



Environment
Canada

Environnement
Canada

Canada

National Report for Canada

30th Session of the DBCP –






Weihai, China

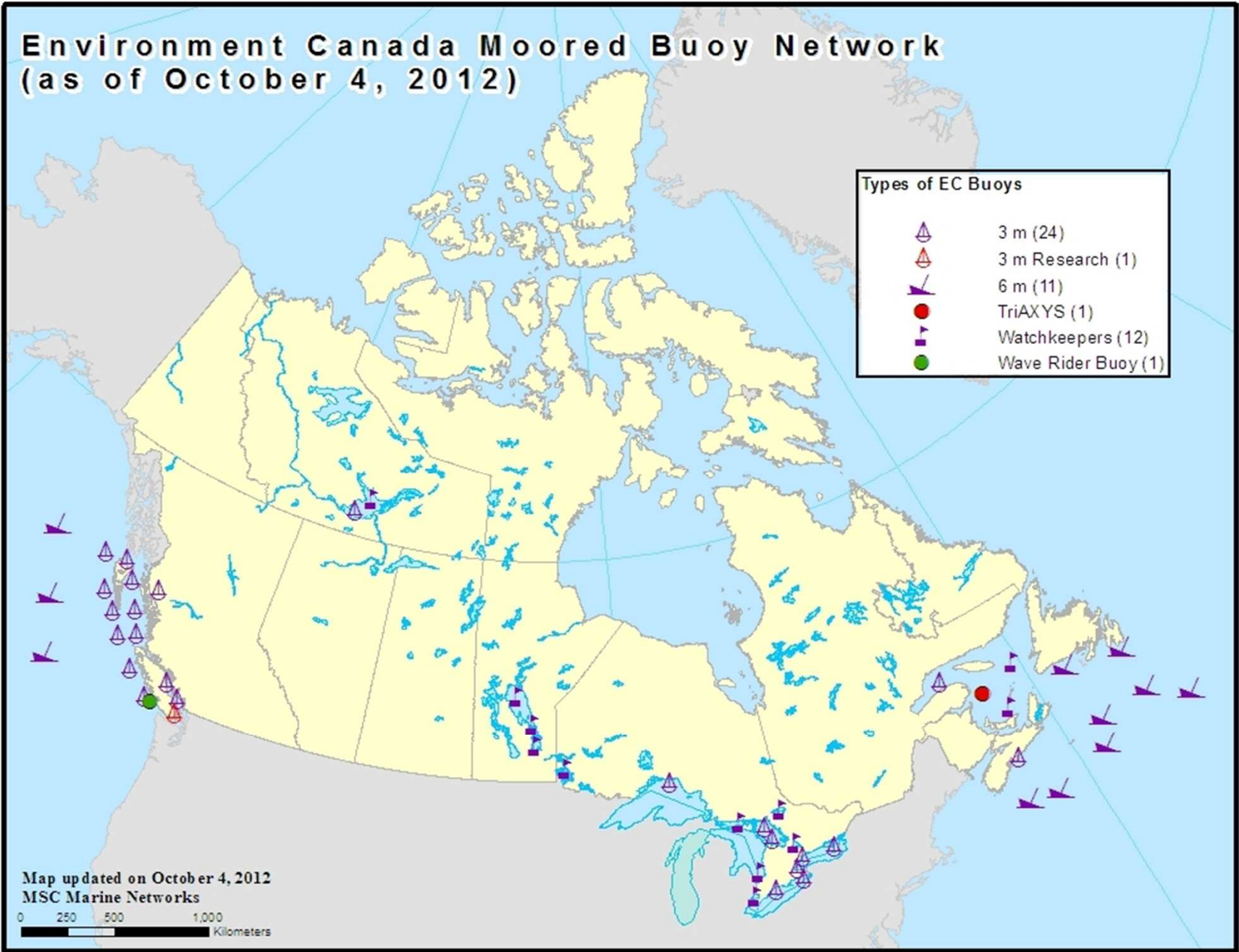
October, 2014

Chris Marshall – A/Senior Manager National Network Operations
Environment Canada – Meteorological Service of Canada



Environment Canada Moored Buoy Network (as of October 4, 2012)

