

# Polar View

By Naomi Francey, Education Support Officer

Elsewhere on this site I covered ESA's leading environmental satellite Envisat. In this issue I have decided to cover another satellite project called Polar View. You are probably thinking I'm obsessed with satellites, well I may be, but I've just realised how amazing they really are and just want to share their abilities with people like yourself!

## “Shrinking ice shelves suggest warming sea temperatures”

There are nine different countries involved with Polar View, including the United Kingdom. It's a joint initiative devised by the European Space Agency and the European Commission with assistance from the Canadian Space Agency. Polar View's main purpose is for monitoring and forecasting services in the polar regions, but also to collect data from mid-latitude regions, for example snowfall in central Europe. Polar View uses data from orbiting satellites such as Envisat and Canada's Radarsat-1 to scan various aspects of polar landscapes which include icebergs, river and lake ice, glaciers, snow cover and ice edges. By observing locations such as these, Polar View gathers data such as ice thickness which can be monitored over the years to measure any changes that occur. It can monitor the extent of ocean coverage of ice shelves, which allows identification of retreating shelves. Shrinking ice shelves suggest warming sea temperatures. Polar View not only measures current data but also has a forecasting service which can give detailed 48 hour forecasts or less precise ten day forecasts. It can predict ice motion which includes direction and velocity, ice thickness, ice concentration and total ice thickness. The majority of these forecasts are used by shipping companies as the polar oceans pose



**The Coldest Place?** A British Antarctic research vessel trudging through sea ice on its way to Rothera Research Station; this is just one example of the harsh polar environment.

a greater transport risk than other waters. These predictions allow them to plan their route safely.

The data that is received by Polar View is used by various groups including governmental institutes, research groups and northern residents. Inuit people in the Far North rely on the data as the ice edges which they use to move from village to village are becoming unpredictable due to global warming. Polar View assists the Inuits by showing them where there are potential thin ice areas and allows them to take a safe passage. Governmental institutes can use information from Polar View to improve flood prediction and prevention methods which is extremely important, especially since flooding is becoming a more frequent occurrence.

## “...Inuit people rely on Polar View data”

Polar View helps to develop maps of the Polar Regions and has greatly improved records; it contributes greatly to global ice data. In the past decade it has become increasingly well-known how important our polar landscapes are and how

they must be protected. With global warming causing retreating ice shelves this is already proving to have environmental and economic implications. This fragile landscape is under threat but with satellites such as Polar View specializing in such regions it will improve data records helping us to understand more about the unique wilderness, which in turn will help us manage it in a sustainable manner.

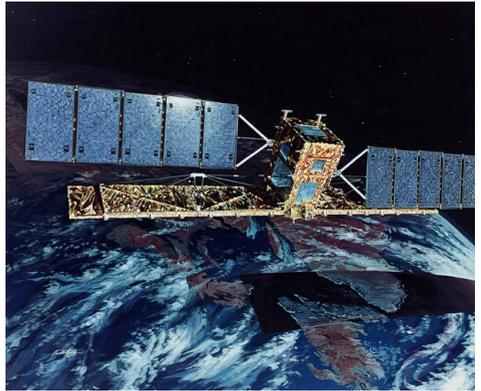


Image Credit: Canadian Space Agency

**RADARSAT-1** is the Canadian Space Agency's earth observation satellite. It has continued operate well over its planned five year life, RADARSAT-2 is due for launch this month.