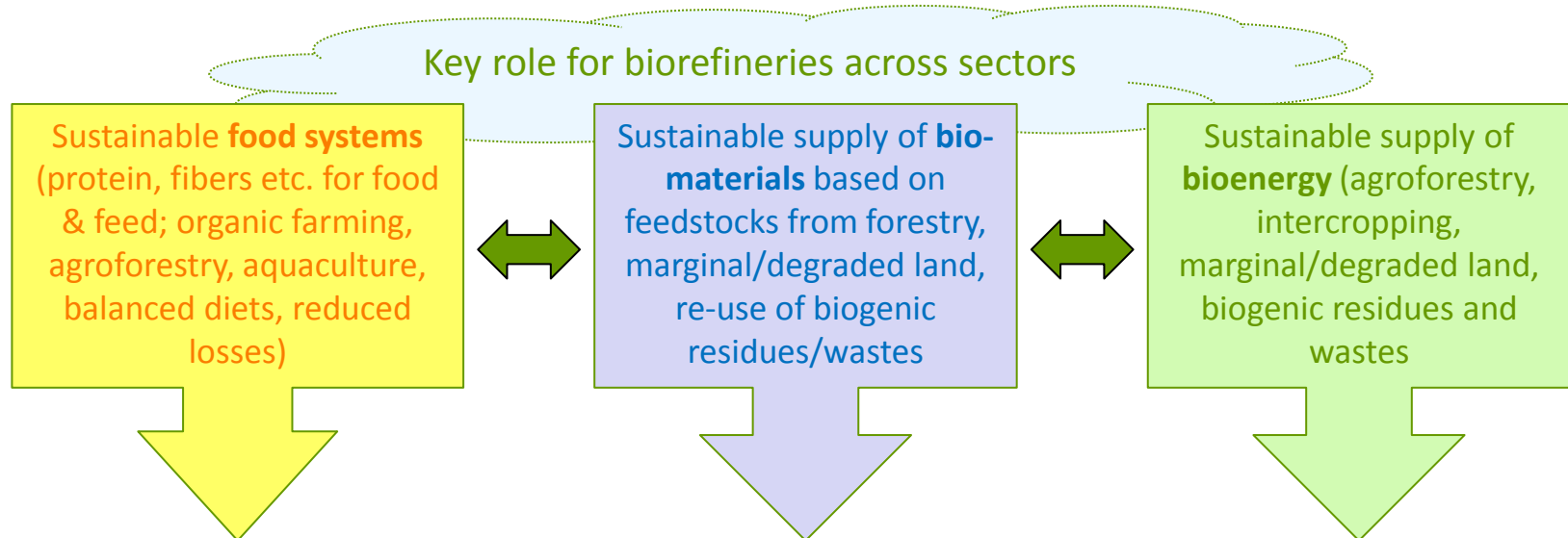
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Sustainable Bioeconomy: a vision



- Global food security, secure land tenure
- Regional/local employment and value added (rural development)
- Sustainable production in agriculture, fishery and forestry
- Reduction of food losses, recycling of wastes (circularity)
- Conservation of ecosystem services (biodiversity, C sequestration, recreation, soil fertility, water...)

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More Information



www.globalbioenergy.org

IEA Bioenergy

Inter-task project “Measuring, governing and gaining support for sustainable bioenergy supply chains” <http://itp-sustainable.ieabioenergy.com>



Resource-efficient bioeconomy in Europe www.s2biom.eu



Supporting a Sustainable European Bioenergy Trade Strategy
<http://www.biotrade2020plus.eu/>

biomass policies Sustainable bioenergy in EU28 www.biomasspolicies.eu

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