



Environment  
Canada

Environnement  
Canada

Canada

# National Report for Canada

28<sup>th</sup> Session of the DBCP –

Fremantle, Australia

October 2-6<sup>th</sup>, 2012

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Environment Canada – Meteorological Service of Canada

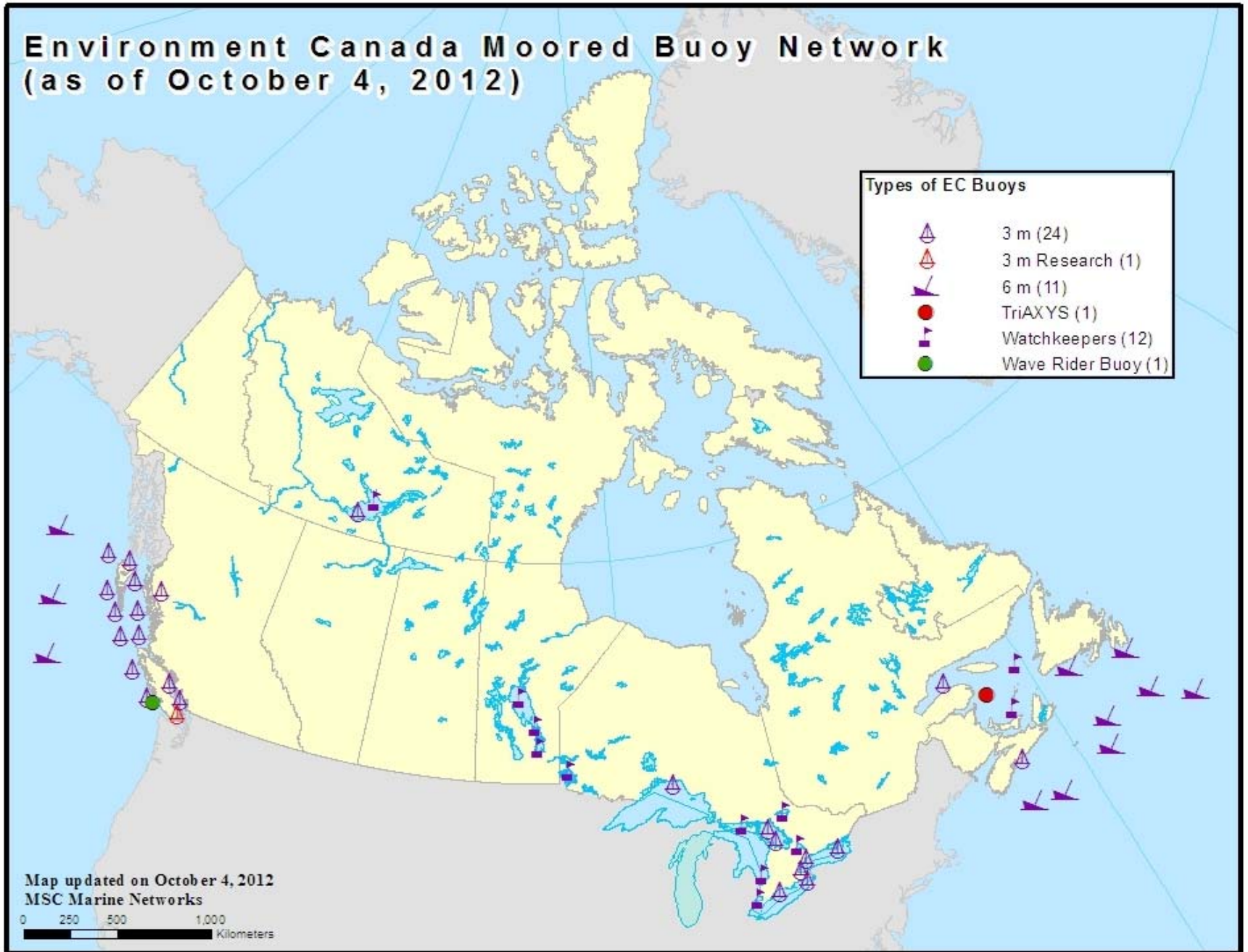
# Environment Canada Moored Buoy Network (as of October 4, 2012)

