With support from Canada, USC Canada's Seeds of Survival project (2015-2020) has benefited 26,046 small-scale farm households in Guatemala, Honduras, Nicaragua, Burkina Faso, Ethiopia and Mali. In those countries, it has enhanced the availability of diverse and quality food, and strengthened smallholder farmer capacity to adapt to climate change risks. Better local open-pollinated seed varieties are now being used. Farmers have also taken part in research to set up community seed and field gene banks to preserve the biodiversity of local crop material. This will create community seed self-sufficiency, too. Since 2015, household fruit production has grown by 20% and vegetable production by 28%. Fruit and vegetable varieties have also risen by 31% and 42%, respectively. More than 3,400 women and 1,200 youth farmers received help in acquiring community land. Meanwhile, more than 4,800 women and approximately 2,000 youth received agricultural inputs such as seeds, micro-loans and equipment. These results underscore the fact that promoting the participation of women and youth in agro-ecological practices and market-related initiatives contributes to sustainable economic growth.

Canada's Caribbean Disaster Risk Management Fund is an important initiative that helps local communities adapt to climate change and prepare for disasters to lessen the impact once they strike. For example, in 2017, the fund supported a partnership in Wowetta, Guyana, with the Wowetta Women's Group and the Kanuku Mountain Community Representative Group. Together, they erected facilities that will allow vulnerable communities to process and stockpile cassava flour for occasions when they are cut off during floods or when drought harms cassava production. Since 2017, over 3,000 pounds of cassava flour have been stockpiled.

Canada also provides longer-term support to help crisis-affected populations and communities recover and rebound. For example, in October 2017, in the aftermath of Hurricane Maria, which destroyed nearly all of Dominica's crops, the Government of Canada funded the creation of a Dominica Emergency Agricultural Recovery Program. High-quality potato seeds, along with equipment and tools, were provided to Dominica in December. Planting started in February 2018, helping Dominican potato farmers (mostly women) to re-establish their crops in time for the growing season.

INNOVATION

The rainy season in Senegal tends to be irregular. Given this, Canada put forward an innovative approach that combined weather monitoring and agricultural insurance to help small farmers mitigate risks from climatic hazards. In 2017-2018, Canada provided support to the Deployment of Agricultural Insurance Index project in Senegal's Casamance region. Thanks to this, 25 rain gauges—meteorological instruments that measure precipitation—arrived so that the impact of reduced rainfall on harvests could be predicted. From there, it was possible to determine financial compensation to farmers in case production dropped due to lack of rain.

The Government of Canada's contribution to the Central America and Caribbean Catastrophe Risk Insurance Multi-Donor Trust Fund, implemented by the World Bank, helped Central American and Caribbean countries build resilience. This was achieved through insurance and other tools to provide more cost-effective, rapid and reliable financing for emergencies. Examples of the fund's work include:

- natural disaster-risk insurance in Nicaragua;
- disaster-risk financing and insurance in Central America, Panama and the Dominican Republic; and
- the development of comprehensive fiscal risk approaches in various countries across the region.

INNOVATION

In Morocco, more than 200 mines have been closed over several decades, often abandoned without proper decommissioning. These mines can pose significant environmental and health risks. With support from Canada's IDRC, researchers from two universities did something no one else had done—they mapped mines that had leached harmful chemicals. Researchers from the Cadi Ayyad University in Marrakesh, Morocco, and Canada's Université du Québec en Abitibi-Témiscamingue also developed a targeted, cost-effective technique to contain acid mine drainage. With help from a Moroccan phosphate mining company, their innovation was scaled up to create a store-and-release cover over an entire mine site, a first in North and West Africa. (A store-and-release cover can contain acid mine drainage, releasing it later at a desired time.) This success has earned them the prestigious Hassan II Prize for the Environment, awarded by Morocco's Ministry of Energy, Mines and Sustainable Development.

In Africa, a dearth of climate change leaders hinders the development and implementation of science-informed policy and strategies for building resilience. A fellowship program between the University of Nairobi and the Institute of Resource Assessment at the University of Dar es Salaam seeks to fill this gap. The program launched in January 2018 with support from Canada's IDRC. It will support 30 mid to senior-career researchers, policy advisers and practitioners with climate change ideas that can be applied at scale. Building leadership among women is also a central program objective. The program builds on IDRC's past investments in climate fellowships: 63% of the current fellows participated in earlier IDRC programs. Some earlier fellows are also returning as resource persons to train the new generation.