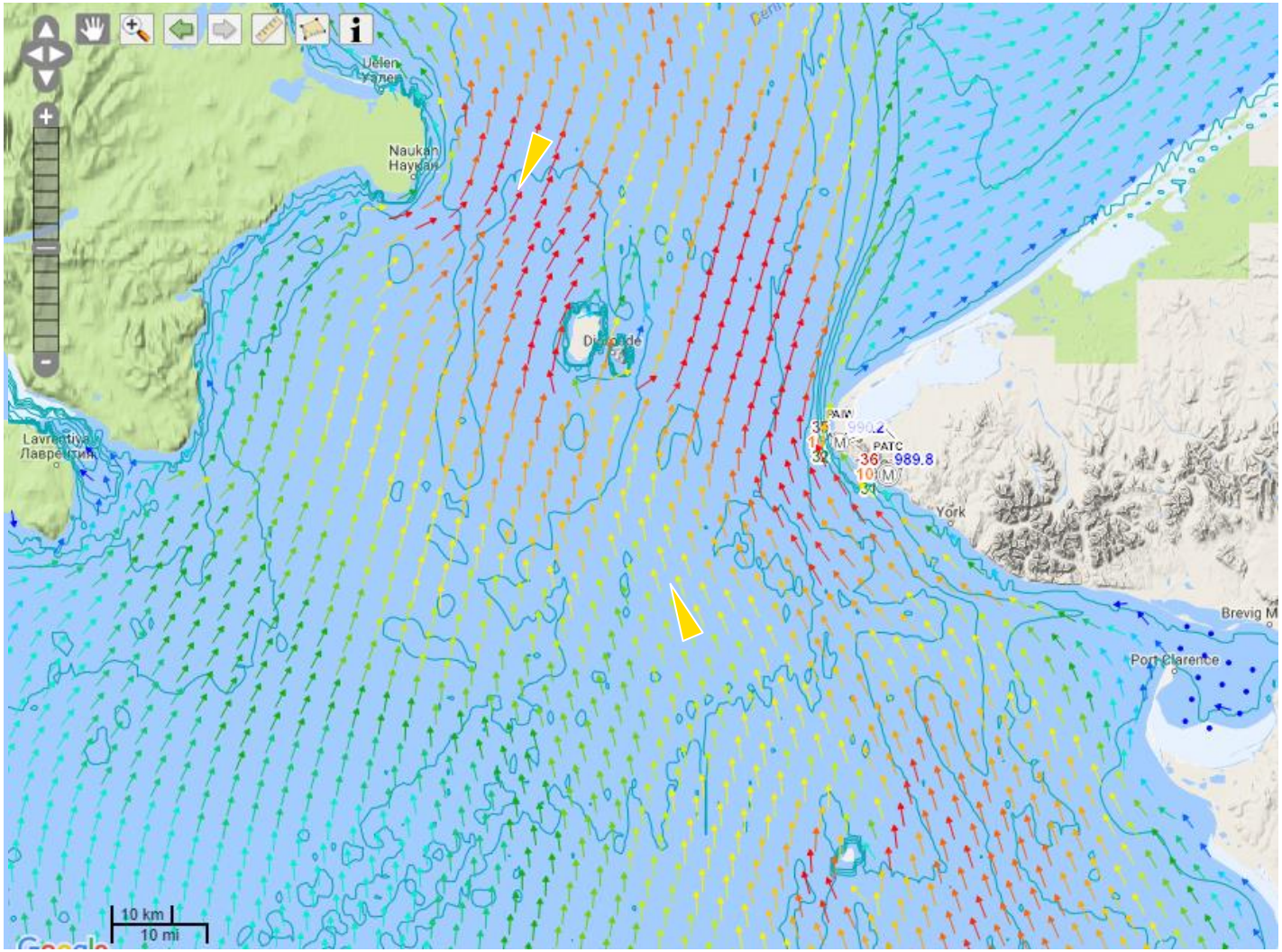
Maritime Environmental Response Scenario

