

Session 1

Sustainability and Innovation with particular reference to Japanese Experience

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Many sustainability benefits may be obtained immediately through the use of currently available technologies. In the long run, however, sustainability requires transitions involving system innovation. Sustainability is not just the maintaining of steady state of capital assets but also equally about continued advancement or creation. Both the maintaining of steady state of capital assets and creation of new and better services for more people require innovation in technology and socio-economic system. There might be trade-off between sustainability-based technology and current socio-economic system. Japanese experience suggests that innovation can help to ease the adverse effects of some trade-offs posed by existing technology. Current development pattern are not sustainable from both ecological and ultimately economic viewpoint. While modern economic advances have brought important environmental quality gains, Japanese experiences also suggests few of the gains have been automatic and the overall results still include persistent development failures and deepening ecological decline including climate change. Innovation is not without problems. It also brings risks, which should be anticipated and dealt with. Since technological innovations promise only some of the needed improvements, governance initiatives must ensure that they are accompanied by co-evolving societal processes characterized by continuous changes in formal and informal institutions. Governance for sustainability has to be more anticipatory, oriented towards the long-term, using visions of sustainability, and concerned with learning, innovation and adaptation. Many sustainability benefits may be obtained immediately through the use of currently available technologies. In the long run, however, sustainability requires transitions involving system innovation.

A foundation for sustainability-based decision making is insufficient. Governance for sustainability needs means of spurring and guiding appropriate action. Policy instruments of many kinds are available including market-based instruments. Direction towards system innovation which is linked with institutional change is also discussed.