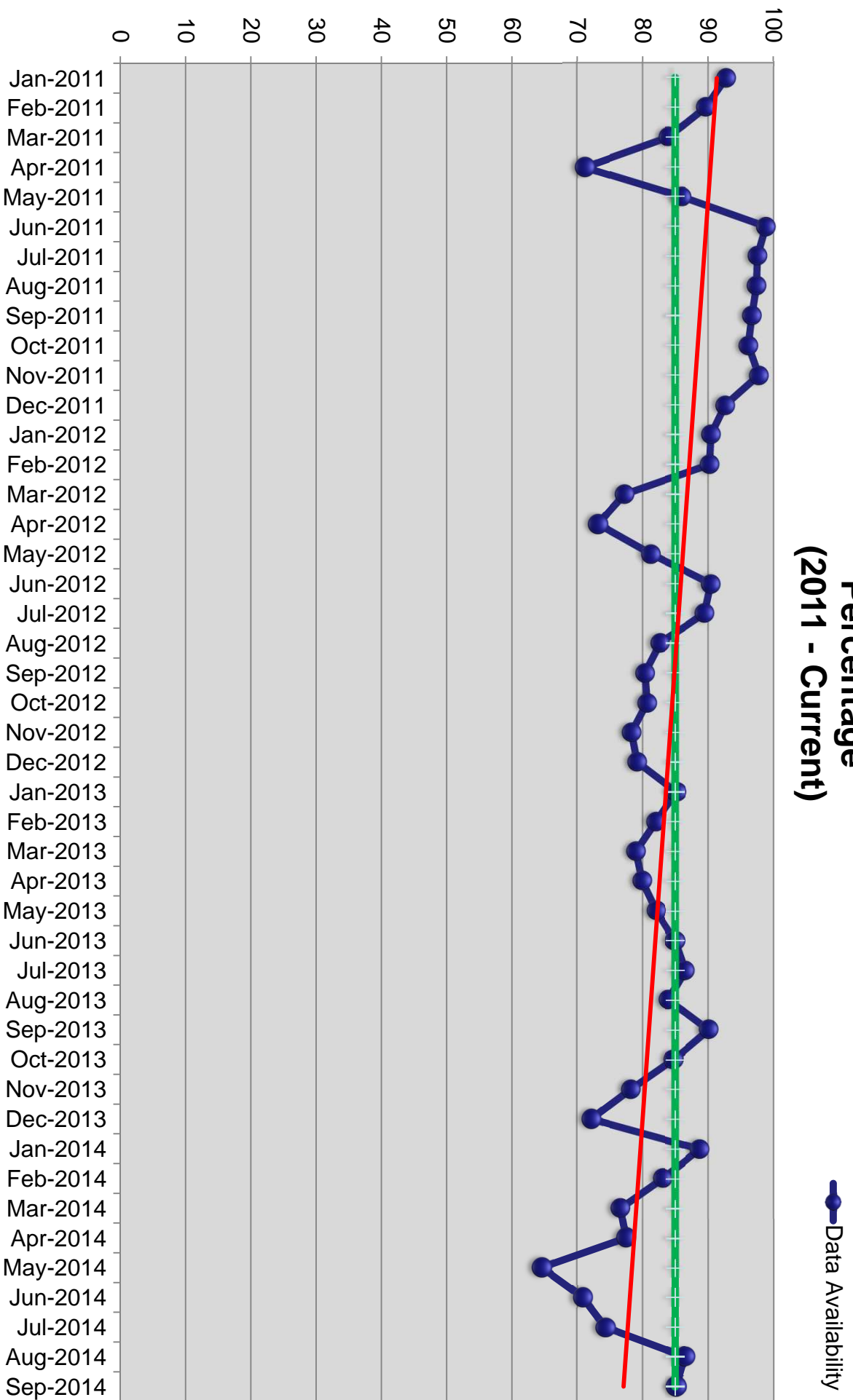
	3 m (24)
	3 m Research (1)
	6 m (11)
	TriAXYS (1)
	Watchkeepers (12)
	Wave Rider Buoy (1)



Map updated on October 4, 2012
MSC Marine Networks

0 250 500 1,000
Kilometers

Environment Canada Moored Buoy Real Time Data Availability Percentage (2011 - Current)

