

2 Special Reports





Boosting Food Output

In 2007 and into 2008, the price of oil and raw materials soared. Meanwhile, growing concerns over climate change caused many farmers to switch to crops that could be converted into biofuels, resulting in a net loss of arable land for food production, and leading to a shortfall of foodstuffs throughout the world. According to a report released by the United Nations (UN) in February 2008, stockpiles of rice and many other grains had fallen to historic lows, and consequently many exporters began to limit and in some cases halt exports of staple crops.

While international prices have retreated from their peak in 2008, they have not returned to their pre-crisis levels. Prices also remain volatile, and average global grain prices in May 2009 were still 24 percent higher than in 2006, forcing over one billion people to the brink of poverty and hunger.

Countries most affected by this food crisis are characterized by fragile ecosystems, susceptibility to the worst effects of increasingly frequent natural disasters, and a yawning gap between levels of domestic production and domestic demand and consumption. Where wholesale prices for grain imports have risen, inflation has destabilized domestic markets, and sometimes imports have dried up altogether. All of these recent issues have exacerbated chronic economic instabilities, causing civil unrest in some nations.

In 2008, the TaiwanICDF initiated a series of Grain Yield Enhancement Contingency Projects in four partner countries facing the most serious food shortages, and a Rice Production Improvement Project in a fifth partner country. Through 2009, these projects have gradually improved food security in Haiti,

Burkina Faso, Swaziland, The Gambia and Nicaragua.

Haiti

Although rice is one of Haiti's primary staples, 75 percent of its supplies are imported. Prices began to rise through 2007, after which the global economic downturn caused the value to more than double, greatly reducing buying power in a country where about 80 percent of the people live on less than US\$2 a day. This left Haiti facing severe shortages and triggered demonstrations and riots.

In line with the Haitian government's policy of boosting output of grains, the TaiwanICDF has sought to address food security. Our technical mission has acquired additional farmland, increased the use of mechanized plows, added value to harvests by improving milling and processing, and established production and marketing teams. These initiatives are substantively boosting output and helping to alleviate hunger. Cultivation totaled 223 hectares in 2009, yielding output worth roughly US\$660,000 and increasing output by 34 percent, with the added value of milling and marketing boosting net profits by over US\$8,000. Some 4,318 farmers have benefited from the project to date.

Burkina Faso

Working with personnel from the Bagré Reservoir Management Office, the TaiwanICDF has promoted a second phase of the Grain Yield Enhancement Contingency Project since July 2009 by introducing superior varieties of paddy rice, and by expanding into and reclaiming upland areas. In

these locations, where soils are often not arable due to a lack of irrigation, the mission has substituted maize for rice so that staple crops can be readily cultivated during the rainy season, with the crop being harvested in November and December. In 2009, a total area of 1,606 hectares was farmed, with each hectare yielding 5,504 kilograms of produce on average. This compares to an output of 3,197 tons prior to the introduction of higher quality seed, and exceeds the original project target of 2,000 tons. Maize grown over 100 hectares of land yielded 406 tons, more than doubling an initial goal of 200 tons.

Swaziland

Through 2009, the TaiwanICDF dispatched irrigation experts to Swaziland to consult on ongoing work. Mechanized plows, rice transplanters and milling machines were brought in to augment operations, while the technical mission also established drying fields, storage facilities and irrigation canals. Besides reclaiming 67.1 hectares of land for rice production, the mission also planted maize on 20 hectares, sweet potatoes on 25 hectares and various other produce on 10 hectares on account of changes to the landscape during the rainy season.

The Gambia

In order to amplify the positive effects of its agricultural work, our technical mission works in close cooperation with The Gambia's Department of State for Agriculture and National Agricultural Development Agency, and various bilateral aid agencies such as ActionAid, Catholic Relief Services, and the US Peace Corps. Work carried out under the Grain Yield Enhancement Contingency Project has focused on providing seed stock for the extended cultivation of upland rice. In 2009, we cultivated breeder seed on 10 hectares, yielding 30 tons; and propagated foundation seed across 20 hectares, yielding 101 tons. In addition, upland rice cultivation was extended to 4,400 hectares.



