and natural disasters; risk mitigation and impact mapping; and environmental monitoring and change detection.

Remote sensing is also being used

- in agricultural applications, to assess crop type and crop conditions, to estimate crop yield, and to map soil characteristics and soil management practices

- to contribute to the mapping and monitoring of surface water resources

- in forestry applications related to climate change monitoring to estimate net primary productivity in forest systems using measures of vegetation parameters such as greenness, growing season length, leaf area index, fraction of photosynthetically active radiation, and absorbed photosynthetically active radiation

- to monitor disasters, such as floods, oil spills, forest fires, hurricanes, and volcanic eruptions

- to monitor weather, sea state, and ice conditions, and as a key element of Environment Canada's meteorological forecast systems.

The transfer of remote sensing technology to developing countries takes place under such programs as GlobeSAR-2, which links Canada to countries in Latin America. The goals of the program are to build a capacity in radar remote sensing in the participating countries; demonstrate applications of RADARSAT for use in priority areas of natural resource management, as identified by participating countries; and support the establishment of linkages between Canadian public and private institutions and their counterparts in Latin America.

Forest Component of Earth Observation for Sustainable Development

Natural Resources Canada's Canadian Forest Service is cooperating with the Canadian Space Agency to develop the Earth Observation for Sustainable Development (EOSD) program. EOSD will rely mainly on Landsat, RADARSAT, and hyperspectral images to monitor land cover, biomass, and disturbances. The program will support and improve Canada's National Forest Inventory by adding seamless satellite coverage to data sets derived from air photo and ground plots. EOSD also develops automated systems to speed the analysis of large volumes of images required to cover Canada's large land base.

High-Speed Connectivity and Network-Based Information Systems

Canada is working to advance information technologies in a variety of ways. A leading example is the Government of Canada's cooperation with CANARIE Inc. (Canadian Network for the Advancement of Research, Industry, and Education). In keeping with its mandate to accelerate Canada's advanced Internet development and use, CANARIE recently launched CA*net 3.