

ROAD TO BIO

KEY MESSAGES FOR COMMUNICATION ABOUT BIO-BASED PRODUCTS

Roadmap for the Chemical Industry in Europe towards a Bioeconomy
Engagement Guide



The RoadToBio: Developing a roadmap for the chemical industry towards a bioeconomy

Bio-based feedstocks in the chemical industry

The European chemical industry is committed to increase the share of bio-based feedstocks in their production processes. Bio-based products offer the opportunity to contribute to a sustainable economy and to reduce the dependency on fossil resources. The aspiration of the Bio-based Industries Consortium is to achieve a bio-based feedstock share of 25% of the total volume of organic raw materials by 2030.

Roadmap

The RoadToBio project developed a roadmap for the chemical industry, recommending actions to achieve the 25% goal. Together with a broad range of stakeholders the project team:

- Assessed the current state and opportunities for growth of bio-based feedstocks for over 500 chemicals and multiple value chains
- Identified regulatory and societal barriers for increased bio-based feedstock supply and bio-based chemical & material demand
- Formulated actions to overcome the barriers and make use of the opportunities

Roadmap elements

The roadmap consists of three elements:

- *Action plan*: summarises barriers and actions into overview schemes
- *Engagement guide*: provides communication tools to promote bio-based chemicals and easy-to-read information on the roadmap
- *Strategy document*: provides in-depth background information integrating all RoadToBio research activities

This factsheet is part of the engagement guide.

Background and how to customise key messages

Key messages

Key messages are the essence of what you want to communicate. They function as bite-sized statements that articulate what you do, why you do it, how you are different, and what value you or your products bring to your stakeholders. Key messages provide the takeaway headline of the issue that is intended to be communicated.

Key message development

The key messages presented in this factsheet are intended as an instrument for the chemical industry to address target audiences in their communication about bio-based chemicals, materials and products. The key messages build on results of the BioCannDo project, which developed general key messages

about bio-based products, using a thorough approach including literature research, feedback from industry and communication experts and focus groups¹. In RoadToBio we specified these key messages and developed additional ones tailored to the chemical industry.

Customising key messages

The key messages presented in this factsheet can be customised by producers to fit specific products and audiences. What is not relevant or true for specific products can be omitted and specific characteristics of products can be highlighted. The wording of the messages can be tailored to the target audience, since industrial customers and end consumers

require different communication and marketing strategies. To assist with customisation, we provide short and simple key messages supplemented with background information that can be used to build on or adapt messages.

When customising key messages remember that they should be²:

- **Concise:** Optimally three key messages on one page; each statement only one to three sentences in length or under 30 seconds when spoken
- **Strategic:** Define, differentiate and address benefits/value proposition
- **Relevant:** Balance what you need to communicate with what your audience needs to know
- **Compelling:** Meaningful information designed to stimulate action
- **Simple:** Easy-to-understand language; avoid jargon and acronyms
- **Memorable:** Easy to recall and repeat; avoid run-on sentences
- **Real:** Active rather than passive voice; no advertising slogans
- **Tailored:** Effectively communicates with different target audiences, adapting language and depth of information

Also check the "Communication Guide" factsheet of this series for more recommendations on how to communicate about bio-based products to different target groups!

Example: customised key message

The general key message "chemicals and materials from biomass can provide new and better functionalities" was customised for bio-based insulation materials, resulting in the more specific message³:

Compared to mineral and fossil-based materials, bio-based insulation materials:

- provide equally good heat and sound insulation performance
- have better moisture regulating properties
- provide excellent summer heat protection

¹ For insights from the BioCannDo project see www.allthings.bio/insights-from-biocanndo/

² Wetherhead, D. (2011) Key message development: Building a foundation for effective communications. <http://prsay.prsa.org/2011/12/02/key-message-development-building-a-foundation-for-effective-communications/>. Accessed 14 February 2019.

³ This sample key message was adopted from the BioCannDo project, www.allthings.bio



Any chemical or material made from fossil oil or gas can be made from biomass

Background

Many chemicals, materials and consumer goods are made from fossil resources (e.g. plastics, synthetic fibres, washing detergents or solvents). The fossil resources (oil and natural gas) were originally biomass that was converted in a process spanning millions of years. Any fossil-based ingredient can be replaced by renewable biomass resources or biomass residues so that we can speed up or by-pass this process. In the current bioeconomy, chemicals and materials produced from biomass already replace fossil-based ones.



Chemicals or materials produced from biomass can help to reduce CO₂ emissions

Background

The carbon in fossil resources was captured millions of years ago and is released at the fossil-based products' end of life. This release of carbon dioxide (CO₂) contributes to an increase of greenhouse gas concentration in the atmosphere. Greenhouse gases are one of the major drivers of climate change. To stay below the 1.5-2°C target of global warming, 70% of all coal reserves and at least one third of oil and natural gas reserves need to stay in the ground or their CO₂ emissions have to be kept from entering the atmosphere.

