

WORKING LANGUAGE

The working language of the conference will be English.

REGISTRATION FEE

No registration fee is charged to participants.

CONFERENCE WEB PAGE

Detailed information on administrative procedures including participation and registration is provided on the conference web site:

<http://www-pub.iaea.org/iaeameetings/43050/Scientific-Forum>

SCIENTIFIC SECRETARY

Mr David Osborn
Director
IAEA Environmental Laboratories,
Monaco
Department of Nuclear Sciences and
Applications
Tel.: +37 7 9797 7279
Email: D.Osborn@iaea.org

ADMINISTRATION AND ORGANIZATION

Ms Martina Khaelss
Division of Conference and Document Services
Tel.: +43 1 2600 21315
Fax: +43 1 2600 26007
Email: M.Khaelss@iaea.org



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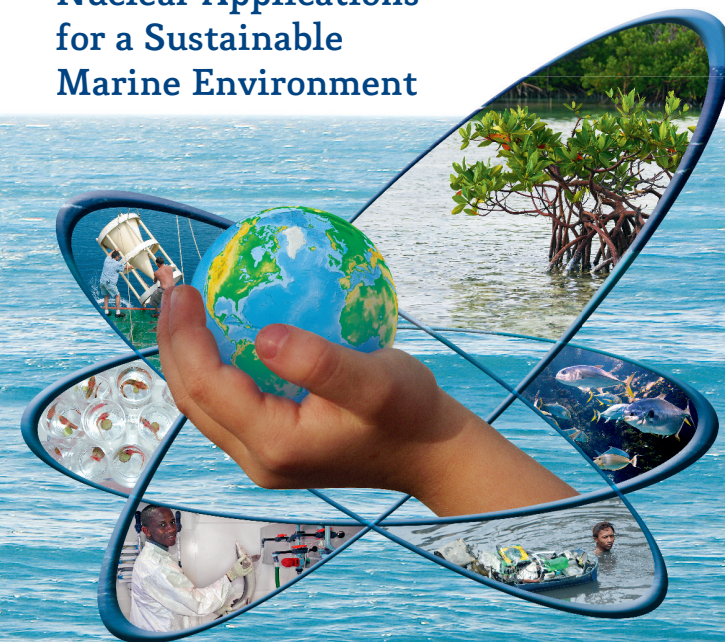
The world's coasts and oceans, which make up around 70 per cent of the earth's surface, face serious man-made threats from pollution, unsustainable extraction of resources and climate change. Nuclear and isotopic techniques help us to understand the pressures on the marine environment and to find more effective responses.

Yukiya Amano
Director General, IAEA

International Atomic Energy Agency
Scientific Forum

THE BLUE PLANET

Nuclear Applications
for a Sustainable
Marine Environment



17–18 September 2013
Vienna, Austria



IAEA

International Atomic Energy Agency

BACKGROUND

Planet earth is blue. Seen from space the vast oceans covering 71 per cent of its surface are its most defining feature. They help sustain life on earth by generating oxygen, regulating the climate and the water cycle, and since prehistory, human beings have congregated on their shores dependent upon their resources. That connection remains as strong as ever. Seventeen of the world's 20 largest cities are at the oceans' edge and over half the people on earth live in a coastal zone.

But the burden of such intense human use of coastal and marine systems is putting the health of the oceans in jeopardy and with it the future well-being of the human population dependent upon them. Collaborative measures to alleviate the pressures are urgently needed.

The IAEA assists its Member States in using nuclear and isotopic techniques that can help yield greater understanding of changes



SESSION 1

Opening

Statements by the IAEA Director General and invited guests.

SESSION 2

Oceans of Change

Increasing acidification of the oceans as they absorb mounting levels of carbon dioxide from the atmosphere is among the negative impact of climate change on global economies and human communities. Each day 25 per cent of man-made CO₂ is taken up by the oceans. Nuclear and isotopic techniques are unique tools that offer the means to identify targeted and cost-effective means of reducing it, as well as adaptation strategies. The IAEA is playing an important role as a coordinator of international research activities to provide a comprehensive understanding of the global effects of Ocean Acidification. Sustained collaboration is crucial to improved understanding and the preservation of the health of the environment and resilience for future generations.

SESSION 3

H₂O – Hilltops – to – Oceans

Freshwater and marine systems although often managed separately are interconnected. Sustainable development in coastal and oceanic settings is impossible to achieve without taking into account the entire 'Hilltops--Oceans' water cycle. Importantly, the source of more than 80 per cent of pollutants in the marine environment is from the land and water is their key means of dispersal. Panellists will address wastewater remediation and reuse, sludge treatment and reuse, the role of biodegradable materials in environmental preservation and the fate of radioactive pollutants in the marine environment.

THE BLUE PLANET

SESSION 4

Shores of resilience

Among the contributions of healthy coastal and marine ecosystems is their role in providing fresh air, clean water, coastline protection, nutrient recycling, food supply, and resources for economic growth and recreation. They also have an important aesthetic and cultural value for humankind. As well, they are important reservoirs of biodiversity at a time when the loss of species on both land and in the sea is an increasing cause for concern. Protecting these systems requires knowledge about the impact of pollution and other threats, and how well countries can strengthen the resilience of ecosystems. Nuclear and isotopic techniques are able to track various pollutants, such as terrestrial carbon sources and how they are cycled in ecosystems. Isotopic techniques can reveal the bio-magnification of toxic pollutants in marine food webs, contributing to the safety of seafood and the health of coastal populations. Nuclear techniques can also be applied to understand feeding relationships and energy flow in order to assess marine food web stability - a key component for sustainable fisheries and ecosystem resilience.

SESSION 5

Closing