



## The State of the European Environment: Challenges and opportunities for Finland

*What are the challenges of the current environmental policy in Finland, and what kind of opportunities lie ahead? Why are we facing these challenges and what do the indicators actually measure? How does Finland compare to other European countries?*

*The Forum for Environmental Information organised a seminar in June for discussion on the report "The European Environment - State and Outlook 2015" (SOER 2015) published by the European Environment Agency. The keynote was given by the lead author of the report, Jock Martin. This paper analyses the central observations the report makes about Finnish environmental policy as discussed in the seminar.*

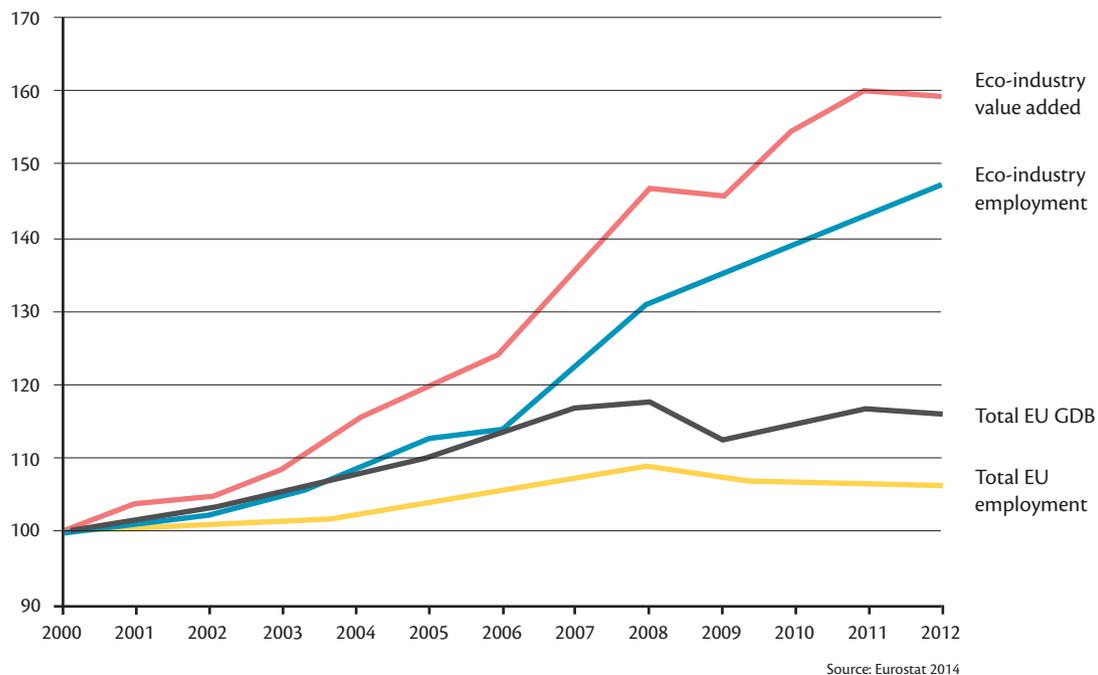
### **The European Environment – State and Outlook (SOER)**

The European Environment Agency (EEA) has developed the SOER as a tool to assess the state, trends, and prospects of the European environment and environmental policy every five years in the context of the global state of the environment. The SOER 2015, published in March, is already the fifth report.

### **Particularities of Finland and the observations of the SOER 2015**

Although the accomplishments of European environmental policy are significant, future challenges are abundant – also in Finland. By comparing the situation in different European countries, the SOER 2015 offers us an opportunity to learn something new about our own situation. In assessing the aims and the effectiveness of environmental policy, e.g. the structure of the economy, the extent of import and export activity, and the sustainability of the use of natural resources need to be taken into account.

The Finnish environment and society have their particularities which affect the way the environmental policy indicators look like for Finland. The aim of this paper is to present these particularities as well as the political measures taken to deal with the shortcomings of the Finnish environmental policy highlighted in the SOER 2015.



**Picture 1.** Eco-industries have prospered despite the recession in Europe.

### **Use of natural resources and resource efficiency**

Finland has a large surface but a sparse population. A significant proportion of the European forests are located in Finland, which means not only an important resource for the economy but also great responsibility in protecting the European natural resources. In addition to Finland's industrial structure and particularly the extractive industry, the significant use of resources in maintaining the broad road network and the economic use of forests cause the common resource efficiency indicators to appear negative for Finland. SOER 2015 uses a common resource efficiency indicator called DMC (domestic material consumption), which has received a lot of criticism as it only measures the amount of raw material used in the economy. The

indicator measures all materials in tons and, consequently, heavy natural resources also "weigh" more in the indicator. These heavy resources include e.g. soil, minerals, and wood, which all are used more than average in Finland. However, the DMC indicator does not quite reveal anything about wise and efficient use of natural resources and makes it difficult to compare countries with differing economic structures. Economies that are based on services consume much less natural resources than those with a lot of process industry, primary production, and a broad road network due to long distances.

It can be argued that successful environmental policy needs more operational resource efficiency indicators that take into account also the differences among var-

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ious natural resources, as well as the structure of the economy. Other indicators could be used to measure the state of natural resources. Finland has aimed to improve sustainable production by, for example, reducing the damage caused particularly by industries that consume a lot of natural resources, such as pulp production and mining. These industries have the opportunity to intensify their material use by, for example, utilizing more waste and side streams.

