

UN Decade of Ocean Science and Engineering for Sustainable Development

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Abstract

The purpose of this presentation to UT23 is to offer to the ocean engineering community a possibility to learn more about the UN Decade of Ocean Science for Sustainable Development (Ocean Decade) and to try to attract their ingenuity - the origin of the word "engineering" - to the new challenges and exciting opportunities associated with the Decade.

The Decade aims to achieve, by 2030, seven qualities of the ocean; to make it clean, healthy and resilient, productive, predicted, safe, accessible, inspiring and engaging. The main idea is to enable science to observe and learn more about the ocean, qualitatively and quantitatively, and to find solutions, as well as motivating factors to optimize our far-from-perfect human relations with the ocean and to start managing the ocean in a much more sustainable way and with more fairness and harmony. More than 40 Decade programs, hundreds of Decade actions are underway now. The arrangements for brainstorming and co-design are in place including a Decade Forum, enabling the dialogue within and between multiple communities of practice, and various expert groups, including on data, private sector and on technology and innovation.

Marine engineering that can be understood as application of scientific knowledge to specific ocean matters is at present not so actively engaged in the Ocean Decade. However, without design and production, or construction, of technical solutions and related infrastructure or software, the goals of the Decade will not be achieved. The potential for marine engineering expansion, especially in the future, will be only growing in association with the Decade, because science-based ocean planning and management will create conditions for the development of sustainable ocean economy and its subsequent manifestation in marine engineering applications, preserving the ocean while using it.

The marine engineering community is invited to learn more about the Ocean Decade, its goals, plans, current activities, and to start thinking of how the community can contribute to the Decade undertaking and to benefit in terms of capitalizing on new conditions for progress in ocean science applications created by the Decade.

Dr. Vladimir Ryabinin (Marine engineer, 1978; Ph.D., 1982; Doctor of Sciences, 1995) is the Executive Secretary of the Intergovernmental Oceanographic Commission (IOC) of UNESCO in the rank of Assistant Director-General of UNESCO. His previous affiliations include the Hydrometcenter of Russia (as a researcher and head of a laboratory), the Moscow State University (as a lecturer), the International Ocean Institute (as an executive director), and the World Climate Research Programme (as a senior scientific officer at World Meteorological Organization - WMO).

Dr. Ryabinin is an oceanographer, marine engineer, and climatologist. His research has led to a number of achievements in the numerical weather prediction on weekly time scale, marine meteorological services, offshore engineering in polar areas, ocean and climate science. He has been an author of hundreds of scientific publications and originator of several mathematical models for the ocean, atmosphere, wind waves, etc.

Since early 1980s, Dr. Ryabinin has been involved in coordination of environmental activities of the United Nations. He has contributed to the core design of such international initiatives as the Global Ocean Observing System, Joint Technical Commission of WMO and IOC for Oceanography and Marine Meteorology, International Polar Year 2007/2008, and the UN Decade of Ocean Science for Sustainable Development (2021-2030).