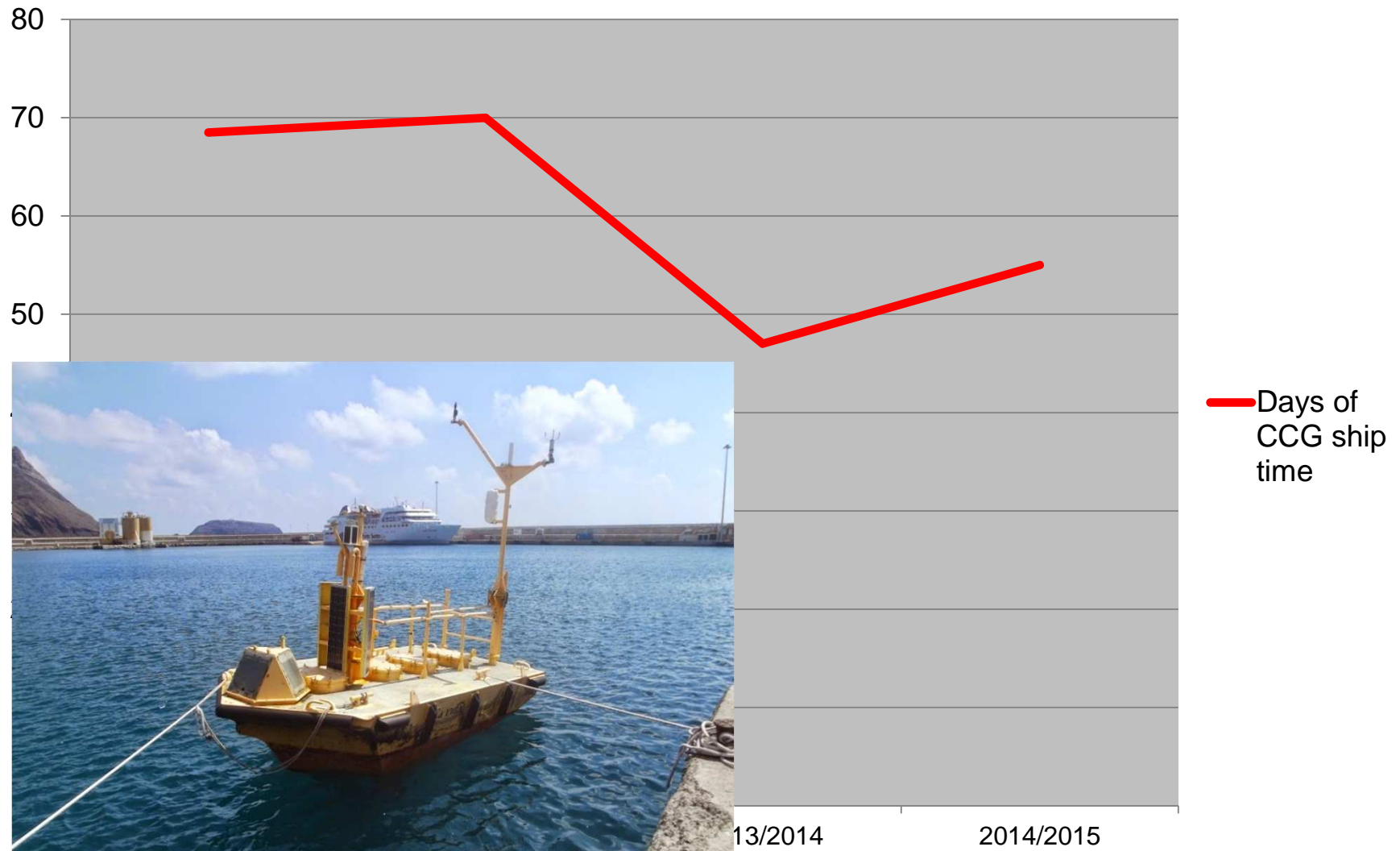




Ship time challenges

- MSC moored buoy program continues to be impacted by a reduction in ship time for servicing/maintaining the network reduction in ship-time of 30-40% past two years.
- We have been impacted by Canadian Coast Guard (CCG) budget reductions, mechanical problems with vessels, and competing priorities.
- The impact has been most significant on the Atlantic Coast, with buoys southeast of Newfoundland not serviced for nearly 3 years.
- Discussions continue with CCG to secure ship-time requirements, MSC will be required to provide funding (CCG cost-recovery)
- We are also seeing private sector options, however concerns with capacity/capability to meet our requirements and costs.

Trend in CCG ship-time (2011-2014)



Drifting buoy deployments – Past 12 months

Arctic Basin

- 14 buoys (various types)
- +10 air deployed in Sept

Types of EC Buoys

- 3 m (24)
- 3 m Research (1)
- 6 m (11)
- TriAXYS (1)
- Watchkeepers (12)
- Wave Rider Buoy (1)

North Pacific

- 40 GDP baro upgrade SVP-B
- Great work by PMO!