### ***Energy***

The share of renewable energy of the total energy consumption in Finland is significant, nearly 30 per

cent (in 2012). Finland ranks fourth among the EU countries in using renewable energy. What is interesting is that a significant proportion of the renewable energy used in Finland is bioenergy, and this proportion will grow in the future. However, using wood-based bioenergy is affecting negatively the current resource efficiency indicator. Therefore, according to the current indicators, the aims to improve resource efficiency and increase the proportion of renewable energy are in conflict.

SOER 2015 recognises Finland's promotion of energy efficiency in the public sector. As for energy policy in more general, Finland is commended for good prac-

tices concerning education in energy policy, capacity building, and energy audits. The challenge for Finland is to achieve the emission reduction targets in the non-emission trading sector by 2020. Finland is among those 13 EU countries which will not achieve the target if the current trend continues. The biggest emitters outside the ETS are transport, heating of buildings, and agriculture. Policy measures that are taken to achieve the target include tightening the energy efficiency regulation and agreements concerning buildings, housing, and devices. In addition, developing vehicle technology and the increased use of biofuels help achieving the targets.

### ***Ammonia (NH<sub>3</sub>) emissions***

One of the most challenging EU environmental policy targets for Finland is to meet the emission ceiling for ammonia (NH<sub>3</sub>) emissions based on the National Emission Ceilings directive. Finland has committed to reducing its air emissions in the Gothenburg Protocol (1999) and in the EU's NEC directive 2001/81/EY. Finland meets the emission ceilings in all other cases but ammonia, in which it has exceeded the ceiling every year since it was established in 2010. 90 per cent of the Finnish ammonia emissions come from agriculture, which means that also the emission reduction must take place in this field. The most important reasons for exceeding the emission ceiling have been inadequate emission reduction, structural change in animal production during last decades, and the significant improvement of observation and measurement techniques. Actions required in order to reduce emissions are already acknowledged. These include, among others, covering the manure storage



## Using statistics and science to help environmental policy-making

When comparing environmental statistics it is important to understand how the numbers are formed. Many environmental indicators are still to be improved, and the statistical methods applied in different countries are not consistent even within the EU – not to mention globally. For the environmental science to be more useful and credible, it is important that the scientific data and the indicators used in statistics are as exact and openly defined as possible. When assessing the relevance of the indicators, a clear distinction should be made between descriptive indicators and those that are connected to policy goals. This would make it possible for scientific knowledge to become as important in environmental policy-making as it already is in economic and social policy-making.

spaces, implementation of more developed manure spreading techniques, more efficient use of manure as a fertilizer, and changes in animal feeding. The emission problem is expected to ease due to animal production getting more professional with bigger farm sizes. This increases the probability of actions to reduce emissions being taken in the animal production industry.

## *Waste and recycling*

In addition to the abovementioned themes, the SOER 2015 mentions Finland in the context of municipal waste and recycling. From 2004 to 2012 the amount of municipal waste per capita in Finland increased, whereas in most of the European countries it declined during the same time period. At the same time, the amount of recycled municipal waste increased, but the proportion of recycled waste of all municipal waste remained at the same level as before in around 30 per cent. The new waste management law that entered into force in 2012 aims to increase the recycling rate of municipal waste to 50 per cent by 2016. The EU waste management directive establishes the same target for 2020. The target is challenging as the proportion of recycled waste in 2012 was only 33 per cent. However, the amount of landfill waste has decreased as Finland has built a network of incinerators. Additional measures are nonetheless needed to increase recycling.

## **Carbon neutral circular economy – necessity for the environment, opportunity for the economy**

The European environmental policy has already delivered substantial benefits not only to the environment but also for the economy and the well-being of people. Eco-industry has fared significantly better than other industries during the recession. Contrary to common beliefs, environmental regulations are good for the economy.

Although it is important to achieve the short term targets, those alone are not enough to change the

large, negative environmental trends. Instead of thinking the 2020 environmental targets, we should be thinking more about how to achieve the 2050 vision – living well within the limits of our planet – in a controlled manner. The long term targets require changes in production and consumption systems, which are only possible through more ambitious policies, information use, investments, and innovations. The required actions also offer opportunities to enhance the European economy and employment as well as promote European science and innovations.

One solution to the diminishing resources is the circular economy. In the circular economy much less

virgin natural resources are used, and existing materials are recycled several times. The circular economy demands challenging changes on the systemic level; thus, open-minded innovations and new ways of thinking are needed. New solutions could be tested in various experiments more actively, and innovative examples could be something to learn from on several levels. A Finnish example of a successful innovative action is the Towards Carbon Neutral Municipalities (HINKU) -project. The municipalities participating in the project committed to energy efficiency and started to use more renewable energy. As a result they were able to significantly reduce their greenhouse gas emissions within just a few years.



This publication is a part of the series "Speeches from the Events of the Forum for Environmental Information". The Forum for Environmental Information is a network that promotes current, scientific environmental information to be used in policy-making on all levels. The forum was established in 2010.

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This publication is based on the seminar organised on 25.6.2015 by the Ministry of the Environment, Finnish Environment Institute, Future Earth Finland, and Forum for Environmental Information. The speakers at the seminar were Jock Martin (EEA) and Per Mickwitz (SYKE) and the commentators were Satu Hassi (Environmental committee of the Parliament of Finland), Laura Höijer (Ministry of the Environment), Mikko Peltonen (Ministry of Agriculture and Forestry), Outi Ampuja (TRAFI) and Jussi Nikula (WWF). This publication is written by Johanna Kentala-Lehtonen.

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