Engaging stakeholders as part of the MSC Services Strategy

World Weather Open Science Conference
Palais des Congrès, Montréal
August 17, 2014

Grace Koshida, Jamie Smith and Ken Macdonald
Meteorological Service of Canada, Environment Canada
Outline of Presentation

• Mandate
• What we do
• Who we serve
• MSC Services Strategy – a new approach
Canada’s Weather Services Challenge
...A large country with a modest tax-base

- Vast geographic area of responsibility
- Country of significant weather and climate extremes
- Little infrastructure North of 60
- Shared responsibility
Today’s Meteorological Service is a complex scientific & technical enterprise

International Cooperation and Stakeholder Engagement

Real-Time Monitoring

Analysis & Prediction

Forecast and Warning Delivery

Research & Technology

Prediction Models

Supercomputer

Storm Prediction Centers

[Diagram showing various components and processes related to meteorological services]
What we do: Monitoring and Data Services

- **Weather and Climate**
  - Mix of 800 staffed and automatic stations reporting hourly
  - 850 Volunteer Climate monitoring stations
  - Satellite and upper air measurements

- **Marine**
  - Moored and drifting buoys
  - Arctic ice beacons
  - Voluntary observing ships

- **Water**
  - 2800 stations that measure water levels and flows on rivers and lakes across Canada

- **Partners**
  - Provinces and Territories
  - International Contributions
What we do:  
Observations and Monitoring

- MSC is recognized as the authoritative source of multi-hazard, multi-scale alerting information
- But there are gaps in the current monitoring system
- There are opportunities to consolidate and add monitoring information in Canada
Who we Serve:
Our Core Public Good Mission

• Our 24/7 services are highly valued by Canadians:
  – Canadians experience high impact weather all year long from coast to coast to coast, generating significant media interest
  – Annually EC produces 1.5 million weather forecasts, 15,000 severe weather warnings, 500,000 aviation forecasts and 200,000 marine, ice and sea-state forecasts
  – The Weatheroffice website registers over 50% of all government web visitors – on the order of 50 million visitors per month
  – Over 90% of Canadians access EC weather information on a daily basis with 50% using it to conduct their daily business
Who we Serve: Enabling Performance within the Federal Family

• We support safe and efficient government missions at home and abroad with our weather, ice and climate services:
  – National Defence (DND) operations in the North and abroad
  – Canadian Coast Guard (CCG) patrolling coastal waters
  – National Search and Rescue operations
  – Agriculture and Agri Food Canada (AAFC) drought monitoring
  – Health Canada with radiological network, air quality monitoring and forecasts
  – Canadian Forestry Service supporting forest fire threats and fire fighting
  – Public Safety for national security and emergency management
Who we serve: Supporting Decision-Making with Climate Information

- Climate records inform building infrastructure design codes and standards
  - Provinces, territories and municipalities
  - Engineering organizations
  - Standard bodies
- Seasonal and inter-annual climate predictions
  - Provide predictive statistics of various climate variables
  - Inform adaptive strategies
How we do it: A Variety of Dissemination Tools

- Weatheradio transmitters and repeaters
- Broadcast Media Partnerships
- Telephone consultation with businesses, media and public
- Weatheroffice Website

[Map of Canada with Weatheradio transmitters and repeaters, Weatheroffice website, and Broadcast Media Partnerships icons]
MSC Services Strategy 2013-2023

• VISION: All Canadians will readily incorporate weather, water, and climate information provided by the MSC into decisions that affect their safety, health, quality of life and economic prosperity.

• Services refers to:
  – Provision of data, information, knowledge, tools and advice about weather, climate, air quality, ice and water.
MSC Services Strategy 2013-2023

• Principles
  – User focus: client and user needs will be identified, evaluated and prioritized through effective engagement
  – Service orientation: external and internal influences will be evaluated from a service perspective
  – Transparency: levels of service will be defined and communicated based on a core set of service delivery criteria
  – Nimbleness: organizational and governance structures will facilitate an efficient and effective service delivery and enable timely advancements
  – Rigour: service delivery based on QMS (Quality Management System) used in MSC
A cultural change is needed

- In order for the MSC to develop a more effective service, MSC plans to:
  - Engage stakeholder and users to better understand their decision-making processes and needs;
  - Manage stakeholder/user feedback to ensure communication throughout MSC’s entire services value chain;
  - Understand MSC’s current and potential future capabilities;
  - Work with stakeholders/users to jointly develop products and services that are useful and useable;
  - Disseminate products effectively;
  - Guide stakeholder/users in the interpretation and use of MSC’s products and services;
  - Identify emerging technologies and networks that offer opportunities for enhanced or innovative products.
What is changing: Observations and Monitoring

• Several federal organizations are critical to observations and monitoring, and could be consolidated (FGP-Federal Geospatial Platform)
• Canada's Action Plan on Open Government
• Open Data by default
• Data.gc.ca: gathering all the data on one portal
What is changing:  
*Observations and Monitoring*

- The Canadian Network of Networks (NoN) is one initiative to improve the overall quantity, quality and accessibility of hydrometeorological data in Canada.
- NoN is a voluntary, collaborative and multi-participant approach to supplement our core monitoring that will encourage and facilitate timely and open exchange of data among many contributors.
- Some private companies are also potential partners (e.g. WeatherFarm has over 1000 stations, providing considerable support for Agriculture in the West.)
- Universities are making modest contributions in terms of coverage but essential for innovation.
What is changing: Observations and Monitoring

Original – EC network

Preliminary mapping results
What is changing: 
**Advanced access for all Canadians to MSC information**

- Implementing new ways of disseminating weather, water and climate information
  - More than 70% of Canadians have cell phones, smart phones and other wireless devices
  - Revamp web presence
  - Robust automated online data extraction system
  - Enhance web-based tools to access and analyse information (graphs, maps)
Conclusion

• MSC has reorganized to facilitate an efficient and effective service delivery and enable timely advancements.

• In order for the MSC to provide a more effective service, we need to:
  – better understand the decision making processes of clients and users,
  – determine their requirements, and
  – improve access to observational data and products in formats that are relevant and useful to them.
Thank You!

Questions?

Grace Koshida (grace.koshida@ec.gc.ca)
Jamie Smith (jamie.smith@ec.gc.ca)
Ken Macdonald (ken.macdonald@ec.gc.ca)