ILRI in East and Southeast Asia

Overview
The vision of the International Livestock Research Institute (ILRI) is to improve food and nutritional security and to reduce poverty in developing countries through research for efficient, safe and sustainable use of livestock—ensuring better lives through livestock. It is renewing its commitment to better lives through livestock by expanding its activities in East and Southeast Asia. This region’s major socio-economic transformations—rapid urbanization, market growth, changing diets and increasing incomes—are contributing to rising demand for meat, milk and eggs, the so-called on-going ‘livestock revolution’. In agriculture, there is rapid development of new farming technologies, as well as improvements in crop-livestock production and marketing. But concerns are growing about the threats to natural resources that these changes bring, coupled with growing climate change risk. These agricultural transformations, however, offer opportunities for effecting a more sustainable, equitable, safe and profitable livestock sector. ILRI is committed to working with many partners within and outside the region to support East and Southeast Asia in meeting its goals through research for development in the livestock sector.

Through CGIAR Research Programs (CRPs) and with partner organizations, ILRI is helping to address high-priority agricultural research issues in East and Southeast Asia, such as helping the region’s smallholder farmers enter the market and take part in its modernizing food systems, better management of food safety, zoonoses and agriculture’s natural resources. There is much reason to be optimistic about the future of livestock production here, as the growing demand for meat, milk and eggs offers ways out of poverty for many millions of people, especially smallholder mixed crop-and-livestock farmers.

1 Formerly part of ILRI Asia and managed from New Delhi, India, ILRI in East and Southeast Asia became a separate regional unit in February 2013.
Development scenarios
ILRI’s long-term strategy ‘Getting the science right’ (2016–2020) highlights the role of livestock research not only in poverty reduction and food and nutritional security but also in human and environmental health. Based on this strategy, ILRI in East and Southeast Asia is working to enhance two kinds of livestock sector growth: (1) strong growth in intensifying and well-connected smallholder systems and (2) high growth with externalities, where rapid changes in livestock production threaten the natural resource base, agro-system functioning and/or human health. These two scenarios also focus on enhancing gender equity and working with partners to achieve greater research-based outcomes and development impacts.

Priority areas
ILRI is focusing its research in East and Southeast Asia on sustainably intensifying mixed crop-livestock agricultural systems and mitigating risks inherent in changing agricultural systems. These priorities are based on research, consultations with stakeholders and partners, and issues in the region that are seen to present challenges and open up possibilities for further research and collaboration. On-going projects are aligned with these priority areas.

Opportunities
Sustainable intensification of crop-livestock systems. Exploits market and production system opportunities and includes the following.

Crop-livestock system integration and productivity. Focuses on forages and crop residues, including integrating livestock in tree plantation and other mono-crop systems, improving dual-purpose food-feed crops and implementing integrated strategies for crop-livestock production for natural resource management, as well as productivity and livelihoods.

Conservation and utilization of animal genetic diversity in the region. Explores the means to better characterize and utilize the rich animal genetic diversity that exists in the region and to find solutions to breed constraints through the use of genomic tools and adapted breeding strategies. Also explores market-driven production and marketing models to drive demand for local breeds while enhancing livestock livelihoods.

Value chain and market development for smallholder participation and productivity. Includes innovative options for organizational transformation to comply with changing market demands and is focused on smallholder pig systems and other high-value products in which smallholders have a comparative advantage.

Threats
Mitigation of risks in changing agricultural systems. Addresses the threats associated with livestock and includes the following:

Zoonotic emerging infectious diseases. Employs integrated One Health/EcoHealth approaches to reduce the threat of diseases that can pass from livestock to people.

Food safety and antimicrobial resistance. Focuses on dynamic livestock product markets which are raising their quality and safety standards, addresses both biological and chemical hazards, and is directed largely at improving food safety in domestic traditional ‘wet’ markets, which are important for poor livestock producers, sellers and consumers alike.

System integrity and environmental services. Includes modelling of expected climate change and livestock hotspots, options for mitigating greenhouse gas emissions and for adapting crop-livestock systems in the face of climate change, as well as managing the environmental impacts of large-scale livestock production.

CGIAR Research Programs
ILRI brings these livestock issues to bear largely through its work within the following multi-institutional CGIAR Research Programs.

