Meeting environmental challenges - a way forward through partnership

IAEA's Special Feature Event on
Nuclear Technologies for the Environment: Protecting Air, Earth and Oceans

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To be delivered by Malcolm Crick, Secretary of UNSCEAR,
on 19 September 2006 in Vienna, Austria during the IAEA's 50th General Conference

Your Excellencies, distinguished guests, ladies and gentlemen

I regret that because of other commitments today, I am unable to attend this milestone session of the IAEA's General Conference. However as I took up the position of Executive Director of the United Nations Environment Programme only recently, I would like to send my own personal congratulations to Dr. ElBaradei and to the Agency on their receipt of the 2005 Nobel Peace Prize, and my best wishes for your fiftieth anniversary celebrations. I do hope to come to Vienna in the coming months for discussions on issues of mutual concern.

I would like to thank the Agency for inviting me to raise some of the critical environmental challenges facing the world today and I take note of the keen interest expressed by Prince Albert in these matters. I would also like to reflect on how the respective functions of UNEP and the IAEA can best be brought to bear in order to help our Member States tackle these serious issues.

I will briefly cover four main points: I will highlight some key environmental challenges; identify what is needed conceptually to address them; discuss the respective roles of UNEP and the IAEA in this regard; and reflect on how best we can take action. This should flag a way forward as to how we can best deploy resources to address the critical issues that are facing us.

Firstly, what are the challenges? Not a day seems to pass without some reference in the media to a serious environmental issue. Human-induced changes to the climate, to water resources, to the marine and terrestrial environment, and to species' habitats have accelerated in the last three decades, and environmental issues have moved steadily up the global political agenda.

No-one can be unaware of the profound changes in climate sweeping our planet, from the melting of ice in the Arctic to the growing frequency and intensity of extreme weather events. According to Munich Re, one of the world's largest re-insurers, weather-related natural disasters cost more than 200 billion US$ in 2005. Impacts of climate change may include a significant rise in the level of the world's oceans. This will cause extensive low-lying coastal areas to become completely submerged, and increase human vulnerability in other areas.

It is estimated that, by the year 2025, two out of every three people will live in water-stressed areas, and in Africa alone, some 25 countries will be experiencing water stress. Today 20 per cent of the global population lack access to safe drinking water. Water-borne diseases from faecal pollution of surface waters continue to be a major cause of illness in developing countries. Polluted water is estimated to affect the health of 1.2 billion people, and contributes to the death of 15 million children annually.

There are a rising number of severe deoxygenated coastal dead zones in several seas, linked to excessive use of fertilizers as well as the deposition of air-borne nitrogen compounds from fossil-fuel burning. In marine fisheries, most areas are producing significantly lower yields than in the past - more than 70 per cent are fished up to or beyond their sustainable limit. Spawning grounds, nurseries and feeding grounds of marine species crucially important to world food security are being destroyed. This is an increasing threat to the food security of coastal populations, in particular in developing countries.

These are just some of the many examples of serious threats to the continuing delivery of critical environmental goods and services upon which we all depend - and therefore to our long-term future.

So secondly, what do we need to address these challenges? We need to be able to maintain ongoing surveillance of the environment, taking accurate measurements and collecting pertinent data; we need to assess the data scientifically, make honest projections, and - with a cool head - consider options and develop realistic strategies; we need to implement those strategies efficiently in the field; and we need to check that we are really having the desired impact with minimal side effects. Sound science needs to underpin all of this.

Thirdly, let us be clear about our roles. It is apparent that UNEP as the voice of expertise on the environment in the United Nations system has a leading role. However this is not to underestimate the contribution that can be made by other United Nations agencies, including the IAEA. At the basic level, the use of a single nuclear weapon would be an obvious human and environmental disaster. Moreover many countries are reviewing the nuclear option as part of their energy mix as a way to reduce greenhouse gas emissions and improve energy security. The IAEA has a duty to promote safety standards that protect the environment by minimizing discharges, managing waste safely, and preventing accidents such as the tragic accident at Chernobyl, whose twentieth anniversary passed in April this year. In these matters, I believe it important that the Agency continues to cooperate with the United Nations Scientific Committee on the Effects of Atomic Radiation - UNSCEAR, whose secretariat, although based here in Vienna, is associated with UNEP. On the one hand, the provision of relevant data by the Agency is essential for UNSCEAR's authoritative global reviews of the levels and effects of radiation. On the other hand, the strong scientific foundation provided by UNSCEAR helps to ensure that the Agency's safety standards are founded on rigorous science. In parallel, with increased political interest in the environment, UNEP - through the UNSCEAR secretariat - is participating in the review of the Agency's Basic Safety Standards for Protection against Ionizing Radiation.

Aside from these responsibilities, the IAEA also has the specialized technical expertise on the use of nuclear techniques for monitoring, assessment and remediation of environmental problems - problems that need not in themselves be nuclear-related. Such techniques can be used in identifying potable water sources, investigating soil erosion, and examining how pollution moves through the environment. The data and information that are generated using these techniques are essential for UNEP to keep the state of the global environment under review and identify priority issues.

Finally, how to bring this expertise to bear on the problems in a coherent manner?

In February 2005, the Governing Council of UNEP, representing Member States of the United Nations, approved the Bali Strategic Plan for Technology Support and Capacity-building. The aims of this plan are to strengthen the capacity of Governments of developing

countries and of countries with economies in transition: to participate fully in the development of coherent international environmental policy; to achieve their national environmental objectives, including those contained in the Millennium Declaration of the United Nations, and relevant international agreements; to develop national research, monitoring and assessment capacity and help establish infrastructure for scientific development and environmental management; and to use and sustain the capacity or technology obtained through training.

At a time when the United Nations General Assembly is calling for more cohesion within the UN system, I believe that this plan provides a coherent platform for enhanced communication, cooperation, coordination and synergies between UNEP and its partners, including other United Nations agencies and specifically the IAEA. I know the IAEA has a substantive technical cooperation programme for helping Member States develop their capacity in nuclear techniques for environmental monitoring and management. I would like to encourage the IAEA to take the Bali Strategic Plan into account when planning its own technology support and capacity-building efforts.

The challenges ahead are serious - failure to meet them is not an option. We can neither bury our heads in the sand, nor waste valuable resources on false hopes. Sound science will be crucial and I believe that increased cooperation and information exchange between our two science-based organizations can only improve our response to these critical challenges.

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