In comparison, CO₂ released by renewable resources was recently captured and will be captured again when biomass is regrown to produce new products. This way, the carbon is kept in a shorter cycle (under sustainable cultivation practices).

When biomass is used instead of fossil resources, fossil carbon can remain in the ground. This way, renewable biomass resources contribute to limiting climate change and global warming.



A lot of products on the market are already made from chemicals based on renewable biomass resources

Background

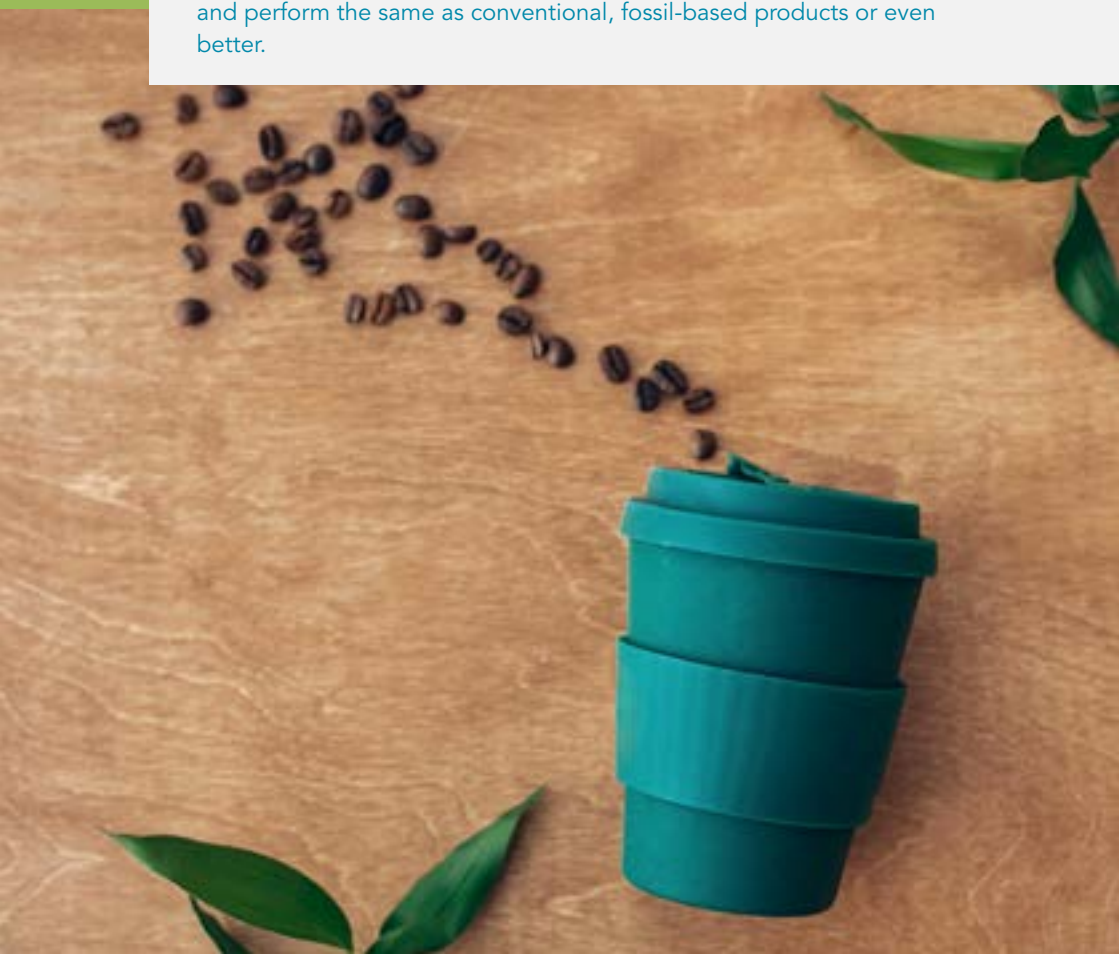
The chemical industry already offers a broad variety of products made from renewable resources. Some examples include: compostable plastic bags, personal care products, natural detergents, plant-based drinking bottles, planting pots for your garden or automotive parts. Even though these products are made from biomass, they can look, feel and perform the same as conventional, fossil-based products or even better.

Chemicals and materials from biomass can provide new and better functionalities



Background

For example, in the building sector, an increasing number of architects and construction companies return to applying construction materials produced from renewable resources, and it is more than just wood for the walls. Insulation, flooring and paints can be made from bio-based materials as well, where they provide a healthier and more comfortable indoor climate. Renewable raw materials are also widely used in cleaning products. Biotechnology provides bio-based ingredients such as enzymes for detergents. Enzymes can help in reducing the environmental impact of washing and cleaning products by using less energy and water, while providing the same or better cleaning results under milder conditions.



The bioeconomy can contribute to a circular economy, which helps us to move away from a linear economy of "take, make and dispose"

Background

The bioeconomy and circular economy go hand in hand. Reducing waste and making optimal use of natural resources are important goals of both the circular economy and the bioeconomy.

