

Using satellite data for assessment of Canada's landmass response to climate changes.

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Reducing Canada's vulnerability to climate change

Ecozones

Ecoprovinces

Ecoregions

Parks

STRATIFICATION

Mean NDVI July - August

Landcover Histograms

MEAN NDVI

HISTOGRAM

NDVI trend 1990 - 2002 and profiles

NDVI TREND

This poster describes the ongoing work developed under Activity 7 of the Earth Science for National Action on Climate Change project dedicated to assessing the 1985-2005 record of satellite data to be used for derivation of climate change indicators. Such indicators at various scales and stratification strategies will allow time series analysis aimed at determining environmental trends across Canada with potential to stimulate integrated decisions regarding vulnerability and additional research needs. This activity has largely focused on improving the quality and relevance of the data, information generated, and on streamlining data flows in order to maximize the data utility and ease of use for all involved in climate change and sustainability research. Long-term measurements will facilitate a spatial evaluation of a selected set of indicators aimed at monitoring and predicting the impact of climate change on human health, environment and industrial development. The work presented here shows the initial development of a web-based tool for visualization of climate change indicators derived from EO data planned to be accessible to the general public. Presently, this information includes land cover distribution, spatial and temporal representations of normalized difference vegetation index (NDVI) as well as animations of 10-day image composites for selected time periods. Land cover and temporal NDVI information is accessible for different approaches to landscape stratification including ecozone, ecoprovince, ecoregion, and national parks. The information presented provides a user friendly means to evaluate changes in vegetation dynamics through space and time. Fully develop it will provide complete national wide coverage of surface parameters which are indicative of climate change effects including land cover, phenology cycle, lake water temperatures cycle, lake freeze-up/breakup dates, albedo cycle, etc.

10 days composite NDVI

10 days composite NDVI zoomed images and animation's window