



Eastern Georgian Bay Stewardship Council

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Media Update – 2010-03

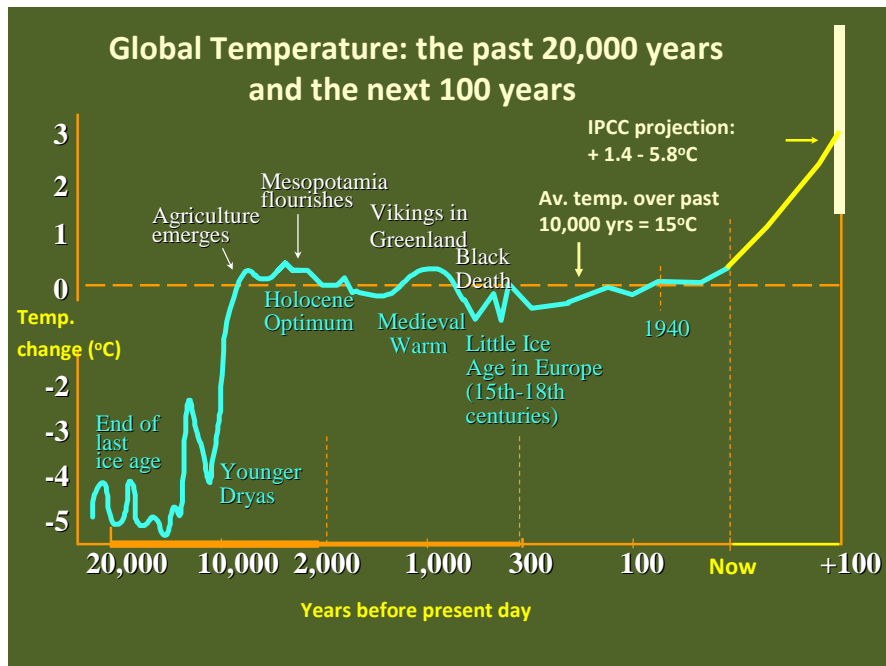
2010 EGBSC Lake Stewardship Workshop –

Climate Change and what it means to YOUR environment

The nay-sayers may tell you different ... but long-term climate data as well as temperature based natural phenomena clearly indicate that climate change is real and is happening now. That was the take-home message of keynote speaker Dr. David Pearson of Laurentian University and supporting presenters at the fifth annual Lake Stewardship Workshop held by the Eastern Georgian Bay Stewardship Council on July 29 at the Parry Sound Curling Club.

Dr. Pearson is an award winning authority on climate change and Co-chair of the Expert Panel on Climate Change Adaptation in Ontario. (For more information visit www.ontario.ca/environment.) He identified climate change as a two-part problem: adaptation to a new climate paradigm and our attempts to limit or mitigate impacts.

Pearson spoke about climate change in an historical context, noting a temperature increase of only five degrees brought us out of the last ice age. The International Panel



Panel on Climate Change is predicting a 1.4 to 5.8 degree C. rise in global temperatures over the next 100 years.

Dr. Pearson spoke of the immensely complicated process of climate change and the multitude of factors driving it: the geometry of the Earth's elliptical orbit; the tilt and wobble of the Earth's axis; the absorption of the sun's energy by open water from melting polar ice; the greenhouse gas effect; melting permafrost that releases methane originally formed by decomposition processes - methane being 20 times more powerful as a greenhouse gas than carbon; the oceans as a storehouse of carbon dioxide (CO₂) – 50 times greater than that of the atmosphere; the impacts of ocean currents and continental drift. He spoke of how more people die from heat waves than any other climatic phenomena – citing that in 2003 over 35,000 deaths in Europe were attributable to a searing heat wave that exceeded 40 degrees celcius!

Kenton Otterbein (Killbear Park Natural Heritage Educator) and Glenda Clayton (Georgian Bay Biosphere Reserve) spoke about climate change impacts on local flora and fauna. Kenton identified detrimental impacts on a variety of species, citing brook trout, white birch, Grey jays and moose as a few examples. He noted that 177 species of birds have shifted their range north over the past 40 years. Glenda spoke about the 35 Species At Risk (SAR) in our area and what impacts climate change might have on them. It wasn't a pretty picture – "Move, adapt or die." Species such as racoons, white tailed deer and rock bass that are generalists in habitat requirements, mobile and adaptable may actually benefit from a warmer climate. But other species with specific habitat requirements such as the least bittern, chimney swift, Canada warbler and monarch butterfly to name a few – are likely to be detrimentally impacted through a multitude of pathways. Kenton closed their session with some signs of hope - success stories relating to banning DDT and CFCs, reduction in acid rain emissions and rehabilitation of the terrestrial ecosystem around Sudbury.

Francine MacDonald of the Ontario Federation of Anglers and Hunters (OFAH) spoke on invasive species and how climate change might affect them. She noted there are over 1500 alien species in Canada and 180 established in the Great Lakes. Of these, 10% have significant ecological and economic impacts. Climate change is likely to enhance pathways for invasive species introductions and furthermore will facilitate expansion of invaders already established. The presence of zebra mussels, round gobies and spiny water flea in our waters are every-day reminders that next to habitat destruction, invasive species are the second greatest threat to loss of biodiversity.

The afternoon concluded with David Sweetnam (Executive Director, Georgian Bay Forever) and Jon Midwood (PhD candidate, University of Waterloo) speaking on Georgian Bay water levels, wetlands and climate impacts. Jon spoke about the rich vastness of Georgian Bay wetlands – over 3000 comprising 5000 acres but how they are at risk from climate driven low water levels. His research clearly demonstrates significant changes in vegetative and fish communities in wetlands under study between 2002 and 2009. Some wetland areas have become meadows or low density vegetation areas providing poor habitat for fish. In turn, fish species richness has decreased dramatically. Jon concluded that climate change driven low water levels strand coastal wetlands, alter aquatic habitat and change (decrease) the composition of coastal fish communities.

At the end of the session, Eric McIntyre – coordinator of the EGBSC expressed deep appreciation to the speakers for their interesting, informative and entertaining presentations. A complete summary of the workshop and presentations can be found on

the website of the EGBSC at www.helpourfisheries.com; look under the “Annual Workshop” tab at the top of the home page.