Leading the way to a European circular bioeconomy strategy

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Foreword

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www.efi.int
Why the report & what are its objectives?

1. What are the gaps in existing bioeconomy strategies that limit the possibilities to support the global agreements and goals?

2. Why it is important to link the bioeconomy and circular economy strategies, instead of advancing them separately?

3. What are the key strategic elements that a successful circular bioeconomy strategy would need to have?
The world states have agreed 2 major agendas

Keeping global temperature rise this century well below 2°C
A socio-economic paradigm shift is necessary

- SDGs and Paris Agreement give a licence to change the existing economic model, or how we advance societal well-being
- Business-as-usual will not work
- Report argues that a circular bioeconomy is a necessary strategy to catalyse this transformation
Circular Bioeconomy: more than bioeconomy or circular economy

Important to acknowledge all aspects of renewable natural capital and bioeconomy, even if it is not easy

“It is often said that what you measure is what you get. Building the future we desire requires that we measure what we want, remembering that it is better to be approximately right than precisely wrong.”

Robert Costanza et al., Nature 2014
Need to update the EU + other bioeconomy strategies

1. No or poor links to SDGs, Paris Agreement, climate, etc. policies
2. Bioeconomy is a tool, not an end itself
3. Need to merge bioeconomy and circular economy
4. Sustainability of bioeconomy cannot be taken as given
5. Opportunities related to bioeconomy services poorly accounted
6. Bioeconomy necessary for urban areas
7. The potential of forest-based sector poorly understood – if at all
Three examples of growing bioeconomy products

- **Forest biomass**
  - Viscose fibre
  - Polymers
  - Engineered wood products

- **Textiles**
  - Increasing demand in textile markets to replace e.g. cotton and synthetic fibres

- **Bioplastics**
  - Increasing demand in many consumer and industry sectors

- **Wood construction**
  - Increasing demand in building sector
Hypothetical example:
EU forest-based materials gain 1% share of the global markets in 3 sectors by 2050

<table>
<thead>
<tr>
<th>Market in 2050</th>
<th>Construction (cement/concrete)</th>
<th>Plastics</th>
<th>Textiles</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Production</td>
<td>13.7 Mt**</td>
<td>11.2 Mt</td>
<td>2.5 Mt</td>
<td>27.4 Mt</td>
</tr>
<tr>
<td>Revenue</td>
<td>~ 1 - 36 billion €</td>
<td>~ 7 - 18 billion €</td>
<td>~ 1.5 - 6 billion €</td>
<td>~ 10 – 60 bill. €</td>
</tr>
<tr>
<td>Wood use</td>
<td>68 Mm³</td>
<td>(no primary use – based on side-streams)</td>
<td>15 Mm³</td>
<td>&gt; 83 Mm³</td>
</tr>
</tbody>
</table>

5% share could even double the current revenue of the EU forest products industry
European circular bioeconomy strategy

FOR ACHIEVING A SUSTAINABLE FUTURE

Photo: Eeva Oinonen
Policy objective: maximize synergies and minimize trade-offs between different ecosystem services

*Figure 5.* Illustration of forest-based bioeconomy production possibility frontier with trade-offs and synergies between forest products and non-product ecosystem services.

Priorities for circular bioeconomy strategy

1. Create a science-based circular bioeconomy *narrative*
2. Do not assume a bioeconomy is *sustainable*
3. Abolish fossil subsidies and increase the role of CO$_2$ price
4. Invest in *R&D*, innovations and new skills
5. Provide the right *regulatory framework*
6. Enhance *risk-taking* capacity
7. Develop EU-level *common standards* and regulations
8. Embrace biobased *services*
9. Make use of the opportunities that *forests* provide
The art and responsibility of politicians would be to sell the circular bioeconomy to voters.

“No policy - no matter how ingenious - has any chance of success if it is born in the minds of a few and carried in the hearts of none”

Henry Kissinger
Thank you!

Photo: Erkki Oksanen

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