

**Input to 2015 SG report on oceans and the law of the sea**

**“Oceans and sustainable development: integration of the three dimensions of sustainable development, namely, environmental, social and economic.**

**Executive Summary**

As the only UN agency operating marine laboratories, the International Atomic Energy Agency assists Member States in the application of both nuclear and stable isotope techniques and technology to develop a better understanding of radioactive and non-radioactive pollution in the marine environment, including its causes and impacts. The IAEA contributes to advancing the use of nuclear science in understanding key physical and biological processes in the coastal and marine environment, such as ocean acidification and the detection of harmful algal blooms. The IAEA regularly provides capacity building support for a transition to a green economy.

Through its technical cooperation programme, including through the Peaceful Uses Initiative, the IAEA is assisting scientists from many countries to apply nuclear and isotope-based tools and techniques to ensure the quality of data and assessments that will help policy makers to take efficient actions for their population.

Ocean monitoring, research and capacity building initiatives coordinated or provided by the IAEA provide valuable knowledge and expertise on the link between the climate system, human societies and the marine environment. The IAEA and the Scientific Centre of Monaco have organised three international workshops on the economic and social impacts of ocean acidification, the most recent in January 2015. These workshops, bringing together scientists, economists and sociologists, have demonstrated that disruptions to the delivery of marine ecosystem services caused by ocean acidification will seriously affect the economy of coastal communities and may even impact the social stability, generating higher levels of unemployment and poverty.

The IAEA also assists a number of Regional Sea Conventions with their respective marine monitoring and research programmes.

The IAEA contributes to the safe management of radioactive materials released into the environment, working with the International Maritime Organization (IMO), and on the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter 1972 and 1996 Protocol Thereto, the Convention for the Protection of the Marine Environment of the North-East Atlantic, and the Convention for the Safe and Environmentally Sound Recycling of Ships.

In 2014, the IAEA updated the guidelines for the London Convention to determine radionuclide levels in materials that may be dumped at sea which have no radiological impact to the marine environment. The IAEA also concluded the update of the database on the inventory of historical disposals, accidents and losses in the oceans involving radioactive materials.

Together with the IMO, the IAEA is also involved in the development of a safe regime for the recycling of ships.

## International Atomic Energy Agency (IAEA)

As the only UN agency operating marine laboratories, the International Atomic Energy Agency (IAEA) assists Member States in the application of both nuclear and stable isotope techniques and technology to develop a better understanding of radioactive and non-radioactive pollution in the marine environment, including its causes and impacts. The IAEA contributes to advancing the use of nuclear science in understanding key physical and biological processes in the coastal and marine environment, such as ocean acidification and the detection of harmful algal blooms. The IAEA regularly provides capacity building support for a transition to a green economy.

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Ocean monitoring, research and capacity building initiatives coordinated or provided by the IAEA provide valuable knowledge and expertise on the link between the climate system, human societies and the marine environment. This enables Member States to not only better understand and forecast the future impacts on marine ecosystems, but also to focus on activities and economic sectors dependant on those resources, such as fisheries and tourism. For example, the IAEA and the Scientific Centre of Monaco have organised three international workshops on the economic and social impacts of ocean acidification, the most recent in January 2015. These workshops, bringing together scientists, economists and sociologists, have demonstrated that disruptions to the delivery of marine ecosystem services caused by ocean acidification will seriously affect the economy of coastal communities and may even impact the social stability, generating higher levels of unemployment and poverty.

The IAEA also assists a number of Regional Sea Conventions with their respective marine monitoring and research programmes, such as the Barcelona Convention (Mediterranean Action Plan), the Black Sea Commission (Black Sea Environment Programme), Helsinki Commission, Oslo-Paris Convention or the Kuwait Convention (Regional Organisation for the Protection of the Marine Environment of the Gulf).

### *Marine Radioactivity*

The IAEA contributes to the safe management of radioactive materials released into the environment, working with the International Maritime Organization (IMO), and on the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter *1972 and 1996 Protocol Thereto* (the LC 1972 and LP 1996), (the London Convention), the Convention for the Protection of the Marine Environment of the North-East Atlantic (the OSPAR Convention), and the Convention for the Safe and Environmentally Sound Recycling of Ships (the Hong Kong Convention).

Amongst the recent work by the IAEA, conducted in cooperation with its Member States and, when relevant, other specialised UN agencies —particularly the IMO, the report “*Determining the suitability of materials for disposal at sea under the London Convention 1972 and London Protocol 1996: A Radiological Assessment Procedure*” (IAEA-TECDOC No. 1759, Vienna, 2015) was finalized and published. It updates the guidelines for the London Convention, providing guidance on performing specific assessments to determine whether materials which are candidate to be dumped in the oceans contain *de minimis* levels of radioactive materials and, consequently, would have no radiological impact to the marine environment. It presents a detailed radiological procedure to assess doses to workers, to members of the public, and to marine flora and fauna related to the dumping of materials at sea. The update was needed to appropriately address the new requirements of the IAEA Basic Safety Standards with regard to exposures of the public and radiological protection for flora and fauna. It is expected to be used by national regulatory authorities responsible for authorizing disposal at sea of candidate materials as well as by those companies and individuals applying to obtain permission to dispose these materials at sea.

## International Atomic Energy Agency (IAEA)

In 2014, the IAEA continued to provide technical advice on the development of radiological environmental quality criteria for marine waters to the Radioactive Substances Committee of the OSPAR Convention.

In 2014, the IAEA also concluded the process of updating the database on the inventory of historical disposals, accidents and losses in the oceans involving radioactive materials (e.g. dumped radioactive waste, nuclear submarines, cargo ships and planes transporting nuclear materials and weapons, industrial radioactive sources) in close cooperation with Member States. The aim of this database is to provide an official record of artificial radioactive materials which have entered in the seas, as prepared by the IAEA and confirmed by the involved Member States. A report on this database is in the process of being published by the IAEA.

In cooperation with the IMO's Marine Environment Protection Committee (MEPC) and the Hong Kong Convention, the IAEA developed recommendations on threshold levels of radioactive materials to be applied for the safe recycling of ships. These values are needed by the ship recycling industry for the identification of radioactive sources that are widely used in commodities for ships like lightning rods, high intensity discharge lamps, smoke detectors, self-luminescence signs and all kinds of industrial gauges. Types and characteristics of these radioactive industrial sources should be incorporated in the inventory of hazardous materials during the life of the ship and prior to recycling. The identification and separation of such sources before the start of the recycling process is essential to ensure safety and protection of workers, the public and the environment and to avoid contaminations of recycled steel and risks associated therewith.