Renewable Carbon Initiative (RCI)
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PRESS RELEASE

Biomass production for the bioeconomy and biodiversity protection can go hand in hand

New RCI report identifies best practice measures to safeguard biodiversity while securing long-term biomass productivity in agriculture and forestry.

Hürth, 12 November 2026: The transition towards a climate-neutral bioeconomy requires a substantial increase in the use of biomass as a renewable carbon source. However, this expansion must take place within ecological boundaries. Biodiversity loss, soil degradation and ecosystem instability pose direct risks not only to environmental integrity but also to the long-term productivity and resilience of biomass supply systems. Contrary to popular belief, the production of biomass and the conservation of biodiversity are not mutually exclusive objectives. In fact, maintaining long-term productivity requires biodiversity conservation.

The new study by the Renewable Carbon Initiative (RCI) together with nova-Institute, Kieler Institut für Europäische Landwirtschaftsstudien (KIELS) and Peterson Solutions assessed a broad range of measures to identify practical ways of combining biomass production with biodiversity protection. Building upon a comprehensive literature review conducted by nova-Institute and structured assessment frameworks by KIELS and Peterson Solutions, the project evaluated biodiversity benefits alongside effects on yield, stability and resilience in agriculture and forestry. It turned out that their compatibility depends on management design, spatial planning, and temporal perspective.

The report offers practical guidance for biomass producers and companies sourcing bio-based feedstocks, helping them identify measures suited to their production systems.

Identifying practical measures

Some measures can deliver substantial biodiversity benefits but also significantly reduce yields, limiting their suitability for productive biomass systems. A core task of the project was therefore to identify measures that support biodiversity while maintaining yields for a future bioeconomy with a growing demand for biomass. For this, a wide range of measures were individually described, including their benefits for biodiversity and potential trade-offs with biomass production. Based on this analysis, the report focuses on a selection of measures and explains how they can be combined to be cost-efficient and provide the best balance of biodiversity and yield both with short-term and long-term effects.

Examples include landscape diversification and cover crops in agriculture, and mixed-species systems and soil protection in forestry. Such practices can support biodiversity and the ecosystem services on which reliable biomass production depends.

The assessment also considers effects of measures on productivity over time: protecting soil and strengthening resilience can help secure future biomass supplies.

Precision farming and forestry technologies, including monitoring tools and drones, can help producers target interventions and use inputs more efficiently, supporting both productivity and biodiversity.

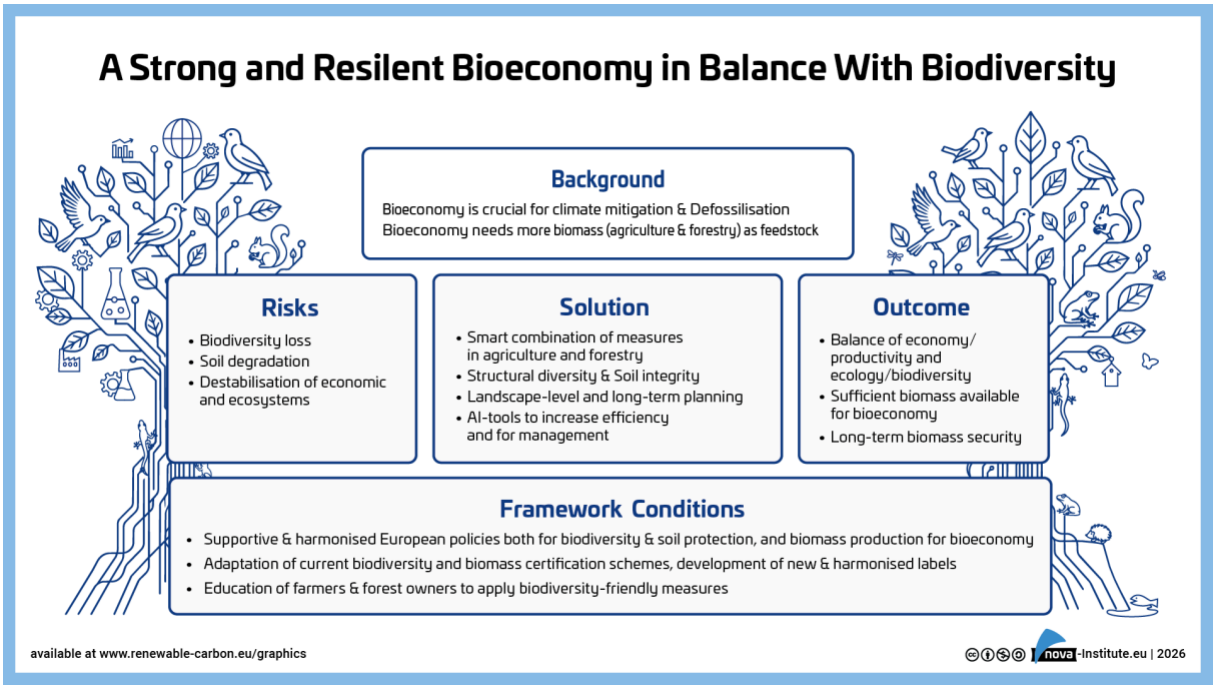


Figure: A strong and resilient bioeconomy in balance with biodiversity

Many actors in the bioeconomy, including RCI members, are already implementing biodiversity-friendly measures for their feedstock sourcing on a voluntary basis. Some measures are also supported financially through the European Union, national or regional programmes. Making these opportunities better known and expanding suitable incentives can help more producers put practical solutions into action.

The report also discusses policy recommendations and support frameworks in detail. By bringing together evidence, practical measures and examples of existing action, it offers a starting point for companies and biomass producers who are looking to advance a resilient bioeconomy in balance with biodiversity.

The report is the second part of a two-part series examining biodiversity in the context of biomass production and the bioeconomy. It is available at https://renewable-carbon.eu/publications/product/rci-report-balancing-biomass-production-and-biodiversity-protection-for-the-bioeconomy-pdf

The first part on biodiversity integration in sustainability assessment, especially Life Cycle Assessment (LCA), can be downloaded for free here: https://renewable-carbon.eu/publications/product/biodiversity-in-sustainability-assessments-in-particular-life-cycle-assessments-lca-rci-report/

Disclaimer

RCI members are a diverse group of companies addressing the challenges of the transition to renewable carbon with different approaches. The opinions expressed in these publications may not reflect the exact individual policies and views of all RCI members.

About RCI

The Renewable Carbon Initiative (RCI) is a global network of more than 60 prominent companies dedicated to supporting and accelerating the transition from fossil carbon to renewable carbon (bio-based, CO_2-based and recycled) for all organic chemicals and materials. Its work focuses on scientific background reports, position papers, advocacy and networking.

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Dr. Lars Börger
Renewable Carbon Initiative (RCI) www.renewable-carbon-initiative.com
Offices at nova-Institut für politische und ökologische Innovation GmbH, Leyboldstraße 16,
DE-50354 Hürth (Germany)

Internet: www.nova-institute.de
Email: contact@nova-institut.de
Phone: +49 2233 460 14 00