



Environment
Canada

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National Report for Canada

29th Session of the DBCP – Paris, France September 2013

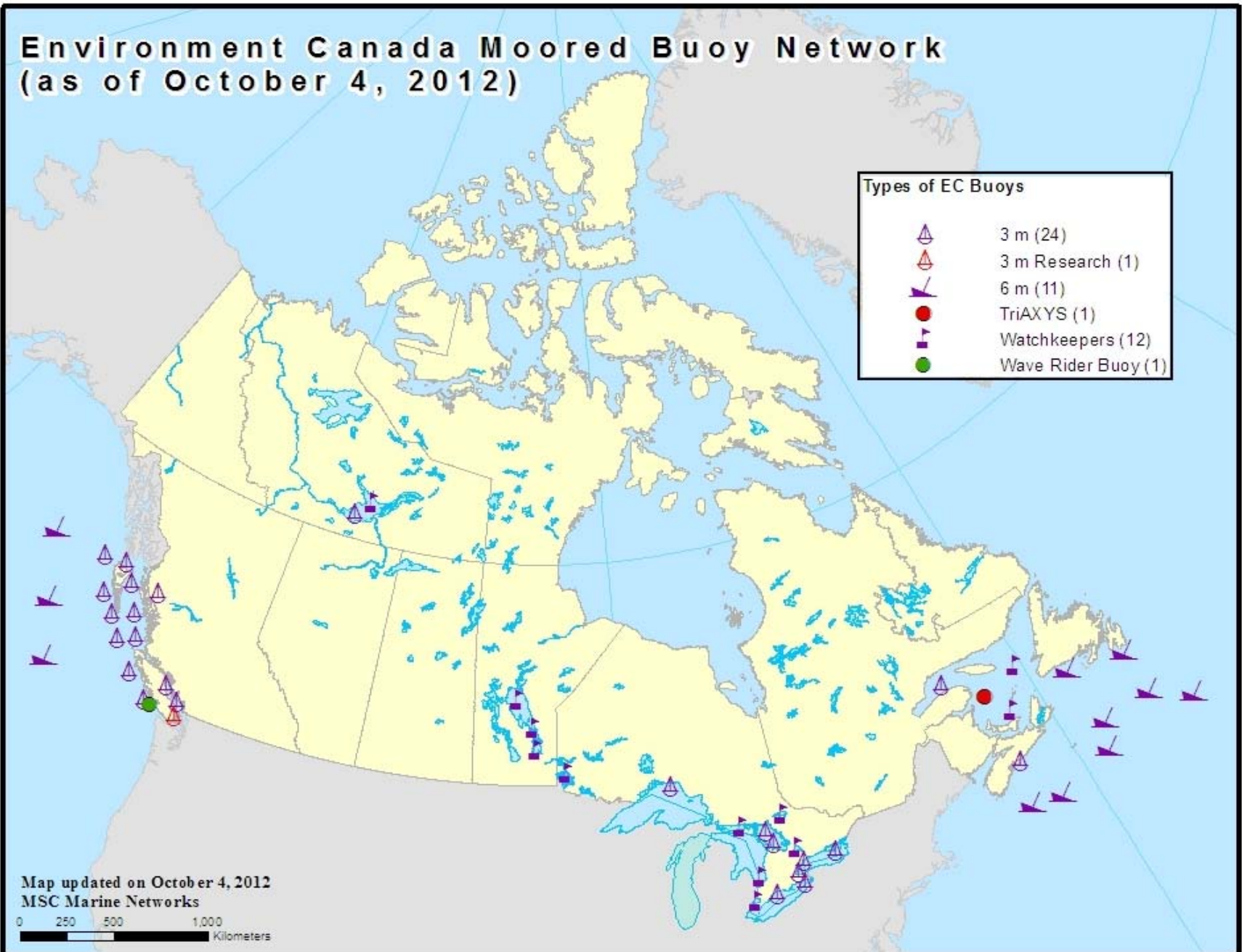
Chris Marshall – National Manager of Marine Networks
Environment Canada – Meteorological Service of Canada



