

OCTOBER/2011

FACT

Innovation Panel

# Eco-innovations and environmental policy

## Finnish National Environmental Innovation Panel

### How to use environmental policy to promote environmental innovations? Why do we need environmental innovations?

These are some of the questions considered in Finland by the national Environmental Innovation Panel, established in 2009 by the Ministry of the Environment. The panel was tasked with finding ways in which the support that environmental policy provides for *the evolution and implementation of environmental innovations might be improved*, so that environmental protection targets are achieved as cost-effectively as possible and preconditions are created for the greening of the economy. The activities of the panel were aimed at increasing the dialogue between the environmental administration and the developers of environmental technologies. Additionally, the panel sought to provide actors in the field with better opportunities to follow developments in environmental legislation.

During its two-year term, the panel particularly evaluated the need for environmental innovations, the role of regulatory measures and other means of promoting environmental innovations, national funding for environmental innovations, and measures at the European Union level to foster environmental innovations.

In February 2011 the panel approved a number of common recommendations for future policy programmes and measures. The purpose of the recommendations is to promote a broad-based effort to make the economy more resource-efficient, greener and more competitive.

In addition to the Ministry of the Environment, the following organisations were represented on the panel: the Ministry of Employment and the Economy, the Finnish Funding Agency for Technology and Innovation (Tekes), the Finnish Environment Institute, Technical Research Centre of Finland (VTT), Helsinki School of Economics (Aalto University), Lappeenranta University of Technology, University of Oulu, the Finnish Innovation Fund (Sitra), the Federation of Finnish Technology Industries, CLEEN Ltd, the Association of Environmental Enterprises, Finnish Forest Industries Federation, Lassila & Tikanoja, Outotec, StI, Vaisala, Winwind, Lahti Science and Business Park, and Green Net Finland.

### Innovation needs identified

To improve material efficiency and prevent waste generation, specific innovation needs were identified in several sectors, such as the extractive industry, the food industry, renovation, and trade.

Furthermore, other areas were identified where improvements in material efficiency could effectively reduce climate impacts. Alongside innovations in processes and products, the panel recognised a need to foster innovations in services and solutions that support environmentally beneficial consumption habits.

### Core instruments assessed

Regulatory measures were found to have had a quite positive impact on the implementation, or diffusion, of environmental innovations. However, they have had a notably smaller impact on innovation itself, that is, the evolution of new solutions. Thus, in terms of innovation and innovators, new, more effective policy measures should be introduced. The European Union-level measures are also crucial in creating lead markets.

Foresight activities relating to environmental innovations were found to be widespread, but shortcomings were identified in making use of foresight information. The small and medium-sized enterprise (SME) sector, in particular, is in need of new tools to access and exploit foresight information. Additionally, more attention should be paid to the potential for technological development when preparing regulatory measures and policy instruments.

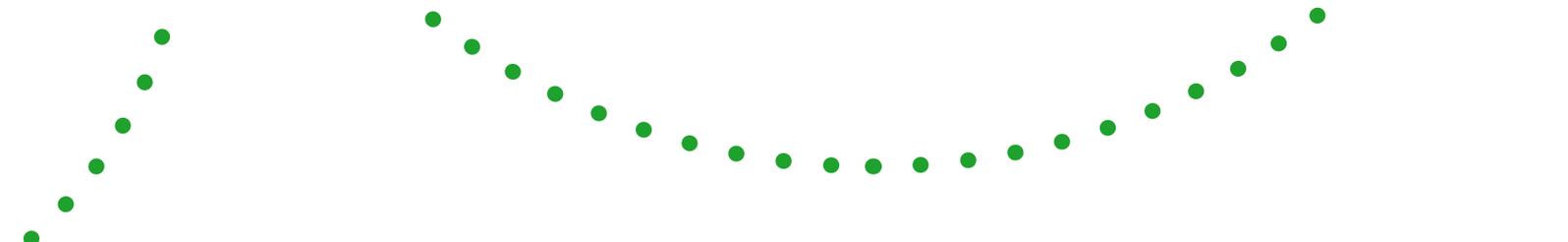
Significant national funding has also been directed at environmental innovations, particularly at energy and climate technologies. Still, the funding allocated towards enhancing material efficiency remains relatively scarce. A closer evaluation should thus be made of the allocation and effectiveness of funding for environmental innovations. The panel also saw room for improvement in the efficiency of the funding system and its relationship to funding available at the European Union level.

