Cambodia and IRRI mark their 30th year of partnership in 2016. Collaboration was formalized when the two parties signed a memorandum of understanding in July 1986. IRRI's support for Cambodia, however, had started much earlier:

When civil strife gripped the country in the late 1960s to the early 1970s, famine caused farmers to eat the rice seeds they had saved for planting. They were discouraged from growing deepwater rice and, when they finally could, traditional varieties had been lost. Fortunately, between December 1972 and January 1973, IRRI had collected various types of rice in Cambodia and conserved duplicates in the International Rice Genebank at IRRI headquarters in the Philippines. After the strife ended, IRRI helped Cambodia regain its lost rice varieties by repatriating 766 of the country’s traditional varieties between 1981 and 1990.

In 1985, Cambodia’s Ministry of Agriculture, Forestry and Fisheries (MAFF) requested IRRI’s assistance in developing the country’s rice research system. IRRI then sent a mission to Cambodia that identified potential areas of cooperation and aid. This led to the signing of an MOU between the two parties in July 1986.

With funding from the Australian Agency for International Development or AusAID (now merged under the Department of Foreign Affairs and Trade or DFAT), MAFF created the Cambodia-IRRI-Australia Project (CIAP) in 1987.

To put the country in the research mainstream, CIAP embarked on breeding programs to develop improved rice varieties for the country’s various ecosystems. Due in part to the introduction of high-yielding varieties and the adoption of CIAP technologies, Cambodia exported rice for the first time in 1995-96.

Key achievements

- **Conservation of traditional varieties.** As part of the repatriation process after the civil war, IRRI reintroduced 766 traditional Cambodian rice varieties to the country from the International Rice Genebank. By July 2016, 4,895 types of seeds from Cambodia are being held in trust at the Genebank.

- **Improved postharvest management at village level.** From 2005 to 2008, IRRI and Cambodia’s MAFF piloted-tested postharvest technologies such as airtight storage systems; improvements in farmer granaries and grain quality assessment kits; and methods for improving rice mills and providing rice market information in 8 villages in Battambang and Prey Veng. Working with Vietnam’s Nong Lam University, IRRI also helped introduce combine harvesters and flatedryers in Cambodia. In 2009-2013, ADB funded the pilot-testing and outscaling of these technologies in six provinces. By the end of 2013, about 200 flatedryers have been installed by the private sector, about 5,000 combine harvesters were in use, and the supply chain for airtight storage systems has been established. Recommendations developed by the ADB-supported project have been included in the Cambodia Rice Strategy.

- **Capacity building.** From 1971 to 2016, more than 250 Cambodian nationals participated in IRRI short courses and training programs and have, in turn, given training to farmers in 46 villages, reaching about 13,000 families. Nine Cambodian scholars (six doctoral, two masteral, and a baccalaureate) have completed their courses in partnership with IRRI, as have an intern and 27 on-the-job trainees. To help reduce postharvest losses, IRRI’s projects in Cambodia, with support from ADB and the Swiss Agency for Development and Cooperation (SDC), enabled the training of 276 researchers, farmer intermediaries, and manufacturers of agricultural equipment by December 2014.

- **Laser leveling.** In 1998, IRRI piloted laser-assisted land leveling in Cambodia under CIAP. By year 2000, around 200 fields had been leveled to demonstrate the technology. The agriculture sector at the time, however, was not ready to adopt the technology. In 2012, the ADB-funded IRRI postharvest project reintroduced the technology and, to date, eight units are in use around the country.

Cambodia and IRRI
As of 2015, 14 IRRI-bred lines have been released as varieties in Cambodia, among which Sen Pidao, IR66, and Chul’sa are still being widely grown.

During the 2004 International Year of Rice celebration in Phnom Penh, representatives from the Cambodian Agricultural Research and Development Institute (CARDI), Food and Agriculture Organization (UN-FAO), and the then AusAID acknowledged the crucial role that IRRI had played in helping the country attain national food security. A famous Cambodian rice, Phka Rumduol, was chosen as the “World’s Best Rice” in three consecutive Rice Traders World Rice Conferences—Bali in 2012, Hong Kong in 2013, and Phnom Penh in 2014. Phka Rumduol was developed through support from the CIAP and was released as a variety by CARDI in 1999.

Current collaboration

Collaborative research activities among MAFF, CARDI, and IRRI support and promote the success of the “rectangular strategy” of development of the Royal Government of Cambodia. Currently, 14 projects are ongoing in Cambodia that are supported by a range of partners including Asian Development Bank (ADB); Bill & Melinda Gates Foundation; German Federal Ministry for Economic Cooperation and Development (BMZ); CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS); International Center for Tropical Agriculture (CIAT); International Fund for Agricultural Development (IFAD); IRRI Fund, Ltd.; Lee Foundation; Michigan State University; sarmap SA; Swiss Agency for Development and Cooperation (SDC); Virginia Polytechnic Institute and State University; and United States Agency for International Development (USAID).

Themes guiding the collaboration are:

- **Climate change adaptation and mitigation.** Breeding and development of varieties for climate change adaptation and resilience, dissemination and adoption of seeds and technology using a value chain approach, and policy development to support these efforts.
- **Better, climate-resilient varieties.** Accelerated development of varieties that not only yield well but also have good eating quality but are adapted to flooding and drought and other effects of climate change, and suited to Cambodia’s stress-prone areas where many of the country’s smallholder farmers grow rice.
- **Remote sensing-based information to monitor crops.** IRRI and its partners are working to reduce the vulnerability of smallholder rice farmers through the use of remote sensing technologies to map and observe rice growth in the country. Information gathered through these technologies will help the government make provisions, e.g., to address potential food shortages resulting from crop damage.
- **Improved farmers’ livelihood.** Integrated approach to helping rice farmers in unfavorable environments reduce risks and improve farm productivity through generation, validation, and dissemination of new technologies.
- **Postharvest.** Options for scalable management of rice straw as a means for farmers to earn added income, as well as adopt practices for low-carbon-footprint and sustainable rice-based production systems, are being documented and studied, with the outlook of dissemination.
- **Training and capacity building.** IRRI continues to host Cambodian researchers and students as scholars or participants in the institute’s various courses and training programs. Through various collaborative activities, IRRI helps build technical expertise for Cambodia’s national agricultural and research extension system and ensures mutually beneficial knowledge exchange to guide initiatives for the country.

**International Rice Research Institute (IRRI)**

The International Rice Research Institute (IRRI) is the world’s premier research organization dedicated to reducing poverty and hunger through rice science; improving the health and welfare of rice farmers and consumers; and protecting the rice-growing environment for future generations. IRRI is an independent, nonprofit research and educational institute founded in 1960 by the Ford and Rockefeller foundations, with support from the Philippine government. The institute, headquartered in Los Baños, Philippines, has offices in 15 rice-growing countries in Asia and Africa, and about 1,180 staff members of some 40 nationalities.

Working with in-country partners, IRRI develops advanced rice varieties that yield more grain and better withstand pests and disease as well as flooding, drought, and other destructive effects of climate change. More than half of the rice area in Asia is planted to IRRI-bred varieties or their progenies. The institute develops new and improved methods and technologies that enable farmers to manage their farms profitably and sustainably, and recommends rice varieties and agricultural practices suitable to particular farm conditions as well as consumer preferences. IRRI assists national agricultural research and extension systems in formulating and implementing country rice sector strategies.

**IRRI Cambodia**

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