Vision of an operational AIFC

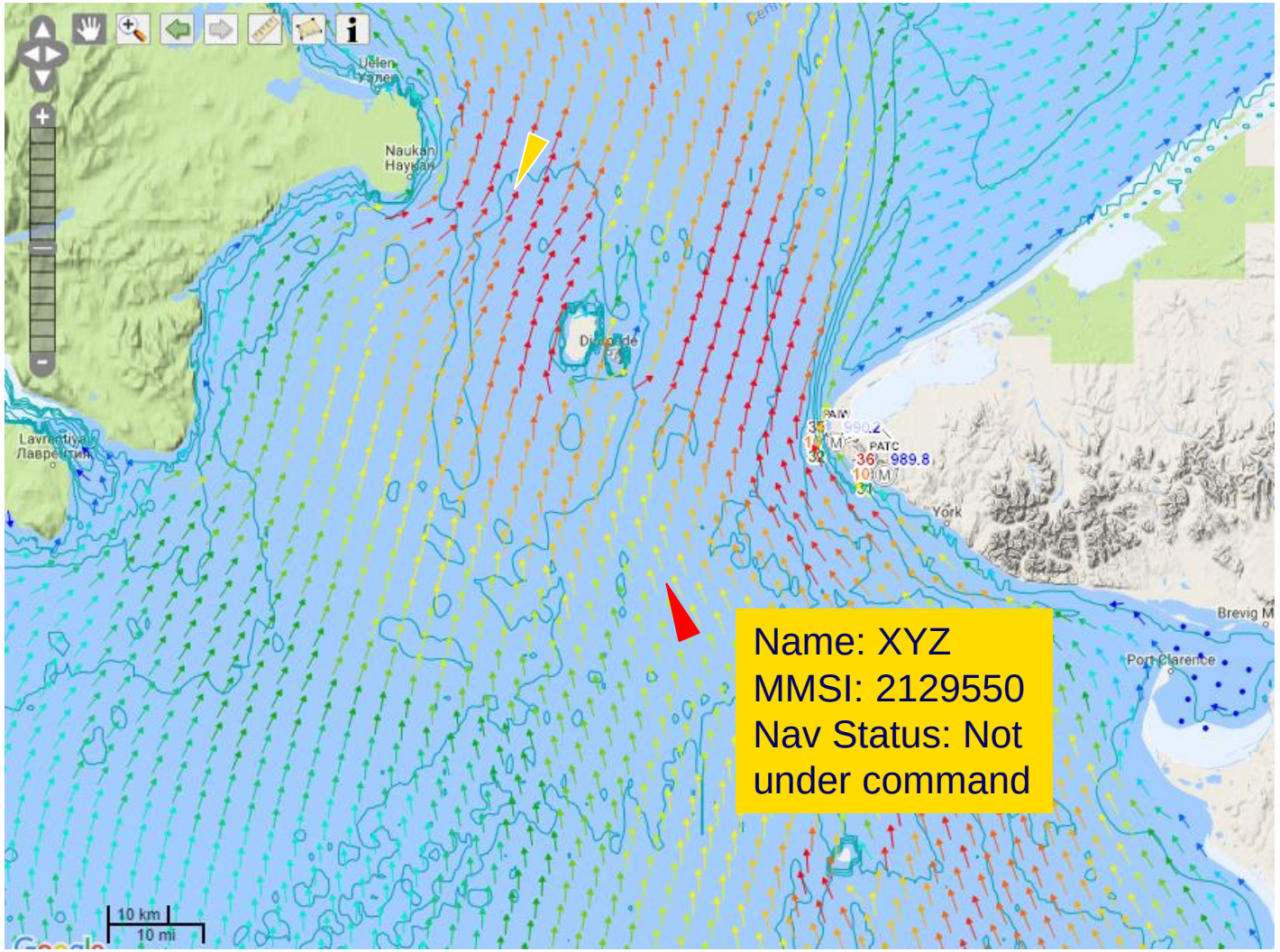
Mission Specific Operating Picture



Overall Situational Awareness with Layers such as

- Vessels
- Ice
- Bathymetry, Currents, etc.

