

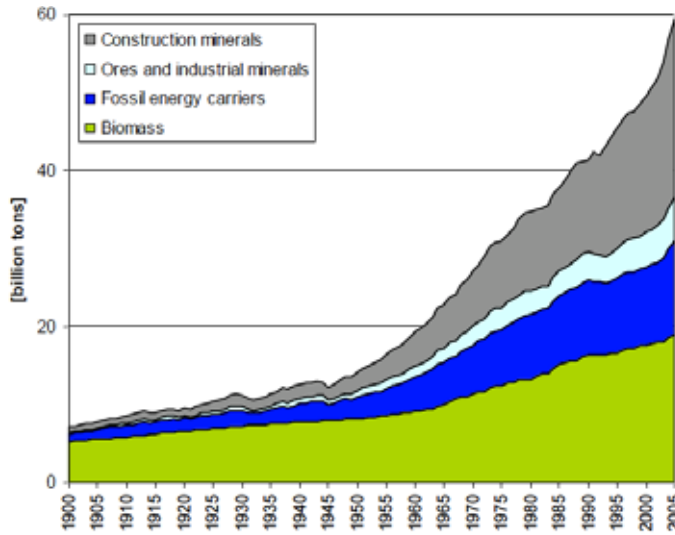
Eco-innovation challenge: turning costs into benefits for all?

Sustainable Innovation
Farnham, 24-25 October 2011

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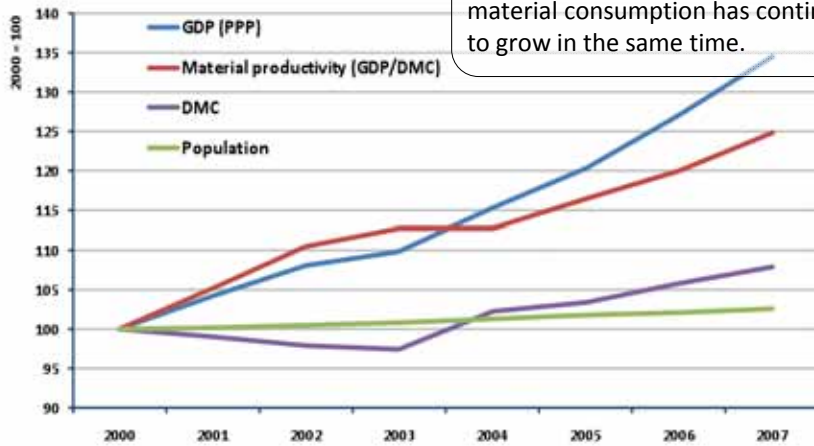


Frames: eco-innovation challenge



Global use of materials 1900-2005

The EU has achieved a relative de-coupling of GDP growth from material use. The absolute level of material consumption has continued to grow in the same time.



Source: EIO based on EUROSTAT MFA database

- 1) to further improve the resource productivity
- 2) to ensure that eco-innovations and their benefits are widely diffused in economy and society

productivity

+

- 3) to ensure that the improved productivity is not offset by the growth in the total consumption of natural resources

sufficiency



Why eco-innovation?



Eco-innovation is any innovation that reduces the use of natural resources (including materials, energy, water, biomass and land) and decreases the release of harmful substances across the whole life-cycle.



Economic dimension: innovation is a new or significantly modified solution **implemented** on the market or in the organisational practice

Eco-innovation is any **innovation** that reduces the use of natural resources and decreases the release of harmful substances across the whole life-cycle.