The circular economy strives to reduce resource consumption. Roughly 90% of the raw materials used in manufacturing become waste before the product leaves the factory. And most products get thrown away within the first six months of their life. But even in a fully circular economy, some input of new raw materials remains necessary. Biomass can provide a sustainable input, because it is renewable and regrows naturally.

Chemicals and materials from biomass are part of the natural cycle. They can provide a sustainable input of new materials for a circular economy. The bioeconomy can furthermore make use of many (organic) waste streams and hereby support the circular economy.



Renewable raw materials can be supplied without threatening nature, biodiversity or food security



Background

Studies have shown considerable potential for the cultivation of biomass for energy and material use on a global level, even under consideration of sustainability criteria such as biodiversity preservation, climate protection or food security.

In a sustainable bioeconomy, cultivation and processing of biomass has to be based on sustainable agriculture and forestry, where environmental aspects as well as social and labour standards are considered. Besides agriculture and forestry, residual biomass can be an important resource for a sustainable bioeconomy. Strong instruments to support the development of a sustainable bioeconomy are certification schemes and labels for renewable raw materials and bio-based products.

The bioeconomy creates jobs in rural areas

Background

In 2015, the bioeconomy generated a turnover of approximately 2.3 trillion Euros and an added value of 620 billion Euros. At the same time, it accounted for roughly 8.2% employment in the EU economy. More than 18 million people are employed in bioeconomy related sectors. Agriculture accounts for a large part of the bioeconomy turnover and employment. If the chemical industry achieves 25% renewable raw materials share in their resource base, this would further increase demands for biomass production and support job creation, stability and development in rural areas. In the future, the bio-based industries aim at creating an additional 700,000 jobs on all levels, 80% of which would be created in rural areas.

Bioeconomy

Turnover: 2.3 trillion Euro
Added value: 620 billion Euro
Employment: 8.2% of EU economy
> 18 million employees
Future: + 700,000 jobs of which 80% in rural areas

Switching to renewable raw materials reduces dependence on fossil resources



Background

A strong European bioeconomy would replace fossil-based products with renewable alternatives, and reduce the EU's dependency on fossil resources like oil, coal and natural gas. Biomass resources can be grown locally in the EU, in contrast to fossil resources, of which the majority is imported. In the long run, the organic chemistry will strive to become circular and apply reusable raw materials to become largely independent from limited fossil resources. This could in the future also be achieved with recycling and CO₂ utilisation, but currently biomass is the most readily available option.



The chemical industry is working to become more sustainable by producing ever more chemicals and materials from renewable biomass resources

Background

The European chemical industry is actively striving to become more sustainable. One of the goals is to make products that are less harmful to the environment but perform just as well as conventional products or even better. Sourcing an increasing part of its feedstock from biomass is an important way for the chemical industry to become more sustainable. Substituting fossil resources with biomass generally leads to reduced GHG emissions and is an important tool to reach our climate targets. The current share of renewable raw material use in the EU organic chemical industry was estimated by Cefic at around 10% in 2015, but the Bio-based Industries Consortium is aspiring to reach a bio-based feedstock share of 25% by the year 2030. Many technical solutions to replace fossil resources by biomass have already been developed and currently efforts are undertaken to scale up the production of new, more sustainable products made from biomass.



The bio-based chemical industry can contribute to achieving several of the global Sustainable Development Goals (SDGs)



Background

The bioeconomy is at the centre of sustainable development and products made from renewable biomass resources can contribute to achieving the UN Sustainable Development Goals. The production of bio-based chemical products supports in particular the achievement of the following SDGs:

SDG 8 - Decent work and economic growth: The bio-based chemical industry can provide new jobs and additional income, in particular in rural communities, and create opportunities to export value-added bio-based products.

SDG 9 - Industry, innovation and infrastructure: The bio-based chemical industry is evolving quickly. Many bio-based technologies are entirely new ideas, which require and support innovation and infrastructure development.

SDG 11 - Sustainable cities and communities: Bio-based chemistry links surrounding rural areas to urban centres, e.g. by setting up innovative processing plants ("biorefineries") that transform agricultural residues and parts of municipal solid waste into chemical building blocks.

SDG 12 - Responsible consumption and production: The bio-based chemical industry contributes to optimised use of biomass and wastes, decouples production and consumption from fossil energy sources and raises consumer awareness.

SDG 13 - Climate action: The use of renewable biomass resources in the chemical industry reduces the use of fossil-based resources and their related greenhouse gas emissions.

SDG 15 - Life on land: Through promoting sustainable management of forests and natural resources, bio-based chemistry can support the combat against desertification, halt and reverse land degradation, and limit or stop biodiversity loss.



www.roadtobio.eu

Consortium:



This project has received funding from the Bio Based Industries Joint Undertaking under the European Union's Horizon 2020 research and innovation programme under grant agreement No 745623.