Alert – Vessel in Distress

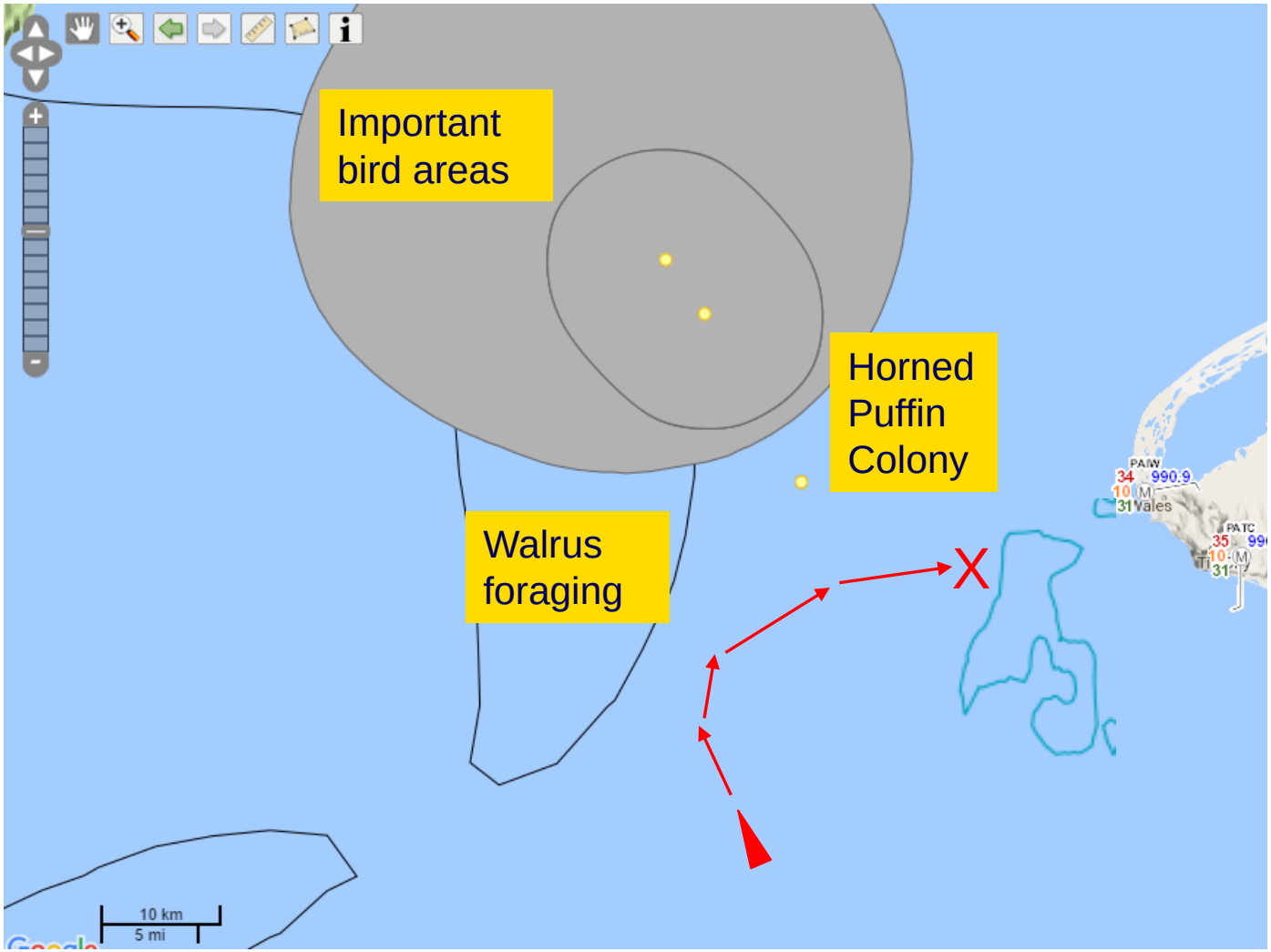


Vessel in distress – loss of power

- Reported by vessel
- Dangerous situation detected by AIFC

Access to vessel information

