



Daunting challenge: a ruined agricultural research station in Cambodia before the rebuilding began.

PHOTOS: BRAD COLLIS

HEALING WOUNDS WITH SEEDS AND SOIL

International agricultural research has demonstrated its vital role in rebuilding devastated countries.

Rebuilding after disasters

When smallholder farmers and rural communities are hit hard by natural or man-made disasters their tenuous hold on food security is loosened. Rebuilding is never simple, and the task is even harder in poor communities.

In 30 years of supporting agricultural development, ACIAR has experienced its share of emergency interventions, sometimes dealing with catastrophes on a gargantuan scale.

In these circumstances, ACIAR's aid is different and complementary to emergency food aid. ACIAR projects are about rebuilding farming capacity from the ground up by partnering with communities over the long term—what participating scientists call “walking beside the farmer”.

The immediate goal is to remove obstacles to food production—replace lost seed or tsunami-stripped soils—and then to quickly transition from starvation to secure production levels. But the assistance does not stop there. From the worst of disasters, opportunities for new gains can be found.

With the right know-how and support, communities have taken the next step by intensifying production and diversifying to produce admittedly small but dynamic agribusinesses. In time, these have often proven capable of producing enough disposable income to pay for home repairs, schooling and health care and to reinvest back into the micro-enterprise.

Strong and enduring bonds can form in these circumstances, as occurred between Australia and Cambodia, Indonesia and East Timor. Then there are the places around the world where Australian team members have been greeted as heroes by recovering communities.

The scientists themselves often have remarkably warm recollections of their involvement, touched in ways they had not expected. Even so, ACIAR wants to express its deep gratitude to all past members of these extra special teams.

In the following pages, we look back at a *Partners* story that commemorated their achievement and powerfully brought home the essential role agricultural scientists and research infrastructure have played rebuilding lives, communities and hope.

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BY BRAD COLLIS

It was 1988 and two Australian agricultural scientists, Harry Nesbitt and Glenn Denning, and Harry's wife Betty, were strolling three abreast down the middle of Norodom Boulevard in the centre of Phnom Penh, Cambodia.

For anyone familiar with Phnom Penh's crowded and chaotic traffic today, it is hard to imagine, but back then the city was completely empty, save for the last remaining units of North Vietnamese troops who had driven out the Khmer Rouge.

The two Australian agriculturalists and Betty Nesbitt were among the first outside civilians to enter the abandoned city, and in so doing were perpetuating a timeless practice that requires soldiers to be followed as quickly as possible by people who can rebuild broken communities and lives.

Their unencumbered stroll down a puddled, haunting thoroughfare compared with today's vibrant mayhem is the difference between war and peace. And in between these two points in time is the foundation laid down by a rebuilt agriculture sector.

Nesbitt and Denning had arrived in Cambodia to prevent a famine; alone and without the protection of peacekeeping forces. They had to rally as many able-bodied farmers as possible to get in a rice crop using the product of modern science, the early-maturing IR66 variety, which created enough time for a second crop in the same season.

From this emergency action, they then began the long, gruelling task of showing an entire dislocated country how to farm the

strange soils and topography that people had been forcibly moved to, and to also begin training a new generation of agricultural professionals.

Their success over the next decade helped Cambodia to rise again as a fast-healing country with a positive future.

The work of Nesbitt, Denning and others in what was the CIAP program (Cambodia–IRRI–Australia Project) epitomises the vital role of international agricultural research in rebuilding countries after conflict.

Ideally, agricultural researchers from developed countries would prefer to be able to concentrate on peacetime development; helping people in less developed countries who are dependent on the land for food and basic income to climb from poverty.

But recent histories, like Cambodia, Rwanda, East Timor (Timor Leste), Afghanistan, Iraq and, closer to home, Solomon Islands and tsunami-devastated countries, have highlighted the need for agricultural research to also be responsive to immediate humanitarian crisis.

This work by international agricultural research agencies, such as ACIAR and partner

organisations like AusAID and the Crawford Fund, have been highlighted in a new book, *Healing Wounds: How the International Research Centers of the CGIAR Help Rebuild Agriculture in Countries Affected by Conflicts and Natural Disasters*.

Published by the Consultative Group on International Agricultural Research (CGIAR), the book is written by Surendra Varma and Mark Winslow (see www.cgiar.org/publications). It also includes a section, 'Rebuilding agriculture after the Asian tsunami', derived from a report produced by Dr Meryl Williams, with contributions from ACIAR and other international research centres.