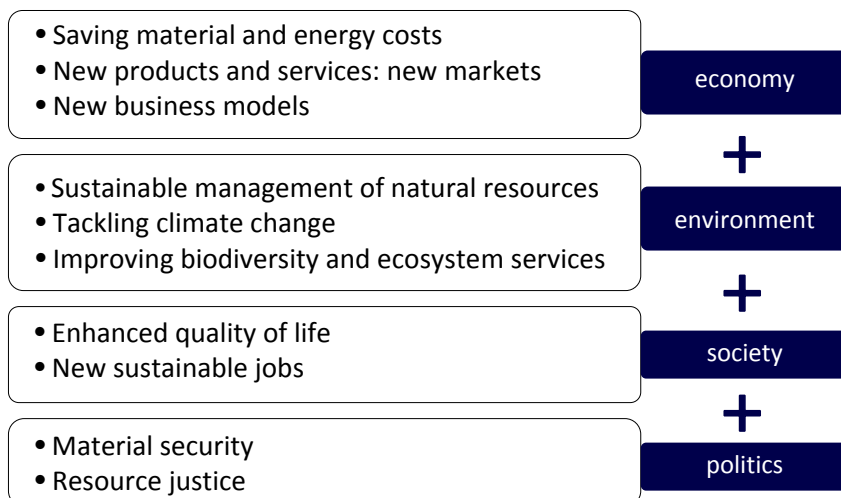
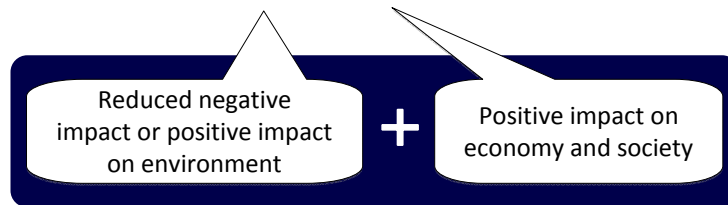


Eco-innovation is any innovation that **reduces the use of natural resources (including materials, energy, water, biomass and land) and decreases the release of harmful substances across the whole life-cycle.**

Environmental dimension:
Better (functional) use of natural resources and reduced emissions of harmful substances across the life-cycle.



Eco-innovation is any innovation that reduces the use of natural resources (including materials, energy, water, biomass and land) and decreases the release of harmful substances across the whole life-cycle.



DEFRA (UK): £23bn could be saved in 2009 in the UK by making simple changes to use resources more efficiently. Savings opportunities with a payback greater than one year estimated at £33bn. This gives a total opportunity of around £55bn (Oakdene Hollins 2011)



NISP – National Industrial Symbiosis Programme (UK): €982m saved and €1027m in additional sales created in the period April 2005-March 2011; €9 in direct receipts for every €1 invested in NISP (NISP Economic Valuation Report, Manchester Economics 2011)



DEMEA (German Material Efficiency Agency) estimated about €200,000 of potential savings per company with an investment of under €10,000 in nearly half of the companies covered by the scheme (DEMEA 2010)

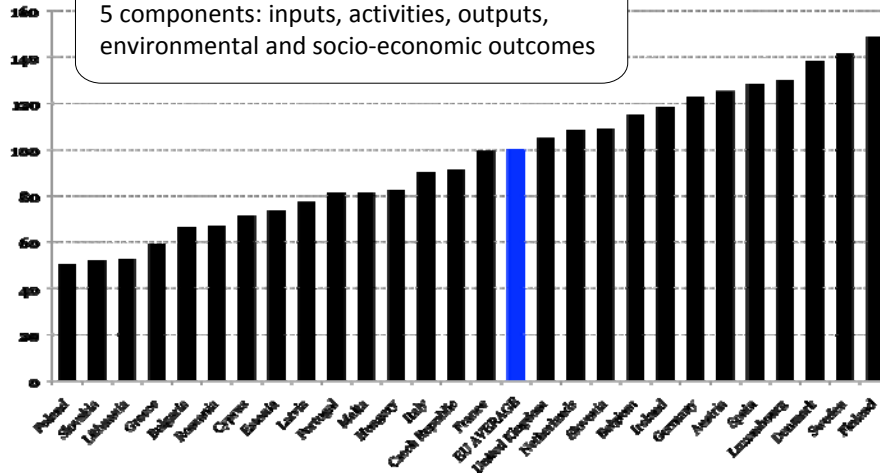


Country performance: Eco-Innovation Scoreboard 2011

Eco-innovation scoreboard 2011

16 indicators (8 data sources)

5 components: inputs, activities, outputs, environmental and socio-economic outcomes

