**Statement by the Scientific and Technological Community**

# CSD-14
# Statement by the Scientific and Technological Community Major Group
# 3 May 2006

Mr. Chairman,

Quality of life is strongly related to available energy services. Meeting the world's rapidly growing energy demands will require utilizing a diverse mix of all available and feasible energy sources and technologies. This includes fossil fuels, nuclear energy, renewables as well as the need for energy conservation and efficiency. In fact it will require drastically increasing the efficiency with which energy is converted, delivered and used.

Although energy technologies are rapidly developing, it is widely acknowledged that existing solutions are not yet sufficient for meeting the world's growing energy needs in a sustainable manner. Much more work will be needed for a new generation of clean technologies for heat, fuels, and electricity to reach the mainstream market. These advancements must be supported with great urgency.

Some examples of important energy R&D topics are: In the field of photovoltaics, achieving cost reductions for highly efficient silicon and thin film solar cells. As regards biomass, increasing the efficiency and versatility of combustion and gasification systems. For countries which want to include nuclear energy among the energy sources, a new generation of nuclear power plants is being developed that address the issues of waste disposal, safety and non-proliferation of nuclear materials. However, priority must be placed on increasing the share of modern renewable technologies in the world's energy mix.

Air pollution results primarily from the combustion of fossil fuels, from various industrial emissions, and large-scale biomass burning in some parts of the world. In addition to the urgent need to develop clean technologies for reducing greenhouse gas emissions, it is also critical to develop technologies that reduce as much as possible air pollution. Current scientific understanding on the impacts of air pollution on human and ecosystem health provides ample evidence to warrant urgent action.

Mr. Chairman,
the scientific and technological community would like to emphasize that there is scientific consensus, documented in the reports of IPCC, that the increase in greenhouse gases in the atmosphere due to human activities is altering the Earth's climate, bringing about a general global warming.

Even if greenhouse gas emissions were stabilized at present levels, the global warming trend and sea level rise would continue for hundreds of years, due to the atmospheric lifetime of some greenhouse gases and the long timescales on which the deep oceans adjusts to climate change.

Consequently, action is needed now in order to reduce greenhouse gas emissions. Urgent action is needed also to design and start implementing strategies to mitigate and adapt to the consequences of climate change, both in relation to environmental impacts and socio-economic consequences.

The scientific and technological community has identified in its discussion paper presented to this CSD session a list of obstacles to accelerate progress in the areas of energy, air pollution, climate change, also in the context of industrial development. We would like to highlight here only three of these obstacles:

- The need for major capacity building efforts in science, engineering and technology: the vast majority of R&D work is carried out by a small number of industrialized nations.
- The need for enhanced R&D funding. For instance, government investments in renewable energy resources have been declining since the mid-1980s, and the share of public R&D support directed towards renewables needs to be increased
- The need for enhanced support to climate related observational networks and international scientific cooperation programmes. It is deplorable that in its 3rd assessment report in 2001, IPCC reported that observational networks were declining in many parts of the world.

Thank you.