



World Summit

Ocean Observing Systems

October 19-22, 2008

St. John's,

Newfoundland & Labrador,

Canada

www.oceaninnovation.ca

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Backgrounder
World Summit – Ocean Observing Systems

Understanding international, regional and national ocean observing activities, plans and frameworks in the context of a future global ocean observing system (integrated, interoperable system of systems) is critical to formulating the strategic actions necessary to actively participate in this rapidly emerging global phenomenon.

Ocean Innovation 2008 – “World Summit – Ocean Observing Systems” will bring together a global community of interest in ocean observing systems to discuss and debate lessons learned and paths forward.

The goal of all ocean observing system initiatives and programs is to improve access to data and information thus improving the decision-making power of a wide range of stakeholders –

“The benefits accrue at the levels of individual companies and entities; at the levels of countries and government agencies; and internationally or globally in the form of better understanding and management of the marine environment, forecasting the global climate system, exploitation of marine resources, and improved management of safety at sea and mitigation of disasters such as coastal floods.” (Global Ocean Observing System Prospectus, 1998).

Existing ocean observing system programs are almost exclusively public sector led, with strong emphasis on public good and scientific research. This approach almost always leads to secondary consideration for private sector interests and participation.

These programs reflect international and national public and private sector requirements for better information on the impact of the marine and ocean sector on global climate change, sustainable use and better understanding of marine resources including fisheries, marine plants and offshore hydrocarbons, security and defense, meteorology, oceanography, marine transport, and improved information on the risk of natural disasters such as tsunamis and hurricanes.

Ocean observing system data is therefore of high importance to governments, researchers (scientists) and business interests in the development of policy and regulatory frameworks and in capturing ocean and marine market opportunities that reflect sound stewardship and sustainable development practices.

The Primary OOS Drivers Are:

- **P**olicy (regulation, sustainable development)
- **S**cience (knowledge)
- **O**perations (safety, efficiency)

Systems and technologies to gather ocean data are manifold. From surface buoys and cabled seabed networks, to satellite and airborne remote sensing, to ship borne sensors and surveys and autonomous underwater vehicles (AUV's), a flood of data is gathered each day – with even more data to be generated by new systems already being planned and implemented.

Some systems and initiatives are led by public sector agencies, while others reflect academic and commercial interests. Some initiatives and activities are coordinated, but most are not.

Ocean observing system programs seek to rationalize and coordinate existing systems and their component technologies through improved integration and interoperability at all levels. For example, the US Ocean Action Plan calls for action to integrate US ocean observing efforts into a national Integrated Ocean Observing System (IOOS) and directs the IOOS to be a major US contribution to the international Global Ocean Observing System (GOOS), which is a component of the Global Earth Observing System of Systems (GEOSS).

For those countries/regions where there is no existing OOS program or initiative, per se, it is necessary to recognize that existing or planned systems can eventually migrate to (coalesce into) a future OOS. For example, in Canada there are presently no formal plans for a national OOS program.

However, there are a number of systems and initiatives (national buoy program, DGPS network, AIS network, national charting effort, INNAV, COINPacific, St. Lawrence Observatory, **SmartBay**, etc.) that will ultimately need to be integrated into a national OOS program. [Note: The term 'integration' in the context of ocean observing systems applies to both technology (interoperability, standards) and policy frameworks.]