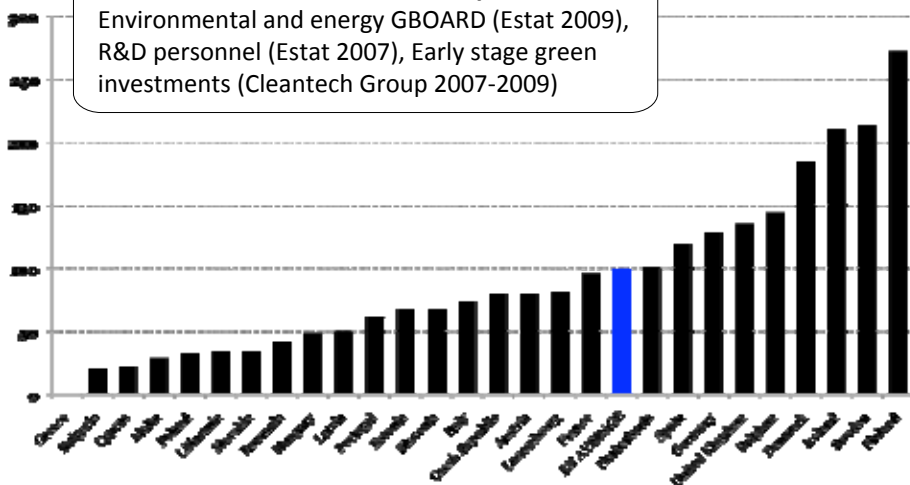


Source: EIO (2011)



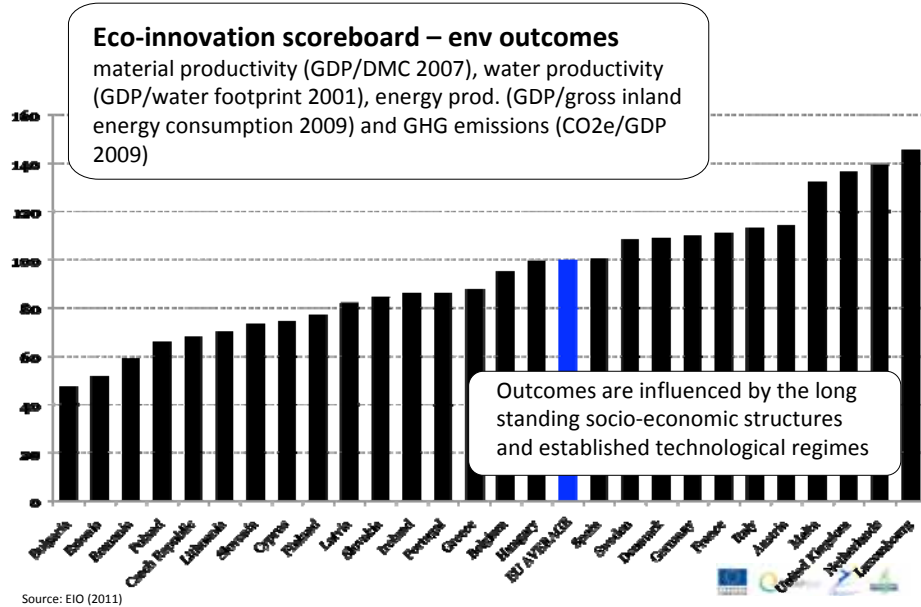
Eco-innovation scoreboard – inputs

Environmental and energy GBOARD (Estat 2009),
R&D personnel (Estat 2007), Early stage green
investments (Cleantech Group 2007-2009)

