



Forest-based Bioeconomy

- A driving force for the Finnish economy

The backbone of the green bioeconomy still lies in forestry and the forest industry. The revenues of the pulp and paper industry are rising again. Energy production and the chemical industry have already grown strongly. In the future, new growth is expected in the fields of nature tourism and recreational services.

In the Green Bioeconomy publication, the Natural Resources Institute Finland (Luke) presents statistics, research data and views on future development trends and the financial opportunities offered by the green bioeconomy.

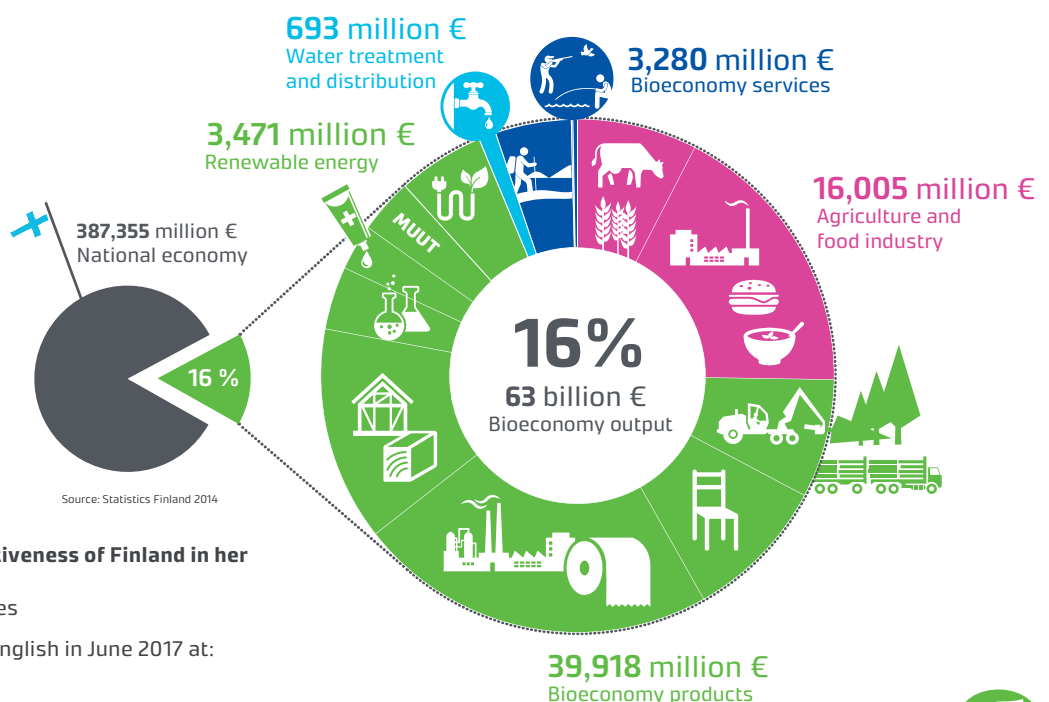
**Boreal
green bioeconomy**

” The goal of the National Bioeconomy Strategy is to raise the output of the Finnish bioeconomy to EUR 100 billion by 2015 and to create 100,000 new jobs.”

Key figures and trends of the northern green bioeconomy

- ✓ **Sustainable wood production.** The current annual growth rate of Finnish forests, 105 million m³ is around 30 million m³ larger than the amount of wood that is harvested or dies naturally each year. In the last 40 years, the volume of forest resources has risen by more than one and a half times, and growth has almost doubled.
- ✓ **Utilising side revenue streams.** Approximately 10 percent of wood volumes comprise bark. In the case of vegetables and root vegetables, the waste lost in side-streams can be up to a quarter of the original weight. Could tree bark components be used as a preservative, while the sidestreams of vegetable peeling plants are used for the production of colourants and dietary fibres?
- ✓ **Resource efficiency and climate wisdom.** The digitalisation of natural resource data helps in the sustainable planning of land use, while taking account of different needs. According to Luke's scenario calculations, forests will remain efficient at sequestering greenhouse gases. We aim to identify the productive capacity differences between fields and optimise the use of farm land.
- ✓ **Forests as a source of wellbeing.** Timber exports grew at record speed in 2016. In particular, exports to China grew markedly. The bioeconomy is also increasing the business opportunities of the wood product industry. The turnover of the natural product sector has been increasing since 2005. The Green Care sector is also growing.

- ✓ **A forthcoming digital leap?** Only a few percent of forest renewal and the tending of seedlings are performed mechanically. However, technical solutions already exist for mechanical forest management. Digitalisation also enables the integration of plant production, livestock production, biogas production and energy production.



Further information

Green bioeconomy
Foundation of the wellness and competitiveness of Finland in her centennial year
 Natural resources and bioeconomy studies

The complete publication is available in English in June 2017 at:
<http://jukuri.luke.fi/>

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