

## Session 2 Green growth and LCS

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The focus of session 2 on Green growth and LCS drives our attention to issues that may well help us address consistency between economic growth and stabilization of GHG concentrations with respect to policy implementation.

The papers presented provide us with much evidence on particular approaches and experiences. Yet they commonly raise important questions to address when considering *feasibility* of the “green growth” goal, with major relevance of technological innovation for sustainable development.

Calling for a profound involvement of the socio-economic system as a whole, technological innovation is meant to shape not only the business space, but also the institutional context and the culture with important feedback effects upon ongoing technologies. In accordance with this view, green growth comes out as the result of a coordinated policy driven process in which different kinds and degrees of criticalities and opportunities have to be taken into account, bearing uncertainty over various time spans while adopting a multilevel strategic view along different “regional” and sectoral dimensions.

Major criticalities can be first of all identified on the supply side. As Heller pointed out, it is important to devise country specific cost-efficient abatement scenarios over different time spans in order to assess major implications for financial (private and public) needs as related to broad quality targets (including requirements of research activities and costs due to social transformation). But once abatement scenarios are assessed, further insights need to be gained on the characteristics of the *national system of innovation* in order for policies to be effective. This is the very lesson that can be learnt from La Rovere presentation, addressing the experience of wind technology in Brazil with major problems related to technological diffusion and development of an autonomous technology supply, given the existent structure of energy supply and production distribution across industry sectors. The presentation by Skea further considers the role played by a well equipped national system of innovation, including R&D and the “educational” (skill) side, the technology transfer issue which needs to be enlarged to encompass social acceptance and consensus, and financing mechanisms. If this is the case, and provided that “environmental” policy measures are credible enough, major opportunities for growth may arise from high investment profitability and competitiveness in leading markets. The presentation by Lechtenböhmer puts forward the relevance of a multilevel strategic view by focusing on the role and criticalities of the urban systems for low-carbon policy implementations. Important specificities have been addressed by Cervigni who has put to the fore the need of considering specific strategies for developing countries as related to poverty, access to technologies and special focus on adaptation issues.

### Major Findings

- Assessment of cost-efficient abatement scenarios is fundamental, but there must be awareness of the specific country level factors on which they are based, thereby leading to different feasibility conditions in terms of goals, including financial and quality targets at both the private and public level.
- National systems of innovation are the relevant dimension to consider for effective implementation of “environmental” policies. They broadly encompass the role of research activities and educational systems, technology transfer issues (including social acceptance and consensus), financing mechanisms and institutional setting.
- Important market opportunities can arise from investing in leading markets for low-carbon breakthrough technologies.
- Multilevel strategic view is essential for policy implementation (at the industry and regional level, including the local dimension).

## Main Issues Discussed

- Technological innovation is at the very base of a new low-carbon model of economic growth with profound involvement of the socio-economic system.
- LCS goes well beyond low-carbon objectives and can be seen as a coordinated and credible policy driven process which has to take account of different kinds and degrees of criticalities and opportunities.
- Coordination is needed between innovation policies and environmental goals. Policy instruments (pricing and regulations) need to be devised in a flexible manner, considering the interaction between different policy instruments and measures for any given framework and level of intervention.
- There is a need for specific support to developing countries aiming at both reducing poverty and improving financing and funding mechanisms. Particular attention has to be devoted to social capital and institutional setting. Special focus has to be placed on adaptation strategies with major implications for allocation of financial resources.

## Further activities to be undertaken by LCS-RNet

- There is a need for better understanding and integrating of the existing theoretical and empirical approaches as regard to the relationship between green growth and technological change and innovation.
- Major implications for policy implementation need to be considered and evaluated once the framework for analysis is defined.
- There is a strong need to set up a comprehensive approach to the transition to LCS in which specificities of developing countries relative to developed and newly-industrialized ones are explicitly taken into account.