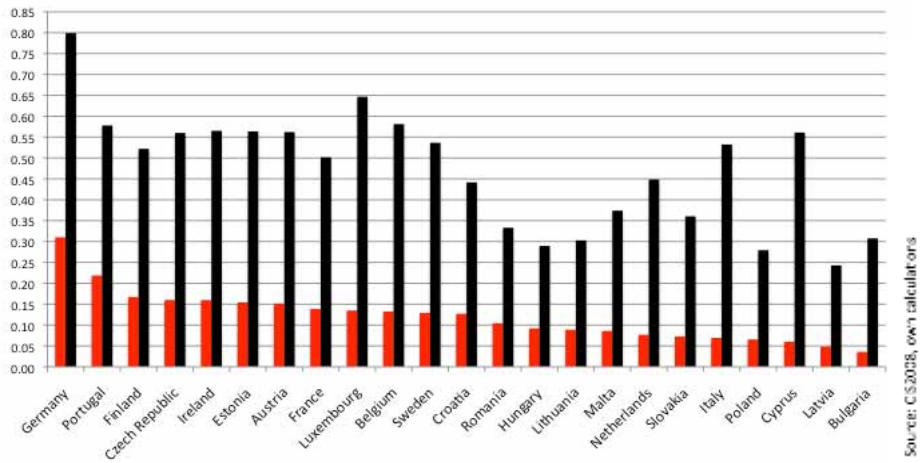


Source: EIO (2011)

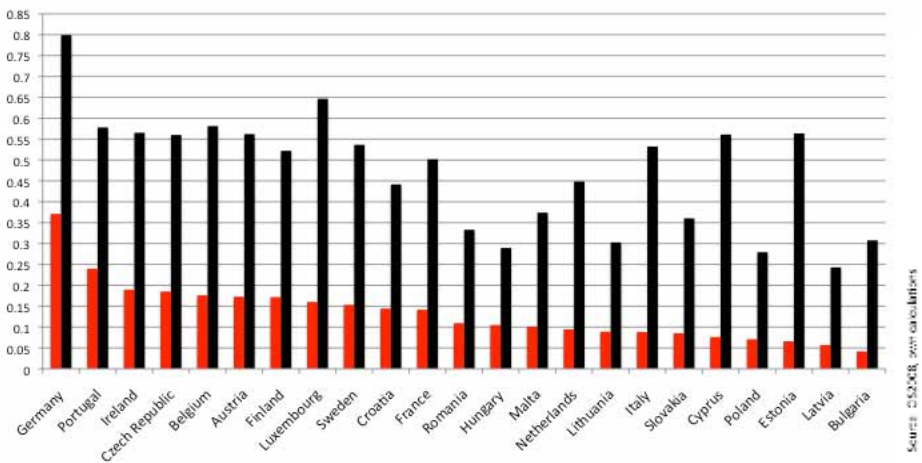




Eco-innovation in companies:
 Untapped potential and systemic lock-ins?

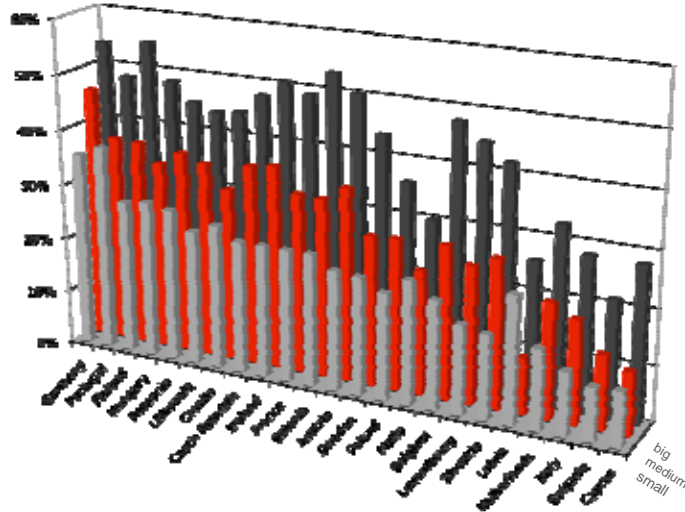


Share of firms reporting **reduced material use** per unit of output as a result of innovation (red) and firms with any innovation activity (black) (CIS 2008)



