

# The Japan-UK Joint Research Project on a Sustainable Low-Carbon Society

Call for Action  
&  
Executive Summary of the Third Workshop



February 13th to 15th, 2008  
Tokyo, Japan

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This workshop summary and all presentation materials are also available on the Japan LCS website.

Japan-UK

Dear Colleagues,

The Governments of Japan and the UK are pleased to announce the results of the third workshop in the Japan-UK joint research project on a *Sustainable Low-Carbon Society*. The workshop, held in Tokyo 13-15 February 2008, focused on the synergies in developing low-carbon societies and sustainable development.

Consumers have the power to drive the transition to a low-carbon society through the choices in the goods, products and services they use. However strong Government leadership is required through the delivery of policies and legislation that will enable to removal of high-carbon intensive choices for consumers whilst creating positive benefits for consumers in making low-carbon choices.

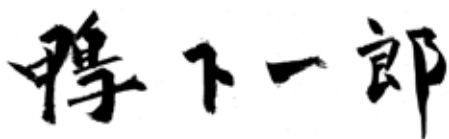
Discussion occurred on the synergies that exist in the transition to a low-carbon society and sustainable development in both developed and developing countries. Significant co-benefits in climate change mitigation and adaptation and in development were identified.

The workshop saw that a shift in investment towards low-carbon technologies in both developed and developing countries is required. Investment in low-carbon technologies should be supported by frameworks set in place by Governments to create the enabling conditions under which the necessary scale of financing in making the transition to low-carbon societies can be achieved.

It was also recognised that making the transition to a low-carbon society will have implications for export-oriented industries. Internationally coordinated sectoral approaches can address the issue of competitiveness, whilst facilitating the acceleration of technology transfer. However, any sectoral approach must be transparent, to the general public as well as to industry.

The Executive Summary from the third in the series of workshops is attached for information. A full report together with the presentations from the workshop will shortly be available. A "Call for Action" to G20 ministers that the international steering committee for this project voluntarily developed is also included as information.

We hope you find the results of the third workshop useful in your consideration of future activities under the Gleneagles Dialogue.



Ichiro Kamoshita  
Minister for the Environment,  
Japan



Hilary Benn  
Secretary of State for Environment,  
Food & Rural Affairs,  
UK



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# **The Japan-UK joint research project on Achieving a Sustainable Low-Carbon Society**

## **Call for Action**

### **Introduction**

During the past two years, Japan and the UK have jointly hosted a series of expert workshops to explore both visions of low-carbon societies and practical steps to achieve them. Through the workshop series we have studied the necessity, urgency and feasibility of local, national and international action on reducing global greenhouse gas emissions through sustainable development, and have developed a shared understanding of low-carbon societies and their impacts on future development pathways and economic growth.

### **Key Findings**

A set of key areas have been identified as being critical to put us on global low-carbon pathways which are consistent with achieving climate change and development goals:

- The development of low-carbon societies is essential and plays an integral part in addressing climate change mitigation and adaptation;
- It is less costly to move towards low-carbon societies than to delay climate change mitigation and pay the resulting increased adaptation costs;
- A suite of policy options is required to facilitate the transition to low-carbon societies. Government leadership is crucial to set the enabling conditions under which individuals, business and organisations can benefit from the opportunities in new low-carbon markets, technologies, products and services;
- Substantial changes will be required in the built environment, transport, utilities, industrial and service sectors. These will need to be implemented in harmony with development goals. A portfolio of sustainable emission reduction measures is required, which take into account regional and national circumstances;
- Synergies between sustainable development approaches and the transition to low-carbon societies can deliver significant economic, social and environmental co-benefits;
- A shift to investment in low-carbon technology research, development, demonstration and deployment (RDD&D), emerging markets, products and services is required to deliver the long-term certainty needed to create incentives to invest in low-carbon choices; and
- The creation of low-carbon consumption options, coupled with enhanced consumer awareness, can help to enable the level of behaviour change required to make the transition to low-carbon societies

