



NIOHC Seminar

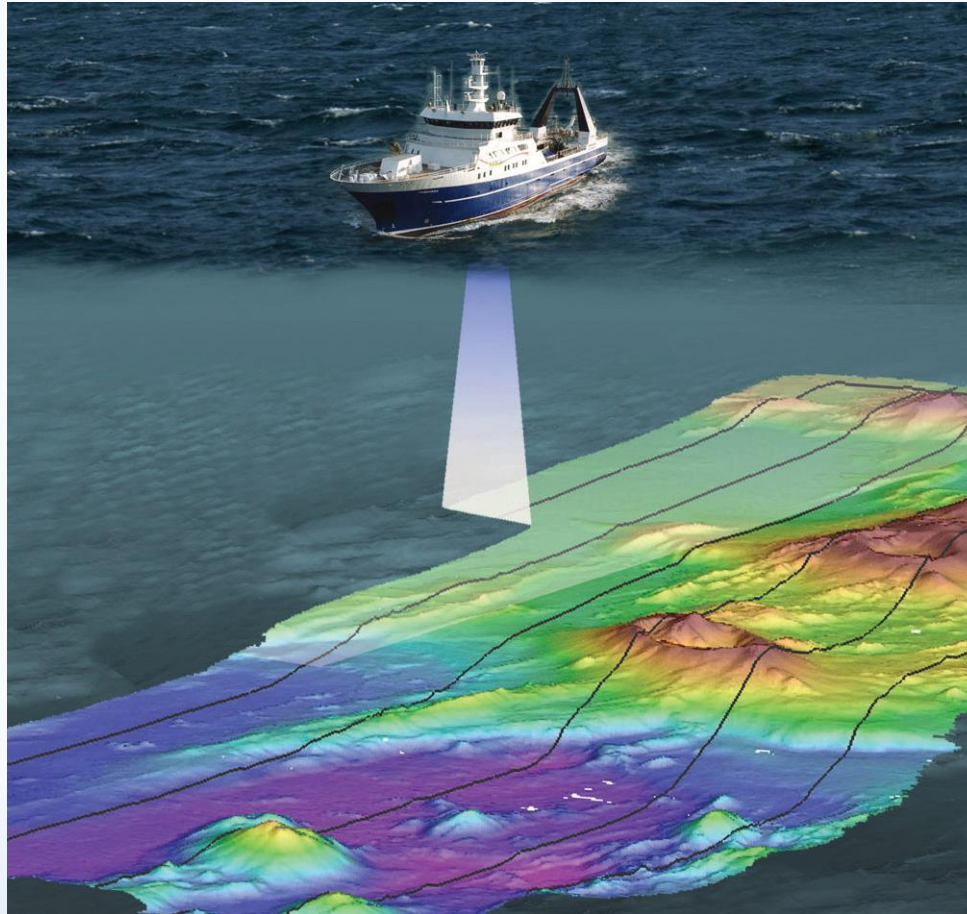
Muscat, Sultanate of Oman, 25 March 2019

Economic impact and benefits of hydrography
(the Blue Economy)



