

Three Oceans Around Canada: Roles of the Interconnected Arctic and Subarctic Oceans in Global Change

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DATE: Wednesday, November 21, 2012

TIME: 10:30 am

PLACE: NAFC Fisheries and Oceans Canada, Auditorium, 80 East Whitehills Road

NB: All are welcome. Please arrive 15 min early to sign up at the front desk and RSVP fraser.davidson@dfo-mpo.gc.ca if attending so we can facilitate your entry into the building. Please bring Photo ID for entry to the building.

ABSTRACT: The Arctic Ocean is changing fast, and to understand why requires that we view its two-way interconnection with its neighbouring Oceans. First, the Arctic and Subarctic oceans surrounding northern North America and Eurasia are fully connected to one another and fulfill an absolutely critical role in global-scale hydrological and thermohaline cycles. Second, while it has long been suspected that the high latitudes will respond fastest and largest to climate forcing, the changes in the physical system actually observed over recent years have far out-paced the most pessimistic of model predictions used in the 4th IPCC report of 2007. Third, connectives and of geochemical and biological systems are now responding to changes in the physical system. Finally, humans are inextricably linked to the changes we are observing today, both as drivers of change through our greenhouse gas emissions and as the very populations needing to prepare for the uncertainties that lie ahead. This talk will review the Arctic's place in the global climate system, highlight changes we are seeing in the physical world of ocean currents and sea ice cover, and then explore what such changes – as components of a coupled system – will mean in terms of marine life and ecosystems, invasive species, ocean acidification and challenges to governance. An 'early warning system grounded in observations carried out by Northern residents is suggested.

ALL ARE WELCOME!!!