

Explanation of the Front-Cover Map: *Draft Level I Ecological Regions of North America*

MANY OF THE ENVIRONMENTAL ISSUES THAT WE FACE TODAY are ecosystem in scope and do not correspond to jurisdictional or administrative boundaries. Adopting an ecosystem approach to environmental resource management and risk assessment requires an understanding of the spatial nature of ecosystems as well as knowledge of their interrelationships, capacities, and resiliency to stresses caused by human activities. A descriptive ecoregional framework is an essential element for the ecological approach to be applied effectively across jurisdictional boundaries. An example of an intermediate application of the framework involves North American Free Trade Agreement (NAFTA) decisions that will have an effect on ecosystem quality and characteristics.

The map on the front cover of this issue, the *Draft Level I Ecological Regions of North America*, depicts the coarsest level of the hierarchical framework that has been jointly prepared by the State of the Environment Directorate (Environment Canada), the National Institute of Ecology (Secretariat of Social Development, México), and the Environmental Research Laboratory (United States Environmental Protection Agency). The approach used to compile the map is based on the premise that ecological regions can be identified through the analysis of the patterns and the composition of biotic and abiotic phenomena that affect or reflect differences in ecosystem quality and integrity (Wiken 1986; Omernik 1987, 1995). These phenomena include geology, physiography, vegetation, climate, soils, land use, wildlife, and hydrology. The relative importance of each characteristic varies from one ecological region to another, regardless of the hierarchical level.

The map represents an approximation based on comments from numerous contributors and the source material listed below. To maximize consistency in the definition of ecological regions and thereby increase the usefulness of cross-boundary applications, revisions to the map are planned. These refinements will follow developments in the process of ecoregionalization, clarification of the meaning of the term "ecosystem" across agencies and countries, and the attainment of a convention regarding the generalization and naming of regions.

Key Sources

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- Wiken, E. 1986. *Terrestrial ecozones of Canada*. Ecological Land Classification Series No. 19. Environment Canada, Ottawa.