### Making use of EU measures & international processes

The purpose of the Europe 2020 strategy is to support sustainable growth and employment by improving the resource efficiency of the economy and mitigating its climate impact. Therefore, the national EU2020 reform programme should define concrete measures for improving resource efficiency, meeting climate targets, and promoting environmental innovations.

Environmental innovations have also become central to the OECD Green Growth Strategy and the UN's RIO+20 Process for Sustainable Development. In this context, concrete initiatives should be developed that support environmental innovations and that strengthen the synergy between environmental targets and green growth.





## Recommendations of the Environmental Innovation Panel

### Promote Environmentally Sustainable Production and Green Growth

1. Promote sustainable use of natural resources and energy, material efficiency, and waste reduction, particularly in sectors that are heavy users of natural resources and in those that would benefit most from improved resource efficiency.

### Invest in Foresight Activities

2. Develop information and calculation systems for estimating raw material and waste flows and their environmental impacts.
3. Improve national foresight activities for social and environmental innovations.

### Enhance Regulatory and Steering Measures that Support Eco-innovations

4. Promote innovations that support environmental regulatory targets by setting clear and sufficiently strict targets.
5. Explore the introduction of natural resource taxation.
6. Aim to secure the incorporation of environmental innovations into Best Available Technology (BAT) reference documents, in order to promote the implementation of innovations.

### Recognise the Special Nature of Eco-innovations and Devise a National Eco-innovation Strategy

7. Devise a national environmental innovation strategy, taking into account the demand for innovations and the needs of users, the role of regulatory and other steering means, and international developments.
8. Restructure the funding system for innovations based on the pending environmental innovation strategy.
9. Support diversified co-operation in order to promote environmental innovations.
10. Utilise international practices in promoting environmental innovations.

### Use European Union-level Measures to Promote Eco-innovations

11. Actively support the implementation of the EU eco-innovation programme by means of environmental and innovation policies and by securing the large-scale participation of interest groups.
12. Improve communications on the available funding opportunities for environmental innovations.
13. Actively inform relevant actors and interest groups about the possibilities of implementing environmental technologies at the European Union level.

### Make the Most of Global Opportunities

14. Take an active role in the processes of the OECD and UNEP Green Growth initiatives and the UN Rio+20 process, by developing initiatives to promote environmental innovations.
15. Use these processes to publicise environmental expertise and eco-innovations.

## Strategic approach needed

In view of the wide-ranging significance and special nature of environmental innovations, the panel recommends drawing up a national eco-innovation strategy. The basis for such a strategy would be projected demand and needs for environmental innovations and the outlook for the development of environmental technologies. The strategy would define targets related to eco-innovations, as well as eco-innovation policy instruments and the related development needs. It would also be used to strengthen co-operation between various actors and to create strong, novel know-how, networking and activities.

## Implications in the Government Programme

The new Government, which initiated the activities in June 2011, aims to make Finland a carbon neutral society and a one which leads the way in environmental expertise, clean technologies, sustainable natural resource policy, and sustainable production and consumption habits. Finland will take advantage of the opportunities presented by new technology and information technology to increase material and energy efficiency, and to reduce emissions.

The Government will draw up a national programme for material efficiency and the sustainable use of natural resources, and explore ways of developing processes for measuring and evaluating them.

In its industrial policy, the Government will prioritise Clean-Tech activities based on environmental and energy technologies. For this purpose, the Government will launch an environmental business policy programme at the Ministry of Employment and the Economy, in order to promote growth of the environmental sector, innovations, and internationalisation, by bringing together all measures and actors involved in developing the sector.

The Finnish website of the Environmental Innovation Panel contains project reports and a press release:

<http://www.ymparisto.fi/default.asp?contentid=371707&lan=fi&clan=fi>