## Types of EC Buoys

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

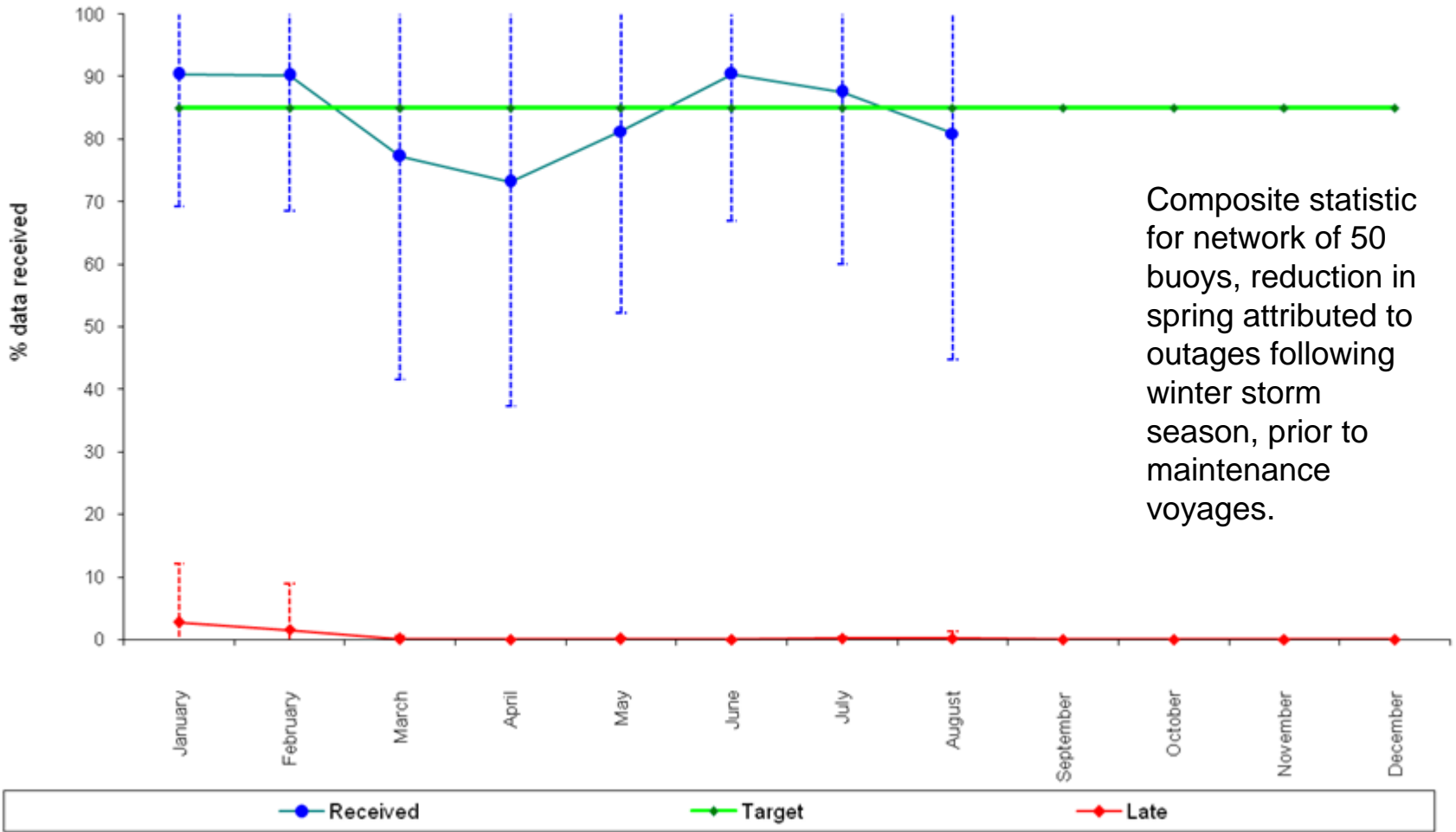
Map updated on October 4, 2012  
MSC Marine Networks