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

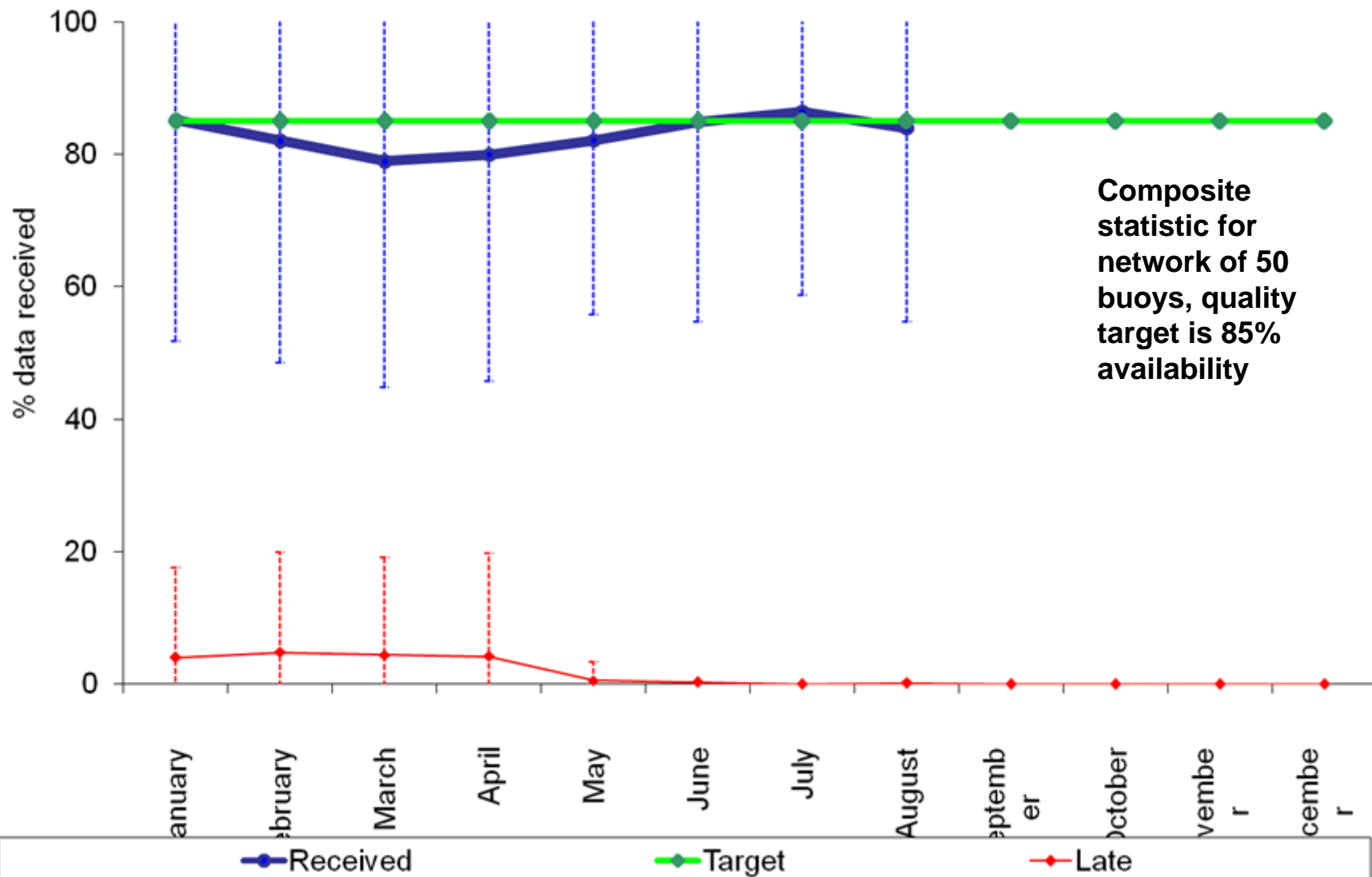
Types of EC Buoys

	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

