

Questionnaire on forest bioeconomy for young people (age 16-30)

Aim of the questionnaire:

The aim of the questionnaire is to collect information about the attitudes of young adults towards forest bioeconomy and forest-based products. Furthermore, the aim is to find out how much young people know about bioeconomy as well as to increase their awareness of bioeconomy and future opportunities of bioeconomy.

The results of the questionnaire will benefit the BLOOM project outreach activities. BLOOM is an European project, financed by Horizon 2020, that aims to increase the bioeconomy awareness of the general public as well as raise public discussion about bioeconomy.

The geographical target area of the questionnaire is Sweden. A similar survey is carried out among young people in Finland. The questionnaire analyses are carried out as a part of a Bachelor Thesis of a Finnish student of Agriculture at JAMK, Finland.

Further information about BLOOM project:

bloom-bioeconomy.eu/ (BLOOM, European website)

www.jamk.fi/bloom (BLOOM, Finnish website, includes English site)

<https://v-a.se/paverkan-och-utvecklingsarbete/bloom/> (BLOOM, Swedish website)

<https://v-a.se/english-portal/projects/bloom/> (BLOOM, Swedish website in English)

Your relation with forests

How would you describe your experience and use of the forest or the forest environment?

You may choose several options.

- Outdoor activities, such as hiking and camping
- Hunting
- Picking berries and/or mushrooms
- Forest management (Using forest as source of income)
- I hardly ever visit a forest.
- Other way. Please describe how. _____

Is it important for you, that the forest is easily available from your home?

- Yes
- No

Why? _____

<https://link.webropolsurveys.com/Participation/Public/720c8cec-2c36-4d6b-b0f4-097894d3951e?displayId=Fin1789797>

How significant are forests to you in your daily life?

No significance
significant

Very

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>
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Why? _____

Do you or your family own a forest?

- Yes
- No
- I don't know or I don't want to answer.

Bioeconomy

Are you familiar with the expression "bioeconomy"?

- Yes
- No

In your opinion, which of the following business fields are included in the bioeconomy?

You may choose several options.

- Food production
- Dairy (industry producing milk-based products)
- Wood processing industry/ forest industries
- Mining
- Wood energy
- Solar energy
- Oil industry
- Fisheries
- Furniture industry
- Algae production
- Tourism
- Electronics industry
- Textile industry

Bioeconomy is an economy that produces food, feed, energy, products and services in a sustainable way from renewable natural resources. **JAMK comment: this shows after answering the previous question.**

Forest bioeconomy is the bioeconomy that is based on the use of forests. It covers different kinds of industries and production lines. These include processing of forest biomass in forest, energy, chemical and food industries.

What sort of products do you know, that can be produced out of forest-based raw materials?

Please mention by name at least three products or product categories.

Use of wood-based products

During the last years, there has been a lot of discussion about the sustainable use of forests. Wood can be used to replace products that are produced from fossil-based raw materials. Also, the environmental impacts of the use of wood are often smaller than those of fossil-based raw materials. Almost everything that is made from fossil-based materials today can be made from wood in the future, according to many experts working in the field. But if the use of wood will increase to make different kind of products, it may increase the logging of forests and thus decrease the biodiversity.

In your opinion, how important is the use of wood as raw material for the following products?

In this section you may evaluate the importance of wood use in scale 1 (not important) - 10 (high importance).

Biocomposites

Composite is a combination of two or more materials that aren't dissolved. In bio-composite, at least one of the materials are bio-based. Biocomposites include for example combinations of plastics and wood and they are used to replace fossil-based plastic in different kind of products such as terrace furniture, musical instruments and packaging materials. Biocomposites have usually lower carbon footprint than traditional plastics but at present, biocomposites are not recyclable.

No importance
importance

High

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>
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Traditional wood-based packaging materials

Wood has been used as raw material in packaging industry for decades. Examples include paper and cardboard. These traditional packaging materials can be recycled and used to make new packages.

No significance
significant

Very

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>
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New wood-based packaging materials

Recently, new wood-based packaging materials that have been designed to replace especially plastics, have entered the markets. They are developed in order to decrease the carbon footprint of packages and to be one solution to the plastic waste problem. However, not all of the new wood-based packaging materials are biodegradable and may not be recyclable.

