Sustainable Growth: a challenging area for ICT research

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1. Sustainable Growth

De-coupling of energy-use and GDP growth?
Not yet...

The energy intensity in the EU-25 fell at an average rate of 1.2 % per year from 1990 – 2003, but total energy consumption increased by 10.9 % over the period.

Growth Trends

<table>
<thead>
<tr>
<th>Year</th>
<th>GDP Growth</th>
<th>Energy Intensity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990</td>
<td>3.4 %</td>
<td>1.1</td>
</tr>
<tr>
<td>2003</td>
<td>2.0 %</td>
<td>0.99</td>
</tr>
<tr>
<td>2009</td>
<td>1.3 %</td>
<td>0.98</td>
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</tbody>
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In search of global green policies

Can we reconcile sustainability... ...with global economic growth?

• "We need to move away from using GDP figures as a basic indicator"
• "We should tackle the quality of growth"
• "We need to preserve the environmental underpinnings of the economy"
• "We must show that the environmentally friendly way is not only nice but [also] profitable, or everything will collapse"
• "We believe climate is one of the biggest issues we face as a company but we also see it as an opportunity"
• "The Commission’s environmental policy...is also about projecting values on where we want our economies to go"
In search of global green policies
A one-day European Policy Summit
on the occasion of Green Week (June 2008)
• http://www.friendsofeurope.org/Publications/tabid/458/Default.aspx

Conclusions
• The very concept of growth institutionalises ever-increasing emissions
• It is misleading to frame the issue in terms of “growth versus green”
  • Dealing with climate change and other sustainability issues will create growth and jobs
  • For the economy to grow in the long run, we have to take care of the environment now.
• People and organisation are confused
  • 800 different ethical and environmental labels!
• A mix of technologies and regulations would help
• Change of behaviour is primordial – still a long way to go

EU Council (June 2006):
• « The EU Sustainable Development Strategy (SDS) and the Lisbon Strategy for growth and jobs complement each other. »
• « The SDS is primarily concerned with quality of life,... The Lisbon Strategy makes an essential contribution to the overarching objective of sustainable development... increasing competitiveness and economic growth and enhancing job creation. »

Brussels European Council (8/9 March 2007)
• An integrated climate and energy policy is of vital importance
• EU leaders set combined targets:
  • Reduction of GHG emissions in the order of 20% by 2020 compared to 1990
  • 20% for renewable energy sources by 2020 compared to the present 6,5%
  • Saving 20 % of the EU’s energy consumption compared to projections for 2020

We need to fight the battle of climate change on two fronts »
(Environment Commissioner Stavros Dimas, June 2007)
• To limit climate change by reducing GHG emissions
• To adapt to current and future climate change in order to lessen the adverse impacts on people, the economy and the environment.

“Adapting to climate change in Europe Options for EU action” (COM(2007)354)
Examples of ICT contributions to the SDS challenges:

- Sustainable consumption and production
- Better monitoring and management of the environment
- Better preparedness, mitigation, adaptation to climate change, environmental threats, and disasters
- Extension of independent living, increase of active participation of elderly people
- Improved healthcare systems, continuous personalised care
- Clean mobility, virtually accident-free, efficient and adaptive
European Policy Context

ICT for Sustainable Growth

A multitude of dimensions

• Assessing ICT opportunities and risks for environmental sustainability
• Developing a comprehensive framework for the role of ICT in environmental sustainability
• Identifying areas showing major ICT prospects
• Detailed investigation of six or more application domains such as:
  - Energy consumption/efficiency
  - Climate change
  - Eco-industrial applications
  - Agriculture, Landscape and biodiversity
  - Personalized information services and quality of life
  - Sustainable urban development
  - Health and environmental risk management

ICT for Environmental Sustainability

Scope, Vision, Projects

Conclusions

ICT ENSURE

an FP7 Support Action

• European platform in the field of “ICT for Environmental Sustainability Research”
• To better network and structure the various national and international environmental research programmes and communities
  - Thematic workshops
  - Community building
  - Survey and web-based database & information system
  - Contributions towards
    - SISE (Single Information Space in Europe for the Environment)
    - ERA (a European Research Area) in the field of ICT for Environmental Sustainability

Coordination of national programmes
Overview “toolbox” FP7

ERA-NET
Like in FP6: Coordination of programmes
✓ MS agree and fund joint calls/programmes
✓ EU funding only for coordination

ERA-NET Plus
New in FP7: To up of a single joint call
✓ MS contribute to a joint trans-national call 2/3
✓ EU funding for research: 1/3 of the joint call

Art. 169
Full integration of national programmes
✓ Scientific and financial: strong EU funding
✓ Single implementing structure

II! ICT for …
ERA-NET Plus: Bridging the gap

Field and type of public funded RTD

Nat./Reg. level

ERA-NET

Plus

FP7

EU level

Further Information & Contact

- DG INFSO Unit “ICT for Sustainable Growth”
  INFSO–ICTforSG@ec.europa.eu
  http://ec.europa.eu/ictforsg
- Research on ICT for the Environment
  http://cordis.europa.eu/ist/environment/projects.htm
  Two sessions on ICT for climate change mitigation/adaptation
- ERA activities related to ICT: CISTRANA portal
  http://www.cistrana.org

Thank you for your attention!

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ICT for Sustainable Growth Unit