

# IDRC in Morocco

**I**n over 25 years of support to researchers in Morocco, IDRC has contributed to advances in a variety of areas, including agriculture and information and communication technologies (ICTs).

IDRC's first contribution, in 1980, helped strengthen the use of computer technology by enabling the Centre national de documentation (national documentation centre) to further expand its capacity to manage national data by installing a minicomputer and extending local and regional connections by establishing regional terminals. Students and other users were able to access information references at competitive prices.

Today, IDRC funding is helping Al Akhawayn University, in partnership with the local administration, to test an e-government system in the city of Fez. Morocco will also benefit from an IDRC-supported effort led by two nongovernmental organizations to promote the availability of computer and Internet software and content in Arabic and African languages and to adapt it to local modes of communication, culture, and standards. As well, a group of IDRC partners is aiming to bridge the African continent's "digital divide." It is providing information and training to African decision-makers to help them make appropriate technology choices for wireless networks as a low-cost and dynamic complement to wired infrastructure.

Much of the Centre's research support in Morocco has focused on improving agriculture and preventing soil erosion. Over the years,

partners have found better ways to reforest the country's mountain and foothill areas, cultivate and distil aromatic and medicinal plants, and produce better quality olive oil. In one initiative, researchers from the Faculty of Science of Mohammed V University worked with three Berber women's cooperatives to improve traditional, small-scale methods for producing argan oil. The team was able to reduce the production time significantly, which helped the cooperatives produce and market several products. Success empowered the women and allowed the villages where the cooperatives are based to establish libraries and community centres.

IDRC also supports research on trade and economic development. Morocco's Conseil national du commerce extérieur (CNCE — national foreign trade council) identified competitive advantages among industrial sectors in four countries of the Maghreb region. The CNCE drew conclusions as to why some industries succeed and others do not and recommended export promotion policies based on the research. The CNCE intends to follow up on these findings with activities that will help industries in the Maghreb improve their position in international markets.

Morocco is also a member of an extensive regional initiative related to water demand management (WDM) that focuses on making better use of existing water resources. Over the past decade, IDRC, the Canadian International Development Agency, and the International Fund for Agricultural Development have supported numerous research projects and a

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network of researchers on WDM in the Middle East. In 2004, these donor agencies set up *WaDimena*, a five-year program coordinated by IDRC, as a new source of funding for Middle Eastern and North African researchers. The program will help the policy and research communities, and civil society to develop policies and practical solutions for more efficient, equitable, and sustainable use of existing water resources.

IDRC has contributed CA\$10 million to 57 research activities in Morocco, some of them regional in scale. Currently, IDRC is supporting four research activities, worth CA\$1.2 million.

### RESEARCH HIGHLIGHTS

#### Local E-Government in Morocco

The Moroccan government's strategy for e-government has focused on creating ministry portals; however, local communities also need to improve access to government services and information, as decentralization moves more of these services to the local level. Al Akhawayn University, in Ifrane, will pilot an e-government initiative in partnership with the local administration of Fez. The system will allow citizens to request and receive government services in an easy and efficient way.

Researchers will provide appropriate academic and technical training to officers and employees of the local administration, or *Wilaya*, so that they can maintain the system in the future. They will be involved in every step of the system's development and its evaluation. As part of the evaluation, the research team will analyze the social impact and political implications of e-government and examine to what extent e-government will be beneficial to Moroccans, given the high rate of illiteracy in the country. What segments of Moroccan society are more likely to avail themselves of, or be excluded from, such benefits? What strategies would give the greatest number of people access to e-government? The researchers will ensure that the Moroccan government is fully involved in the initiative, in the hope that it will replicate the project elsewhere.

