

## **Backgrounder (Supporting Resources) for “A New Climate for Conservation” Report**

### **Jim Pojar – Bio**

Jim Pojar is an ecologist and forester who has lived and worked in British Columbia for 40 years. He received his Ph.D. in Botany from UBC in 1974. From 1975-78, he worked with BC Ecological Reserves Programme, in Victoria. At that time, he and his wife, Rosamund, settled in the Bulkley Valley, where he was employed until 2004 as a Forest Ecologist and Research Manager for the BC Forest Service. For the next four years, Jim served as Executive Director, Yukon Chapter of Canadian Parks & Wilderness Society, in Whitehorse. In 2008, Jim retired from full-time work, and he and Rosamund returned to the Bulkley Valley. He continues to be involved in a variety of climate- and forest-related projects.

### **How Healthy Forests and Ecosystems Help in the Fight against Climate Change**

The Intergovernmental Panel on Climate Change (IPCC) has stated that “forest conservation is a critical strategy to promote sustainable development due to its importance for biodiversity conservation, watershed protection and promotion of livelihoods of forest-dependent communities in existing natural forest”.<sup>1</sup> One of the priority options IPCC has identified for the forest sector to reduce emissions by sources and/or to increase removals by sinks, is maintaining the forest area through reducing deforestation and degradation, and maintaining stand- and landscape-level carbon density.<sup>2</sup>

There have been several recent reports espousing the significant contribution temperate and boreal old-growth forests in North America make as they continue to sequester vast amounts of carbon, e.g., 1.3 +/- 0.5 gigatonnes carbon/yr.<sup>3</sup> The Secretariat of the Convention on Biological Diversity concluded that “maintaining and restoring biodiversity in forests promotes their resilience to human-induced pressures and is therefore an essential ‘insurance policy’ and safeguard against expected climate change impacts”.<sup>4</sup>

### **How the Economics Supports Nature Conservation for Climate**

A recent UN report for policy makers emphasized that “biological resources are a stock of capital in their own right – and one that generates important inputs to the economy, brings benefits to people and contributes to social well-being”,<sup>5</sup> such that “investments to protect ecosystems can return 25 to 100 times more in benefits from the natural services they provide”.<sup>6</sup> Stern concludes that “the loss of natural forests around the world contributes more to global emissions each year than the transport sector” and that “curbing deforestation is a highly cost-effective way to reduce emissions; large-scale international pilot programmes to explore the best ways to do this should get underway very quickly”.<sup>7</sup>

A recent Canadian study found that “increased forest conservation yields better economic returns than does status quo logging and limited conservation”,<sup>8</sup> that the economic case would be strengthened if forests’ role in moderating water flows and protecting quality were part of the accounting,<sup>9</sup> and that with legitimizing the value of carbon storage, BC could benefit financially and be a global leader in forest conservation for purposes of carbon management.<sup>10</sup>

### **What is the Connection between Climate Change and Biodiversity?**

According to the IPCC – the world’s leading authority on global climate change impacts – it is likely that ~ 20 to 30% of species are at increased risk of extinction if increases in global average warming exceed 1.5 to 2.5°C

(relative to 1980-1999), and ~ 40-70% species extinction as global temperature increase exceeds 3.5°C.<sup>11</sup> The United Nations has declared 2010 to be the International Year of Biodiversity<sup>12</sup> – a time to “put biodiversity at the top of the political agenda...to protect life on Earth”.<sup>13</sup> However, key projections, such as the responses of biodiversity, have not received adequate attention by Canada<sup>14</sup> to the point where it is questionable whether we even have a deep understanding of climate change impacts and responses.<sup>15</sup>

According to Bill McKibben, founder of 350.org, “Climate change is the greatest shift our natural systems have faced within human history. They need all the resiliency and margin we can possibly allow them in order to make those shifts less severe than they would otherwise be”.<sup>16</sup>

The beauty is the convergence when international climate change mitigation efforts overlap with biodiversity conservation and wilderness protection,<sup>17</sup> further emphasizing that nature conservation can help in both the mitigation and adaptation to climate change.<sup>18</sup>

### **Jurisdictions that have Made Recent Advancements in Large-scale Forest/Ecosystem Conservation**

Ontario<sup>19</sup> as well as Quebec<sup>20</sup> have large-scale conservation commitments in their northern boreal forests, as well as a recent peatland strategy in Manitoba.<sup>21</sup> Late this past year, federal Environment Minister Prentice signed an MOU that would see Canada, U.S.A. and Mexico committing to defending wilderness.<sup>22</sup>

