

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 Asia has improved lives.

Sri Lanka better prepared for future tsunamis

Coastal communities in Sri Lanka now have more tools to help them survive tsunamis, cyclones, and other natural disasters. This increased preparedness flows from IDRC-funded research that evaluated the best means of alerting communities to approaching danger.

The project was a response to the 2004 Indian Ocean tsunami, blamed for 230,000 deaths, 40,000 in Sri Lanka alone. IDRC worked with LIRNEasia, a Sri Lankan organization that tackles communication technology issues, to focus on "the last mile" of a national warning system. Researchers looked for ways to strengthen the vital link between central authorities and the communities that lay in disaster's path.

LIRNEasia and the social services organization Sarvodaya engaged coastal communities in testing five warning systems. They concluded that the best option was to use cell broadcasting, which allows text messages to be sent to all mobile phones in a given area. Today, thousands of communities have emergency committees, and Sri Lanka's mobile networks are fully capable of issuing warnings through cell broadcasting. ■

Micronutrients reduce maternal and child illness and death

Vitamin and mineral deficiencies affect a third of the world's population, preventing them from fulfilling their potential. In 1992, IDRC and others funded the Micronutrient Initiative. Its mission: make sure the world's most vulnerable people, particularly women and children, get the vitamins and minerals they need to survive and thrive.



Vulnerable coastal communities in Sri Lanka are now better protected by a "last-mile" early warning system.

RADIO NEDERLAND WERELDOVEREFLICHT

Micronutrient Initiative President M.G. Venkatesh Mannar recalls that iodine deficiency was widespread across developing countries just 20 years ago: "From a level of 20% in the early 1990s, today 70% of the world's salt is iodized."

Originally housed at IDRC, the Micronutrient Initiative has grown into the leading global agency focused on delivering low-cost solutions for vitamin and nutrient deficiencies in the world's most vulnerable populations. UNICEF estimates that the Initiative has saved almost one million lives in the past 15 years, children who otherwise would not have survived to their fifth birthday. ■

Information improves lives

Many communities in the Philippines now enjoy benefits made possible by accurate information about their living conditions: job training for youth; new water and sanitation facilities; small loans for family businesses; telemedicine programs. These are just a few of the measures taken to improve lives in thousands of towns and villages. The goal: reduce poverty. The means: provide the most needed services to the neediest families.

How do you determine who is neediest? A community-based poverty monitoring system, or CBMS, provides the answers. Designed in 1994 by researchers at the Philippine Institute for Development Studies in Manila, with IDRC support, the system makes it possible to diagnose the extent of poverty in communities and its causes. With this information, governments can get the most impact from their meagre resources. The cost of gathering the data: \$1.50 per household.

From two pilot projects in 1998, the system has spread across the Philippines and to more than a dozen other developing countries. ■



RICHARD LORD

Communities advance when computers speak their language

Citizens in remote rural areas in 11 Asian countries are leaping over language barriers and into the Internet age. They may now be able to access government services online, and submit college applications without making an arduous trek to the city. And their children are learning the computer skills that promise greater economic opportunities in the future.

This is just a sampling of the Internet-era benefits available to millions more people across Asia thanks to the work of the PAN Localization program. This IDRC-supported network of computer experts (known as PANL10n) has been working since 2003 to develop new technologies that allow computers to function in local languages.

With 3,500 languages in the Asia-Pacific region, and fewer than 10% of people able to communicate in English, Internet use is typically restricted to urban areas. The network's software engineers, linguists, and sociologists work together to overcome the formidable obstacles to making local scripts compatible with computers. ■

A home-based clean water revolution

Simple but effective BioSand Filters provide clean water in more than 300,000 homes worldwide. Early support from IDRC helped launch the devices, which have freed countless people from the constant threat of gastrointestinal disease.

In Cambodia, for example, where 100,000 filters are in use, a 2010 study shows that households with filters experienced a 47% drop in diarrheal diseases. That means drastically lower infant mortality, higher productivity, and poor families spared the cost of medicines, says David Manz, the University of Calgary engineering professor who developed the filter in the late 1980s.

IDRC sponsored a rigorous study showing the filters to be highly effective at killing parasites, as well as eliminating organic and non-organic toxins. The findings — for example, that the filters removed 100% of giardia cysts and 99.98% of the cryptosporidium parasite — spurred their large-scale construction. Keeping the technology in the public domain has allowed non-governmental organizations to spread the filters to communities across the globe. ■

Bamboo and rattan anchor an environmental revival

Bamboo and rattan are at the centre of major initiatives in Asia, Africa, and Latin America that are combatting global warming, fighting soil erosion, protecting forests, and enhancing communities' access to water.

When IDRC first supported pioneering research on these plants in 1979, the world knew little of their environmental potential. But this is changing thanks to work undertaken by the International Network for Bamboo and Rattan (INBAR), created by IDRC in the early 1990s.

For example, bamboo planting restored the fertility of soil degraded by brick mining in Allahabad, India, so farmers once again can grow crops. That project, which won the 2007 Alcan Prize for Sustainability, also raised the local water table by seven metres within five years.

