

Wide analysis of the Swedish forestry sector's carbon balance to bolster Climate Roadmap 2050

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What is the role of the Swedish forestry to achieve the objectives of Sweden's Climate Roadmap towards 2050? An extensive analysis based on the actions and policies described in the roadmap will answer this. The Formas research council supports Linnaeus University's new project with SEK 3 million.

The Swedish government has set a goal of reaching zero net greenhouse gas emission in 2050, as a commitment to the EU initiative Roadmap 2050 for [climate](#), transport and energy. This will require considerable efforts – is it even possible and what do we need to do to achieve the goal?

One of the keys will be a bio-based economy, based on [renewable raw materials](#) with sustainable production and use. The Swedish forest and forestry sector will thus play a major role in the work, not only owing to the forest's ability to assimilate carbon dioxide but also with a smarter use of forest resources. New biomaterials can also be developed with new solutions and perspectives.

As a basis for the work towards Sweden's climate roadmap 2050, Linnaeus University will start a new project in January 2017 – "Total carbon balance of Swedish forestry sector: Evaluate guidelines for climate roadmap 2050". The aim is to evaluate the actions and policies described in the climate roadmap and the effect on the total carbon

balance of the Swedish forestry sector.

The assessments will include forest ecosystems, forest products' carbon stock, material and energy use of forest based [raw materials](#), waste and recycling of used forest products. Leading experts will participate in the calculations, analyzes and evaluations.

"To understand and describe the role of forests in climate benefits, it is important that the analysis includes the forestry sector as a whole. Then we can clarify not only how forestry affects the amount of carbon sequestered and stored in forests, but also how biofuels and other forest products can replace fossil fuels and energy-intensive products such as concrete and aluminum," says Bishnu Chandra Poudel, researcher at the Department of Forestry and Wood Technology at Linnaeus University and project leader.

The scientific challenge is to understand how different management systems and uses of biomass offer the greatest climate benefit. It will be interesting to identify how much biomass is actually used in power plants of various types, how many wooden buildings are in fact being built, etc. Based on the abundant supply of forests in Sweden, it is important to know how much forest products are required to meet the needs of different sectors and how these can contribute to achieving the climate roadmap 2050.

The project, which will run for three years, has received SEK 2,997,000 in a grant from Formas' fund for research and development projects to research leaders of the future in 2016. Formas is short for the Swedish Research Council for Environment, Agricultural Sciences and Spatial Planning. Besides Bishnu and Professor Johan Bergh from Linnaeus University, researchers from Chalmers and SLU will contribute. "Seeing our project in Formas' decision list was a great pleasure for me, says Bishnu. I hope that the project will become an example for other sectors

in their work on climate change – this can be done in the forest industry, what can be done in the transport sector, for instance?"

More information: Project website: lnu.se/en/research/searchresearch/2016-12-wide-analysis-swedish-forestry-sector.html

Provided by Linnéuniversitetet

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