

# **The Japan-UK Joint Research Project on Achieving Sustainable Low-Carbon Societies**

## **Third Workshop – Roadmap to a Low-Carbon World**

### **Executive Summary**

#### **Introduction**

In 2006, the Governments of Japan and the UK established an innovative joint research project with participation from a diverse group of some 20 countries. The project created visions of low-carbon societies and identified the concrete steps required to achieve the necessary transitions. The project took as its starting point the need to stabilise greenhouse gas concentrations at a level that would avoid dangerous climate change.

The features of this project were:

- consensus on a definition of a low-carbon society that embraced the circumstances of both developing and developed countries;
- a long-term perspective focusing on the need for urgent action to at least halve global greenhouse gas emissions through to 2050;
- a broad approach addressing human behaviour, social change and links to sustainable development as well as the specific roles of the private sector and public policy;
- an evidence-based approach that established the feasibility of the low-carbon society through scenarios, modelling and case studies at the country, sectoral and city level; and
- the engagement of experts and stakeholders from government, business and civil society who provided insights into the practical steps that could make the low-carbon society a reality.

The project consisted of a series of three workshops and symposia that progressively addressed: the need for, and feasibility of, low-carbon societies; the concrete steps needed to enable the transition; and key findings and policy recommendations. Each workshop disseminated findings and tested conclusions with a wider group of stakeholders. In a parallel process, leading energy modellers from a range of countries elaborated a set of consistent scenarios exploring pathways to a low-carbon society.

#### **Key findings of the third workshop**

The third and final workshop and symposium took place in Tokyo on 13-15 February 2008. Participants identified several themes and key findings including:

- that there is a pressing need to establish a global long-term goal in greenhouse gas emissions reductions;
- that it is important to build trust between countries and between stakeholders through enhancement of communications and through mutually supportive action programmes based on partnership delivery;

- that developing countries need a sustainable development model focusing equally on poverty eradication and climate change co-benefits – and further that technology transfer, funding, investment switching and capacity building will enable developing countries to reach for low-carbon and low-poverty society; and
- that the delivery of low-carbon societies will require significant changes in lifestyles and practices in both developed and developing countries. To encourage these changes, raising awareness of the impact of our actions on all aspects of the global environment in governments, business, individuals and organisations is vital.

The key findings from the four parallel breakout groups were:

## **1. Behaviour change and its impact on delivering low-carbon societies**

- Consumers have the power to drive significant emissions reductions through the goods and services they purchase, but need information and expert advice and audit programmes to inform their choices.
- The potential impact of informed consumer choice can only be enabled through strong government leadership and a supportive policy framework. This should:
  - ensure that low-carbon options are widely available in all economic sectors, and that these are competitively attractive through pricing signals or other side-benefits;
  - promote education and the raising of awareness in individuals, business and organisations to inform and support the rapid and widespread adoption of good practice low-carbon living and working;
  - stimulate low-carbon markets for exemplar technologies, buildings, products and services through private and public sector procurement and consumer purchasing; and
  - deliver low-carbon enabling policy frameworks, based on long-term targets, regulation and fiscal incentives;

## **2. Delivering low-carbon societies through sustainable development**

- Making the link between sustainable development and the transition to low-carbon societies is vital, and must be done in a mutually supportive manner. Low-carbon society pathways should not hamper economic growth and should ensure that poverty eradication occurs whilst delivering significant climate change co-benefits, including increased adaptation capacity.
- Low-carbon society and sustainable development actions are required in both developed and developing countries.
- Strategies for promoting a low-carbon society should:
  - be clear on societal and environmental benefits;
  - take into account immediate development needs;
  - offer a suite of options of individual policies, tools, and means (including international actions), phased approaches and steps;
  - address the challenge of policy implementation;
  - take into account the interplay with other policies notably in the fiscal domain;
  - be supported by the necessary scale of investment, technologies and capacity building; and

- recognise that there may be ways of developing in a more sustainable manner using best available and near commercialised technologies which avoid lock-in to high carbon-intensive infrastructure.
- Sharing expertise and good practice, alongside enhanced international collaboration, will be needed to ensure the timely delivery of low-carbon societies through sustainable development.

### **3. Enabling low-carbon societies through investment**

- Achieving low-carbon societies is fundamentally a question of re-directing investment to increase energy efficiency and encourage a shift towards low-carbon technologies, techniques and infrastructure. Missed investment opportunities will lock-in high carbon intensity for decades.
- There is a need to act with urgency, because delaying the implementation of actions on a domestic and global perspective will have serious cost and social implications in terms of climate change impacts, the disruption to human societies the world over and the efficacy of subsequent mitigation and adaptation measures.
- Investment pathways must increase overall investment in the research, development, demonstration and deployment (RDD&D) of new low-carbon technologies and techniques. We must recognise the urgency and the scale of change required, and move beyond inadequate incremental improvements.
- Long-term and robust carbon pricing can deliver certainty to business and raise awareness of the environmental costs of production. New policies and measures are also required to enable the necessary scale of investment to facilitate the transition to low-carbon societies.
- Emission reduction opportunities are frequently less expensive in the developing world. Financial frameworks to finance low-carbon investments, both at International Financial Institutions (IFI's) and at private banks, and enhanced international cooperation to extract these, can significantly increase global benefits.

### **4. Barriers and Opportunities: approaches to sensitive low-carbon sectors**

- Moving to a low-carbon society has implications for carbon intensive industries such as iron and steel that are exposed to significant international competition. Sectoral approaches at the international level can start to address competitiveness issues.
- Sectoral approaches can also facilitate investment and technology transfer to firms within these industries in developing countries.
- Such sectoral approaches must be transparent, to the general public as well as to industry. The establishment of clear and internationally agreed methods for measuring carbon emissions is necessary, and would aid the process of levelling the international playing field.
- Disclosure of carbon emissions per sector or product across all countries is necessary in order for a sectoral approach to be feasible;
- Low-carbon society pathways provide opportunities for a new type of development for sensitive sectors, through recycling and the production of environment friendly technologies which could underpin future economic development. By using these opportunities, countries could increase their national competitiveness.

- Some carbon-intensive sectors may require radical technologies to be developed if they are to form part of a low-carbon society. Governments must support early stage R&D within these sectors, and aid promising technologies with further demonstration and deployment funding.

### **Essential actions from the third workshop**

The third low-carbon society workshop identified the following actions which governments are urged to consider:

- The establishment of a long-term goal for global greenhouse gas emissions reductions of at least 50% of 2000 levels by 2050;
- A rapid enhancement of cooperation and sharing of expertise and best practise on achieving low-carbon societies at city-, national- and regional-levels;
- The creation of appropriate incentives for business using long-term policy signals to strengthen carbon pricing e.g. through taxation and enhanced international emissions trading;
- The need to shift the focus of development investment in developing countries towards lower-carbon approaches, and towards a significant expansion in the deployment of existing low-carbon technologies in both developed and developing countries;
- A significant increase in funding for research and development for advanced technologies, and greater investment in the demonstration and deployment of near-market technologies and, in particular, the rapid deployment of carbon capture and storage technology at scale; and
- The implementation of policies and frameworks which enable and promote a change in human behaviour and lifestyle, through providing consumers with necessary information and the opportunity to benefit from low-carbon approaches and in the removal of high carbon-intensive choices.

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