0 250 500 1,000  
Kilometers



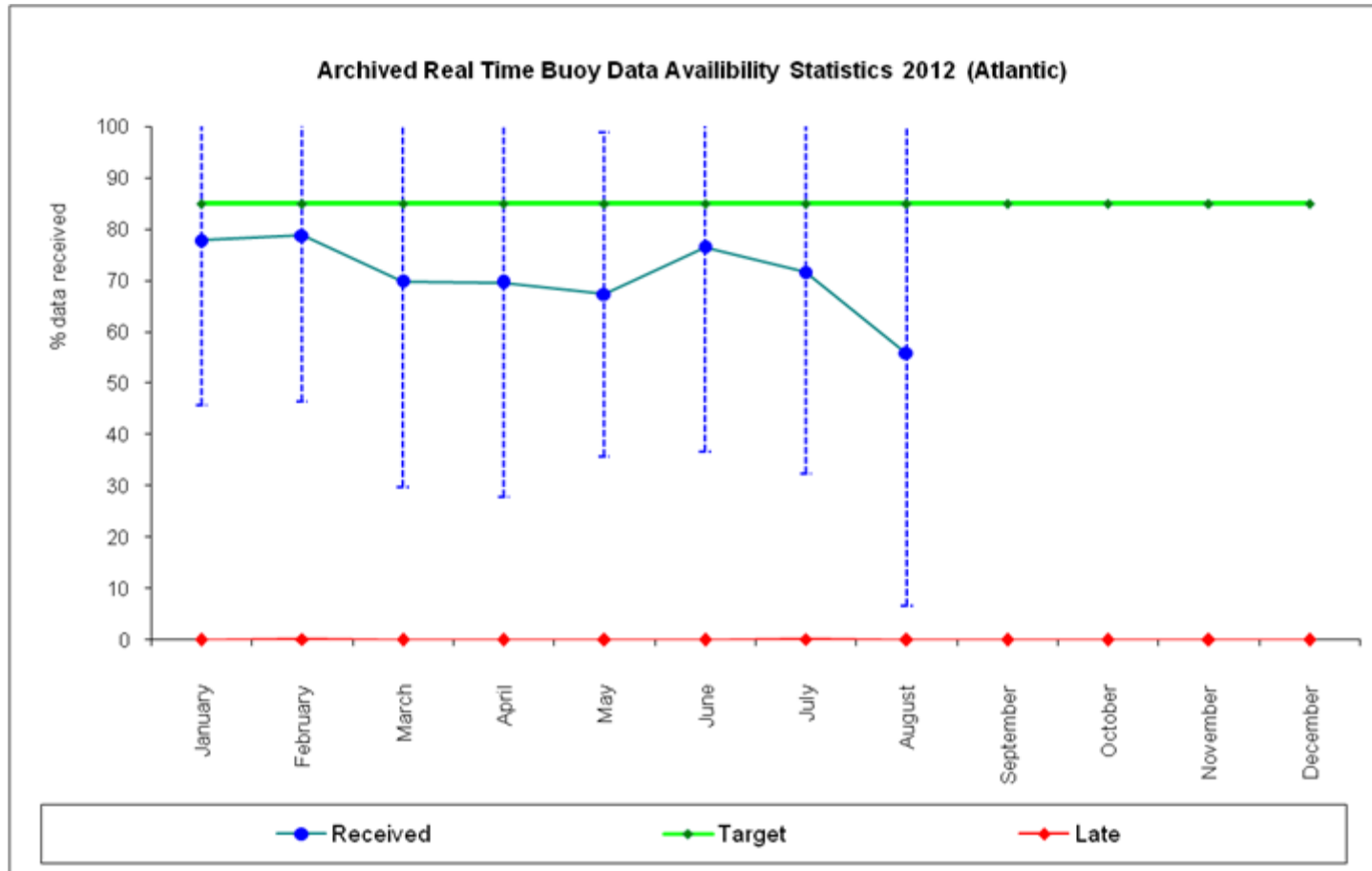


### Real-time data availability for MSC moored buoy network



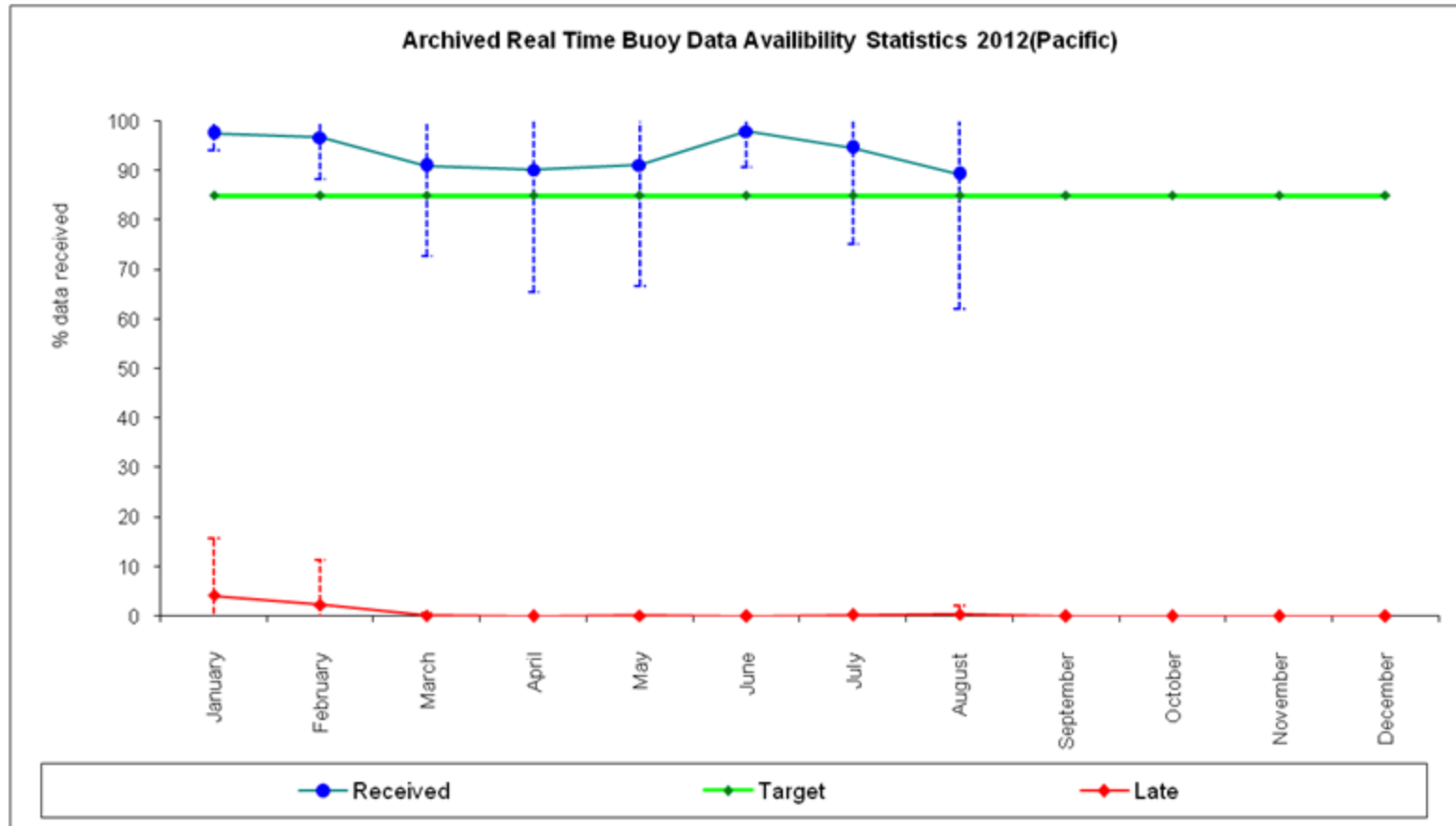


# A tale of two coasts...Atlantic

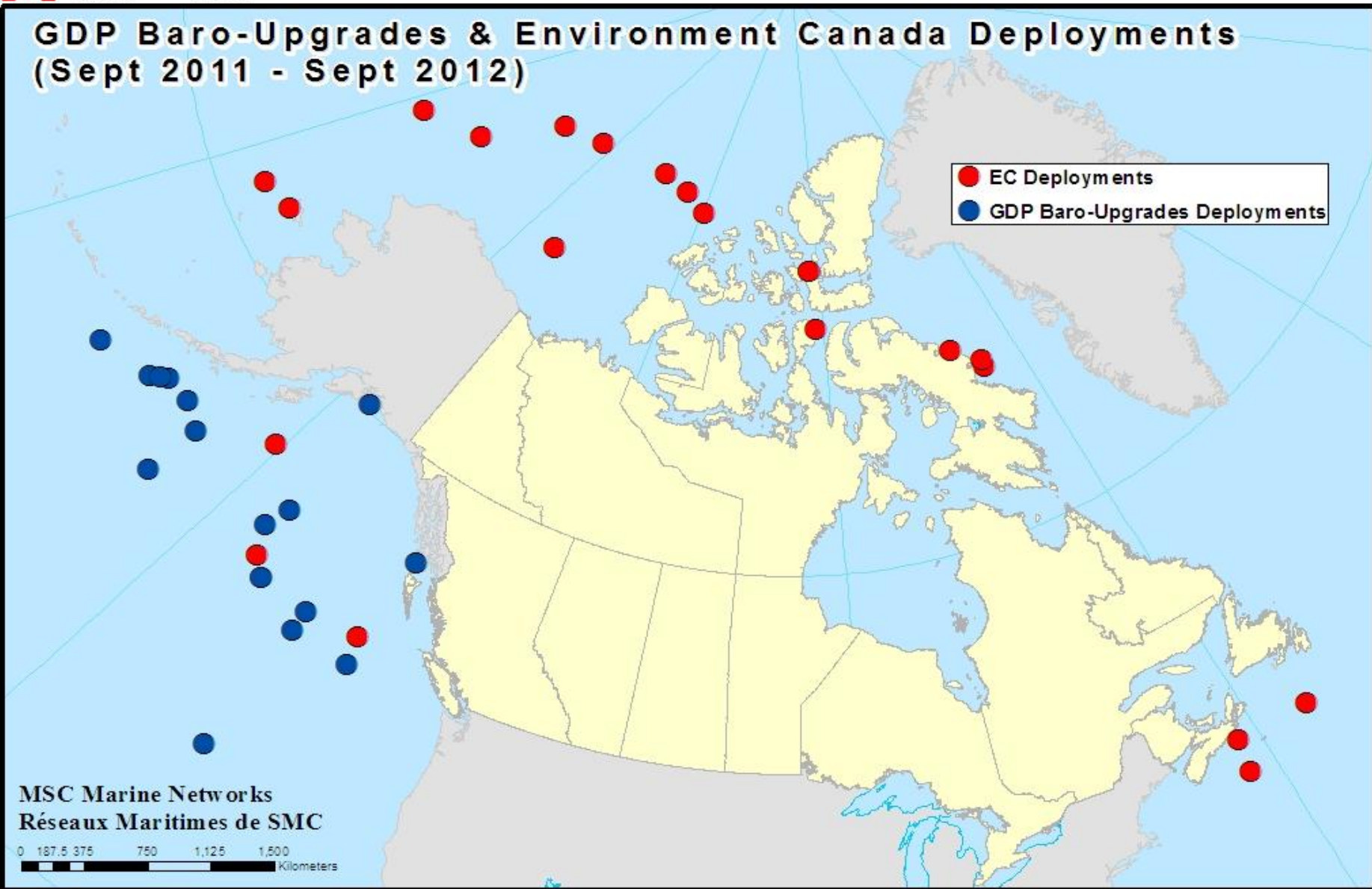




# A tale of two coasts...Pacific



# GDP Baro-Upgrades & Environment Canada Deployments (Sept 2011 - Sept 2012)

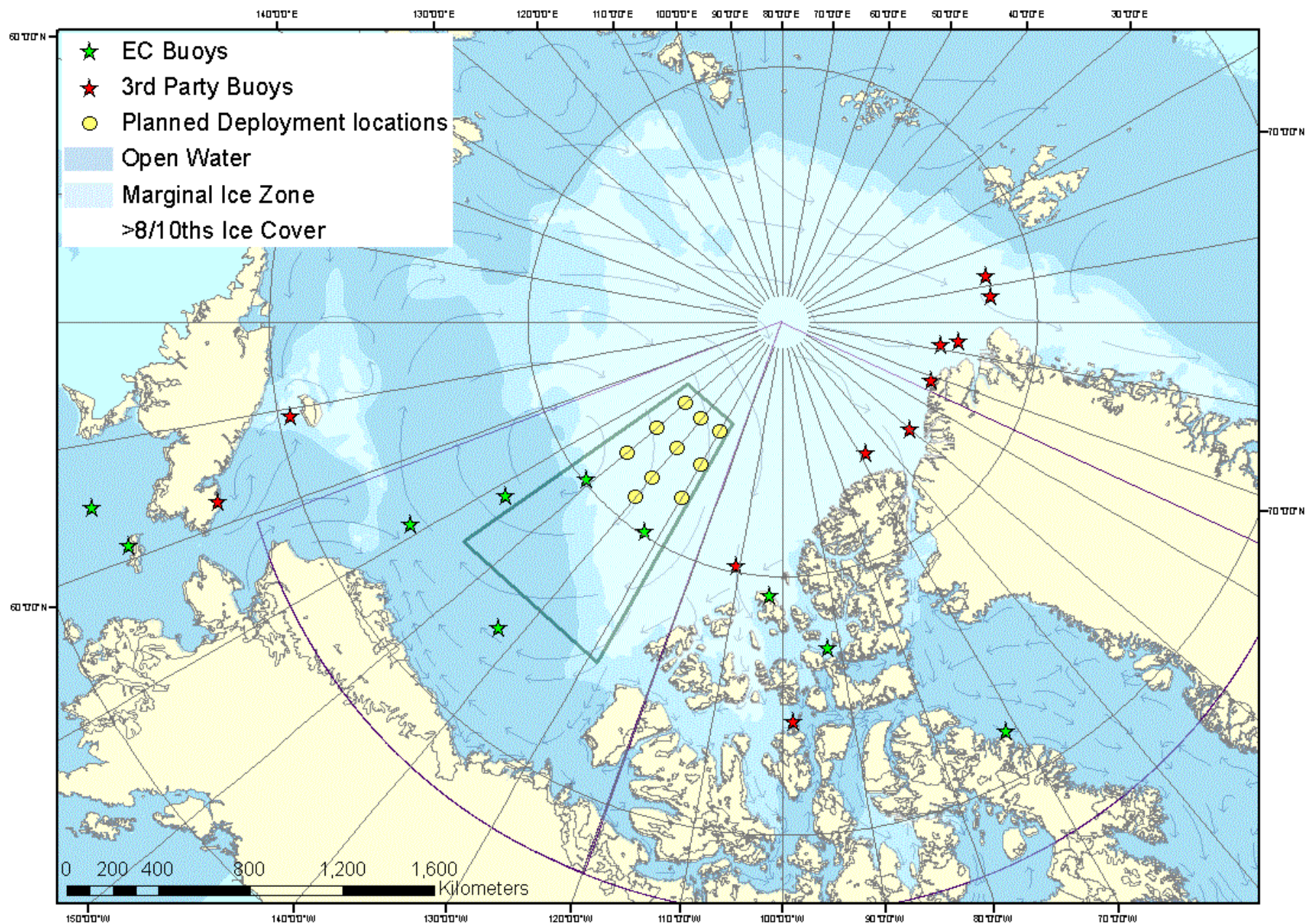


MSC Marine Networks  
Réseaux Maritimes de SMC

0 187.5 375 750 1,125 1,500 Kilometers



# EC-MSC Drifter Buoy Deployments in the Arctic - 2012





## Next 12 months Planned Buoy Deployments

|  | NE Pacific | NW Atlantic | Arctic Basin |