Fusion of Drift, Sensitive Areas

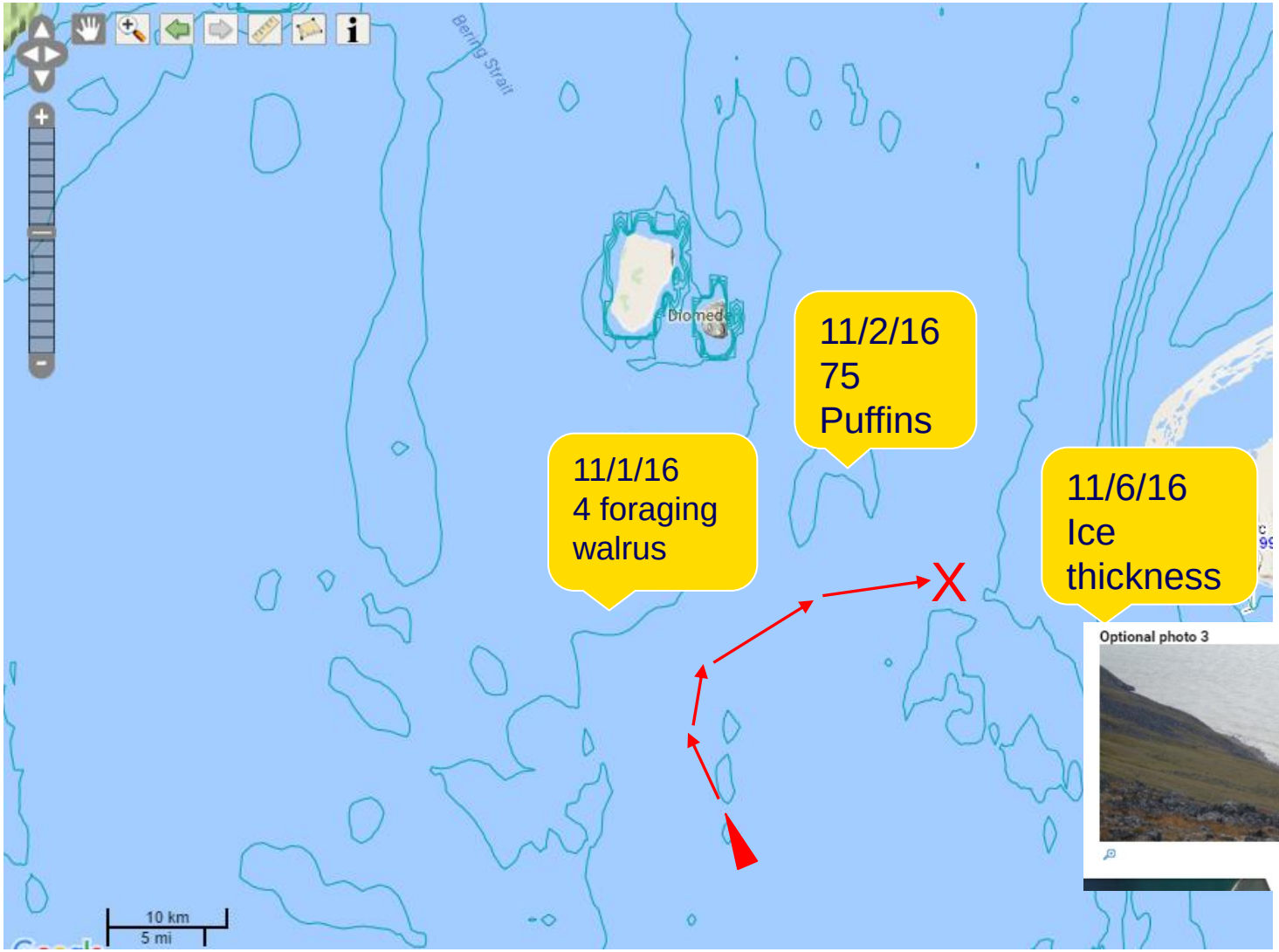


Relevant environmentally sensitive areas, ice projections, bathymetry are fused by AIFC with the projected drift path

