



## Background

USAID- and U.S. university-funded Collaborative Research Support Programs (CRSPs) have worked on global nutrition and food security issues from the initiation of these programs in the late 1970s. CRSP scientists conduct research to improve production technologies, increase access to nutritionally-dense food for rural communities, and



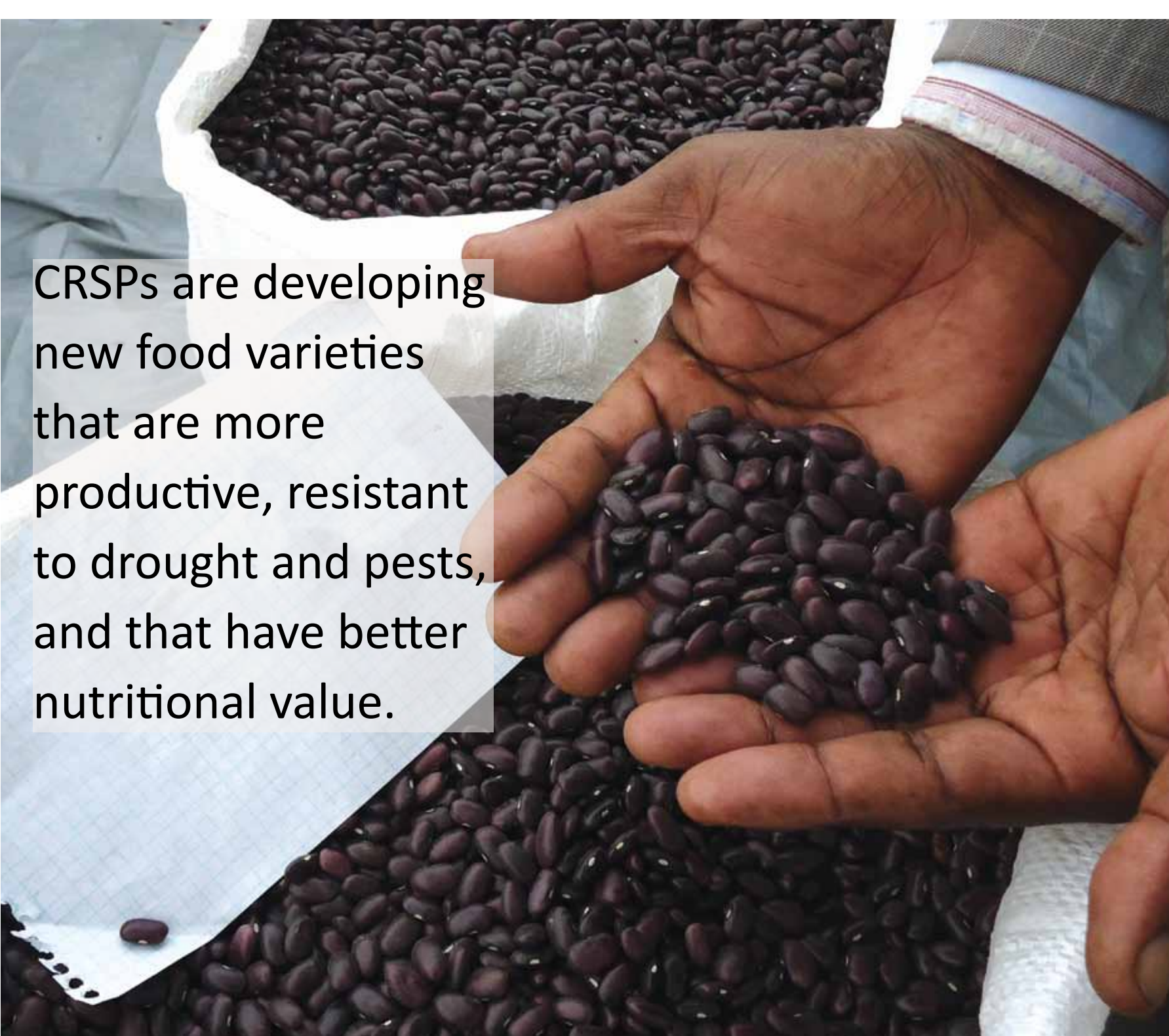
SUSAN JOHNSON/ GLOBAL LIVESTOCK CRSP

develop more productive and resilient varieties of staple crops. While some CRSPs have placed more emphasis on a nutrition component than others, integrated inquiry into the relationship between nutrition, food security, and agricultural development has been a consistent hallmark of the CRSP approach. The new varieties and innovative technologies that the CRSPs have developed have improved food quality and quantity globally. The work of the CRSPs examines the complex set of factors that influence nutritional status and consequently has helped identify effective strategies to address the challenges of global hunger.

