

DRAFT #3

OPENING STATEMENT AT CSD-15

SCIENTIFIC & TECHNOLOGICAL (S&T) COMMUNITY

Meeting the world's growing energy demands is such a massive challenge that essentially all energy sources must be on the table for consideration. This not only includes technologies for energy efficiency and conservation, and advanced renewables, but also for cleaner, less carbon-intensive fossil fuel energy techniques, as well as safe and secure nuclear energy systems. Decisions regarding the use of a given technology require a thorough analysis of its technological, economical, and environmental feasibility. This is the role that the S&T Community is committed to play both nationally and internationally, with all relevant stakeholders, towards implementing scientifically sound and thoroughly engineered solutions.

There is no simple or uniform solution to this challenge. The optimal energy mix for any particular country will depend upon the available natural resources base, population distribution, growth in energy demand, and the status of its technical and economic capacity. Specifically tailored, economically feasible solutions are required for instance, in widely dispersed rural and island populations, or in countries with a large annual growth rate of energy demand. Failure to appreciate such differences has resulted in inadequate or limited outcomes, when implementing sustainable energy solutions in developing countries based on the experience of developed ones.

In the transportation sector, actions for promoting cleaner fuels and vehicles must be complemented by policies to reduce the overall demand for personal vehicle use, by promoting a public transport that meets people's everyday needs. In some countries, modifying unsustainable transportation energy consumption patterns will certainly require difficult cultural adjustments.

There is a need for strong support for research and development, in many areas, for instance in lowering the costs of solar photo-voltaic devices, in producing bio-fuels from cellulose materials, in achieving efficient carbon sequestration schemes for fossil-fuel based generation, and in finding feasible mechanisms for hydrogen

production, storage and distribution. To help guide effective and coherent R&D investment strategies, the scientific and technological community has set up in 2006 an International Science Panel on Renewable Energies and is organizing an International Conference on Engineering for Sustainable Energy in Developing Countries, to take place next August in Rio de Janeiro, Brazil.

Industrial development is an important means of creating wealth and improving quality of life. However, industrial production is often a major source of air and water pollution, greenhouse gas emissions, and other environmental problems. Consequently, a technological transformation towards more sustainable industrial production systems is essential. Ensuring industrial competitiveness requires building the required infrastructure in terms of energy supply, transport availability, trained manpower and environmental regulatory systems. But the costs for complying with sustainable restrictions are, in some cases, prohibitively high for developing countries. Thus, industrial development in developing countries must be assisted through strong affordable programs of capacity building and transfer of the cleanest available technologies.

Climate change is a fact, as confirmed by the latest reports from the IPCC. The S&T Community considers that strong measures need to be taken on two fronts. Firstly, in order to mitigate the impacts of global warming, massive reduction of greenhouse gas emissions must be urgently implemented. Secondly, strategies to adapt to the consequences of climate change need to be designed and implemented, both in relation to environmental impacts and socio-economic consequences. Climate change is exposing the world's infrastructure to conditions it was not designed to withstand. Designing, building and maintaining resilient infrastructure that can adapt to the impacts of a changing climate becomes therefore an urgent undertaking. In addition, more research on understanding regional impacts of climate change, as well as strengthening global observation systems, are of prime importance. Science, engineering, and technology will be essential to act on such fronts, and there will be a need for a significant strengthening of relevant S&T worldwide.

Air pollutants and greenhouse gases have many common sources. It thus makes sense for all nations to explore strategies to simultaneously meet air quality control and climate change mitigation targets. There must be proactive efforts to disseminate

advanced integrated atmospheric modeling tools, technologies for air quality monitoring and pollution prevention, and knowledge of best practices in air quality management.

The Scientific and Technological Community considers this CSD cycle to provide a unique opportunity to establish a global frame for addressing these extremely pressing interrelated sustainable development challenges. We are committed to work with all other stakeholders in this endeavor.