#### *Notes*

<sup>1</sup> [http://www.ipcc.ch/publications\\_and\\_data/ar4/wg3/en/ch9s9-5-2.html](http://www.ipcc.ch/publications_and_data/ar4/wg3/en/ch9s9-5-2.html)

<sup>2</sup> [http://www.ipcc.ch/publications\\_and\\_data/ar4/wg3/en/ch9s9-4-1.html](http://www.ipcc.ch/publications_and_data/ar4/wg3/en/ch9s9-4-1.html)

<sup>3</sup> [http://www.sierraforestlegacy.org/Resources/Conservation/FireForestEcology/ThreatsForestHealth/Climate/CI-LuyssaertNature08Old\\_growth\\_carbon\\_sink.pdf](http://www.sierraforestlegacy.org/Resources/Conservation/FireForestEcology/ThreatsForestHealth/Climate/CI-LuyssaertNature08Old_growth_carbon_sink.pdf); <http://www.borealbirds.org/resources/carbon/report-full.pdf>

<sup>4</sup> p.8 <http://www.cbd.int/doc/publications/cbd-ts-43-en.pdf>

<sup>5</sup> p.20 <http://www.teebweb.org/LinkClick.aspx?fileticket=I4Y2nqIiCg%3d&tabid=1278&language=en-US>

<sup>6</sup> <http://www.timescolonist.com/opinion/op-ed/Protecting+nature+economic+benefits/2406733/story.html>

<sup>7</sup> p.4 [http://www.hm-treasury.gov.uk/stern\\_review\\_report.htm](http://www.hm-treasury.gov.uk/stern_review_report.htm)

<sup>8</sup> p.5 <http://www.ecojustice.ca/publications/reports/dollars-and-sense-the-economic-rationale-to-protect-bcs-spotted-owl/attachment>

<sup>9</sup> p. 5 <http://www.ecojustice.ca/publications/reports/dollars-and-sense-the-economic-rationale-to-protect-bcs-spotted-owl/attachment>

<sup>10</sup> p. 6 <http://www.ecojustice.ca/publications/reports/dollars-and-sense-the-economic-rationale-to-protect-bcs-spotted-owl/attachment>

<sup>11</sup> [http://www.ipcc.ch/pdf/assessment-report/ar4/syr/ar4\\_syr\\_spm.pdf](http://www.ipcc.ch/pdf/assessment-report/ar4/syr/ar4_syr_spm.pdf)

<sup>12</sup> <http://www.cbd.int/2010/welcome/>

<sup>13</sup> <http://www.cbd.int/doc/speech/2010/sp-2010-01-08-curitiba-en.pdf>

<sup>14</sup> p.14 <http://unfccc.int/resource/docs/2009/idr/can04.pdf>

<sup>15</sup> p.15 <http://unfccc.int/resource/docs/2009/idr/can04.pdf>

<sup>16</sup> Pers comm., January 18, 2010

<sup>17</sup>

[http://unfccc.int/files/methods\\_science/redd/application/pdf/the\\_nature\\_of\\_climate\\_change\\_reunite\\_international\\_climate\\_change\\_mitigation\\_efforts\\_with\\_biodiversity\\_conservation\\_and\\_wilderness\\_protection.pdf](http://unfccc.int/files/methods_science/redd/application/pdf/the_nature_of_climate_change_reunite_international_climate_change_mitigation_efforts_with_biodiversity_conservation_and_wilderness_protection.pdf)

<sup>18</sup> [http://www.landtrustalliance.bc.ca/docs/LTA\\_ClimateChangePrint.pdf](http://www.landtrustalliance.bc.ca/docs/LTA_ClimateChangePrint.pdf)

<sup>19</sup> <http://www.borealopportunity.ca/Boreal%20Coalition%20Response%20June%2020%20FINAL.pdf>

<sup>20</sup> [http://news.mongabay.com/2009/0913-hance\\_quebec.html](http://news.mongabay.com/2009/0913-hance_quebec.html)

<sup>21</sup> <http://www.gov.mb.ca/chc/press/top/2009/12/2009-12-09-094600-7308.html>

<sup>22</sup> <http://www.theglobeandmail.com/news/technology/science/canada-commits-to-wilderness-deal/article1356547/>