

## Conserving Biodiversity Pays: The Values of Ecosystem Services

In this, the International Year of Biodiversity, the 2010 RCEN Annual Conference is focusing on biodiversity across Canada and our planet.

Biological diversity – or biodiversity – is the term given to the variety of life on Earth and the natural patterns it forms. It is this combination of life forms and their interactions with each other and with the rest of the environment that has made Earth a uniquely habitable place for humans.

Yet over the last 50 years, humans have had more impact on ecosystems than at any other time in history<sup>1</sup>. Loss of both species and ecosystem diversity has occurred as a result of habitat loss and alteration, over-exploitation, climate change, and the spread of invasive species into pristine environments. The current rate of species extinction is 1,000 times greater than the normal background rate that has existed since life evolved on Earth<sup>2</sup>.

This is more than an academic issue. We are now starting to understand what the consequences of this loss might be. Biodiversity is crucial to the survival of humankind—indeed, of *all* life on Earth. It supports us with free ecological goods — such as food (including fish, seafood, game, wild foods, spices, crops), water, medicines, lumber and fuels, and free ecological services — such as air and water purification, decomposition of waste, pollination of crops, seed dispersal, pest and disease control, climate and flood regulation, ecotourism, and cultural, educational and spiritual inspiration.

For example, healthy biodiversity provides us with the continued existence of bees to pollinate food crops, or maintains the health of a marsh ecosystem to absorb flood waters and filter out pollution so fish and other organisms continue to survive. Biodiversity also creates and supports human cultures and our spiritual needs. Imagine, for instance, how First Nations cultures on the Pacific coast would have evolved without salmon, the principal iconic species. Our cultures—our values—are a direct result of our environment.

What are the costs of losing these free ecological goods and services — to life, to our cultures and to our economic systems? How can the concept of ecological goods and services help create solutions that will slow down the current rate of biodiversity loss? Can putting a price on ecosystem services protect and restore biodiversity?

Speakers with local, regional, provincial, national, and international perspectives will explore these questions, present examples of successful interventions that have led to the survival of species and habitats and will discuss the priority areas where practices, policies, strategies, and programs must be developed.

This conference will provide specific opportunities for attendees and speakers to engage and exchange on their experiences and challenges and help enhance the informal networks on this important topic.



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<sup>1</sup> Millennium Ecosystem Assessment, 2005, Ecosystems and Human Well-being: Biodiversity Synthesis

<sup>2</sup> Source?