|--|------------|-------------|--------------|
| <b>Moored Buoys<br/>(maintain national<br/>network of <u>50</u><br/>buoys)</b> | 18         | 12          |              |
| <b>Drifter</b>   | 5          | 6           | 15           |
| <b>Barometer<br/>Upgrades</b>  | 20         |             |              |
| <b>Datawell<br/>waveriders</b>   | 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.
- **22** buoys deployed in Arctic Basin in 2012 (on-ice and in-water)
  - This has included Air Deployments of ICEX Air buoys via Royal Canadian Air Force C-130
- We have ramped up deployments in North Pacific --- 21 deployed last year, planning for 25 next year
- All MSC funded buoys will use Iridium telemetry (when possible), and be equipped with barometers.



ENV

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UNITED STATES AIR FORCE  
WITFIELD  
TIR-13-1016  
REF 2016

TIR-13-1016





## 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.
- Moving forward with procurement of “Next Generation” Marine Payload --- RFI have been concluded, planning for competitive procurement in Q1 2013. New solution will be used for all moored buoys and ship-based AWS.
- 3 buoys deployed in Gulf of St. Lawrence in support of National Marine lab to help verify wave models in closed basin with variable fetch.
- Planning for deployment of 2 buoys in support of the sailing venue for the PanAM games to be hosted in Toronto in 2015 (buoys required in summer of 2013).



## New Initiatives

- 50% of Moored buoy network now equipped with SUTRON SatLink2 40W GOES transmitter. Expected to roll out to remainder of the network by end of 2012.
- Have worked with AXYS Technologies to integrate Iridium communications into moored buoy platform – very promising results.
- Mooring Life Cycle – We have had 4 mooring failures in past year, working towards more proactive LCM of moorings.
- Continued collaborating with NDBC:
  - Excellent meeting hosted by NDBC in February this year, EC planning to host NDBC staff in Canada --- opportunities for collaboration
  - Continued interaction between technical staff (NDBC sent a representative to EC National Buoy Meeting last December).



# 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 will be a challenge retirement of key staff, and budget constraints.



# Airborne surveillance of NOMAD

SSC MSS 6000 Mission: TC951-2012-003 VIDEO  
 Video: 2012-04-18 18:41:19 N48°21.58' W133°53.73' 331° 997 ft 157.3 kts EO/IR  
 EO/IR: N48°21.56' W133°54.54'  
 Aircraft: 2012-04-18 18:41:19 N48°21.58' W133°53.73' 331° 997 ft 157.3 kts





Thank-you / Merci!

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Deployment of SVP-B August 2011 on the Grand Banks