

<b>Donor country</b> Canada			
<b>Project/programme title</b> CFS Carbon Knowledge and Tools Available to Stakeholder			
<b>Purpose</b> To transfer knowledge and expertise in the use and application of the Carbon Budget Model of the Canadian Forest Sector (CBM-CFS3) to national and international forestry community			
<b>Recipient country</b> International	<b>Sector</b> Forest	<b>Total funding</b> \$300,000	<b>Years in operation</b> 2001-2009
<p><b>Description</b></p> <p>In 2002, the carbon accounting team of the CFS (CFS-CAT) and the Canadian Model Forest Network (CMFN) responded to the forest industry's need for an operational carbon accounting tool. The tool would help forest managers meet criteria and indicator reporting requirements for sustainable forest management as well as reporting requirements for forest certification. It would help managers understand how their actions affect the net carbon balance of their forest estate. The CBM-CFS3 is a stand- and landscape-level modeling framework that simulates the dynamics of all forest carbon stocks required under the UNFCCC. It is compliant with the Good Practice Guidance for Land use, Land-use Change and Forestry (2003) report published by the IPCC. The freely available operational-scale CBM-CFS3 is the most widely-used forest carbon model in Canada. It is used by industry, governments, ENGO's, and academia in Canada.</p> <p>In 2005, NRCan began a bilateral project with the Russian Federal Forest Agency to share knowledge and approaches to forest carbon accounting with scientists in Russia where the model has been used for regional- and national-scale analyses. More recently, the CFS-CAT began a collaborative project with CONAFOR (Comisión Nacional Forestal), the Government of Mexico's Ministry of Forests, to assess and test the suitability of the CBM-CFS3 in the wide range of forests and climates of that country. The aim of the project is to determine whether the model could contribute towards Mexico's GHG accounting system and towards Mexico's efforts to account for the effects of reducing emissions from deforestation and degradation (REDD). More recently, the CFS-CAT has also begun collaborating with individuals in Spain, China, Italy and potentially, Korea.</p>			
<p><b>Indicate factors that led to project's success</b></p> <ul style="list-style-type: none"> <li>▪ Partnership between the organization developing the science and technology (NRCan, CFS), and a nationwide organization with an established network of partners in the operational forestry community (the CMFN).</li> <li>▪ Knowledge and expertise of the teams involved.</li> <li>▪ Use of the CBM-CFS3 as the main model in Canada's National Forest Carbon Monitoring, Accounting and Reporting System (NFCMARS).</li> <li>▪ Promotion of published scientific research using the CBM-CFS3.</li> <li>▪ National and international promotion of the CBM-CFS3.</li> <li>▪ Successfully executing several training workshops for national and international participants at low cost to participants.</li> <li>▪ Free model, documentation, and technical support for model users.</li> <li>▪ Web resources facilitating information exchange (project website, NRCan FTP sites, Canada National Forest Information System website)</li> </ul>			
<p><b>Technology transferred</b></p> <ul style="list-style-type: none"> <li>▪ <b>The CBM-CFS3 software and supporting documentation (user's guide and tutorials).</b> over 500 individuals in 42 countries have obtained the software to date, and it is being used by individuals around the world.</li> <li>▪ <b>Knowledge and expertise in the use of the CBM-CFS3.</b> 9 training workshops have been held in Canada to date, training 223 participants, 33 from foreign countries (including the Russian Federation and developing countries like Madagascar, Uganda, Thailand, Philippines, Mexico, and China). 3 training workshops were held between February 2006 and February 2009. 2 more training workshops were held after February 2009. A mini-CBM-CFS3 training workshop (1/2 day) was also presented at the International Model Forest Global Forum (IMFN) in Hinton, Alberta in June 2007.</li> </ul>			

▪ **Information and assistance.** Between February 2007 and February 2009, the project extension forester provided free technical support to CBM-CFS3 users, responded to nearly 600 requests for assistance and guidance from around the world.

▪ **Collaboration with Russia:** in March 2005, a member of the Russian Academy of Sciences attended a CBM-CFS3 training workshop. In 2006, the Russian Academy of Science sent one of their staff to work with the CFS-CAT for 2 months to learn how to use and apply the CBM-CFS3 to forests in Russia. The same individual met with the team again at PFC in February 2009, to finalize a project involving the application of the CBM-CFS3 to Russian forests at the national scale, as Canada does under NFCMARS. Collaboration, information exchange and use of the CBM-CFS3 continues.

▪ **Collaboration with Mexico:** A workshop was held between NRCan, CONAFOR and ECOSUR in Mexico in June 2008 to exchange information on forest carbon accounting and carbon accounting technology. In March 2009, 6 individuals from the above Mexican organizations and the Colegio de Postgraduados, participated in a CBM-CFS3 training workshop at the Pacific Forestry Centre, followed by a one-day meeting to exchange information on forests, carbon accounting and modeling issues, etc. Collaboration, information exchange and use of the CBM-CFS3 continues.

▪ **Collaboration with Spain:** As a result of the CBM-CFS3 mini-workshop in Hinton in 2007, 2 individuals from the Spanish Dirección General de Medio Natural y Política Forestal and 1 individual from CESEFOR attended the CBM-CFS3 training workshop in March 2009. All three individuals also participated in an additional day of forest and carbon accounting information exchange with the CFS-CAT. In July 2009, the individual from CESEFOR returned to Pacific Forestry Centre for almost 2 months to work with the CFS-CAT to test applying the CBM-CFS3 to Spanish forest data. Collaboration, information exchange and use of the CBM-CFS3 continues.

▪ **Collaboration with China:** . In January 2007, an individual from the Chinese Academy of Sciences attended a CBM-CFS3 training workshop. This individual sent a colleague to the March 2009 CBM-CFS3 training workshop, and she also participated in an additional day of forest and carbon accounting information exchange with the CFS-CAT. Further collaboration, information exchange and use of the CBM-CFS3 continues.

▪ **Collaboration with Italy and Korea:** . In July 2009, one individual from the Joint Research Centre (Italy), and one individual from Kookmin University (Korea), attended a CBM-CFS3 training workshop. Both participated in an additional half-day of forest and carbon accounting information exchange with the CFS-CAT. Although preliminary, further collaboration and information exchange will likely occur, and the individual in Italy has begun testing the model with their data.

**Impact on greenhouse gas emissions/sinks**