

CCSIP R&D Business Plan: Creating a Bilateral Bioinformatics Network to Develop Novel Carbon Measurement Strategies and Support the Growth of Environmental Monitoring Companies in Canada and California

The impact of climate change is readily apparent in Canada and California, as it is threatening the sustainability of key industries such as fisheries, forestry and agriculture. Although there is increasing consensus that net carbon emissions must be reduced, there is little agreement on the best way to achieve this. Current carbon measurement and management strategies fail to account for natural ecological disturbances that can readily alter carbon levels in the environment and put them into a state of flux. For example, a fire or pest infestation can readily turn a forest from a carbon sink (a reservoir that gathers and stores carbon) into a carbon source. These changes are difficult to track. Ecological informatics, the development and application of computer technologies that enable the analysis and management of ecological data, may offer an important part of the solution. Recognizing this opportunity, researchers from the University of Alberta and the University of California Davis will establish a bilateral Ecoinformatics Network to develop novel ways to monitor, measure and report on biospheric carbon (the natural movement or exchange of carbon between different parts of the ecosystem, such as the atmosphere, oceans and earth's crust). With support from CCSIP, the Network will bring together key stakeholders from industry, academia, government, and non-governmental organizations (NGOs), and aim to create a world-first Biospheric Carbon Index. The group will also develop a business plan that identifies potential markets and investment required to fully implement and sustain the network. Long-term, this collaboration could stimulate the growth of environmental monitoring companies in Canada and California, and enable the development of the skilled people they require.

