Sustainable Products and Services

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Three main questions

1. Why is industry incited to offer sustainable products and services?
2. How is it influenced by technology development?
3. How does it impact the competitive advantage of firms?

Question 1

Through a mix of

- Regulation
- Market trends and strategies (sustainability as a means to add value to its products/services)
- Change of users' demands and expectations
- Higher degree of awareness of costs and benefits (external costs)

The EXTERNE project (1)

ExternE quantifies the social and environmental damages for the electricity and transport sectors

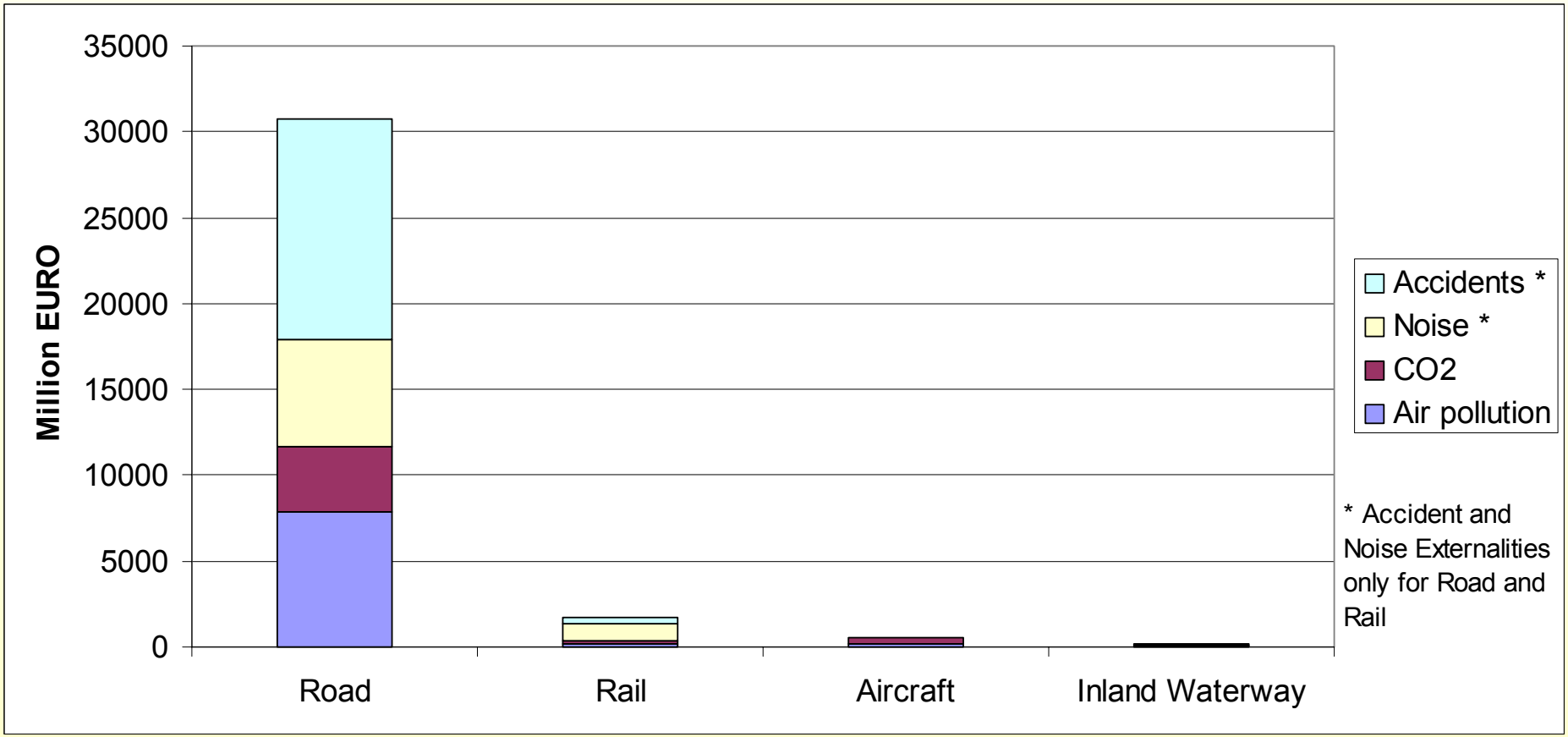
Evaluation of damages to the natural and built environment, such as *effects of air pollution* on

- ***human health***
- ***buildings***
- ***crops***
- ***forests***
- ***global warming***

The EXTERNE project (2)

- **Translation of damages in monetary terms** for the whole European Union and for different fuel cycles for power generation (fossil, nuclear and renewable) and for transport modes and technologies
- Contribution to the **cost-benefit analysis of policies options**
- Quantification of impacts through the damage function or impact pathway approach

Quantifiable externalities due to transport in Germany



Question 2

- **Technology development is a major driver of innovation, competitive and sustainable growth (cf.Lisbon and Göteborg)**
- **But important barriers to technology development and adoption exist:**
  - ➔ **Insufficient or inconsistent R&D efforts (ERA, 3%, ETAP)**
  - ➔ Economic barriers: market failure to reflect the external costs; investment size and risk (e.g. infrastructure); low return; lack of venture capital (e.g. SMEs)
  - ➔ Regulatory barriers: uncertain or unduly prescriptive or inconsistent (i.e. at EU level) regulatory environment
  - ➔ Diffusion barriers: lack of information about the potential of technologies (e.g. cost/benefit analysis); socio-economic factors (e.g. acceptance); lack of skills

Question 3: the example of wind technologies

- **EU = world leader** (90% of the market) with 25,000 employees (against 700 in 1988) and 25,000 MW installed

The key of success?

- **A substantial support to EU R&D (supply)** in the successive FPs (€230 million since 1984 – FP1), with a strong industrial participation
- **A financial support to market introduction (demand)** through the buy-back of green electricity

Can Europe do as well in other sectors (1) ?

Few examples of ongoing actions:

1. European Technology Platforms (ETPs)

- **Clarification of the ETP concept:** see orientation paper on http://www.cordis.lu/technology-platforms/
- **22 ongoing ETPs; at least 1/3 are ETAP-relevant: e.g.**
  - ➔ Hydrogen and fuel cell,
  - ➔ Sustainable chemistry,
  - ➔ Water supply and sanitation,
  - ➔ Building for a future Europe,
  - ➔ Road/Rail/Maritime,
  - ➔ Photovoltaics,
  - ➔ Renewable forestry resources,
  - ➔ Future manufacturing technologies barriers

Can Europe do as well in other sectors (2) ?

A few examples of ongoing actions:

2. Network of Verification Centres

- To validate the technical and economic performance of new technologies
- To allow their objective comparison with existing technologies
- IPTS study on the opportunity to set up a European programme of testing/verification
- Invitation to submit CAs on specific ET testing networks (e.g. TP 6.3, 3rd call)

For more information

www.europa.eu.int/comm/environment/etap