Scaling the EU's Bioeconomy: priorities to achieve defossilisation and strategic autonomy

Input from the Dutch government for the Call for Evidence for the initiative 'Towards a Circular, Regenerative and Competitive Bioeconomy'

The Dutch government welcomes the European Commission's proposal to update the Bioeconomy Strategy.[1] A strong bioeconomy is needed to achieve a healthy, climate neutral and circular society, to future-proof revenues for companies and farmers in the EU and to diversify the EU's agriculture. By providing solutions for circular use of raw materials, bioeconomy and biotechnology contribute to the EU's strategic autonomy. The Netherlands has recently published its national vision for biotechnology,[2] and is working on a strategy for bio-based resources. In this document, we list our key priorities regarding the EU's Bioeconomy Strategy.

1. **Create and protect European lead markets for bio-based products**: one of the strategy's main aims is to increase resource efficient, energy efficient and circular use of biological resources by creating stable demand. We support this objective and set out our key priorities below:
    a. **Market creation for high-value applications:** we ask the Commission to take note of the Joint Statement on a Sustainable Carbon Policy Package.[3] Specifically, we ask the Commission to consistently broaden product regulation, such as minimum content requirements, to include recycled, bio-based and CO_2-based materials. We therefore support the proposals to include bio-based targets in the Packaging and Packaging Waste Regulation[4] and in the revision of the Detergents Regulation.
    b. **Harmonisation and level playing field:** we support the Commission's focus on prioritizing high-value applications of biomass, which is in line with the Dutch framework for the sustainable use of biomass.[5] Sustainable biomass is scarce and should therefore be used in line with the cascading principle. To achieve this, harmonisation of sustainability criteria for all uses of biomass is crucial. We therefore support the extension of sustainability criteria in line with article 29 of the Renewable Energy Directive to the use of biomass for materials. To create a level playing field between fossil, recycled and biogenic carbon, the methodologies for life cycle analysis should be harmonised to enable a fair comparison. We advocate for using the -1/+1 approach for high-value applications as this recognises the uptake of biogenic carbon also in cradle-to-gate assessments. We also stress the importance of the application of the Safe and Sustainable by Design principles in the R&D phase of the development of new substances and materials. These measures would support the uptake of sustainable carbon within the Single Market in, e.g., the chemical sector. Finally, we would like the Commission to undertake an impact assessment regarding the necessity and possibility for measures ensuring a level playing field and safeguarding sustainability standards. Any such measures should be in line with international obligations (e.g., WTO), and their achievability, administrative burden and impact on third countries should be considered.

2. **Support primary producers and a strategic industry:** we welcome the Commission's aim to strengthen the role of primary producers and to remove unnecessary and unjustified barriers to bio-based manufacturing. Our key priorities regarding these objectives are:
    a. **Strengthening the role of primary producers:** primary producers play an essential role in the transition towards a circular, regenerative and competitive bioeconomy. Therefore, it is crucial that a level playing field within the EU is created to maintain fair competition between

[1] Minister of Foreign Affairs 2025, Kabinetsappreciatie nieuwe initiatieven 'Werkprogramma van de Commissie 2025' – link
[2] Rijksoverheid 2025, Kabinetsvisie op biotechnologie 2025-2040 - link
[3] Rijksoverheid 2024, Joint statement on a European sustainable carbon policy package - link
[4] We support the current exemptions in the PPWR around packaging for medical purposes as formulated in 2025/40, article 7, 4 and would propose the same exemptions in the case of bio-based targets
[5] Ministry of Infrastructure and Water management 2020, Sustainability framework for biomass - link

primary producers in different member states during the transition towards the production of different types of crops needed for the bioeconomy. In addition, agricultural production should not only be economically viable but should also take place within planetary boundaries. Land and resource use needs to be carefully considered in the production of food and other biomass products. To ensure soil health, sufficient biomass should stay available to be applied back to the soil as organic matter, in line with the existing EU targets for European soils.[6] Finally, we address the importance of prioritizing food security within the transition.

b. **Scaling a strategic industry:** industrial biotechnology, biorefinery and use of biomass for chemicals will increasingly contribute to our economy, and supply strategic sectors like defence, life sciences & health, energy and agri & food. By providing sustainable alternatives to fossil resources and processes, the bioeconomy contributes to long-term competitiveness, energy and resource efficiency and to strategic autonomy. The bioeconomy also offers opportunities for the EU to realise CO_2 removals (CDR).[7] CDR will be needed to meet climate targets, all the while maintaining focus on climate mitigation efforts. However, innovation in these sectors faces long development timelines, high risks and requires large capital and human investments. To ensure a thriving industry, innovations and skills need to scale here. Increased market demand, clarity on biomass sustainability criteria and an effective level playing field as mentioned above will improve access to financing. To further support innovative solutions (e.g., manufacturing of PEF),[8] the plastics manufacturing sections of EU Taxonomy should be extended beyond bio-waste feedstock to include all sustainable biomass. Finally, we also support the Commission's initiative for a Biotech Act.

