



## **IIASA and Canada** **Highlights of Recent Canada-IIASA Activities**

IIASA collaborates with the best researchers in the world regardless of location but has a preference for working with researchers in IIASA member countries. The below is brief overview of recent IIASA-Canada collaborations.

### **Sustainable Agriculture and Food Security**

Canada is the world's fifth-largest exporter of agriculture and agri-food. Canadian agriculture is a \$100 billion industry and employs more than two million Canadians. IIASA has developed significant expertise and research tools in this area. A [recent Canadian-IIASA collaboration](#) that involved researchers from IIASA and the University of British Columbia identified and reviewed ten land management activities, including forest harvesting, crop species selection, and crop irrigation.

### **Sustainable Energy Future and Climate Change**

Canada is a leading global energy producer and the Canadian energy sector represents almost 10% of Canada's GDP. In 2014, Canada was the fifth-largest crude oil and fourth-largest natural gas producer. The Canadian Government is committed to reducing greenhouse gas emissions, enhancing energy efficiency, and having a diverse energy mix. IIASA has substantial expertise in this area. A [recent Canadian-IIASA collaboration](#) in this area included researchers from IIASA, the University of Toronto and the University of Victoria modelled the trade-offs between variable renewable energy deployment and its impacts on the electricity system.

### **Deep Decarbonization Pathways Project**

The Deep Decarbonization Pathways Project (DDPP) will prepare practical national deep decarbonization pathways to 2050, consistent with the 2°C target associated with the Copenhagen Accord of 2009. IIASA has strong relationships with the DDPP. The Director, Professor Jeffrey Sachs, is an IIASA Distinguished Visiting Fellow, and 13 DDPP countries are IIASA members.

### **Analyzing Ecological and Evolutionary Dynamics**

Occupying a significant percentage of the global land mass, Canada is rich in biodiversity. Indeed, over half of Canada's territory remains relatively untouched by human infrastructure or impact. The Government of Canada has placed a premium on the protection of biodiversity, while maintaining the integrity of aboriginal hunting and trapping, as well as freshwater and marine fisheries that are of significant value to Canadian economic prospects and cultural identity. IIASA analyzes and forecasts how ecological and evolutionary dynamics shape populations, communities, and ecosystems, and how behavioral dynamics and adaptations determine the fate of groups of interacting agents. A [recent Canadian-IIASA collaboration](#) which involved researchers from IIASA and the Ontario Ministry of Natural Resources and Forestry found that evolutionary and ecological factors interact to influence the growth and size of fish. These sorts of findings represent an invaluable contribution to the policy and decision making process.

### **Canadian Participation in IIASA Research and Capacity Building Activities since 2008**

- IIASA researchers have collaborated with 32 research partners in Canada.
- An average of 9 Canadian researchers have been employed as researchers at IIASA every year.
- 5 Canadian students have participated in the Young Scientists Summer Program (YSSP), which develops the research skills and networks of talented PhD students. For the YSSP and the Postdoctoral Program, IIASA gives preference to applicants from member countries.
- 60 Canadians have visited IIASA and participated in IIASA organized events.
- IIASA researchers have visited Canada over 50 times to attend conferences, present their research, and to discuss research collaborations and activities.
- Canadian-IIASA collaborations have results in more than 200 publications.