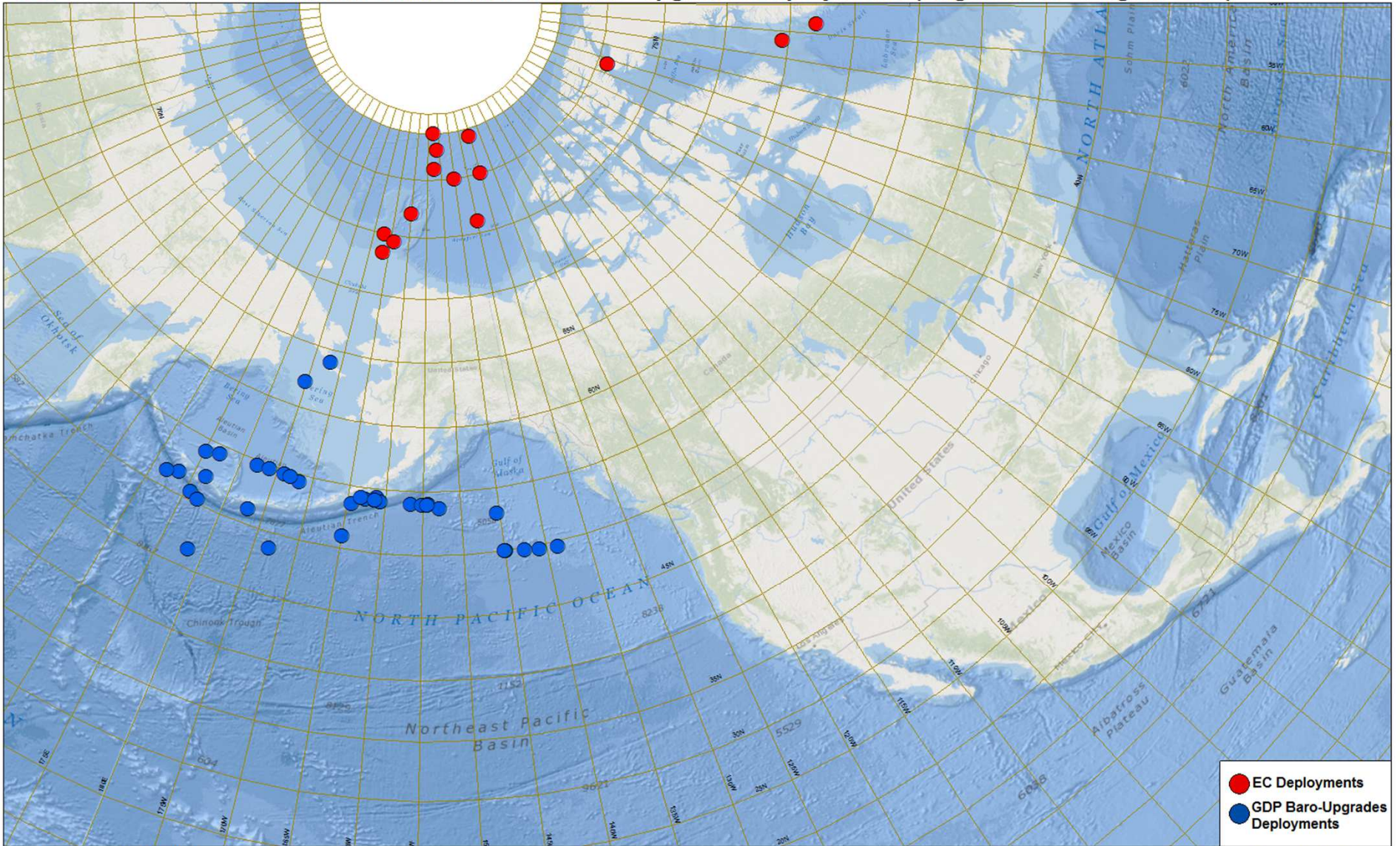
Northwest Atlantic

- 2 MSC funded SVP-B
- PMO logistics for E-SURFMAR

Map updated on October 4, 2012
MSC Marine Networks

0 250 500 1,000
Kilometers

Environment Canada and GDP Baro-Upgrades Deployments (August 2013 - August 2014)