### **Key recommendations**

Based on our findings from the workshop series, we the International Steering Committee for the Japan-UK collaboration on achieving low-carbon societies call

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upon the Heads of State for the G8 and emerging economies to place a priority in delivering necessary measures in the following areas, in order to enable the transition to a low-carbon world. The series of workshops have identified essential actions to be:

- 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 international cooperation and sharing of expertise and best practise on achieving low-carbon societies between nations and in national, regional and international stakeholders;
- 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;
- Acceleration in energy efficiency improvement using incentives to encourage institutional and behavioural change;
- The expansion of current financial flows, international cooperation in low-carbon approaches and the development of new financing mechanism;
- A significant increase in funding for research and development for advanced technologies;
- 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
- Adjusting trade regimes to encourage rapid deployment of technologies and products that enhance sustainable development while lowering carbon emissions;
- 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;
- A Shift, in a revenue neutral manner, taxation structures from income-based to environmental-based to encourage behaviour from business and individuals which internalises the cost of choices on global emissions;
- the development of new indicators that measure quality of life in a more meaningful way than GDP which effectively measures quantity of consumption;
- The building of trust within and between nations is essential to reinforce the credibility of long term goals and policies. Trust can only be built by continuing and enhancing dialogue between stakeholder groups within countries and between countries with diverse national circumstances.

International Steering Committee  
Tokyo, Japan  
February, 2008

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**The third workshop of the Japan-UK Joint Research Project  
on Achieving a Sustainable Low-Carbon Society**

**“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.

International Steering Committee  
Tokyo, Japan  
February, 2008

## International Steering Committee

Co-chairs:	Shuzo Nishioka (NIES, Japan) Jim Skea (UKERC, UK)
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Group 4	Jim Watson (SPRU and Tyndall Centre, UK) Naoya Tsukamoto (MoEJ, Japan)

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Group 3	Andrew Bolitho (Defra, UK)
Group 4	Kejun Jiang (Energy Research Institute, China) Toshi Arimura (Sophia University, Japan)

## About the Hosts

This symposium and workshop - sponsored by the Ministry of the **Environment Japan (MoEJ)** - is hosted by the MoEJ and the Department for **Environment, Food and Rural Affairs in the UK (Defra)**, in collaboration with partners; National Institute for Environmental Studies (NIES), UK Energy Research Centre (UKERC), the Tyndall Centre for Climate Change Research and the British Embassy to Tokyo, under the direction of the international steering committee.

## About the Partners

Established in 1974, the **National Institute for Environmental Studies (NIES)** is a research organisation for environmental issues. The NIES provides a scientific and technological infrastructure for environmental administration with integrated and interdisciplinary research on a wide range of issues. The NIES has supported the MoEJ in the arrangement of the workshop contents and logistics.

The **UK Energy Research Centre (UKERC)** was set up in 2004 to provide a focus for energy research in the UK while galvanising collaborative international energy research. A key supporting function of UKERC is the UKERC Meeting Place, based in Oxford, which aims to bring together members of the UK energy community and overseas experts from different disciplines, to learn, identify problems, develop solutions and further the energy debate.

The **Tyndall Centre for Climate Change Research** brings together scientists, economists, engineers and social scientists, who together are working to develop sustainable responses to climate change through trans-disciplinary research and dialogue on both a national and international level - not just within the research community, but also with business leaders, policy advisors, the media and the public in general.

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### “Japan Low-Carbon Society Scenarios toward 2050”

This research project, initiated in 2004, is sponsored by Global Environment Research Fund (S-3) of MoEJ. The objective of the project is to propose concrete countermeasures to achieve LCSs in Japan by 2050, including institutional change, technology development and lifestyle change. More than 50 research experts have studied together to develop visions and roadmaps. This project supports the “Japan-UK joint Research Project.”

<http://2050.nies.go.jp/>

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