

# BioCannDo

## Key messages

For communicators and multipliers



## Seven things to know about bioeconomy

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 N° 720732.



Horizon 2020  
European Union Funding  
For Research & Innovation



## Key message #1

# Any product made from oil can theoretically be made from biomass

- Many daily life products are made from fossil resources (e.g. plastics, synthetic fibres or many washing detergents or solvents).
- **All fossil-based ingredients could theoretically be replaced by renewable resources and residues from land and sea (plants, trees or animals).**
- In the current bioeconomy, bio-based materials or chemicals fully or partly replace the fossil-based ones.



## Key message #2

# Bio-based products can help to protect our climate by reducing CO<sub>2</sub> emissions.

- The use of fossil resources is one of the major drivers of climate change.
- 70% of all coal reserves and one third of oil and gas reserves need to stay in the ground for us to stay below 2°C of warming.
- CO<sub>2</sub> from fossil based products was captured millions of years ago and is now additionally released into the atmosphere. Therefore it contributes to an increase of greenhouse gas concentration in the atmosphere.
- In comparison the CO<sub>2</sub> released by bio-based resources was recently captured and will be captured again when resources regrow and new bio-based products will be produced. The carbon is kept in a cycle (within in a reasonable time).
- Moreover bio-based feedstock stores CO<sub>2</sub>. For instance, producing 1 m<sup>3</sup> of wood stores 1 ton of CO<sub>2</sub>.



## Key message #3

# A lot of bio-based products are already available on the market.

- **Retail already offers a broad variety of bio-based products.**
- Some examples include: Apparel made from milk, wood or coffee ground, shoes from algae, disposable tableware from palm leaves, toys from bioplastic, compostable plastic bags, personal care products from plants, natural detergents, plant-based drinking bottles, planting pots for your garden or even new glasses.
- **Even though these products are made from biomass they can look, perform and feel just as conventional products or even better.**



# Key message #1 Bio-based products can provide new and better functions other than what are expected from them.

- In the building sector architects and construction companies increasingly return to **bio-based construction materials** and it is more than just wood for walls. Insulation, flooring or paints can be made from bio-based materials as well. These materials provide a comfortable room climate.
- Bio-based raw materials are also widely used in cleaning products. Biotechnology provides bio-based ingredients such as enzymes for detergents. Enzymes can help reducing the environmental impact of washing and cleaning products. Less temperature, energy and water is needed to ensure the same cleaning results.



## Key message #5 The bioeconomy contributes to a circular economy, which helps us to move away from a linear economy of “take, make and dispose”.

- Bio-based resources are renewable and part of the natural cycle. They can provide a sustainable input of new materials for a circular economy.
- Right now, **90% of the raw materials used in manufacturing become waste before the product leaves the factory** while **80% of products made get thrown away within the first six months of their life.**
- In a circular economy, ideally all materials are used repeatedly, recycled and circulated. However, some input of new raw materials remains necessary. Bio-based resources can provide a sustainable input, because they are renewable and regrow naturally. The bioeconomy can also make use of many (organic) waste streams from current production processes.



## Key message #6

# A sustainable bioeconomy can secure raw material supply at global level without threatening nature, biodiversity or food security.

- To produce bio-based products we need biomass feedstock. Various studies have shown that **there are considerable potentials for the cultivation of biomass for energy and material use on a global level** even when conditions such as the preservation of biodiversity and climate protection are taken into account.
- But the bioeconomy is not automatically more sustainable than the current fossil economy. **The cultivation and processing of biomass needs to comply with standards such as ending deforestation, protecting biodiversity, soil, water, air and accepting social and labour standards.**
- The development of a sustainable bioeconomy can be supported by certification standards for renewable raw materials and bio-based products, which are offered by a variety of organisations. With increasing consumer demand for sustainable products certification becomes more important for producers of raw materials and bio-based products.



## Key message #7

# The bioeconomy can create jobs in underdeveloped areas.

- **The bioeconomy generates approximately 2.2 trillion Euros and represents around 9% employment in the EU economy.**
- Today more than 18 million people are employed in bioeconomy related sectors.
- The bio-based industries aim at creating 700.000 jobs on all levels of which 80% would be created in rural and currently underdeveloped areas until 2030.



## For further reading:

- [JRC Science for Policy - Report Bioeconomy 2016.](#)
- [Bioeconomy Knowledge Center](#)
- [InnProBio Factsheet Bio-based Products and Services in a Circular Economy](#)
- [The BBI JU – An Institutional PPP supporting the Bioeconomy Strategy](#)
- [Nova-paper #7: Global bioeconomy in the conflict between biomass supply and demand](#)
- [Agency for Renewable Resources \(FNR\) – Facts and Figures Renewable Resources](#)

## Examples of labels certifying renewable resources

[Forest Stewardship Council \(FSC\)](#) and [Programme for the Endorsement of Forest Certification \(PEFC\)](#) certify environmentally and socially responsible managed forests.

[Roundtable on Sustainable Palm Oil \(RSPO\)](#) certifies a sustainable palm oil production. 19 percent of global palm oil production is certified by RSPO.

[International Sustainability & Carbon Certification \(ISCC\)](#) provides a standard for certification of bioenergy, food, feed and bio-based products.

[Bonsucro](#) certifies a responsible sugarcane production.

[Better Biomass](#) is an international certification system for solid, liquid and gaseous biomass.

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