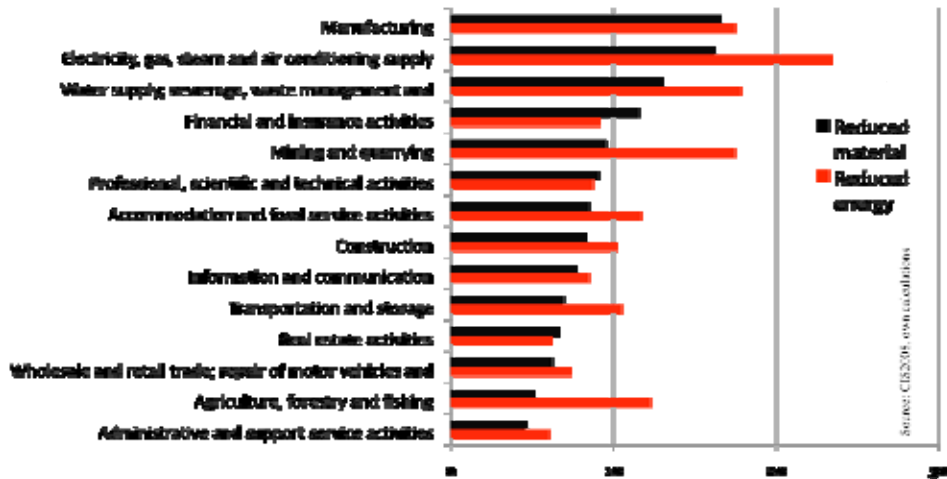
Share of firms reporting **reduced energy use** per unit of output as a result of innovation (red) and firms with innovation activity (black) (CIS 2008)





Source: CIS2008, own calculations

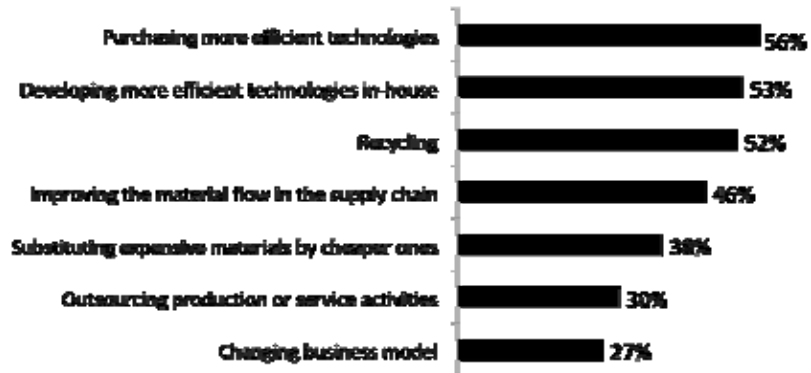
Innovating firms reporting **reduced material use** per unit of output **per company size** (CIS 2008)



Source: CIS2008, own calculations

Share of firms reporting **reduced material and energy use** per unit of output as a result of innovation in selected sectors (CIS 2008)





Changes implemented to reduce material costs by European SMEs over last five years (2006-2010) (N=5222; sectors: manufacturing, construction, water supply and waste, agriculture, and food services)

Source: EUROBAZOMETER 2011, own calculations



Transition: are we on the right track?




European Commission
Europe 2020

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Europe 2020 is the EU's growth strategy for the coming decade. In a changing world, we want the EU to become a smart, sustainable and inclusive economy. These three mutually reinforcing priorities should help the EU and the Member States deliver high levels of employment, productivity and social cohesion.

Concretely, the Union has set five ambitious objectives - on employment, innovation, education, social inclusion and climate/energy - to be reached by 2020. Each Member State will adopt its own national targets in each of these areas. Concrete actions at EU and national levels will underpin the strategy.

[Annual Growth Survey 2011](#)

Smart growth

Sustainable growth

Inclusive growth

Exiting the crisis


Targets	Tools	Who does what
<ul style="list-style-type: none"> EU-wide targets National targets 	<ul style="list-style-type: none"> Flagship initiatives Using existing tools Monitoring progress 	<ul style="list-style-type: none"> European institutions and bodies EU Member States Civil society

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Major world economies aim for "green growth" as the way out of the crisis

