

SOCIETY BRIEF #2

How do students perceive the bioeconomy?

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University students are key for the development and implementation of bioeconomy, being at the same time the workforce and central actors for it. We conducted a survey to learn more about how forestry-students across Europe perceive bioeconomy. Around 1400 answers from nine countries were collected. Here's what we found out:

Highlights

- Around 70% of the respondents have heard about the bioeconomy, mainly through university courses.
- Less than 30% of respondents are aware of European and national bioeconomy strategies.
- About 90% of respondents would like to have more bioeconomy taught in their university programs.
- The perception of many bioeconomy dimensions, including the role of forests, varies across countries, reflecting on different potential development routes towards a bioeconomy.



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The survey

An explorative multi-language online questionnaire was developed targeted at Bachelor (BSc), Master (MSc) and Doctorate

(PhD) students currently enrolled in forestry programs across Europe. Student programs were selected to cover all distinct European regions: Northern (Finland and Sweden), Central-Western (Austria, Germany, France), Southern (Italy and Spain) and Eastern Europe (Slovakia and the Russian Federation). One or more top-ranked forestry universities from each country were selected for the survey and a total number of 1 400 questionnaires were collected, mainly (83%) from Austria, Germany, Italy, Slovakia and Sweden

Familiarity with bioeconomy

About 70% of respondents reported they have heard about bioeconomy: for all target-countries the figure is higher than 50%, ranging between 52% (Italy) to 100% (Finland). Among the main sources of information about bioeconomy respondents identified university

courses (36%), followed by scientific papers, news, social media and conferences.

Uncertainty highly dominates respondent's awareness of European and national bioeconomy strategies: the "Don't know" choice is the most common one (63% and 60%, respectively).

Bioeconomy at university

Bioeconomy is addressed at different extents and in different manners within university programs attended by respondents. In Central-North European countries it is mainly addressed via dedicated teaching (31%) and parallel activities (15%), while in South European ones dedicated parallel activities (14%) and non-dedicated teaching (36%) prevail. In about two-thirds of the cases bioeconomy is perceived as being addressed only seldom or sometimes within the courses and this reflects on the level of general satisfaction about the extent to which bioeconomy is currently addressed: overall about 40% of respondents indicated they are not/little satisfied, while 20% reported to be satisfied/very satisfied. The least satisfied respondents are those from France, Italy and Spain. As a consequence, 87% of respondents would like to have at least a little more bioeconomy taught in their university programs, with 50% asking for more or much more.

The perceived role of forest resources within bioeconomy

While forestry is perceived as the sector that is currently contributing the most to bioeconomy in Europe and within single countries, there are differences across countries. Respondents from Central-North European countries perceive the contribution and the importance of the forestry sector at the domestic level is higher than the

contribution at the European level, while in South- and East European countries the perception is the opposite one.

Central-North European respondents perceive that bioeconomy should be mainly product-oriented and technology driven, while South European ones see room for the development a bioeconomy that takes into account the whole spectrum of forest ecosystem services.

Bioeconomy and future job opportunities

Although not all respondents have a clear idea about their future professional life, about 70% of respondents perceive the development of a bioeconomy will create more job opportunities, and 48% are convinced it will help them finding the job position they would like to get.

Recommendations

- Different visions and understandings of the bioeconomy concept by forestry students across Europe reflect on different development routes towards the transition to a bioeconomy in European countries.
- Universities must have a role within the societal transformation process.
- Interdisciplinary and innovation-embracing education should be fostered, not neglecting social science approaches and combining traditional forestry subjects with other disciplines.
- This study is far from exhaustive: Studies in more countries, and different universities are needed.