Nutrition is a critical component of the U.S. Government's Feed the Future Initiative. Stunting, a marker of long-term nutritional insufficiency, affects from a third to nearly half of all children in the Feed the Future (FTF) countries. Improving the health and nutritional status of these children is an investment in the future. Better nourished children become far more capable adults, and will be the leaders of the future. The CRSPs are working in all FTF countries.

FTF Countries	% Children Stunted
Bangladesh	43
Cambodia	40
Ethiopia	51
Ghana	28
Guatemala	48
Haiti	29
Honduras	29
Kenya	35
Liberia	42
Malawi	47
Mali	38
Mozambique	44
Nepal	49
Nicaragua	22
Rwanda	44
Senegal	19
Tajikistan	39
Tanzania	44
Uganda	38
Zambia	45

Source: UNICEF (2011).



CRSPs are developing new food varieties that are more productive, resistant to drought and pests, and that have better nutritional value.

## Selected Positive Impacts of the CRSPs on Nutrition

- Improved varieties and/or agricultural technologies that allow crops to be more productive and resistant to disease, drought, and pests.
- Improved the nutritional quality and bioavailability of foods to enhance their nutritional benefits.
- Improved access to animal source foods that are critical to ensuring optimal development in children under five.
- Promoted nutrition-oriented value addition by developing new Ready to Use Therapeutic Food products. These are nutritionally dense foods that can quickly and cost-effectively address the needs of severely malnourished children and adults with debilitating chronic diseases.
- Pioneering interdisciplinary, integrated approaches to the study of agriculture and nutrition.
- Built the capacity of students through long-term degree training and of men and women producers in short-term trainings.

## Recommendations

To strengthen their impact on nutrition, the CRSPs can:

**Make Nutrition a Key Focus** by studying food access and allocation, gender relations, socioeconomic inequality, and cultural patterns of nutrition-related behaviors.

**Support Interdisciplinary Research Teams** to help bridge the gap between scientists and the communities who will benefit from their research.

**Put Women and Children First** by targeting the most vulnerable (children under five) and working to enhance women's access to resources and the technologies essential to improving nutrition in children.

**Foster Participatory Development Planning** so that stakeholders, including small farmers, can help scientists to focus on those crops or other products that of greatest importance to rural consumers.

Prepared by the CRSP Digest Project.

## Individual CRSP Contributions to Nutrition Research

### Global Nutrition CRSP

The newest CRSP is identifying and testing nutrition interventions known to have positive effects on the most vulnerable populations. It has established programs in Nepal and Uganda and is building collaborative networks, establishing operating procedures, and holding workshops. It works closely with USAID/Uganda as a monitoring and evaluation partner for its agriculture and nutrition-oriented "Community Connector" project.