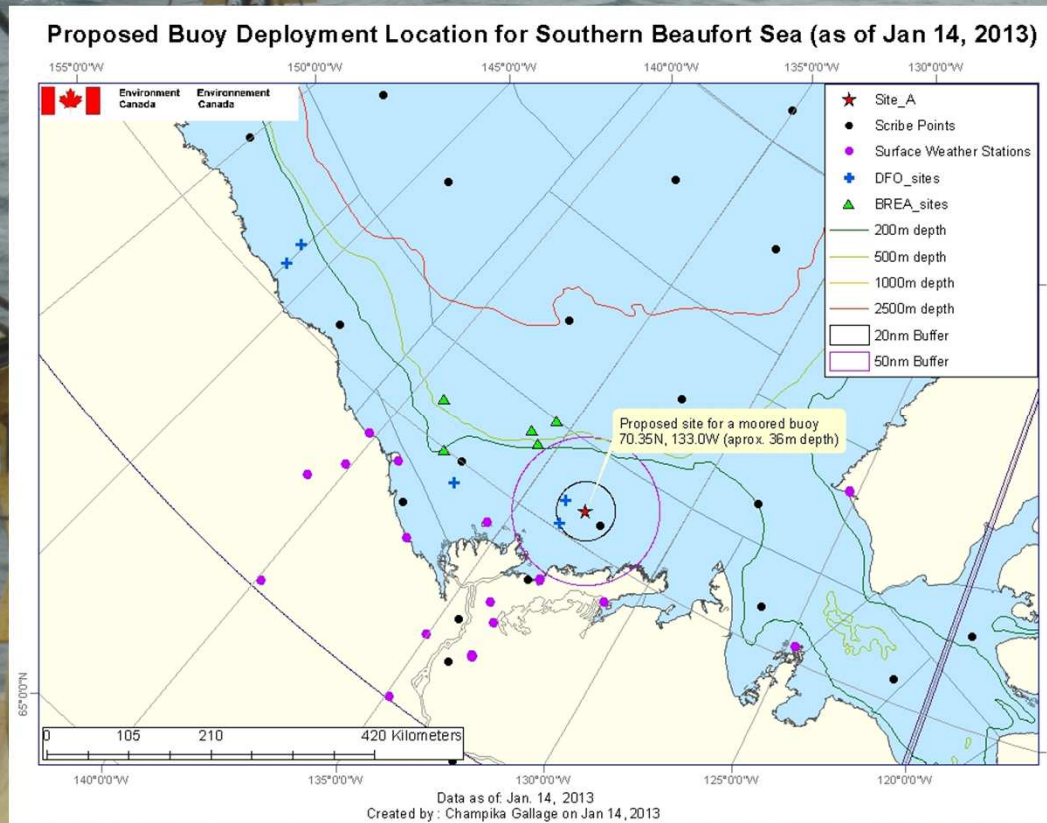


Created on August 14th, 2014

Created by Lily Fung



Seasonal Moored Buoy in the Beaufort Sea



- Pilot project to understand feasibility and costs
- Deployed and retrieved by CCG Icebreaker Wilfred Laurier – Sig cooperation from DFO Science
- Proposal to increase Arctic moored buoys



Next 12 months Planned Buoy Deployments

	NE Pacific	NW Atlantic	Arctic Basin
Moored Buoys (maintain national network of <u>50</u> buoys)	18	12	1-2
Drifter	0	4-6	20
Barometer Upgrades	30		
Datawell waveriders	1	1	



Drifter Deployments

- MSC is ramping up number of ice buoy/beacons as part of METAREA Project --- goal is sustained deployments over the next number years to form the **Canadian Arctic Buoy Array (CABA)**
- Arctic deployments will be done in collaboration with IABP and other parties to ensure optimal coverage --- all MSC funded ice buoys equipped with barometers.
- All MSC funded buoys will use Iridium telemetry (when possible), to reduce communication costs and improve data timeliness and access.



Environment
Canada

Environnement
Canada

New Initiatives

Canada

- Continue to work with Jou Beh Technologies and Scotia Weather Services to receive and route **third-party** buoy data to the GTS.
- Continue contribution to **PP-WET** – plan deployments of 2 Datawell for in-situ intercomparisons and SIO GPS buoys.
- **BUFR migration** – Working to deliver buoy (moored and drifter) and ship observations in BUFR. Will miss Nov 2014 deadline.
- 2 buoys deployed in support of the sailing venue for the PanAM games to be hosted in Toronto in 2015 – 2 buoy deployed this summer in Lake Ontario – use of cell modems and 15-minute reporting interval.
- Iridium SBD modems integrated into moored buoy transmitter module – providing redundant mode of communications for GOES, along with bi-directional capabilities.
- Working to secure access to new third party buoy and platform observations (oil fields east of Newfoundland)



Issues / Summary

- Continued deployment & recovery of moored buoys by Canadian Coast Guard – **critical partnership** – ship time currently at no cost to EC.
- Would like to thank NDBC for their continued support – includes technical knowledge exchange, and sharing of expertise.
- Excellent ongoing support from AXYS Technologies
- Training/retention of qualified meteorological buoy technicians continues to be a challenge.



Thank-you / Merci!

Chris.marshall@ec.gc.ca

416-739-4468

Air deployment of ICEx Air Beaufort Sea –
September 2014