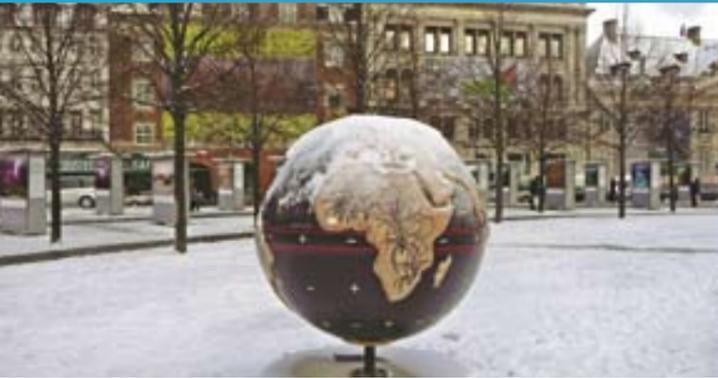
Nicaragua

As in many of our partner countries, rice is one of Nicaragua's staple foods. However, impoverished farmers lack the capital to purchase seed, and are hindered by old-fashioned agricultural equipment. Field management is weak, and a significant share of each harvest is lost to diseases and pests. Ultimately, many farmers are at the mercy of nature, and struggle to become self-sufficient in production.

The TaiwanICDF is working in harmony with the Nicaraguan government's national development strategy to boost grain output and eradicate hunger through the Rice Production Improvement Project and similar initiatives to boost output per unit of land. Our technical mission is also training seed instructors to boost the overall number of technicians available to Nicaraguan government agencies. These initiatives are addressing the endemic inefficiencies that have frustrated agricultural production in the country, so accelerating the uptake of technology, and focusing on the root causes of problems confronting farmers.

In 2009, our technical mission helped to cultivate 8.44 hectares of breeder seed and 76.6 hectares of foundation seed. A combination of this stock was then propagated across 142 hectares, yielding harvests worth almost US\$430,000. This work was supplemented by two training workshops discussing the use of technology and field demonstrations, with over 110 Nicaraguan farmers and agency staff attending.

All told, the five yield-boosting initiatives implemented by our technical missions have increased seed stock by 755,402 tons, unhusked rice by 20,184 tons, maize by 1,121 tons, sweet potatoes by 491 tons and other produce by 366 tons.



Environmental Sustainability

In recent years, environmental sustainability, the gradual depletion of fossil fuels and the threat of climate change have become topics of major concern for the international community. In December 2009, the United Nations Climate Change Conference (COP15) assembled in Copenhagen, Denmark, to discuss the responsibilities of signatories to the Kyoto Protocol once it expires in 2012. Although Taiwan is not a party to the United Nations Framework Convention on Climate Change (UNFCCC), the country was represented at the conference by affiliated organizations acting as NGO observers, providing an opportunity to participate in discussions on a wide variety of topics associated with climate change. Our government also recognizes that future policies should reflect the consensus of the UNFCCC.

An agreement was reached at COP15 to provide funding for developing countries to reduce carbon emissions. During the conference, representatives of the Alliance of Small Island States (AOSIS) also warned that a united response to climate change is not only critical to the survival of their own group of nations, but would soon become the most critical issue facing all nations.

Many members of the AOSIS are TaiwanICDF partner countries in the Caribbean and the Pacific, and we intend to strengthen cooperation with small island nations on matters concerning environmental sustainability. Other international multilateral and bilateral organizations have drafted strategic goals, and subsequently initiated programs, to reduce or adjust carbon emissions through mitigation or adaptation. With new initiatives being brought in to address climate change as it relates to policy-making, institutional capacity, technology transfer and financing, the need to take action is

fast becoming one of the most important motivations driving international cooperation and development.

