

## PARTNERSHIP INITIATIVES INFORMATION SHEET

### Name of the Partnership/Initiative:

#### *Indicators for Sustainable Energy Development (ISED)*

**Expected date of initiation:** *May 2002*

**Expected date of completion:** *June 2005*

*Note: The ISED partnership may be expanded to increase the number of participating countries and to extend the implementation period 3 more years up to 2008.*

### Partners Involved:

#### **Governments:**

Brazil  
Cuba  
Lithuania  
Mexico  
Russian Federation  
Slovak Republic

#### **Intergovernmental organizations:**

International Atomic Energy Agency (IAEA) is the leading agency in cooperation with the International Energy Agency (IEA), UNDESA - Division for Sustainable Development and Statistics Division, Eurostat and the Economic Commission for Europe (ECE).

**Other supporting groups include:** the International Center for Theoretical Physics (Italy), the Center for Energy Policy (Russian Federation) and the Center for Energy-Environment Research & Development (Thailand).

**Leading Partner:** International Atomic Energy Agency (IAEA)

**Name of the contact person/focal point:** Mr. Holger Rogner

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**Main objectives of the Partnership/Initiative**  
**Please provide a brief description:**

The project on Indicators for Sustainable Energy Development (**ISED**) has three major objectives: (1) to fill the need for a comprehensive and consistent set of energy indicators that can be used in an effective manner to assess progress towards a sustainable energy future, (2) to assist countries in energy and statistical capacity building necessary to induce energy sustainability and (3) to supplement the general indicators effort being undertaken by the United Nations Commission on Sustainable Development.

The project consists of two phases. The major objective of the **First Phase** is to define a conceptual framework that incorporates and identifies specific indicators for sustainable **energy** development. Issues and parameters relevant to energy sustainability have been identified. A preliminary set of major energy indicators has been derived for assessing these issues. The conceptual framework model considers the main dimensions of sustainable development. Systematic cross linkages among indicators have been identified. Driving Force and State characters have been assigned to these indicators and a set of desirable Response Actions have been identified for improving the sustainability of the energy sector. The **Second Phase** of the project aims to demonstrate the practical applicability and utility of the ISED system as a policy tool in a variety of analytical cases. The objectives of this phase include: (1) To make the necessary improvements and continue developing the overall conceptual framework; (2) To incorporate the ISED into the relevant databases and analytical tools so that energy indicators can be used in on-going statistical analyses (capacity building); (3) and to provide assistance to countries in the use of the ISED system for the formulation of their energy strategies in conformity with the objectives of sustainable development.

**Please also provide a brief description of the relationship of the Partnership/Initiative with the objectives of Agenda 21 as well as relevant goals and objectives of the United Nation Millennium Declaration:**

Agenda 21 was adopted by the United Nations Conference on Environment and Development (UNCED) in Rio de Janeiro, Brazil in 1992. Because the objectives of sustainable development are very broad, governments and policy makers need a set of quantifiable parameters (indicators) to measure and monitor important changes and significant progress towards the achievement of these objectives. This was recognised by Agenda 21, which specifically (Chapter 40) asks countries and international governmental and non-governmental organisations to develop the concept of Indicators of Sustainable Development (ISD).

Agenda 21 covers all issues that have significant bearing on one or more of the three key dimensions of sustainability, namely social, economic and environmental. One of these significant issues is energy. The provision of adequate and affordable energy services, in a secure and environmentally benign manner, and in conformity with social and economic developmental needs, is an essential element of sustainable development. This was recognised by Agenda 21. In this connection, Chapter 9 of the Agenda clearly states:

*“Energy is essential to economic and social development and improved quality of life.*

*Much of the world's energy, however, is currently produced and consumed in ways that could not be sustained if technology were to remain constant and if overall quantities were to increase substantially. The need to control atmospheric emissions of greenhouse and other gases and substances will increasingly need to be based on efficiency in energy production, transmission, distribution and consumption, and on growing reliance on environmentally sound energy systems, particularly new and renewable sources of energy. All energy sources will need to be used in ways that respect the atmosphere, human health, and the environment as a whole."*

The importance of energy for sustainable development and the need for a set of indicators specifically relating to this has been a concern since the publication of the *Brundtland Report*, "Our Common Future" in 1987 (WCED 1987). The need was re-emphasised in 1992 with the publication of Agenda 21, and most recently underscored at the 9th session of the UN Commission on Sustainable Development (CSD) in April 2001. To date, however, none of the efforts to develop indicators under the aegis of Agenda 21 specifically incorporates Indicators for Sustainable Energy Development (ISED). A comprehensive treatment of the energy sector encompassing all four dimensions of sustainability (i.e., social, economic, environmental and institutional) is still needed. This partnership/initiative is designed to fill this need.

With respect to the goals and objectives of the United Nations Millennium Declaration, this project is particularly relevant to the objectives III and IV that correspond to the goals of "Development and Poverty Eradication" and "Protecting Our Common Environment".

Energy is an essential input for social development and economic growth. It provides basic needs and services such as heating, cooling, cooking, lighting, and transportation and is a critical production factor in virtually all sectors of industry. At the same time, the production and use of energy cause environmental degradation at all levels - local, regional and global. For example, combustion of fossil fuels and fuelwood leads to indoor and outdoor air pollution by particulates and oxides of sulphur and nitrogen; hydropower often causes environmental damage due to the submergence of large areas of land; and global climate change associated with the increasing concentration of greenhouse gases in the atmosphere has become a world-wide concern today. Natural resource depletion, accumulation of wastes, deforestation, water pollution and land disturbance are further examples of energy-related environmental concerns.