(Project # 101980, E-Government Pilot in Morocco; Duration: 2004–2006; IDRC allocation: CA\$303 320; IDRC contact: Adel El-Zaïm; Local research partner: Dr Driss Kettani, School of Science and Engineering, Al Akhawayn University, PO Box 104, Avenue Hassan II, Ifrane, Morocco)

#### Software and Web Content in Local Languages and Cultures

It is generally agreed that for users to adopt and make optimal use of computers and the Internet, software and content need to be available in a familiar language. Yet almost all software and Internet content are developed in English and a few other Western languages. This project, led by US-based nongovernmental organization (NGO) Kabissa, aims ultimately to make information and communication technologies (ICTs) more accessible and relevant to multilingual users in North Africa by speeding up the localization — the adaptation to local languages, cultures, and preferences — of computer software and Web content. This will in turn make technology a more powerful tool for social and economic development in rural areas.

In this three-year project, Kabissa is partnering with several US and local NGOs, associations, and institutes. The project involves an initial survey of the current state of localization in Africa; a workshop in which African and other experts will exchange information and identify areas for collaboration; and a Web-based database of localization resources for software developers and content authors.

(Project # 102933, PAN Africa Localization: Enhancing Capacities for Localization of Arabic and African Languages; Duration: 2005–2008; IDRC allocation: CA\$312 100; IDRC contact: Adel El-Zaïm; Lead research partner: Kim Lowry, Kabissa Inc., 1519 Connecticut Avenue, Suite 200, Washington DC 20036, USA. Tel.: 20-2-265-6116; Fax: 70-2-441-8964; Email: info@kabissa.org; Web site: www.kabissa.org)

#### Understanding the Impact of Trade Agreements

During the last decade, Arab countries have signed a number of regional trade agreements (RTAs). Unfortunately, their implementation has never been studied in a systematic way. Gaps exist between what such RTAs state and what is

actually implemented. A better understanding of the reasons behind the existing gaps would be a major contribution to policy-making and academic research. In particular, policymakers need information on the net impact of RTAs on the economies of participating Arab countries. This information would be helpful in implementing existing arrangements and negotiating and designing future agreements.

The Economic Research Forum is analyzing the situation in Egypt, Jordan, Morocco, and Tunisia. The resulting paper will serve as a vehicle to highlight priority issues. Researchers will then take a more focused look at Egypt and Morocco, addressing the net impact of overlapping RTAs. Roundtable sessions will be held to discuss results.

(Project # 102235, Policy Implications for Overlapping Preferential Trade Agreements in Arab Countries; Duration: 2004–2006; IDRC allocation: CA\$322 000; IDRC contact: Susan Joekes; Research partner: Dr Hana Kheir el Din, Economic Research Forum for the Arab Countries, 7 Boulous Hanna Street, Dokki, Cairo, Egypt. Tel.: 20-2-7602882; Fax: 20-2-7616042; Email: erf@erf.org.eg)

### Bridging the “Digital Divide” with Wireless Technology

The high cost of conventional “wired” infrastructure is a barrier to access to information and communication technologies and social change in developing countries. By contrast, less cumbersome wireless technologies, such as WiFi and WiMax, can deliver tested low-cost telecommunications to complement conventional networks. They are also particularly effective in places where no infrastructure exists, helping communities to “leapfrog” generations of existing technology. To make “bridging the digital divide” a reality will require an appropriate integration of investment in both wired and wireless infrastructures, and a joint effort by governmental, profit, and non-profit sectors.

A group of African partners is conducting workshops, providing face-to-face training in how to set up community wireless networks, and creating classroom curriculums in English, French, and Arabic for an online repository of information on wireless technologies, along with other components.

(Project # 102693, Capacity Building for Community Wireless Connectivity in Africa; Duration: 2004–2006; IDRC allocation: CA\$319 870; IDRC contact: Adel El-Zaim; Research partner: Ann Tothill, Association for Progressive Communications, APC Secretariat, Presidio Building 1012, Torrey Avenue, PO Box 29904, San Francisco, CA 94129 USA. Executive Director’s Office, PO Box 29755, Melville 2109, South Africa. Tel.: 27-11-726-1692; Fax: 27-11-726-1692; Email: webeditor@apc.org)