Climate change has already had an impact on an interconnected range of TaiwanICDF operations in medicine and public health, agriculture, SME development, and ICT; and to this end, we have elected to make environmental sustainability one of the cornerstones of future operations. Assistance is now being offered to partners in renewable energy, potable water, organic and solid waste treatment, pesticide residues testing, and the use of geographic information systems (GIS) to survey and monitor environmental changes and hazards.

Recent projects have yielded impressive results. Our Funafuti Household Solid Waste Reduction Technical Assistance Project is paying dividends in Tuvalu, where land is limited to nine low-lying islands and atolls. The project accounts for Tuvalu's actual environmental conditions and promotes various forms of recycling and controlled incineration as a means to reduce the volume of refuse accumulated at landfill sites. Meanwhile, Biogas Application Projects have been introduced in both Honduras and Nicaragua, converting livestock waste into an alternative source of energy, and then into a concentrated form of organic fertilizer.

Two years ago, we embarked on a three-year drive to put environmental protection and clean energy at the heart of our operations. Since these types of projects are relatively expensive and require a lengthy project cycle, we are committed to focusing on the specific requirements and conditions of partner countries. New programs being initiated by overseas missions will offer long-term assistance and guidance so that our developing partners can realize their stated aim of reducing carbon emissions.



Case Study Biogas Application Project

The livestock industry is frequently criticized as being a major cause of climate change, since animal waste is a significant source of carbon dioxide, methane, and other greenhouse gases (GHGs). Old-growth forest is often razed in order to create open plains for grazing, resulting in a net loss of carbon sinks. Grazing then damages ground vegetation, affecting soil quality and causing water shortages.

However, livestock waste contains nitrogen, phosphorous, potassium and other trace elements needed to keep soils healthy. The waste can first be collected and put through a process of anaerobic fermentation, generating biogas as a clean, alternative form of energy. Following fermentation, further decomposition of the waste then transforms the product into a highly effective organic fertilizer. When used as compost, this can improve soil permeability and sustain aquifers, and promote root growth in vegetation.

In 2009, the TaiwanICDF installed biogas digesters at hog-breeding and production centers in Honduras and Nicaragua. Further digesters are planned for the site in Honduras. Across both countries, carbon dioxide and methane emissions will be reduced by roughly 157

tons and 26.5 tons per year, respectively, while NT\$6.772 million will be saved due to reductions in overheads. Projections show that in Nicaragua, where the biogas is used to fuel incubation lighting, some NT\$4.986 million should be saved over 20 years.

The success of these Biogas Application Projects has attracted the attention and accolades of the Nicaraguan government and other international organizations operating in the region. In November, our technical mission began working with the American Nicaragua Fund to promote extension activities modeled on the setup at the original hog-breeding center, together installing simple biogas digesters at 38 facilities in El Menco and Tolesmayda. In future, farmers participating in the program are expected to make an annual saving of US\$240 on fuel costs, so in addition to reducing pollution and GHG emissions, the project is helping to boost the living standards of farmers. New cooperative projects focusing on biogas and similar forms of renewable energy are presently being identified or prepared, and will be complemented by programs addressing water resources and soil quality in rural communities, in countries such as Panama.



Global Health Care

Taiwanese medical missions first operated in the 1960s, when physicians were dispatched to Libya to raise the standard of medical facilities and institutional capacity at a military hospital. Africa's political situation was unstable at the time; and, since sanitation and hygiene were poor, and a host of infectious diseases were rife, mission members were risking their own lives in the line of duty. Despite this, further missions went on to operate throughout Africa, serving the public and helping to bring epidemics under control. The compassion of these pioneering Taiwanese doctors laid the foundations for our current work in medicine and health care, and we aspire to work with the same spirit today.