There are large disparities in the level of energy consumption, not only among different countries, but also among the rich and poor in the same country. Nearly 1.6 billion people still have no access to electricity or other forms of commercial energy and that the richest 20% of the world's population use 55% of primary energy, while the poorest 20% use only 5%. Globally, the demand for energy is increasing in consonance with socio-economic development. While the sustainability of the supply capacity of the earth's fossil fuel resources is not an issue for the foreseeable future, the security of supply and continued uninterrupted availability of imported energy is an immediate concern for countries short of indigenous energy sources, particularly those that are heavily dependent on oil and gas imports.

Progress towards a sustainability energy future requires the assessment of a broad range of relevant and interrelated issues that need to be analysed with quantifiable energy parameters or energy *indicators*. The proposed partnership on ISED focuses on the comprehensive treatment of the energy sector encompassing the social, economic, environmental and institutional dimensions of sustainability; therefore, the project will help in fulfilling the Millennium Declaration goals of "Development and Poverty Eradication" and "Protecting Our Common environment".

**Expected results:**

Please provide a brief description:

The partnership will result in enhanced decision making capabilities in participating countries, and in the collection, reporting and use of better and more detailed statistical data needed to build energy indicators for sustainable development.

The systematic use of the ISED system will allow participating countries to improve their ability to assess the status of energy priority issues, to evaluate the impact from energy policies in place, to formulate prospective energy policies and to measure progress towards a sustainable energy future.

**Specific targets of the Partnership/Initiative and timeframe for their achievement:**

Inclusion of the ISED system in national databases and in on-going energy analysis.

Effective use of the ISED system in the assessment of energy priority issues and in the evaluation of current policies and programs.

Effective use of the ISED system in the formulation of energy policies designed to ensure progress towards sustainable energy development.

Participating countries will perform these activities during a 3-year program started in May 2002. The project may be extended for three more years to continue monitoring progress and to include additional countries that have expressed willingness to participate in this initiative.

**Coordination and Implementation mechanism**

Please provide a brief description of expected coordination/implementation mechanism of the Partnership/Initiative.

In order to implement this partnership on Indicators for Sustainable Energy Development (ISED) the IAEA is initiating in 2002 a Co-ordinated Research Project (CRP) entitled "Historical Evolution of Indicators of Sustainable Energy Development (ISED) and the Use of this Information for Designing Guidelines for Future Energy Strategies in Conformity with the Objectives of Sustainable Development." The total duration of this CRP is three years starting in May 2002 and with a mid term review at the end of 2003. The CRP will be conducted as a joint project in cooperation with the International Energy Agency (IEA), the UN Economic Commission for Europe (ECE), Eurostat, and the UNDESA.

The first Training Workshop/Research Coordination Meeting already took place in May 2002 that included participants from statistical offices and from institutions within each country that are the most relevant users of the ISED and associated data. Three additional workshops will be conducted in the next three years that will include countries already in the partnership and a number of additional countries.

The IAEA and other supporting organizations will work together with experts from participating countries to compile historical data on ISED, to further refine the ISED as the indicators are subjected to a systematic data compilation process and to highlight the utility of the ISED as policy tools. The effort will conclude with a review of the past performance of national energy programs in relation to the sustainability objectives and with the formulation of potential remedial

measurements in the form of policies.

**Arrangements for funding**

Please describe available and/or expected sources of funding for the implementation of the Partnership/Initiative (e.g. donor government(s); international organization(s)/financial institution(s); foundation(s); private sector; other major groups, etc.)

The IAEA is providing small research grants to developing countries under this Coordinated Research Project. National institutions are bearing a substantial part of the local costs to implement this initiative. Other international organizations are providing technical, analytical and financial support for activities plan under this project.

**Arrangements for capacity building and technology transfer**

Please include information if the Partnership/Initiative provides for training, informational support, institutional strengthening and/or other capacity building measures:

The training activities will focus on methodological issues and collection procedures relevant for the data required to establish ISED, while ensuring compliance with international standards for energy related statistics, and the use of indicators as policy tools. The training should result in enhanced decision-making capability in participating countries, and in the reporting of better and more detailed data.

Please also provide here a brief description of expected arrangements for technology transfer (if applicable).

**Links of Partnership/Initiative with on-going sustainable development activities at the international and/or regional level (if any)**

Please provide a brief description:

This initiative is directly linked to the activities of the UN Commission on Sustainable Development and in particular to the work on Indicators of Sustainable Development. The initiative is also linked to the sustainable development activities of the OECD, the IEA, Eurostat and the ECE.

**Monitoring Arrangements**

Please describe expected arrangements for monitoring of progress in the implementation of Partnerships/Initiative after it will be launched at the WSSD:  
(e.g. frequency/modalities of preparation of progress reports; electronic updates, news-letters, etc)

Progress on the implementation of this initiative will be monitored by the IAEA throughout the 3-year period by the submission of two country progress reports per annum, participation in annual workshops and performance evaluations.

The annual data submissions to international databases will provide a useful check of progress made by the countries engaged in the training programmes.

Country teams are expected to complete their research, databases and analysis by June 2005. The work will be documented in a final report and countries will present their findings and results at the final meeting. The final report will be widely distributed to Member States and international organizations participating in this initiative and engaged in sustainable development activities.

**Other relevant information:**

An Internet based Information Exchange Forum will be established in the near future.

Web-site (if available):

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