Blue Economy

Hydrography – underpinning the blue economy



Blue Economy

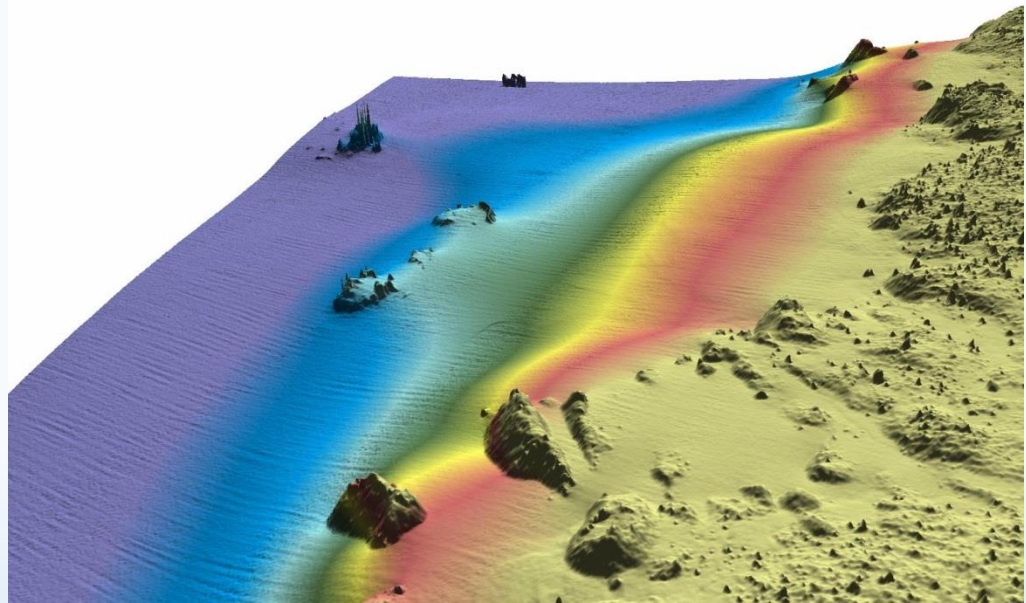
The term “*blue economy*” is being heard more and more. It is an expression used to describe all the economic activity associated with the oceans, seas, harbours, ports, and coastal zones.

Underpinning all that activity, is hydrography.



Blue Economy

Every human activity conducted in, on or under the sea depends on knowing the depth and the nature of the seafloor, the identification of any hazards that might exist and an understanding of the tides and the currents.



Blue Economy

Obtaining and disseminating this hydrographic knowledge is the role of the world's hydrographers.



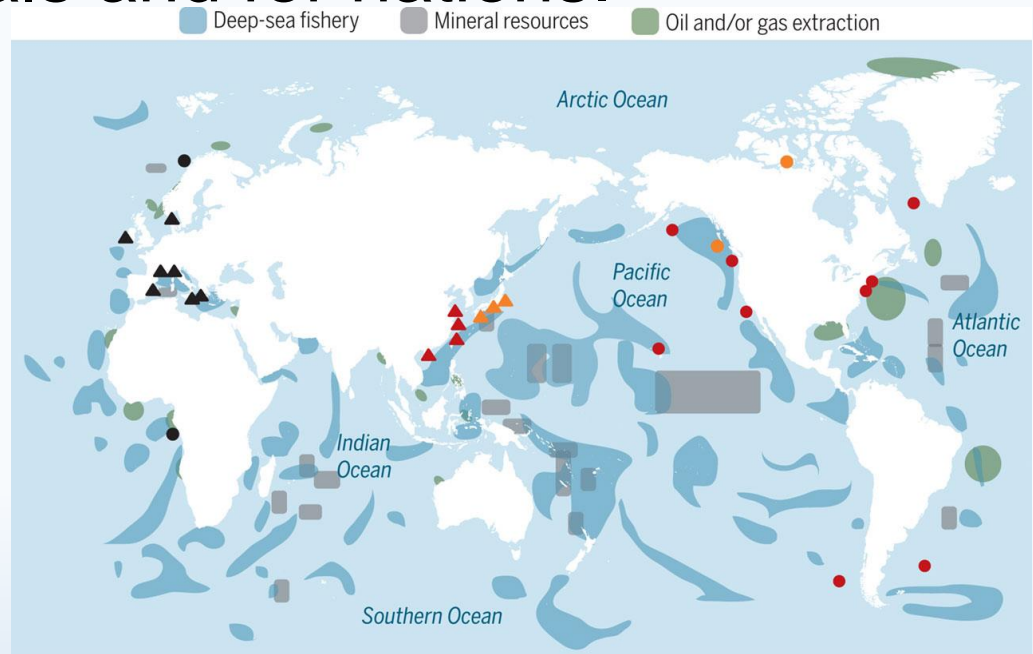
Blue Economy

Their work is the most fundamental of all the enablers required to develop and sustain the *Blue Economy*.



The Potential of the Blue Economy

The seas and oceans, including the seabed and the sub-seabed, represent a vast repository of food, mineral resources, energy, water, bio-medicines, and infrastructure that in turn creates wealth for individuals and for nations.



