

Science contributing to combat Finland's spillovers

Production-related emissions from Finland and other developed industrialised countries have been significantly reduced but **complex material flows in consumption and the related emissions have not decreased at the same rate, but rather they continue to grow. For example, more than 90 percent of the biodiversity footprint caused by the Finnish public procurement is situated outside Finland**, demonstrates Report from 2024. The report emphasizes that we need to i) develop means to continuously monitor the footprints, ii) implement measures to mitigate as much of the footprints as we can, and iii) consider offsetting the residual footprints. Without such measures Finland's contribution to global biodiversity loss is unlikely to be lessened.

There is growing amount of information available on these complex material flows that burden the climate and the environment, but till now it has not succeeded to make a difference in the seen trend. All organizations subject to accounting obligations could be required to report on their biodiversity footprints caused by the consumption as part of their financial accounting and financial statements.

Methodological work on accounting and reporting biodiversity footprints transported across the value-chains is well advanced, and it is currently being piloted in several projects in Finland.

Effective regulation requires actors to provide sufficiently comprehensive and up-to-date information to ensure comparability. On the other hand, regulation is needed to make such data more sustainable in order to steer consumption. The climate and environmental impacts of consumption will also be indirectly steered. Individuals' consumption habits are deeply rooted, and increasing awareness of the negative impacts of consumption does not necessarily lead to changes in consumer behaviour.

Panel recommends to focus on ensuring the most essential issues and to act on important issues already now, even though the information is incomplete. Enough information is yet available on the problematic nature of

consumption and the state of the environment, and now it is essential to be able to implement it; in addition to the natural sciences viewpoint, behavioural science data is needed on how to achieve change, i.e. how to change consumer behaviour by influencing people's behaviour.

Global data on the value chains of most of the consumables is not perfect, and no biodiversity indicator can measure all facets and features of the biodiversity. **We should actively avoid falling into the pitfall of perfectionism and not let the data gaps and uncertainties prevent us from already assessing and starting to mitigate the biodiversity footprints of consumption.** Data will improve with time, and we must be careful to develop the continuous monitoring of biodiversity footprints so that they can always be retrospectively recalculated. This way the comparability of the biodiversity footprints can be maintained and trends in our performance assessed across time. **We can also argue that the problem is not a lack of information, but structures that encourage companies to optimise their production primarily on the basis of price and quality instead of responsibility.**

A non-guilty and constructive approach (but also responsible for all parties) plays a key role in influencing human activity; means include raising awareness, developing competence and developing and introducing operating models, processes and practices embedded in everyday life so that people can easily seize them (“making success easy and automatic”). This kind of change in thinking and operating methods has been carried out for decades in improving security, for example in complex, security-critical sectors; research evidence shows that by using systematic, long-term, participatory means, systemic change is possible even in complex issues, even if they also have conflicting goals.

Consumption and production based on voluntary responsibility are not enough; international regulation is needed to improve the sustainability of production chains. As the environmental change accelerated by consumption knows no sectoral or other boundaries, **it must be seen as a systemic entity in which environmental, social and economic sustainability is addressed as intertwined phenomena;** this requires structural solutions and broad, multidisciplinary and multi-stakeholder cooperation.

A seminar was organized in 2025 by the national commission for sustainable development and the national committee for development policy on Finland's impacts on global sustainability. The event's science panel discussed negative impacts from consumption in and production of Finland on sustainability in other countries. Participants of the panel: prof. Janne Kotiaho (Finnish Nature Panel), prof. Jyri Seppälä (Finnish Climate Change Panel), prof. Anna-Maria Teperi (Expert Panel for Sustainable Development), and MSc Jenni Palukka (Finnish Agenda2030 Youth Group).