### Health Impact Assessment of Small Dams

Governments, in several parts of Africa, promote small dams as an alternative to large-scale irrigation. Small dams, however, do not necessarily result in sustainable development, and their negative impacts, such as increased transmission of water-borne diseases, may be substantial. This grant is supporting a detailed study of the impact of a small dam in Souss Massa, Morocco, on the overall well-being of the community. Researchers from Morocco’s Institut national de la recherche agronomique (national agronomic research institute) are examining the health and socioeconomic effects as well as potential technical shortcomings of the dam. The project will result in recommendations for the dam’s improved management, plus a methodology for community assessment of small dams and their impact, which will be applied in a second phase elsewhere in Morocco.

(Project # 102387, Health Impact Assessment of Small Dams; Duration: 2005–2006; IDRC allocation: CA\$188 580; IDRC contact: Renaud De Plaen; Lead research partners: Abderrahmane Ait Lhaj, Institut national de la recherche agronomique, BP 415, Rabat, Morocco; Dr Eline Boelee, International Water Management Institute, 127 Sunil Mawatha Pelawatte, Battaramulla, Sri Lanka; Dr Eline Boelee, Project Leader, PO Box 5680, Addis Ababa, Ethiopia)

### Helping the Maghreb Compete Globally

In the context of major changes in the international trade environment, it is important that countries understand their competitive advantages and adapt their trade policy accordingly. North Africa’s Maghreb region, a crossroad between the Mediterranean and the Sahara, Africa and Europe, and East and West, is no exception. Morocco’s Conseil national du commerce extérieur (CNCE — national

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foreign trade council) has identified competitive advantages among industrial sectors in its own country, as well as in Algeria, Tunisia, and Mauritania. The CNCE developed indicators that combine up-to-date quantitative benchmarks from international authorities with a qualitative analysis of internal and external factors of competitiveness. Industry representatives, researchers, and policymakers in the Maghreb can use these indicators to compare industrial performances and, based on the findings, recommend policies to promote exports. The study of sample enterprises led to explanations of why some industries succeed while others do not. The CNCE has set up lines of communication between universities and professional groups that it will continue to rely on for follow-up work to help industries better position themselves in international markets.

(Project # 101115, The Competitiveness of Maghreb Enterprises: Analysis and Monitoring; Duration: 2001–2004; IDRC allocation: CA\$499 200; IDRC contact: Susan Joekes; Local partner: Mohammed Benayad, Secretary-General, Conseil national du commerce extérieur (CNCE), 63, Boulevard My Youssef Rabat, Rabat, Morocco. Email: Mohamed@mcnet.gov.ma)

### Moroccan Women Preserving the Argan Tree

The argan, a socially and environmentally valuable tree species, is endemic to Morocco. In 1999, UNESCO decreed Morocco's argan forest to be a world biosphere reserve. Resistant to heat and drought, these long-living trees help protect the thin soils of Morocco's arid and semi-arid southwest regions from erosion. Moreover, all parts of the tree can be used: the wood is burned as fuel;

the leaves and fruit serve as forage for goats and camels; and the oil is used in cooking, traditional medicine, and soap making. Tree density, however, has gradually decreased from 100 to 30 trees per hectare.

To help protect the argan tree, researchers at the Faculty of Science of Mohammed V University introduced and tested new processing equipment in three Berber women's cooperatives. The innovation significantly reduced the time required to process argan oil, thereby improving its production potential. The cooperatives in southwest Morocco, near Agadir, now market four products: oil for cosmetic use; edible oil; a honey, argan oil and almond spread; and soap. Massage oils are under development. The cooperatives have created about 110 permanent jobs and 100 temporary ones. The success and popularity of argan oil has allowed the villages where the cooperatives are based to open libraries and community centres and has boosted the region's tourism industry.

(Project # 060065, Preserving the Argan Tree; Duration: 1998–2002; IDRC allocation: CA\$273 284; IDRC contact: François Gasengayire; Research partner: Université Mohammed V, CP 544 Agdal, Rabat, Challah, Morocco)

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