c. **Proportional and future-proof legislation**: developers of and investors in bio(tech) innovations are hampered by inconsistent regulations. To make the best possible use of innovations while maintaining high safety standards, we need a proportional and future-proof approach in EU legislation and regulations with transparent, efficient and predictable authorisation procedures. An example of inconsistency is the regulation around contained use, which is regulated across the EU for micro-organisms, but not for animals and plants.[9]

3. **Increase sustainable biomass availability:** we support the Commission's aim to secure the competitive and sustainable supply of biomass. Our key priorities regarding this objective are:

   a. **Sustainable application of biomass according to the cascading principle**: biomass is too valuable to serve as a one-to-one replacement in all fossil applications. Efforts should be made to reduce overall feedstock use through high-level R-strategies (reduce, reuse, repair and recycle). Additionally, applications of bio-based feedstock, for which more sustainable alternatives are both available and pending, need to be phased out. Phasing out must go hand in hand with the phasing in of these alternatives. In some cases, e.g., the use of biofuels for passenger cars, biomass should play a temporary role within a strategy aimed at swiftly finding alternative sources. In this type of bridging application, it is important to prevent lock-ins. As mentioned above, market creation for high-value applications is one way to ensure biomass is used to its highest-value potential. This should happen in parallel with the phasing out of support for low-value applications (e.g., subsidies) where effective. As the Dutch government, we have committed to the phaseout of subsidies for low-value biomass applications as soon as possible, where effective for phasing in high-value applications.[10] We call upon the Commission to provide a comprehensive and long-term view on the buildup of

[6] EU Mission: A soil deal for Europe
[7] The Netherlands supports demand creation for CDR at the EU level, for example through a reverse auction financed with ETS-revenues - link
[8] PEF is a plant-based alternative for PET plastic
[9] Directive 2009/41
[10] Rijksoverheid 2024, Regeerprogramma - link

the use of biomass in high-value applications and the phaseout of the use of biomass in low-value applications.

b. **Mobilisation of the EU's sustainable biomass potential by taking an integral approach:** even with careful use of biomass only for applications where there are no available alternatives for the time being, the need for sustainable biomass will rise sharply. Mobilising the EU's biomass potential is therefore an important step towards a higher degree of strategic autonomy for energy and raw materials. So far, policy has rightly focused on mitigating the risks associated with increasing the use and supply of biomass. At the same time, positive synergies with other policy goals are possible. For example, we see opportunities for deployment of regenerative and innovative agricultural methods, which could potentially contribute to restoration of marginal lands, biodiversity and climate adaptation.[11] When these goals are met, sustainable harvest of biomass for materials and remaining energetic purposes might increase as an additional benefit. However, finding and utilising these potential synergies requires an integral approach in order to maximise the positive effects of biomass mobilisation. Therefore, we call for the inclusion of bioeconomy interests also in policy development in other areas, such as the Common Agricultural Policy, the Circular Economy Act and climate mitigation and adaptation policy. In addition, we observe that so far, efforts have been directed at land-based agriculture. We encourage the Commission to explore the potential of water-based agriculture (seaweeds and seagrass) to increase biomass availability.

c. **Conditionally allowing the use of food and feed crops for high-value applications**: available land for growing crops is limited. Food security is and must remain priority. The available area for cultivation of crops for applications beyond food and feed should be examined. This should include dedicated land for non-food applications as well as land where the cultivation of crops for non-food applications could be additional to or synergistic with food and feed, as analysis shows that using biomass cultivated on agricultural land for purposes other than food and feed does not in itself have a negative impact on food security. On the contrary, growing sustainable, land-efficient food and feed crops can have multiple benefits for local and global food security, climate mitigation, market stability and economic security.[11] We call for providing space for the deployment of those crops that are most efficient to use for the highest value applications, e.g., sugar beet. The yield of fermentable sugars that can be used as feedstock for biotechnology is considerably higher in primary versus secondary crops.[12] Moreover, many promising technologies for bio-based materials that are ready to scale are based on sugar. In the short term, where technology to produce sugars from lignocellulosic biomass is not yet available at scale, we support the flexible use of primary crops across food, feed and non-food applications, provided the cultivation meets the abovementioned sustainability criteria and sustainable end-uses.[13] The cultivation and use of food and feed crops for bio-based materials (if all petrochemicals would be replaced by bio-based alternatives) would only require 5% of world arable farming area and therefore do not pose a threat to food security.[14] For the long-term, we advocate that sustainability criteria of biomass, rather than limitations for the type of crop, should drive policy decisions. It is important to maintain harmonized sustainability criteria for biomass used in different applications (e.g., biofuels and materials) to enable synergies in production.

[11] Faaij 2022, Repairing what policy is missing out on: a constructive view on prospects and preconditions for sustainable bio-based economy options to mitigate and adapt to climate change - link
[12] Dammer 2023, The use of food and feed crops for bio-based materials and the related effects on food security - link
[13] SER 2020, Biomass in the balance – link
[14] Deloitte 2014, Opportunities for the fermentation-based chemical industry - link