

2010 - International Year of Biodiversity

by Ole Hendrickson

The diversity of life on planet Earth and its critical importance to human well-being has been in the spotlight for much of this year.

On October 4th, scientists completed an ambitious 10-year Census of Marine Life, exploring little-known areas such as portions of the oceans 5000 meters deep. They found life everywhere they looked, discovering over 6000 new and sometimes bizarre species capable of living "even where heat would melt lead, seawater froze to ice, and light and oxygen were lacking."

Using DNA sequencing techniques, scientists concluded that there could be up to 100 times more kinds of marine microbes than previously thought. Bacteria may comprise as much as 90% of the mass of living marine creatures. To quote from the Census' highlights report, "the continually rising number of known kinds of life reinforces the conclusion that the Age of Discovery has not ended."

The term "biodiversity" includes variety of ecosystems as well as genes and species. In Canada, federal, provincial and territorial government scientists just released a major new report entitled Canadian Biodiversity: Ecosystem Status and Trends 2010. It documents change - often dramatic - in Canada's forests, grasslands, wetlands, lakes and rivers, coasts and oceans.

This new report gives special attention to ice and its large-scale disappearance: "Ice is a defining feature of much of the Canadian landscape and many plants and animals are adapted to seasonally or permanently frozen environments." Loss of sea ice affects seals, polar bears, Arctic cod, and Arctic foxes. Frozen peatlands are changing to wetlands as permafrost thaws throughout the North.

Another major event in 2010 was the successful conclusion of a United Nations "biodiversity summit" in Nagoya, Japan. At a meeting of the Convention on Biological Diversity 192 national governments agreed unanimously on more than 40 decisions aimed at sustaining Earth's ecosystems and the benefits they provide for human well-being. They adopted a new international protocol on access to and sharing of the benefits from the use of the genetic resources of the planet. They also set 20 global biodiversity targets for the year 2020, agreeing to at least halve and where feasible bring close to zero the rate of loss of natural habitats including forests; to devote 17 per cent of terrestrial and inland water areas and 10 per cent of marine and coastal areas to biodiversity conservation; and to take action to restore at least 15 percent of the Earth's degraded areas.

Protecting biodiversity starts at home. National government officials gathered in Nagoya endorsed a plan of action to involve local authorities - "districts, counties, municipalities, cities, towns, communes, etc" - in efforts to achieve the new global biodiversity targets. They called for awareness campaigns on the importance of biodiversity and ecosystem services at local level with participation of business, youth, non-governmental organizations and indigenous and local communities; including through celebrations of the International Day for Biological Diversity (May 22) and the Green Wave tree planting initiative.

They also encouraged local authorities "to integrate biodiversity considerations into public procurement policies and urban infrastructure investments (parkways and green transportation systems, public buildings, vertical gardens, water treatment and distribution, convention and conference centres, housing projects, waste management, etc.)"

The fate of the Earth's diverse species and ecosystems - and ultimately, human societies - depends on

the willingness of ordinary people to act. The Convention on Biological Diversity does not impose strict penalties on countries that fail to achieve global targets and objectives. It encourages businesses, consumers, governments and civil society to work together to ensure that there are places where species can thrive in the absence of human development pressures.

This makes good economic sense and adds beauty to our lives.

Watershed Ways is a publication of the Ottawa River Institute (www.ottawariverinstitute.ca), a non-profit, charitable organization based in the Upper Ottawa Valley.