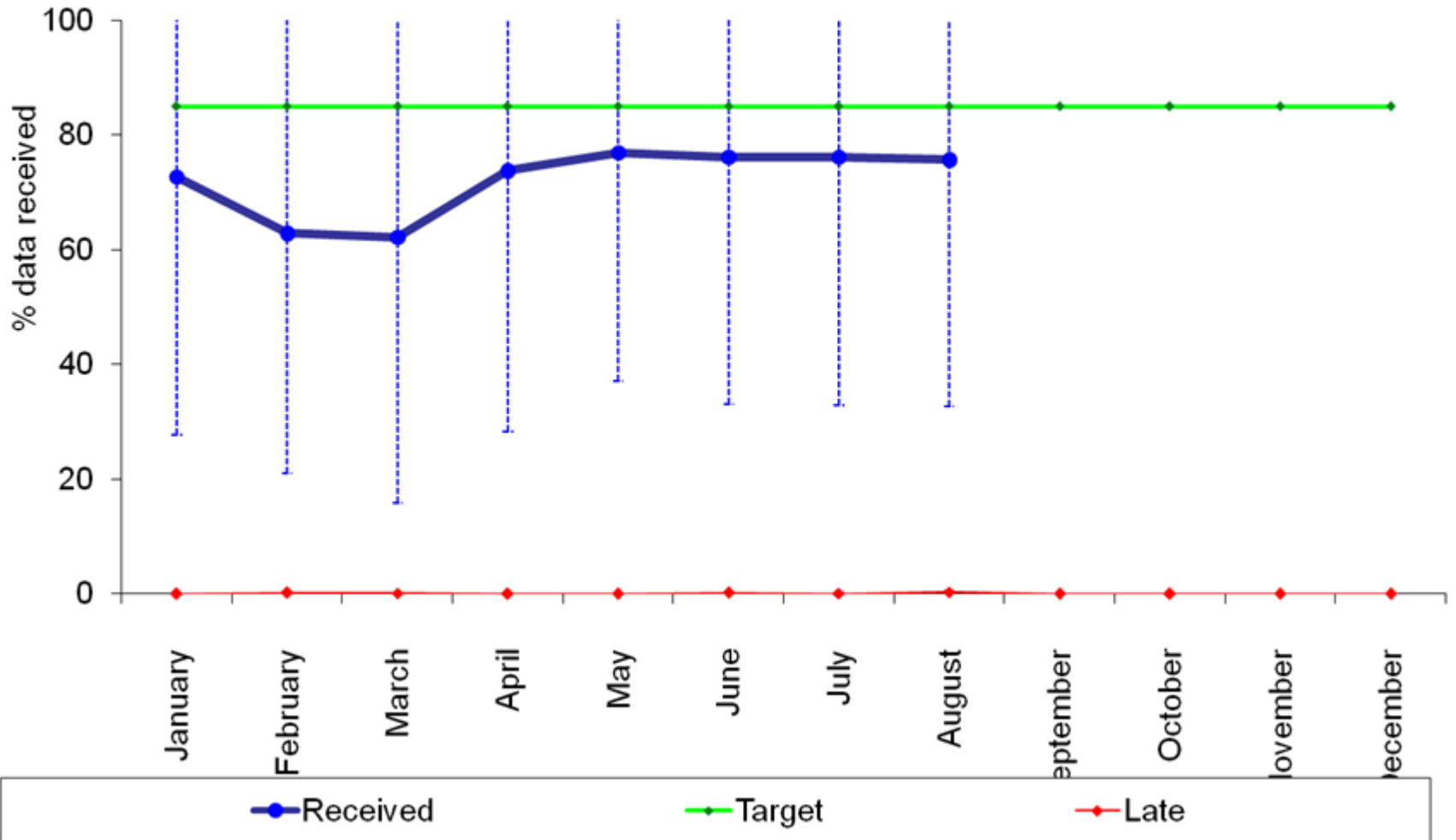
Archived Real Time Buoy Data Availability Statistics in 2013 (National)