Livestock agri-food system
Focuses on increasing the productivity of small-scale livestock and fish systems in sustainable ways, making meat, milk and egg more available and affordable to poor consumers across the developing world.

Agriculture for Nutrition and Health
Focuses on maximizing health and nutrition benefits through agricultural practices, interventions and policies, while reducing health risks.
Climate Change, Agriculture and Food Security
Focuses on information systems, policies and mitigation and adaptation strategies relating to climate change.

Capacity development with partners
Given the strong research capacity in East and Southeast Asia, ILRI has established several partnership mechanisms to leverage that capacity development among country partners for joint research, as well as capacity development throughout the region. These partnerships for capacity development include the ILRI-CAAS (Chinese Academy of Agricultural Sciences) Joint Laboratory on Animal and Forage Genetic Resources in China; two One Health/EcoHealth resource centres in Thailand (based in Chiang Mai University) and Indonesia (based in Gadjah Mada University); a centre for food safety in Japan (based in Rakuno Gakuen University); and the Center for Public Health and Ecosystem Research (CENPHER) of the Hanoi University of Public Health (HUPH) in Vietnam.

Partnerships and geographic strategy
ILRI works through and with partners to conduct and implement research in the region. This partnership is essential for joint research and capacity development. ILRI supports regional research coordination and learning (e.g. partnering with the Asia-Pacific Association of Agricultural Research Institutions); supports regional livestock policy and investment advocacy (e.g. partnering with Food and Agriculture Organization of the United Nations, World Bank, World Organisation for Animal Health); and convenes meetings with partners for planning and priority setting, advocacy and resource mobilization.

Currently several CGIAR Research Programs are carrying out research in countries in the region. Vietnam is the centre of numerous activities by these programs, with regional offices of partner organizations located there, while these CGIAR Research Programs are expanding in Lao PDR, Cambodia, China, Indonesia and Myanmar. Based on partner and investor demand, research is also being developed in other countries in the region.

ILRI tailors its communications approaches to meet regional needs through the publication of blogposts and other web materials, research and policy briefs, brochures, factsheets and multimedia products, and participation in public awareness events and other high-profile fora.

Staffing
To support research and capacity development throughout the region, ILRI in East and Southeast Asia has staff based in ILRI offices in Beijing, China, and Hanoi, Vietnam (where the regional office is located). ILRI staff members based in this region are specialists in veterinary epidemiology, population genetics and genomics, One Health/EcoHealth and food safety, agricultural systems analysis and agricultural economics.

ILRI staffing in this region is diverse in both its expertise and national origins. The 6 staff that were working in the region in 2012 have been increased to 15 staff in 2017 and additional recruitments are planned.
The International Livestock Research Institute (ILRI) works with partners worldwide to:
1. Develop, test, adapt and promote science-based practices that—being sustainable and scalable—achieve better lives through livestock.
2. Provide compelling scientific evidence in ways that persuade decision-makers—from farms to boardrooms and parliaments—that smarter policies and bigger livestock investments can deliver significant socioeconomic, health and environmental dividends to both poor nations and households.
3. Increase capacity among ILRI’s key stakeholders and the institute itself so that they can make better use of livestock science and investments for better lives through livestock.

ILRI leads the CGIAR Research Program on Livestock, leads a component of the CGIAR Research Program on Agriculture for Nutrition and Health on food safety, and contributes to several other CGIAR research programs and platforms. ILRI is the co-founder, with the African Union/New Partnership for Africa’s Development Planning and Coordination Agency, of the Biosciences Eastern and Central Africa Hub (BecA-ILRI Hub) on its Nairobi campus where world-class facilities for biotechnology research are in use by ILRI, other international centres and many national partners. The platform increases access to advanced laboratories for African and international scientists conducting research on African agricultural challenges. ilri.org

The International Livestock Research Institute (ILRI) works to improve food security and reduce poverty in developing countries through research for better and more sustainable use of livestock. ILRI is a CGIAR research centre. It works through a network of regional and country offices and projects in East, South and Southeast Asia, Central, East, Southern and West Africa, and in Central America. ilri.org

CGIAR is a global agricultural research partnership for a food-secure future. Its research is carried out by 15 research centres in collaboration with hundreds of partner organizations.cgiar.org