### Horticulture CRSP

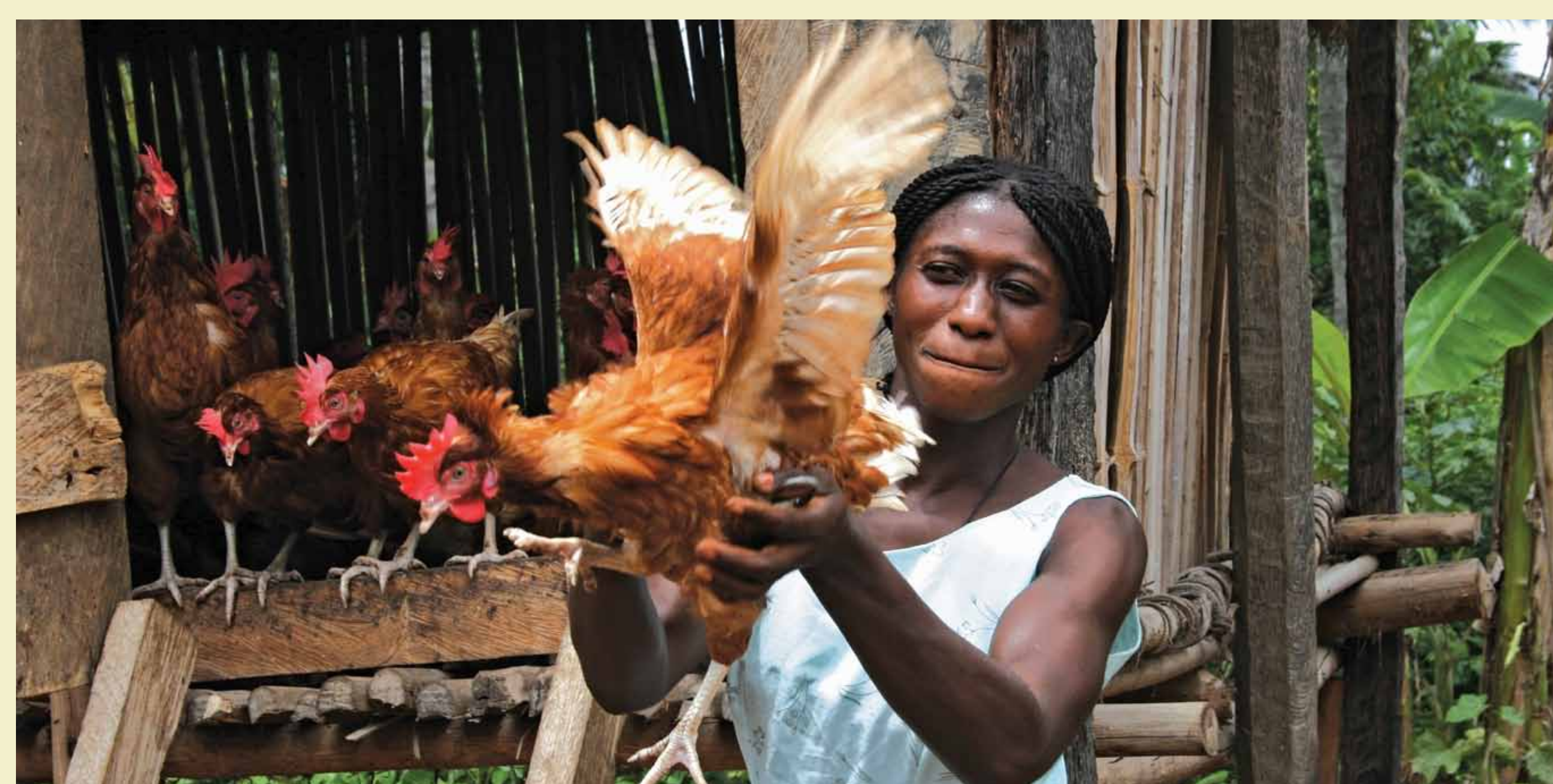
The current Horticulture CRSP promotes the production of diverse fruit and vegetable crops, including indigenous African vegetables, to address malnutrition, particularly micronutrient deficiencies. It supports the consumption of horticulture crops by increasing production, maintaining the genetic diversity of crops, integrating smallholder producers into markets, and improving food storage and postharvest strategies.

### Sorghum, Millet and Other Grains (INTSORMIL) CRSP

In its early phases, the INTSORMIL CRSP conducted research in Honduras and Sudan to improve sorghum production and grain quality for consumption. Biological and social scientists pioneered the Food Consumption Perspective to incorporate key factors that influence the nutritional status of foods. Plant breeding priorities were shaped by local preferences to enhance adoption of improved sorghum varieties.

### Pulse and Peanut CRSPs

These CRSPs have recently researched the role of beans and peanuts in combating obesity by stimulating a sense of satiety. These findings are important both for industrialized and developing countries where obesity is a concern.



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### Human Nutrition CRSP and Global Livestock CRSP

The Human Nutrition CRSP was the first CRSP to focus on nutrition as its central theme, rather than a specific crop or commodity. In a study conducted in the 1980s in Embu, Kenya, CRSP scientists produced a database of nutrition-centric research that provided important information on the progress of child nutrition over time. In response to the findings, years later, the Global Livestock CRSP conducted an intervention study in Embu to test whether introducing animal-sourced foods (ASF) into the diet of children would affect their nutritional status and performance. The researchers found that supplementation of meat resulted in increased leadership and activity levels of children. In addition, micronutrient deficiencies and anemia were significantly reduced in children receiving the supplementary meat. The finding that an increase in consumption of meat correlated with higher cognitive abilities in children has become one of the pillars of current thinking on nutrition. In Ghana, building on these as well as other findings linking women's control of resources to investments in children's welfare, GL-CRSP research explored options for developing sustainable pathways to get ASF into children's diets. The GL-CRSP project provided microcredit with training on nutrition and business development to mothers of young children and monitored the impacts on children's nutritional status with positive results. This implementation package has since been taken over by private banks, ensuring longer-term sustainability.