Command center deploys and tracks response units

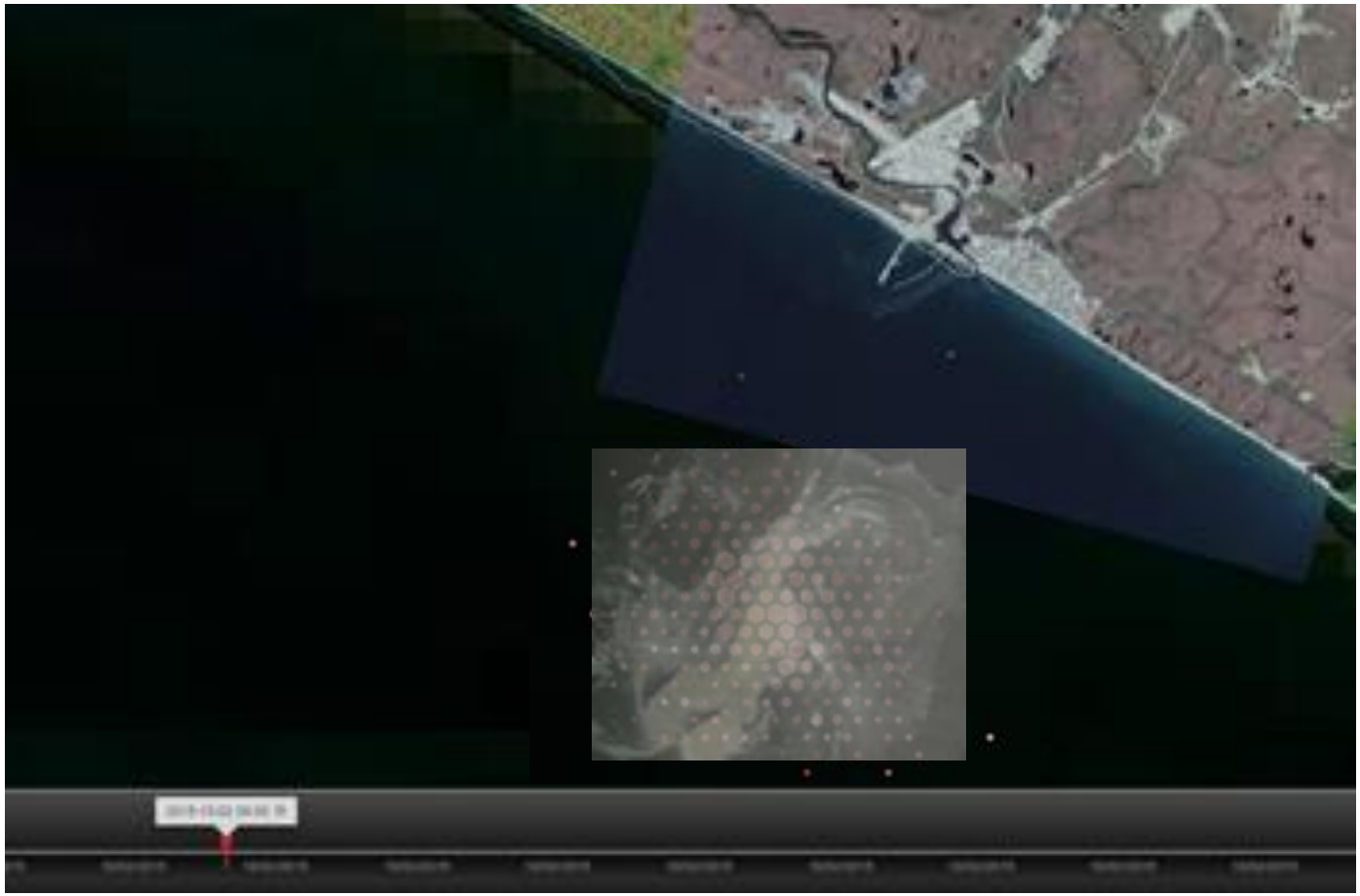
AIFC helps determine the danger of grounding, ice hazards

Additional MDA from CBONS



Reports from Community-Based Observer Networks can help verify risks and provide additional context