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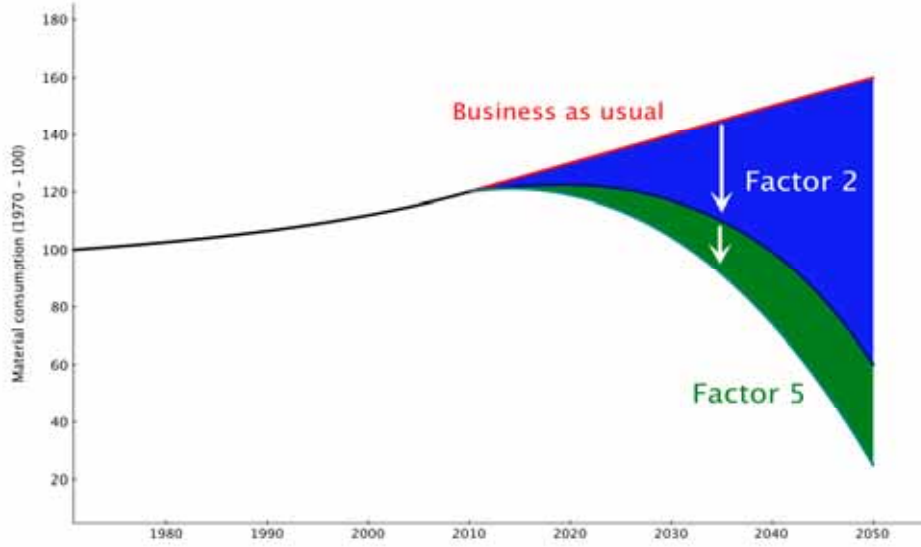
25/06/2009 - The world's main economies are looking to "green growth" as the way forward out of the current crisis, opening up new prospects for climate-change negotiations ahead of the 15th Conference of the Parties of the UN Framework Convention on Climate Change (COP15) in Copenhagen in December.

Ministers from 40 countries, representing 80% of the world economy, discussed the crisis and where next at the OECD's annual ministerial meeting in Paris. Participants included the 30 OECD member countries plus five countries that are candidates for membership, Chile, Estonia, Israel, Russia and Slovenia, and five major economies with which the OECD has a policy of 'enhanced engagement' - Brazil, China, India, Indonesia and South Africa.

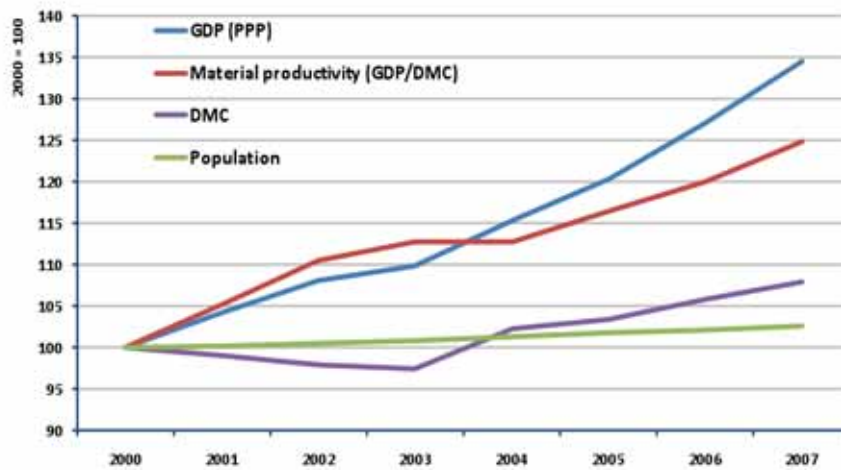
In a Declaration on Green Growth signed by all 30 OECD countries plus Chile, Estonia, Israel and Slovenia, ministers tasked the OECD with developing a Green Growth Strategy bringing together economic, environmental, technological, financial and development aspects into a comprehensive framework. A first report will be delivered to the OECD's next Ministerial Council Meeting in 2010.