The first international workshops on rattan and bamboo in 1979 and 1980, hosted by IDRC, blossomed soon after into a research network. Housed initially at IDRC, in 1997 INBAR became an independent organization, based in Beijing. ■



LOU YIP/INBAR



ROBERTO VERZOFLICKR

Breakthrough supplies young fish to a hungry industry

Filipino fish farmers have a larger, more reliable supply of milkfish seed stock, or fry, than they did 30 years ago. They also have better rearing methods for the popular, affordable milkfish, which accounts for about half of the Philippines' farmed fish and is vital to its food security.

The improvements came thanks to pioneering research by a multinational team of scientists at the Southeast Asian Fisheries Development Center (SEAFDEC). During the 1970s and 1980s, IDRC provided funding and technical support for this work.

In 1978, SEAFDEC first spawned milkfish in captivity. The breakthrough made the industry's growth possible in Southeast Asia. At the time, the Philippines produced about 400 tonnes of milkfish annually. Artisanal collection provided income for many coastal fishers, but could not supply fry year-round. The Philippines now produces more than 370,000 tonnes of milkfish a year. ■

Project Seahorse evolves into major marine protector

Project Seahorse mobilized poor fishing communities to create dozens of marine protected areas in the Philippines. Later, it engaged the Chinese traditional medicine industry — the prime harvesters of wild seahorses — in efforts to protect the species.

After these achievements, accomplished with IDRC support, the organization went on to become a world leader on marine sustainability issues. Project Seahorse is now a global alliance of local researchers and policy advocates with the reach and expertise to work in the multiple arenas where these issues unfold.

For example, Project Seahorse lobbied persistently for policy change at the Convention on International Trade in Endangered Species of Wild Flora and Fauna (CITES). After years of CITES refusing to regulate trade in marine fish, Project Seahorse convinced it to put seahorses under its protection. Since then, the convention has begun regulating exports in a variety of marine fishes. ■

Creating Mongolia's information society

The Internet is playing a crucial role in bringing much-needed services such as education and health care to remote parts of Mongolia, thanks to long-term support from IDRC.

For example, digital pioneers in Mongolia worked to provide online training for rural doctors. They also helped the Health Sciences University of Mongolia develop the "Doctor System." Using this Web-based diagnostic tool, rural physicians can send X-rays, ultrasound images, and other medical tests to urban centres, where health professionals advise on diagnosis and treatment.

IDRC helped introduce the country's first Internet connections in 1996. This early support contributed to the development of today's vibrant online environment for business, government, educators, and non-profit groups.

In recognition of its ongoing support, IDRC received the country's highest award, the Friendship Medal of Mongolia, in 2004. ■

Opportunities grow on trees in Nagaland

In India's remote Nagaland region, food security has been boosted and the health of threatened forests restored. These and other remarkable changes have flowed from the Nagaland Environmental Protection and Economic Development project. The Nagaland government, IDRC, and the Canadian International Development Agency funded the initiative from 1994 to 2006.



RITA WILLAERT/FLICKR

Amid rapid population growth and increased demand for food, land in the mountainous region was being left fallow for shorter periods. The result: depleted soils, reduced forest cover, and increasing food insecurity.

The NEPED team asked farmers to plant commercially viable trees, such as alder, which also fix nitrogen in the soil. This provided an economic incentive not to clear the land until the trees matured. More than 7 million trees planted in the first six years soon brought environmental benefits.

Renamed Nagaland Empowerment for People through Economic Development, NEPED continues its work as an autonomous agency financed by the Government of India. ■



VISHAL BHAVE

Technology helps Asian women balance family and work

A website is helping Southeast Asian women earn an income and balance their work and home lives. Called eHomemakers, it is Southeast Asia's only community network that promotes the use of information and communication technologies to telework and run small home businesses.

eHomemakers started life as "Mothers for Mothers," an informal group launched in Malaysia in 1998 by Chong Sheau Ching, founder and chief executive officer of eHomemakers. With IDRC support, she and colleagues explored how information technologies, from mobile phones to the Internet, could be harnessed to help poor, isolated women working at home.

One outcome: a Chinese, English, and Malay language website (ehomemakers.net) through which the now more than 17,000 members share information, organize activities, advertise products and services, and more. ■

Saving lives, money, and ecosystems

Environmental economists shed light on the underlying causes of environmental degradation, and apply economic principles to design solutions that benefit people and the planet. IDRC has worked for two decades with researchers in developing countries to build this field, which provides decision-makers with evidence and analysis to help them make tough choices.

For example, after the 1999 cyclone in Orissa, India, researcher Saudamini Das assessed the storm-protection value of mangrove forests. She calculated that a hectare of mangrove land prevented damage worth US\$43,000 during the cyclone. She also estimated that more than 90% of the 10,000 lives lost would have been saved had the area's mangroves been intact. Now in India, mangroves are being protected, Das says.

IDRC supports the work of two networks in Asia: the Economy and Environment Program for Southeast Asia (eepsea.net) and the South Asian Network for Development and Environmental Economics (sandeeonline.org). ■



STEPHANIE SALAZAR/FLICKR

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

idrc.ca