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Plenary

Record of the Eighth Meeting

Held at Headquarters, Vienna, on Thursday, 19 September 2013, at 3.05 p.m.

President: Mr MABHONGO (South Africa)

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– Report on the Scientific Forum 2013

1. The PRESIDENT, recalling that the theme of the Scientific Forum 2013 had been “The Blue Planet — Nuclear Applications for a Sustainable Marine Environment”, invited the Rapporteur of the Scientific Forum 2013, Professor Fernando Siringan, to present the report on it.
2. Professor SIRINGAN (Rapporteur of the Scientific Forum 2013) presented the report, which is reproduced in the Annex.
3. The PRESIDENT thanked Professor SIRINGAN for his report and commended him and the Secretariat on the success of the Scientific Forum 2013.

The meeting rose at 3.15 p.m.

IAEA Scientific Forum 2013

The Blue Planet — Nuclear Applications for a Sustainable Marine Environment

Report to the 57th IAEA General Conference

Professor Fernando Siringan

Marine Science Institute

University of the Philippines

Mr President, Director General, Distinguished Delegates,

I am pleased and honoured to be given this opportunity to present to the General Conference the report on the IAEA Scientific Forum 2013, whose theme was The Blue Planet - Nuclear Applications for a Sustainable Marine Environment.

Mr President,

As you know, the annual IAEA Scientific Forums are organised parallel to the General Conference and seek to showcase and advance the peaceful applications of nuclear science and technology to contemporary challenges.

This year the Director-General gave priority to the natural environment. More specifically, the forum focussed on ‘the other 70 per cent’ of the planet, that is, the oceans, the defining feature of the earth when gazed upon from space.

Indeed, this planet is a blue planet and this reality must never be forgotten in our quest for a sustainable future.

Mr President,

Delegates to this year’s forum heard of humanity’s absolute dependence on healthy and functioning marine and coastal ecosystems. They learned that these systems are not merely repositories of our waste where ‘out of sight is out of mind’, but instead they provide essential life support services to all humankind. Delegates also heard however, that these ecosystems are increasingly stressed by climate change, pollution, overfishing and other growing threats.

During the opening session, the Director General noted that healthy seas and oceans matter to all of us, referring to them as the cradle of life. He observed that governments need accurate data, and for that, they need skilled researchers who can devise accurate models to help predict future conditions. The IAEA helps to make this possible, promoting a comprehensive approach to the study, monitoring and protection of marine, coastal and terrestrial ecosystems.

The Director General was joined by a very distinguished panel, including His Serene Highness Prince Albert II of Monaco, who congratulated the IAEA on its efforts to coordinate international research on the emerging threat of ocean acidification. Dr Frederic Briand, Director General of the Mediterranean Science Commission gave the keynote presentation and highlighted five key threats to the marine environment, namely climate change, which includes ocean acidification; pollution; over-fishing; destruction of habitat; and introduced marine species.

The first of the technical sessions focused on rapid change associated with atmospheric concentrations of Carbon Dioxide, particularly the growing threat of ocean acidification. The forum demonstrated that nuclear and isotopic techniques are unique tools that contribute to better understanding environmental changes related to climate change.

The work of the IAEA as a coordinator of international research activities on ocean acidification was welcomed and emphasis was given to accelerating this work.

The second technical session focused on the impact of pollution on the marine environment, with a particular emphasis on pollution from our cities, factories and farms, where over 80% of marine pollution originates.

In this regard nuclear and isotopic techniques are important tools to understand mechanical, chemical and biological processes and the links between land and sea.

The forum highlighted that pollutants and radionuclides in biological systems can have high adverse impact even in remote locations. However it also showed that nuclear techniques can be used for assessment, prevention and remediation of pollution. Issues addressed ranged from radioactive waste products in the oil industry, to the use of neutron activation analysis and electron beam technology to understand and address key pollutants in the marine environment.

Speakers at the forum emphasized that technology transfer and training are key, but also there is a need in many countries to update regulations to accommodate new technology.

The third technical session looked at how these cumulative pressures are affecting the resilience of coastal and marine systems, and how we might work to improve that resilience. Resilience being the ability of the marine environment to recover, adapt and transform amid multiple stressors. The session noted that strengthening the resilience of coastal and marine ecosystems requires holistic solutions but is crucial to the well-being of humanity.

Mr President, five key messages can be taken from the forum:

1. Ecosystem or environmental health underpins economic development
2. Climate change and pollution will increase the cost of business in coastal and marine systems
3. Nuclear and isotopic techniques are important tools to understand mechanical, chemical and biological processes and functioning of the environment. Nuclear techniques can also be used for assessment and remediation of pollution.
4. Industry, government, research institutes, civil society, other partners and Intergovernmental Organisations, must work collaboratively to build the resilience of coastal and marine ecosystems to climate change and other pressures. In this regard, the Forum highlighted the need for organisations such as UNEP, UNDP, UNESCO-IOC and the IMO to collaborate with the IAEA in applying nuclear technology to environmental problems.
5. Cross-discipline approaches are needed. Those involved in nuclear science, the physical and chemical sciences, the life sciences, economics, the social sciences and policy makers must cooperate to promote holistic ecosystem-based approaches to today's problems in the marine environment

Mr President, Director General, Distinguished Delegates,

As I conclude this report, I would like to remind delegates that leaders from around the world

gathered in June of last year, in Rio de Janeiro, to debate The Future We Want. At that meeting many of the same countries that are in this room today committed “to protect, and restore, the health, productivity and resilience of oceans and marine ecosystems...”. They emphasized “the need for cooperation in marine scientific research” and reiterated “the need to ... support marine scientific research, monitoring and observation of ocean acidification and particularly vulnerable ecosystems ...”.

The Scientific Forum has re-emphasized this fundamental conclusion, namely that the challenges facing the coastal and marine environment are too large for any one nation or organisation to address in isolation.

This year’s Scientific Forum showed the significant capabilities that have been established in the Member States with the assistance of the IAEA. However, still more needs to be done to optimize capabilities in the use of nuclear sciences and technologies to improve the coastal and marine environment worldwide. The IAEA has an essential role to play in achieving this.

Thank you for your attention.