- >> Watch the [press conference](#)
- >> Read the [ministerial conclusions](#) and the [declaration on green growth](#)
- >> Read also [Green Growth: Overcoming the Crisis and Beyond](#)
- >> Visit the [meeting website](#)

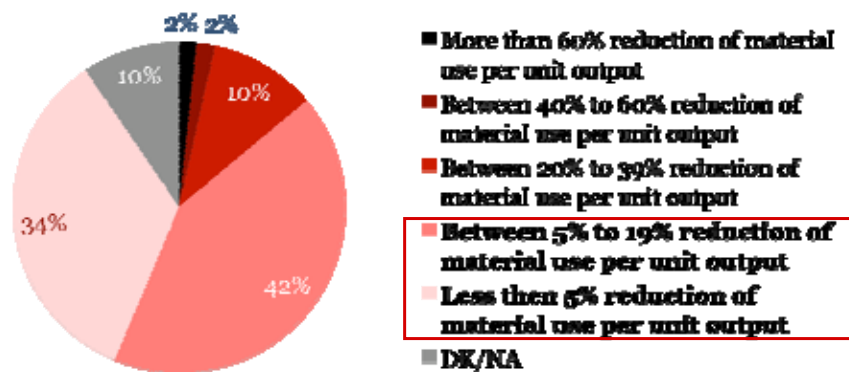


Source: EIO 2011



Source: EIO based on EUROSTAT MFA database

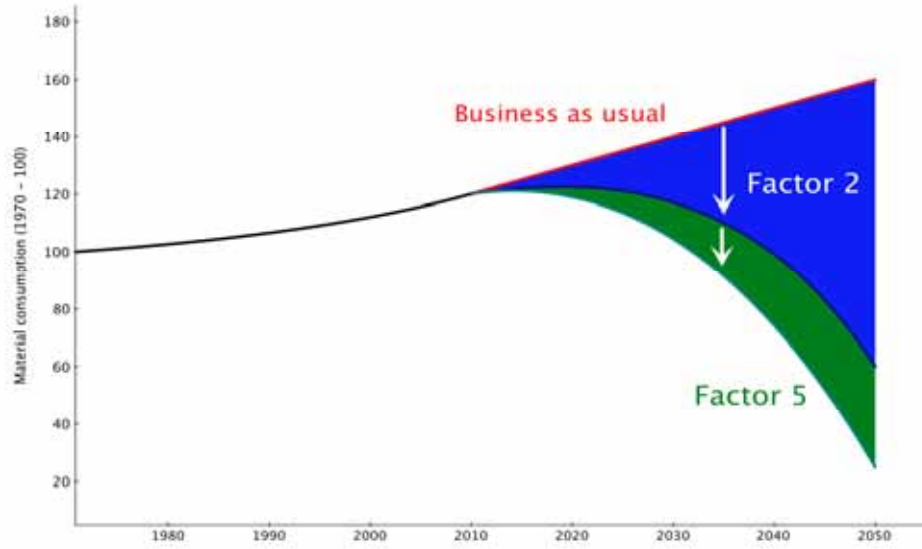
45% of companies in EU in manufacturing, construction, agriculture, water supply and food services have **introduced at least one eco-innovation in the past two years** (Eurobarometer 2011)



Source: Eurobarometer (2011)

How would you describe **the effect of innovation** you have introduced in the past 24 months in terms of **resource efficiency**?





Source: EIO 2011

Concluding remarks

- Eco-innovation activity is relatively widespread in the EU according to innovation polls
- There is growing evidence that eco-innovation can lead to the reduction of material cost of companies, including SMEs
- Eco-innovation, notably linked to resource efficiency and material security, has moved up both policy and business agendas

but...



- Majority of EU companies do not eco-innovate
- Great majority of eco-innovators declare only incremental material efficiency improvements
- Strong eco-innovation performance does not automatically result in better environmental performance on the macro scale
- There is a high diversity of eco-innovation performance in the EU, both between countries and sectors



Eco-Innovation Observatory



A Cerro Tololo Sky (Chile)
Credit: Roger Smith, AURA, NOAO, NSF

- Information platform on eco-innovation for business, policy and researchers
- Analysis of the current and future eco-innovation trends in EU and beyond
- Funded by the European Commission, DG Environment
- Duration: 3 years (2010-2012)



Our resources:

- Reports and briefs
- EU27 country profiles
- Database with on-line charts and maps
- Good practice examples
- Glossary
- Surveys

Visit our website to get access to our reports, briefs, and databases.



www.eco-innovation.eu



Thank you

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