Blue Economy

Aquaculture
Biomedicine
Boats and Shipbuilding
Cables and pipelines
Coastal Zone management
Defence and Security
Desalination and water
treatment
Marine recreation
Ocean energy and minerals



Blue Economy

Ocean science and observation

Port operations

Robotics and submarines

Shoreline development

Telecommunications

Tourism

Very large floating platforms

Weather and climate science



Blue Economy

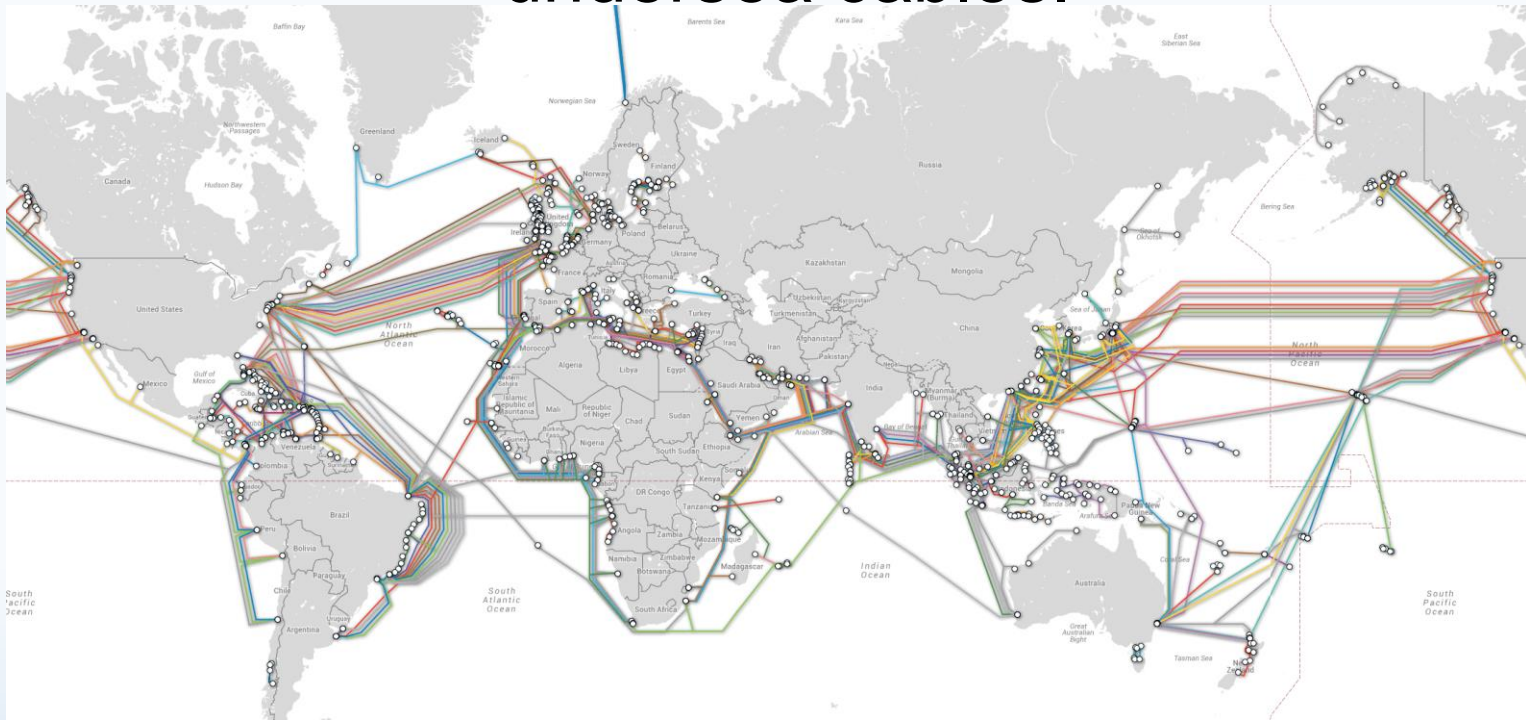
Each of these important and growing maritime sectors provides jobs and creates wealth.

But each depends, in some way or another on hydrography as its enabler.