The publication of the UN Millennium Development Goals provided the international development community with a blueprint for action. Three of these objectives are directly related to health care: reduce child mortality; improve maternal health; and combat HIV/AIDS, tuberculosis and malaria. In order to contribute toward the realization of these targets, we established the IHCSA in 2006, in partnership with a number of local hospitals and medical institutions. A key strand of cooperation within this alliance has involved the provision of medical services through MMMs.

MMMs are designed to treat the sick and the vulnerable on location, wherever there is a pressing need for medical care. Recently, we have also launched trial missions that concentrate on performing certain specializations, such as cataract operations and hip replacement surgery. These missions have been widely lauded for their success. In order to enhance the function of MMMs and maximize the benefits of Taiwanese medical resources, we now plan to tackle specific illnesses in cases where partner governments have been unable to overcome endemic problems. Since these MMMs are intended to address specific medical issues, we will step up the recruitment of Taiwanese medical personnel

with expertise in certain specialties.

The TaiwanICDF continues to deepen partnerships throughout the medical sector, and MMMs will continue to transfer clinical technology and offer training in specialized areas. Meanwhile, we also intend to expand a thriving program that brings overseas medics to Taiwan on training placements at IHCSA hospitals. Pursuing clinical training in Taiwan has proven to be a worthwhile experience for these medical professionals, and is ultimately helping partner countries to achieve their development goals.

Healthcare Personnel Training Program

In 2009, 33 doctors, nurses, medical administrators and managers, laboratory technicians and medical engineering staff from 19 countries visited Taiwan under the TaiwanICDF's Healthcare Personnel Training Program. These individuals received three-month training placements at 17 hospitals and in a variety of specialties, including internal medicine, surgery, obstetrics and gynecology, pediatric medicine, emergency medicine, and psychiatry. Visiting nurses and medical technicians received training in their respective fields.

Being assigned to a single institution for a significant length of time allows participants to receive practical clinical training through daily interaction with colleagues and patients. They gain a deeper understanding of how the Taiwanese medical and health care system works, and develop their professional skills in a cutting-edge environment. Upon returning to their home countries, participants are expected to serve as seed instructors and pass on their knowledge. The practices and experiences acquired in Taiwan are then transferred to their colleagues, thereby raising the quality of human resource at local hospitals and medical institutions.



Case Study Mobile Medical Missions

TaiwanICDF MMMs were formally established in February 2006, and have since become one of the core functions of the IHCSA. MMMs are essentially small-sized mobile hospitals, designed to offer both performance and flexibility. They are staffed by volunteer doctors, pharmacists, and nurses from IHCSA member-hospitals and -institutions, and provide roving, short-term medical assistance within our partner countries. In the course of performing their duties, MMMs also share the latest research with their overseas colleagues, which helps to enhance the expertise of local personnel and improves the long-term quality of medical services in these nations. The assistance provided by our MMMs demonstrates that Taiwan is committed to improving health care throughout the world.

At present, 37 local hospitals and medical centers are members of the IHCSA. The TaiwanICDF collaborates with these partners on medical assistance projects. In

2009, 19 MMMs were formed in cooperation with 19 of our IHCSA member-institutions, traveling to 15 partner nations. Twelve of these missions were commissioned and funded by MOFA, with the TaiwanICDF financing the remaining seven. Altogether, 169 medical personnel participated in these missions, treating patients on around 25,000 occasions.

In addition to part-funding these initiatives, the TaiwanICDF plays the role of coordinator. Between 2006 and the end of 2009, we arranged for 72 MMMs to be stationed at temporary clinics in urban and rural communities in 24 partner countries across Africa, Latin America, Southeast Asia, and the Pacific. In this time, 653 Taiwanese doctors and medical personnel have offered clinical training, demonstrations, and taken part in technical exchanges; and treated some 120,100 patients.



Human Resources Development

The modern concept of “human capital” emphasizes the relationship between organizations and people. For an organization to achieve its mission, it must invest in the development of its workforce and acquire the right combination of skills.