Vessel Aground – Leaking Oil



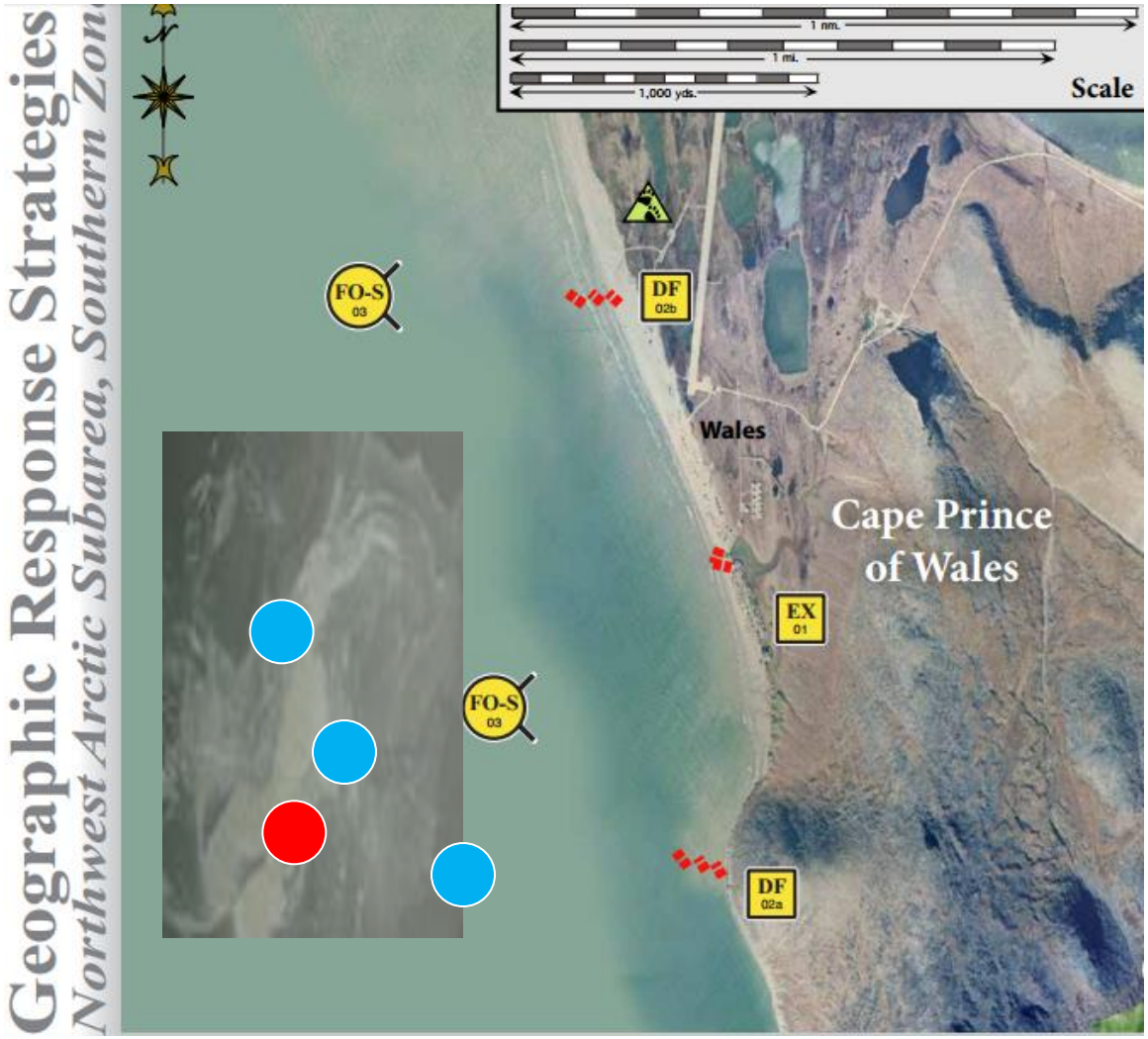
Fuse with satellite or aerial imagery of current spill area

Run on-demand model of oil spill trajectory from point source or drifting vessel

Can visualize with real-time density plots for better response for high-volume areas

GNOME-2 accounts presence of sea ice near and under the surface

Spill Response



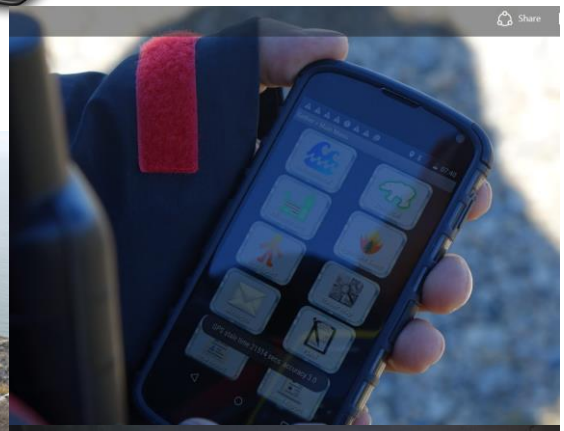
Run on-demand model to compute high-resolution currents and tidal surge for impacted area

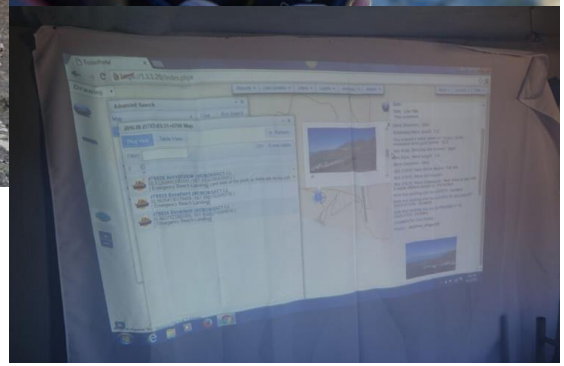
Provide information for informed OSRO response

In longer-term recovery, oil readings (potentially under ice) mapped via AUV

Response Coordination

The Field Information Support Tool (FIST) provides rapid decision support for responders





Hand-held interface supports off-grid communication and CBO data to be used during a response, domain awareness with fusion portal

Provides first responders with ship, facility, physical environment topography, medical information, critical information on local details such as beach landings