From this publication, the Crawford Fund has produced *Healing Wounds: An Australian Perspective*, which looks at the work by Australian agencies in helping damaged communities to rebuild.

While there is a strong Asia–Pacific focus, the book also looks at the role of Australian-supported agricultural research in Rwanda, Afghanistan and Iraq.

In particular, *Healing Wounds* underscores the value of international agricultural research

centres being able to quickly rework their programs and strategies to respond to a crisis.

In 2000, ACIAR responded immediately to the post-election violence in East Timor, coordinating the resources of five CGIAR centres to initiate the Seeds of Life program to urgently secure the country's food resources.

This program then became the main vehicle for lifting agricultural productivity and diversity by introducing improved, higher-yielding varieties of staples such as cassava, maize, sweetpotato, peanuts and rice. Many East Timor scientists also received training during the project, to give the fledgling democracy a better chance of sustaining its food supplies and building an agricultural economy.

ACIAR played a particularly important role in rehabilitating the agriculture faculty of the National University of East Timor. This continues to play an important part in building the country's human and institutional capacities.

The Seeds of Life program took its cue from the Seeds of Hope campaign in Rwanda from 1994–96. AusAID was a significant contributor to this CGIAR post-conflict engagement, which



Rising again: Australian agricultural scientist Harry Nesbitt at a farmer field day in Cambodia in 2001.



PHOTOS: BRAD COLLIS

Agricultural aid at work. (Top left) AusAID's Dr Kep Coughlan at work in Cambodia; Cambodian farmers now have the confidence to give over some of their land to ACIAR/AusAID-supported crop-diversification trials; and (bottom right) a Cambodian boy collects water for crops from a well built with Australian aid.

in many ways embodied the consequences of societies left to stagnate in poverty while the rest of the world is seemingly moving on. Rwanda was typical of the hopelessness and ethnic hatred that is so easily fuelled when people see no way out from poverty, political upheaval and economic stagnation.

Again, an initial campaign to revive food production was able to be used to also build a better agricultural base—improved crop varieties and the development of national capacity-building by training local expertise.

Significantly, these programs, launched in times of strife but designed to have long-term impacts, have learned how to get the right seed to the neediest people quickly and without pushing aside local agrobiodiversity and seed enterprises.

The basis for rebuilding Cambodian rice production, for example, was improving local varieties that had been collected before the conflict and stored in the germplasm bank at the International Rice Research Institute (IRRI) in the Philippines.

Similarly in Rwanda and East Timor, complementary research partners were drawn together to identify seed sources appropriate to

specific localities and needs.

In Solomon Islands, the challenge has been something else again: the need to develop new livelihoods to create a more even distribution of economic opportunity, which was the cause of ethnic conflict that erupted into violence in 1998.

Through support from ACIAR and others, the WorldFish Center has been developing small-scale aquatic enterprises that can help the coastal poor lift themselves from poverty. Over the past nine years, WorldFish has transferred the technology for catching and growing the blacklip pearl oyster from Polynesia to Solomon Islands. The establishment of just one major pearl farm in the Western Province of Solomon Islands is expected to provide at least 100 households with annual incomes of US\$2000.

ACIAR has given ongoing support to the work of WorldFish and current projects on pearl oysters, sea cucumbers and sustainable aquaculture reflect this. Other ACIAR-funded research targets management of migratory tuna stocks, support for regional plant genetic resources development, and domestication and commercialisation of crops from indigenous trees and shrubs.

In Afghanistan, ACIAR and AusAID have been helping the International Maize and Wheat Improvement Center (CIMMYT) to restart wheat farming, in particular local seed production.

More recently in Iraq, a 3 year project has just started in which improved varieties of wheat, barley, pulses and legumes will be introduced to Iraq's dryland cropping systems. The AusAID-funded program is being managed by ACIAR in partnership with the International Center for Agricultural Research in the Dry Areas (ICARDA).

All of these programs contain stories of individual courage and dedication by expatriate and local agriculturalists who are the frontline fighters against poverty and human despair.

As *Healing Wounds* points out, poverty and hunger can breed despair and desperation, and without hope and education one alternative for some young people is to turn to banditry, violence or terrorism. ■

Healing Wounds: An Australian Perspective is available from the Crawford Fund, www.crawfordfund.org