

SCIENCE AND TECHNOLOGY FOR SUSTAINABLE DEVELOPMENT

A G8 ACTION PLAN

We recognise the need, as acknowledged in the World Summit on Sustainable Development (WSSD) Plan of Implementation, to support the development of cleaner, sustainable and more efficient technologies. Co-operative scientific research on transformational technologies offers potential to improve public health by cutting pollution and reduce greenhouse emissions to address the challenge of global climate change. Our countries must optimise the use of natural resources including through recycling.

We will focus our efforts on three areas that present great opportunities for progress: co-ordination of global observation strategies; cleaner, sustainable and more efficient energy use; agricultural sustainability, productivity and biodiversity conservation.

In undertaking these activities, we are committed to working co-operatively with other developed countries. We are conscious that, to meet the objectives of the WSSD, developing countries and countries with economies in transition need to build and strengthen their capacity to assimilate and generate knowledge for sustainable development. We reaffirm our commitment made at the WSSD to assist them through international co-operation in enhancing their research capacities.

1. Strengthen international co-operation on global observation

We will:

1.1 Develop close co-ordination of our respective global observation strategies for the next ten years; identify new observations to minimise data gaps;

1.2 Build on existing work to produce reliable data products on atmosphere, land, fresh water, oceans and ecosystems;

1.3 Improve the world-wide reporting and archiving of these data and fill observational gaps of coverage in existing systems;

1.4 Favour interoperability with reciprocal data-sharing;

1.5 Develop an implementation plan to achieve these objectives by next spring's Tokyo ministerial conference.

2. Accelerate the research, development and diffusion of energy technologies

We will:

2.1 Promote energy efficiency of all sources and encourage the diffusion and uptake of advanced energy efficient technologies, taking pollution reduction into account. Possible measures include standards, public procurement, economic incentives and instruments, information and labelling;

2.2 Promote rapid innovation and market introduction of clean technologies, in both developed and developing countries, including at the Milan Conference of the Parties of the United Nations Framework Convention on Climate Change and beyond, at the International Energy Agency (IEA) and other

international fora such as the UN Economic Commission for Europe, the Expert Group on Technology Transfer, etc, finding appropriate methodologies to involve the private sector;

2.3 Support efforts aimed at substantially increasing the share of renewable energy sources in global energy use:

- " stimulate fundamental research in renewable energies, such as solar photovoltaics, off-shore wind energy, next generation wind turbines, wave/tidal and geothermal, biomass;

- " collaborate on sharing research results, development and deployment of emerging technologies in this area;

- " work towards making renewable energy technologies more price competitive;

- " participate in the International Conference on Renewable Energies, spring 2004 in Bonn;

2.4 Accelerate the development of fuel cell and hydrogen technologies (power generation, transportation, hydrogen production, storage, distribution, end-use and safety):

- " increase international co-operation and exchange of information in pre-competitive research based on the principle of full reciprocity through the IEA and other existing organisations;

- " work with industry to remove obstacles to making fuel cell vehicles price competitive, striving to achieve this goal within two decades;

- " accelerate developing internationally agreed codes and standards in appropriate existing organisations;

- " work together to facilitate the use of hydrogen technologies in our and other markets, including through development of infrastructures;

2.5 Expand significantly the availability of and access to cleaner, more efficient fossil fuel technologies and carbon sequestration systems and pursue joint research and development and expanded international co-operation, including demonstration projects;

2.6 Encourage the Global Environment Fund to include energy efficiency, renewables, cleaner fossil fuel technologies, and sustainable use of energy when setting up its programme;

2.7 Develop codes and standards for next generation vehicles, cleaner diesel and biodiesel, recognising that social needs for fuel quality are diverse among G8 countries;

2.8 In accordance with our national procedures, promote clean and efficient motor vehicles including next generation vehicles;

2.9 Work in consultation with industry to raise energy efficiency of electrical and electronic equipment;

2.10 We take note of the efforts of those G8 members who will continue to use nuclear energy, to develop more advanced technologies that would be safer, more reliable, and more resistant to diversion and proliferation.

3. Agriculture and biodiversity

We will:

3.1 Promote the conservation and sustainable use of genetic resources for food and agriculture:

- " support the International Treaty of Plant Genetic Resources for Food and Agriculture by concluding

negotiations over a standard material transfer agreement that facilitates access to plant genetic resources for agricultural research and development and equitable sharing of benefits arising from their use;

" support efforts to ensure funding for genetic resources conservation in the framework of the priorities set up by the Food and Agriculture Organisation Commission on Genetic Resources;

3.2 Help developing countries improve their agricultural productivity in a sustainable manner:

" support the Consultative Group for International Agricultural Research's vital role in disseminating agricultural research, as well as the Global Forum for Agricultural Research and other regional and national agronomic research organisations and North-South and South-South research partnerships;

" support actions to provide technology suited to local economic social and environmental conditions to the rural poor in developing countries particularly in Africa, including public-private partnerships;

3.3 Promote sustainable agricultural technologies and practices, including the safe use of biotechnologies among interested countries, that contribute to preventing famine, enhancing nutrition, improving productivity, conserving water and other natural resources, reducing the application of chemicals, improving human health and preserving biodiversity;

" participate in the 22-25 June 2003 Agricultural Science and Technology ministerial conference in Sacramento, to implement the commitment from the Rome World Food Summit;

3.4 Use modern technologies such as satellite imaging technologies to help us:

" combat illegal logging;

" promote sustainable forest management;

" promote agricultural biodiversity and conservation.

We will enhance our understanding of resource material flows and continue work on resources productivity indices, notably in the Organisation for Economic Co-operation and Development.

We will discuss various aspects of the global climate change problem at the World Conference on Climate Change (Moscow, September 2003).

We will work in partnership with developing countries and relevant multilateral organisations to facilitate utilisation in developing countries of the results of relevant research and development in these technologies, and so contribute to sustainable development. Trade liberalisation of environmentally friendly products will contribute to this as well.

We will convene senior G8 policy and research officials and their research institutions to compare and to link programmes and priorities, to involve and assist in more effective planning and potential linkage of future programmes addressing research on global observation, cleaner energy, agriculture and biodiversity. This group should also consider ways to assist developing countries that have their own research programmes in these three areas, inter alia by examining the possibility of opening our research programmes to third countries.