Some Facts about “Blue Economy”

Well over 95% of the world’s intercontinental data and telephone traffic passes through undersea cables.



Some Facts about “Blue Economy”

75% of the world’s oil supplies and 55% of the world’s gas supplies are transported by sea.

Offshore wind farms are increasingly cost competitive with fossil fuel and nuclear sources.



Some Facts about “Blue Economy”

The Oceans already provide at least 15% of animal protein for about 3 billion people, aquaculture (farming) of fish and aquatic plants is worth more than \$106 billion, the fishing industry provides livelihood to more than 540 million people.



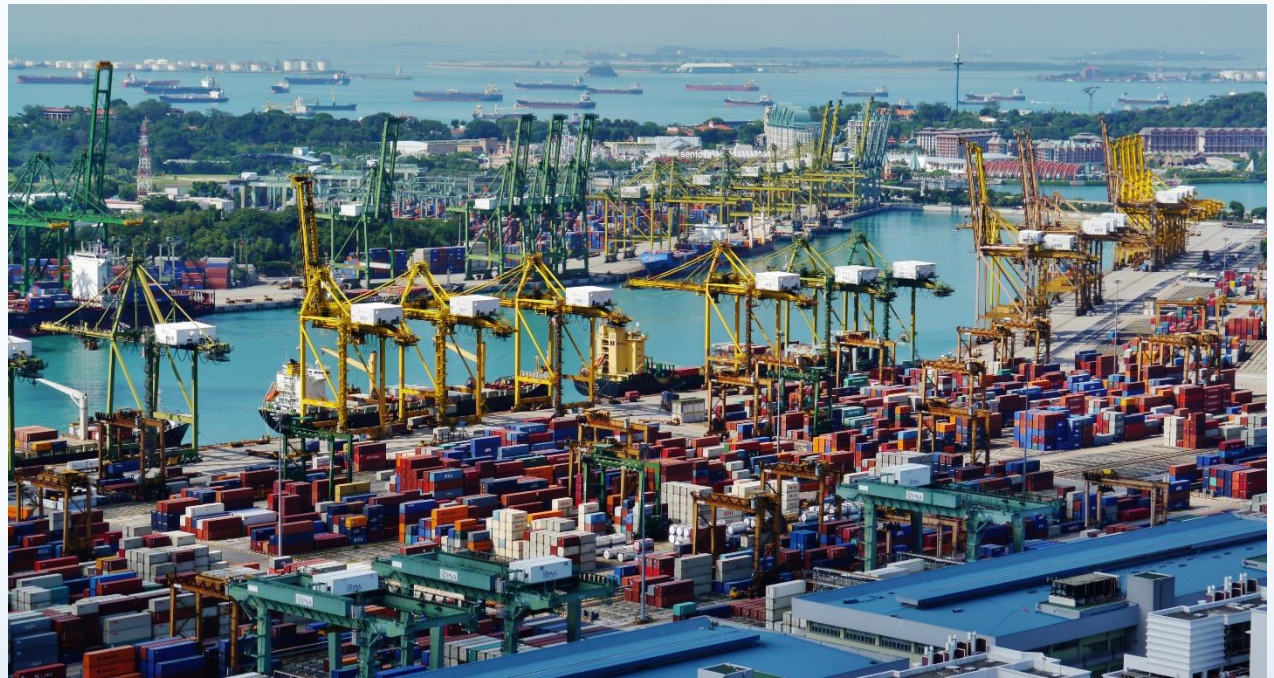
Some Facts about “Blue Economy”

Cruise ship passengers spend at least \$100 each for each day ashore. That’s over a quarter of a million dollars from a typical cruise ship for every day in a port.



Some Facts about “Blue Economy”

Port economic activity usually generates at least one other indirect job for each new job. For high tech industries, this multiplier effect can reach up to 5 or 6.



Some Facts about “Blue Economy”

Economic studies show that the cost: benefit ratio for national investment in hydrography and nautical charting is always positive and can be better than 1:10.



Some Facts about “Blue Economy”

For most ships, 30cm extra depth of navigable water allows at least 2,000 tonnes more cargo to be carried.



Ships are getting bigger



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