A tale of two coasts...Atlantic

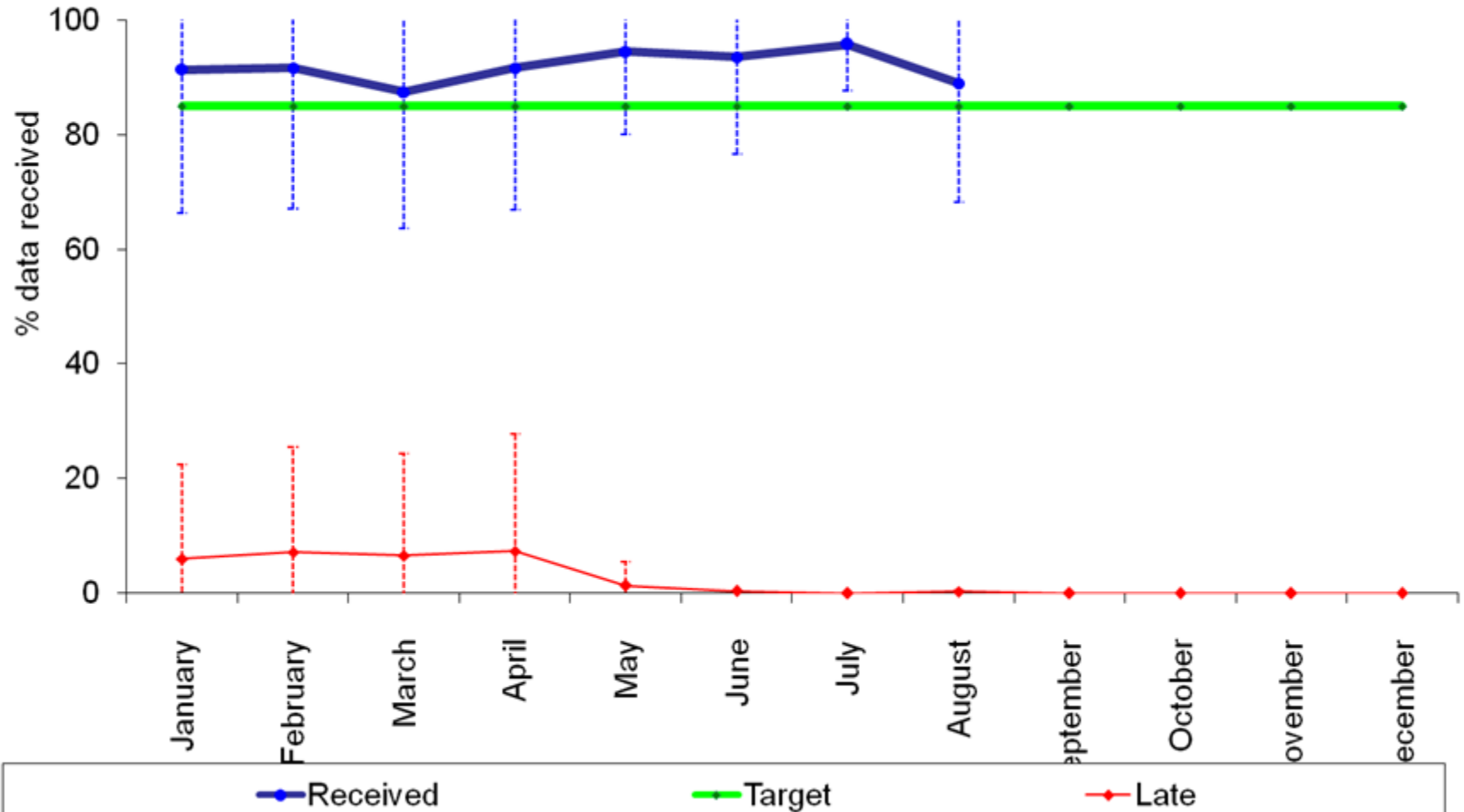
Archived Real Time Buoy Data Availability Statistics 2013 (Atlantic)





A tale of two coasts...Pacific

Archived Real Time Buoy Data Availability Statistics 2013 (Pacific)





Ship time challenges







- MSC moored buoy program has seen a year-over-year reduction in ship-time of 40%
- 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 visited for over 2 years.
- Discussions are underway with CCG to secure ship-time requirements, MSC may need to provide funding (CCG cost-recovery)
- We are also seeing private sector options, however concerns with capacity/capability to meet our requirements.

Drifting buoy deployments – Past 12 months

Arctic Basin

- 13 buoys (various types)
- 7 air deployed

Types of EC Buoys

	3 m (24)
	3 m Research (1)
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	TriAXYS (1)
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	Wave Rider Buoy (1)

North Pacific

- 2 MSC funded SVP-B
- 23 GDP baro upgrade
- Great work by PMO!