No significance
significant

Very

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>
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Bio-based (not biodegradable) plastics

Bio-based plastics are produced out of renewable materials and they are used to replace fossil-based plastics for example in packages. They are developed in order to decrease the carbon footprint of packages. However, bio-based plastics are plastic-like and are not easy to recycle. Bio-based plastics aren't always biodegradable and if it's not biodegradable, it acts the same way as traditional plastic if entering the environment.

No significance

Very significant

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>
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Biodegradable plastics

Unlike bio-based plastics, biodegradable plastics always degrade naturally but they may need the special conditions of a composting facility. They are developed in order to decrease the carbon footprint of packages and to be one solution to the plastic waste problem.

No significance

Very significant

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>
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Wood based foodstuff and food additives

Wood is suitable material for foodstuff and wood can replace some artificial produced food additives. For example, forest industry by-streams can be used as a raw material of bioactive extract in functional food.

No significance
significant

Very

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>
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Next generation (wood-based) textiles

Wood has been used to make textiles for decades, but the production hasn't always been environmentally friendly. In recent years, new wood-based textiles have been developed. They are more environmentally friendly as no toxic chemicals are needed in the production. Compared to cotton production, wood fibre production consumes much less water, land area and pesticides.

No significance

Very significant

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>
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Pharmaceutical industry

Wood contains many compounds that can be used in pharmaceutical industries, food industry and cosmetics. There are a lot of products already available, such as xylitol. Sterols and stanols are also compounds derived from wood and they can be added in for example margarine to decrease blood cholesterol.

No significance

Very significant

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>
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Construction materials

In Finland, the share of wood in construction industry is 40 % and in the EU 4 %. Wood has a lower carbon footprint compared to concrete (which is often used in building) and after use, wooden construction materials can often be recycled or used as energy.

No significance
significant

Very

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>
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Furniture industry

Wood has always been used in furniture because it has good availability and it's easy to work with. Among the benefits of wood are also its durability and low weight, as well as easy recycling.

No significance

Very significant

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>
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Please choose three product groups that you think wood should be used into.

You may choose several options.

- Biocomposites
- Traditional packing materials (paper, cardboard)
- New wood-based packaging materials
- Biodegradable plastics
- Biobased (non-biodegradable) plastics
- Next generation (wood-based) textiles
- Wood-based foodstuff and food additives
- Pharmaceutical industry
- Construction
- Furniture industry
- Nothing from above.
- Something else. Please specify. _____

What product groups would you like to use yourself?

You may choose several options or decide not to answer.

- Biocomposites
- Traditional packing materials (paper, cardboard)
- New wood-based packaging materials
- Biodegradable plastics
- Biobased (non-biodegradable) plastics
- Next generation (wood-based) textiles
- Wood-based foodstuff and food additives
- Pharmaceutical industry
- Construction
- Furniture industry
- Nothing from above.
- Something else. Please specify. _____

In your opinion, is any of these product groups such that wood is not suitable material for?

You may choose several options or decide not to answer.

- Biocomposites
- Traditional packing materials (paper, cardboard)
- New wood-based packaging materials
- Biodegradable plastics
- Biobased (non-biodegradable) plastics
- Next generation (wood-based) textiles
- Wood-based foodstuff and food additives
- Pharmaceutical industry
- Construction
- Furniture industry
- Nothing from above.
- Something else. Please specify. _____

Would you be willing to pay more from a product that is environmentally friendly?

- Yes

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- No
- I'm not sure

Why?

How much more? 5 %, 10 %, 20 %, etc.?

Background questions

Age

- 16-20 years
- 21-25 years
- 26-30 years
- Other Please specify: _____

Sex

- Male
- Female
- Other

Education

- Secondary School/ Högstadiet
- High school /Upper secondary school/ Gymnasiet
- University of applied sciences/ Higher Vocational Education/Yrkeshögskola
- University/Högskola
- Other. Please specify: _____

In which country do you live?

- Sweden
- Finland
- Other. Please specify: _____

Place where you live

- Country side/ small town
- City
- Suburb
- Other. Please specify: _____