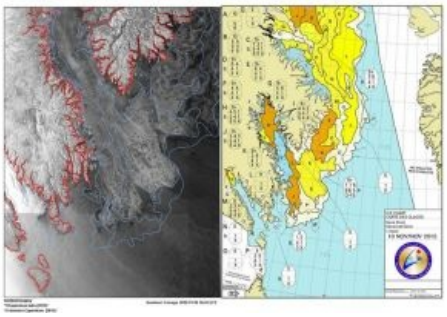
Assisting Ice-breaking with Satellite Data



Radar satellite data like those from Sentinel-1 can provide day and night information, through clouds, of entire coastal areas even during harsh weather. This is especially important during the winter months, when conditions can be very unfavourable at northern latitudes. Sentinel will allow the Canadian Ice Service of Environment Canada to offer better information on sea ice, helping mariners to avoid it or to find the safest route.

Sentinel-1 is dedicated to providing information for a range of practical applications for Europe's Copernicus environmental programme.

Iceberg Detection and Sea-ice Monitoring

Desmond Power, vice president of Remote Sensing at the Center for Cold Ocean Resource Engineering , explains to always having found it challenging to get the satellite data needed with the right balance of resolution and coverage, because the iceberg detection and sea-ice monitoring services compete with other maritime services that demand lower-resolution data.

Sentinel-1 gives a coverage and resolution balance to be used for both applications. The planned mission means that wide regions of interests are effectively covered with a reasonable repeat frequency. Using Sentinel-1 as a baseline, it is possible to more effectively integrate Radarsat-2 and other third-party radars to provide a complete maritime surveillance solution.

Environment Canada will use Sentinel satellite imagery to increase the frequency of monitoring Canadian waters for potential oil spills.

Following ESA's recent Sentinel agreement with Canada, the Canadian Space Agency will act as an interface between ESA and national initiatives from Canadian private and public organisations.

Image: