

# FORUM on International Cooperation among Environmental Research Infrastructures

Ocean Observing Infrastructure in Canada: International Connections, Science Impact and Societal Services

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#### Ocean Networks Canada









#### Ocean Networks Canada

- Extend the Internet underwater
- Our output product is DATA!
- We support of over 12 observatories, cabled or autonomous
- We manage ~500 instruments reporting data 24/7, in near real time
- We support data acquisition of over 150 instrument types
- We offer a combination of 200 different data product types





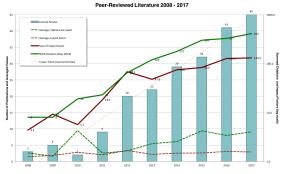
#### Ocean Networks Canada

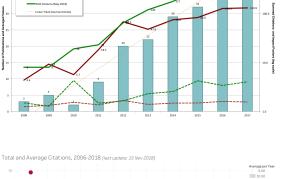
- ONC is one of the 4 large Major Science Infrastructure in Canada
- Staff currently at 130
- Funding sources:
  - Science funding (Canada Foundation for Innovation)
  - Government Funding (Fisheries and Oceans)
  - Commercial contracts
- Obligations:
  - Maximize science impact
  - Provide services to government
  - Deliver science-based commercial services

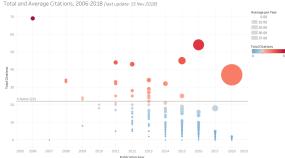


## Science Impact







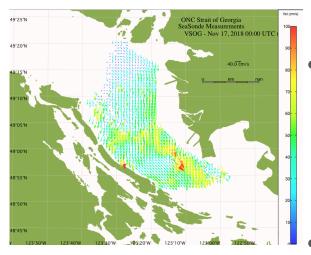


- ONC is a platform that serves many science disciplines (Geophysicists, Oceanographers, Marine biologists, Climate scientists, ... but also high-energy physicists, avian biologists, social scientists, ...)
- Increasing publication record and impact factor
- Robust training of HQP
- User satisfaction increasing



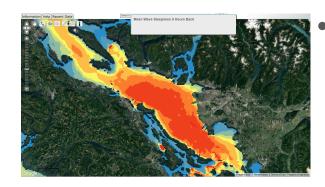
## Government Support





Data Management: support of coastal radar, hydrophone data from many sources

Helping Canada become a GOOS regional association (CIOOS)



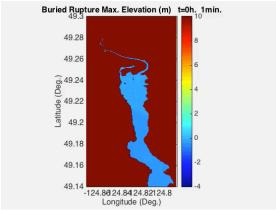
Provide support for ocean modelling efforts



#### Societal Impact





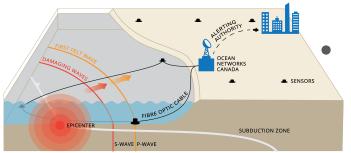


- Community observatories and indigenous engagement on the remote west coast and in the Arctic (Baseline environmental measurement, anthropogenic impact, integration with local knowledge, specific data products)
- Tsunami impact modelling for cities and coastal communities

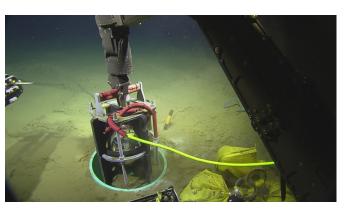


## Societal Impact

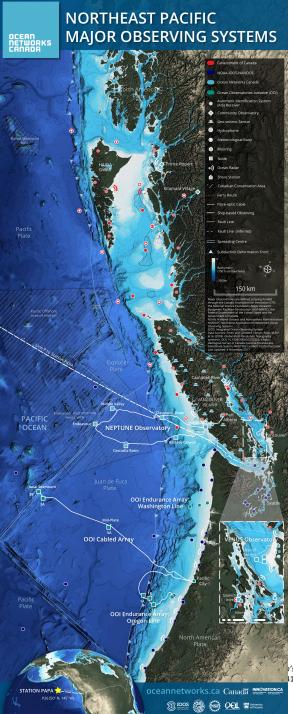




Earthquake early warning for Vancouver, Victoria (preparing for the megathrust Cascadia event)







## International Context



- North-East Pacific Observing Systems (with US-OOI, CDN-ONC)
- ONC supports instruments for US, European and Asian Experiments
- All data are public immediately
- Participation in RDA, WDS, GOOS efforts
- Collaboration agreements in place with many other organizations (e.g., EMSO-ERIC, NOAA, ...)



## The 3 questions



- Ensuring the value of FIERI: Our communities of users support coordinated efforts of FIERI members for focused actions with clear and ambitious yet achievable outcomes for societal benefit
- Contribution to the alignment of future funding calls: Our main funding agencies (NSF, CFI, EC) already coordinate well. Outcomes of above need to be communicated to them
- Priorities for sharing and re-use of knowledge: Regular conferences and workshops focusing on data management and field ops aspects