In today’s knowledge-based economy, people are the driving force behind innovation. The value and performance of an organization is determined by its intellectual capital and an ability to utilize human resources effectively. The strengths or weaknesses of individual humans, and their configuration as a team, play the key role in success or failure at an organizational level.

In today’s rapidly globalizing environment, competitiveness is essential if corporations are to overcome traditional boundaries and access volatile markets. These markets are, themselves, becoming increasingly diverse and complex, and can only be tapped with the right kind of human resource. Businesses face a daunting array of leadership and integration challenges; meanwhile, a newer,

technologically literate generation must interact with the older generation, and multinational workforces must adapt to a variety of cultural backgrounds and languages. Global communication, human resource training, innovation in leadership and outsourcing are just some of the challenges facing businesses.

Taiwan has always been highly reliant on trade. Our country learned to contend with international competition and became accustomed to negotiation, which enabled our economy to develop rapidly but securely. Consequently, Taiwan has gained a great deal of know-how regarding human resource development. Conversely, most of our partner countries are developing nations who struggle to align their workforces to the demands of international business, and their public administration and legal regulations need to be reinforced. With this in mind, the TaiwanICDF has established a Workshop on Human Capital Management to coach government officials responsible for human resource agencies or similar departments. Analyzing

and discussing the factors that underpin Taiwan’s success in deploying human resource not only passes on this success, but also strengthens relationships with our partners and consolidates lines of communication.

Workshop on Human Capital Management

Taiwan’s development and subsequent role in the international community over the past several decades becomes clearer within the context of globalization. In the 1980s, Taiwanese companies reflected the prevailing outlook by embarking on a drive to globalize operations, making overseas investments, and transforming themselves into multinational enterprises. Meanwhile, many non-commercial domestic organizations sought to align their own practices with those of similar organizations in the international community. Since then, these multinational enterprises and organizations have had to adapt their human resources to comply with the range of legal regulations and employment policies maintained in different countries. Recruiting and training personnel who will flourish in different cultural and social environments has been crucial, while those in leadership and management roles have had to identify with and inspire their overseas workforces. All of these issues are unavoidable considerations for any enterprise or organization aiming for success in the modern economic era.

In the course of developing its own human resources, Taiwan has accumulated an impressive array of experiences that can serve as an important reference for its developing partners. For this reason, we invite officials from government departments and similar policy-making agencies to attend our Workshop on Human Capital Management, in Taiwan. Participants have a first-hand opportunity to understand Taiwan’s achievements in this field and explore the key factors behind our success. All of our workshops are designed to strengthen exchanges, consolidate relationships between Taiwan and its partners, and raise the aspirations



and knowledge of our visiting participants. Upon returning home, they can apply what they have learned to their work, and contribute toward the social and economic development of their country. Visiting Taiwan also gives these individuals an opportunity to witness Taiwan’s achievements in the pursuit of freedom and democracy. This helps to strengthen bilateral diplomatic relations and promotes the “Taiwan Experience.”

In 2009, the Workshop on Human Capital Management was attended by 28 individuals from 28 nations. Most participants were public sector officials responsible for high-level planning, administration or training. The workshop curriculum emphasized both theory and practice. Representatives of Taiwanese government departments, eminent domestic and international scholars, research fellows and industry representatives were drafted in to give lectures and offer their take on Taiwan’s experience in human resource development. Additionally, field trips were arranged with students making on-site visits to the government’s central personnel administration agency, vocational training institutions, and other relevant companies. This helped to promote understanding, exchanges and applications from a practical perspective. Meanwhile, as a complement to the academic syllabus, students spent their weekend touring scenic and cultural landmarks in northern Taiwan, in order to provide a fuller impression of Taiwan and foster friendships between nationalities. Students not only left Taiwan enriched with a new set of skills, but also with a better understanding of our lifestyle and culture.