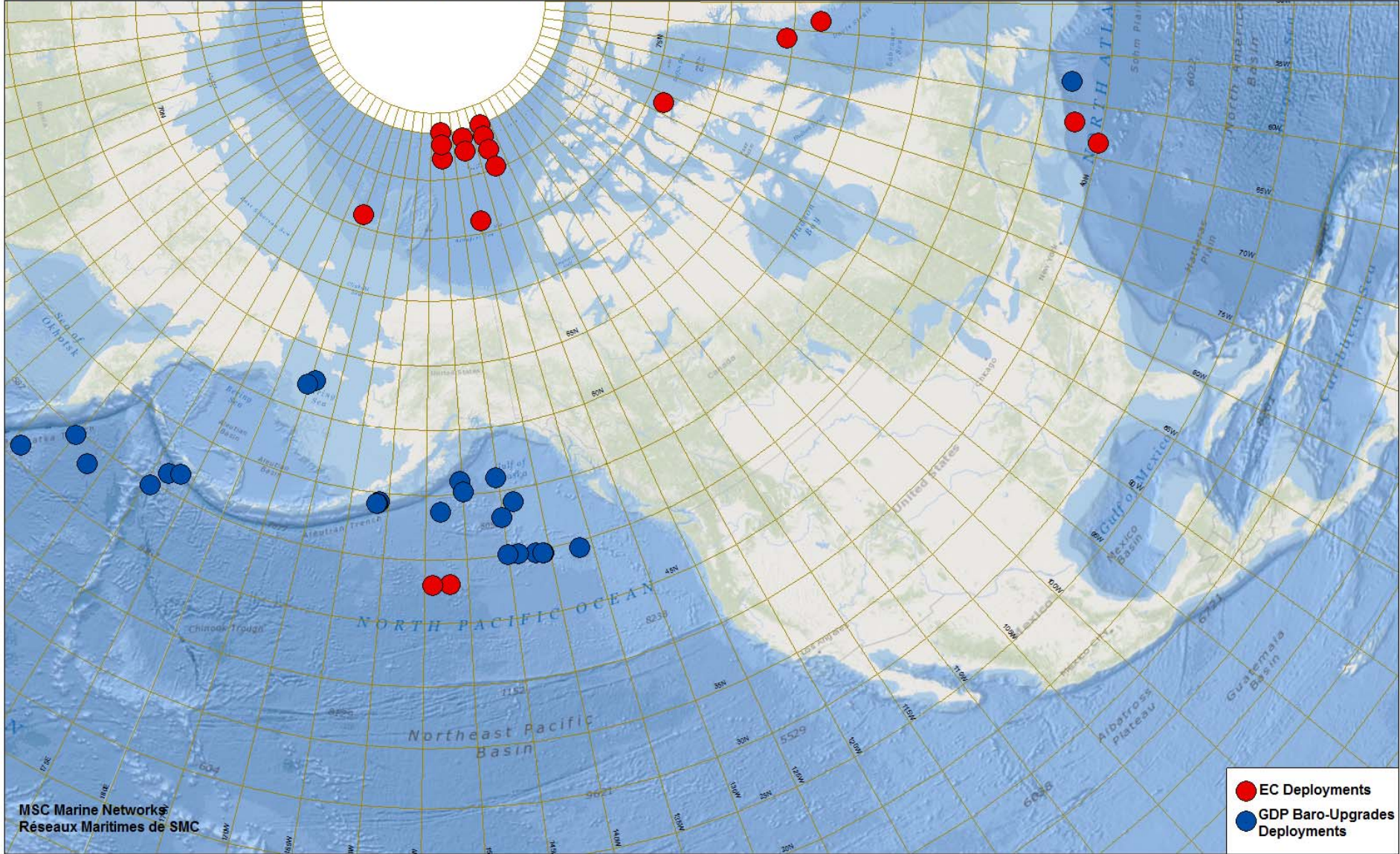
Northwest Atlantic

- 4 MSC funded SVP-B
- 1 GDP baro upgrade
- Deployments for Pierre

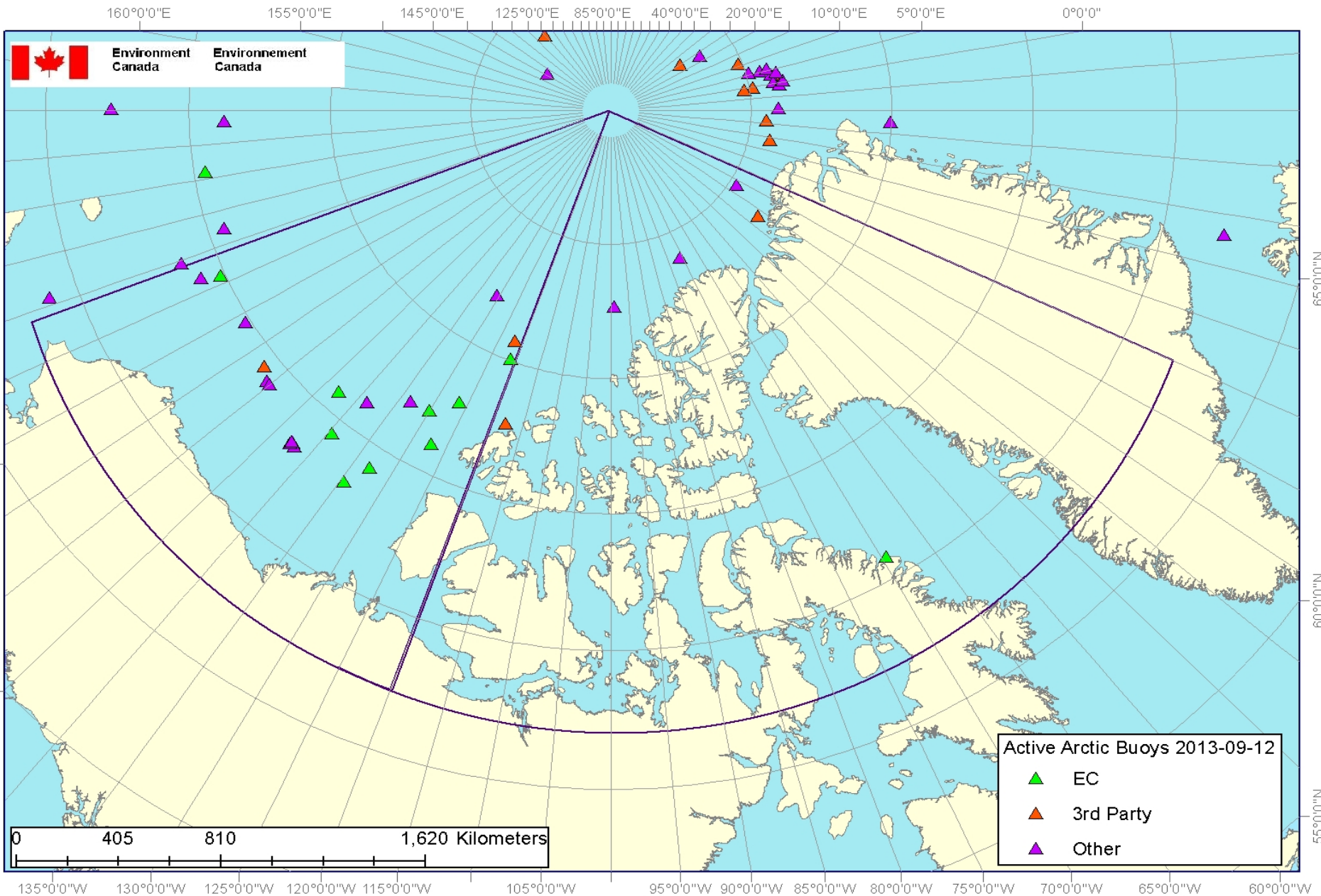
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Environment Canada and GDP Baro-Upgrades Deployments (Sept 2012 - Sept 2013)



Active Buoys in Canadian High Arctic - 2013 Sept 12



Data as of Sept 16, 2013



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 (?)
Drifter	5	6	20
Barometer Upgrades	20		
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 will have pressure obs.
- **13** buoys deployed in Arctic Basin in past 12 months (on-ice and in-water)
 - This has included Air Deployments of air deployable buoys via Royal Canadian Air Force C-130
- All MSC funded buoys will use Iridium telemetry (when possible), and be equipped with barometers.



New Initiatives

- Continue to work with Jou Beh Technologies and Scotia Weather Services to receive and route **third-party** buoy data to the GTS.
 - This includes the O-buoys and met parameters from IMB and other buoys
 - Data not available in BUFR format.
- Continue contribution to **PP-WET** – plan deployments of 2 Datawell for in-situ intercomparisons and SIO GPS buoys.
- Moving forward with procurement of “**Next Generation**” **Marine Payload** --- Tender to be issued fall of 2013.
- Planning for deployment of 2 buoys in support of the sailing venue for the PanAM games to be hosted in Toronto in 2015 – 1 buoy deployed this summer in Lake Ontario.
- Iridium SBD modems integrated into moored buoy transmitter module – providing redundant mode of communications for GOES, along with bi-directional capabilities.



Issues / Summary

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

Thank-you / Merci!

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Deployment of SVP-B August 2011 on the Grand Banks