

Middle East and North Africa

Canada's IDRC funds research that helps to reduce poverty and build healthier, more prosperous societies, the goal of Canada's international development efforts. Here are a few examples that show how IDRC-supported research in the Middle East and North Africa has improved lives.

Argan cooperatives boost opportunities for women

Drought-tolerant argan trees, which grow only in Morocco, act as a "green curtain" against the encroaching Sahara desert. But due to charcoal-making, grazing, and intensive cultivation, this important species is threatened.

Chemistry professor Zoubida Charrouf realized that local communities needed to benefit from the tree if they were to preserve it. Her research led her to create cooperatives that allow poor Berber women to earn a living by producing high-quality argan oil for the cosmetic and food markets.

With a four-year research grant from IDRC (1998–2002), Charrouf worked with the Ibn Albaytar Association to improve argan oil production. The researchers mechanized some tedious tasks, such as grinding the nuts. This sped up the production process, improved oil quality, and reduced waste.

Today, argan oil is a high-value niche product on the international market. In Morocco, thousands of women have been lifted out of poverty as they derive economic benefits from preserving an endangered tree. ■

Recycling wastewater offers solution to scarcity

Treating and reusing water from sinks and bathtubs has helped many small farming families in the Middle East deal with an extreme water shortage and significantly boost their incomes.

The success of IDRC-supported household projects in Jordan, Lebanon, and the West Bank has moved national



Argan oil cooperatives have helped to improve lives and save an important tree species.

governments and international agencies to incorporate "greywater" reuse into plans to combat the region's deepening water crisis.

In Jordan, researchers from the Inter-Islamic Network on Water Resources Development and Management developed a simple treatment system that greatly reduces contaminants in greywater. This mostly purified water can be used in drip irrigation systems that sparingly irrigate fruit trees, crops that are eaten cooked, and fodder crops.

Jordan has incorporated greywater into its national water strategy. In cities, new high-rise buildings must include greywater recycling. Policy changes to accommodate greywater use have spread to nearby countries, including Lebanon and Yemen. On the global stage, the World Health Organization has published guidelines on the safe use of greywater. ■

eFez: Making government work for people

The primary goal of the eFez Action Research Project was to make public services more efficient. In doing so, it also boosted public accountability and renewed the spirit of democracy in Morocco.



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For these achievements, the IDRC-supported initiative received national and international accolades. It won Morocco's e-Mtiaz prize for electronic administration in 2006, and the Technology in Government in Africa and United Nations Public Service awards in 2007.

On the surface, eFez's goal was purely practical. It sought to make life easier for Fez residents by streamlining the process for obtaining documents — particularly the birth certificates required for everything from job applications, to accessing health care, to school registration.

Computerizing services led the Al Akhawayn University research team to restructure the whole business process and introduce self-serve kiosks. Other municipalities and Morocco's national government are now following Fez's example. ■

Poison centre network saves lives

Snakebites, food poisoning, toxic chemicals — all potentially fatal if the correct antidote isn't used, fast. Since 1988, a computer program called INTOX has been providing life-saving information in minutes.

"We put together a huge data bank based on reliable information from the World Health Organization and other sources, and made this available to poison centres in different parts of the world," says Dr P.K. Abeytunga, vice-president of the Canadian Centre for Occupational Health and Safety.

That centre, with support from IDRC and in cooperation with WHO, helped develop the "INTOX Package" that brings together the expertise of 100 toxicology experts from 60 countries. The system allows poison centres around the world to share information online.

Even small poison centres in developing countries can benefit, and contribute. For example, a centre in Cairo established with IDRC support helped prevent an outbreak of deadly botulism in 1992. It has trained more than 1,000 Egyptian doctors in the treatment of poisoning. ■

The health risks of tobacco and hookahs

Smoking tobacco through a waterpipe — a narghile or hookah — is at least as dangerous as smoking cigarettes. So says the World Health Organization, in an advisory that notes: "Waterpipe smoking is associated with many of the same risks as cigarette smoking and may in fact involve some unique health risks."

That 2005 advisory resulted largely from the pioneering work of IDRC-supported researchers at the American University of Beirut. Using a mechanical smoking machine, they demonstrated that one waterpipe session is as dangerous as smoking 20 to 30 cigarettes. Smoke from waterpipes was found to contain a high level of tar, along with nicotine and heavy metals.

This is just part of the tobacco-control work IDRC has supported for the past two decades. These efforts have included helping countries with legislation and farmers with planting alternative crops. ■

Solving land disputes in Lebanon

New agricultural techniques have helped settle land-use conflicts, improve soils, and increase fruit crops in Arsaal, Lebanon. The research, supported by IDRC, also introduced new income-earning activities for women.

In the mountain village of Arsaal, a land dispute between herders, fruit growers, and quarry operators had degraded water and land, and thus threatened livelihoods. IDRC-funded researchers from the American University of Beirut set out in 1990 to resolve the issue.

They first established a local users network through which farmers, scientists, women's groups, and others could work collaboratively. This led to the introduction of measures to preserve the environment and boost incomes. Two cooperatives were established — one for livestock herders, the first in Lebanon; and another, run by women, to process fruit and weave carpets.

The Arsaal initiative has spawned a research centre. AUB's Environment and Sustainable Development Unit has established itself as a regional centre of excellence on issues such as urban agriculture. ■



ANNA FASHA/UESDU

Innovation sows seeds of hope in dry areas

An international research centre has become a global force working to improve the lives of the more than 1.7 billion people who live in the drylands that cover two-fifths of the world's land area.



The International Center for Agricultural Research in the Dry Areas was founded in 1977 with backing from IDRC and the Ford Foundation. From its Middle Eastern base, ICARDA develops new food-security strategies, water technologies, and seeds for improved crop varieties that have also brought hope to people across Africa and in parts of Latin America and Asia.

Since 1977, more than 900 improved varieties of food and forage crops bred from ICARDA germplasm have been introduced worldwide. These were developed for their high yields, tolerance of extreme temperatures or soil salinity, and resistance to disease and pests.

Now, ICARDA is tackling a wider range of problems. In Afghanistan and Pakistan, for example, it is helping farmers switch from growing opium poppies to high-value crops such as saffron. ■

A clear path for small business growth

Tax cuts and a streamlined registration process are just some of the measures that reflect a new attitude toward small and medium enterprises in Egypt. Support from IDRC and the Canadian International Development Agency, from 2000 to 2008, helped Egypt's Ministry of Finance pave the way for these improvements.

Would-be entrepreneurs in Egypt used to face an almost impenetrable wall of regulations. Many of the recommendations arising from the research influenced new laws and bylaws, helping to create jobs for unemployed youth and boost the sluggish economy.

"The amount of time and the cost of starting a business is way down," says Mohamed Youssef, who was the ministry's SME Development Unit manager between 2006 and 2008. "Taxes for businesses were cut in half." Rules were also changed to require that at least 10% of government purchasing should be from small and medium enterprises. ■

Software for justice

To collaborate in the fight against human rights violations such as covert arrests, torture, and death squad killings, governments and activists need accurate, timely information about these crimes. Thanks to support from IDRC, they can turn to HuriSearch — the only comprehensive Web search engine specializing in human rights.

Operating in 77 languages, HuriSearch lets users tap into millions of Web pages published by more than 5,000 human rights groups. It is just one resource in a set of information tools designed and made available by the international human rights network HURIDOCS, which was founded in the 1980s. Over the years, IDRC has funded several of the network's initiatives.

A Canadian information specialist and rights advocate, Judith Dueck, helped develop HuriSearch. "It looks at the websites of even very small organizations," she says. "Content from these sites would never be found by a large search engine like Google, but can be found by ours." ■

Wild plants spark revival in traditional foods

In rural Lebanon, women are spearheading a return to healthy, affordable food by promoting local plants. Since 2005, a dozen women in the northern village of Al-Kwakh have gathered daily in a communal "Healthy Kitchen." They prepare dishes using wild plants such as water parsnip and wild fig, which they also sell in a Beirut market and at an eco-lodge that they run.



These nutrition ambassadors, in Al-Kwakh and other villages, are spreading knowledge about native plants. Their kitchens are part of a food-security strategy designed by researchers at the American University of Beirut, using IDRC funds.

The country's long civil war, combined with cheap food imports, led to a decline in agriculture and increased reliance on processed foods. Poverty made things worse. The researchers studied more than 40 wild plants and traditional dishes made from them. The research, which now involves the University of Ottawa in Canada, continues to focus on local ecosystems' ability to sustain healthy diets. ■



Arab women continue rights struggle

A campaign that won legal recognition for Arab women's citizenship rights in nine jurisdictions is providing inspiration and tactical lessons for women facing growing discrimination across the Middle East.

With support from IDRC, the Beirut-based Collective for Research and Training on Development-Action (CRTD.A) launched a regional research effort in 2002 to examine how women's lack of citizenship rights leads to the denial of other rights.

Their findings led CRTD.A to launch the Arab Women's Right to Nationality campaign. They sought to create public awareness of the ways that Arab women's inability to transfer their citizenship to their partners and children created grave hardship. Cut off from the benefits of the woman's citizenship, spouses and children were denied the right to health care, education, employment, political representation, or to travel freely within the country.

The resulting political debate led Egypt to change its citizenship laws in 2004. Algeria, Libya, Morocco, Saudi Arabia, Tunisia, United Arab Emirates, West Bank and Gaza, and Yemen later followed suit. ■

Smart solutions to a worsening water crisis

Innovative policies and new technologies that reduce water waste are helping countries across the Middle East and North Africa deal with chronic water shortages.

Those advances spring from the simple idea that preventing water loss is effectively the same as giving parched countries new sources of water. This view gained widespread credibility in the wake of an IDRC-supported research program, WaDImena, designed to assess how the so-called "water demand management" approach could ease the region's water crisis.

Between 2004 and 2009, WaDImena brought together researchers, policymakers, farmers, and community groups to share successes and assess new ideas. The research was wide-ranging. For example, WaDImena contributors examined how watering crops at night (to minimize evaporation) and using frugal technologies such as drip-irrigation could reduce agricultural water demand.

New ideas have led to policy changes. In Morocco, for example, government subsidies for efficient drip-irrigation technologies are used as a lever to encourage farmers to grow value-added crops that make better use of scarce water. ■



About Canada's International Development Research Centre

IDRC supports research in developing countries to promote growth and development. IDRC also encourages sharing this knowledge with policymakers, other researchers, and communities around the world. The result is innovative, lasting local solutions that aim to bring change to those who need it most.

Read more about the lasting impacts of IDRC-funded research: www.idrc.ca/lastingimpacts

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