

## Institutional updates

### ILRI develops livestock master plan for India's Odisha State

The following is a foreword by Jimmy Smith, director general of the International Livestock Research Institute (ILRI), to a new ILRI report, Odisha livestock master plan 2022/23–2026/27.

'ILRI and its partners have, since 2013, provided technical support to interested countries in Africa and Asia to develop livestock master plans. A livestock master plan is an investment plan prepared to help governments identify, verbalize and prioritize their livestock development strategy objectives.

'The plan is designed as an evidence-based quantitative analysis of the livestock sector, including a baseline livestock sector analysis, a 15-year livestock sector strategy, and a five-year sector investment plan. This includes financial and human resource analysis and a budget that guides the development of a country's sustainable livestock sector.

'The Odisha livestock master plan initiative began with an aim to provide an investment plan which would complement the livestock sector development budget in a bid to help further modernize the livestock sector, enabling it to make an even more substantial contribution to the state's development goals. I am delighted to note that we now have a comprehensive document to facilitate the development progress of the livestock sector.

'In Odisha, livestock is an important economic activity only next to crop farming, with over 80% of the rural population owning livestock, which generates up to 30% of their income. Although crop production is the principal activity, livestock is an essential secondary income source for many small-scale, marginal and landless farmers, who may own only a few animals.

'The livestock master plan will also inform the development planning of the Government of Odisha and other agencies within its livestock sector, development partners/donors, non-governmental organizations, civil society organizations, private sector actors and development banks. It offers alternative investment technologies and innovations that, when combined with effective policy changes, will spur the state's comprehensive and sustainable development by attending to the recommended interventions, investments, policies and institutions needed to develop the livestock sector further.

'The choice of livestock value chains is informed by their significance in contributing to the state's development objectives. The livestock master plan is expected to provide a more detailed and complete set of value chain investment and development plans, which will help to achieve the broad targets of the livestock road map.

'This work has been generously funded and supported by the Bill & Melinda Gates Foundation through Samagra Governance and was undertaken by a joint team of experts from the Odisha government institutions—the Fisheries and Animal Resources Department, veterinary colleagues and district officers—in collaboration with ILRI livestock and planning experts.

'Four nations, namely Ethiopia, Tanzania, Rwanda and Uzbekistan, as well as the Indian states of Bihar and Odisha have, over the years, benefitted from ILRI's expertise in developing livestock master plans, some in collaboration with the Food and Agriculture Organization of the United Nations and the French Agricultural Research Centre for International Development. The Gambia and Kenya are among those that are currently developing livestock master plans.'



### Welcome note

Welcome to the ninth edition of ILRI's South Asia newsletter!

This newsletter shares key updates of ILRI's activities in South Asia with stakeholders, partners and donors.

I hope you will enjoy reading it and thank you for your strong support of ILRI South Asia.

Learn more about our work at <https://asia.ilri.org/>. If you have any feedback, please contact [ilri-delhi@cgiar.org](mailto:ilri-delhi@cgiar.org)

**Habibar Rahman**  
Regional representative for  
ILRI South Asia

## ICAR and CGIAR hold annual review of collaborative projects

Representatives of the Indian Council of Agricultural Research (ICAR) and CGIAR reviewed the progress of research work undertaken by different CGIAR centres in India in 2021 and discussed research activities for 2022 during a virtual meeting held on 7 February 2022. Under the workplan approved by the Department of Agricultural Research and Education (DARE), Government of India for 2019-2022, four ILRI-ICAR collaborative projects are being undertaken in four priority areas: (i) methane emission and its mitigation, (ii) backyard poultry genomics, (iii) animal disease economics and (iv) multi-dimensional improvements of food-feed crops, including deconstructing lignocellulosic biomass. The key achievements of these collaboration projects include capacity development for 22 Indian scientists from various ICAR institutes through hands-on training on livestock methane emissions in October 2021, development of vaccines for African swine fever (ASF), Rift Valley fever (RVF) and Middle East respiratory syndrome coronavirus infection (MERS-CoV), and capacity development on novel vaccine/diagnostic technologies.

Habibar Rahman, ILRI regional representative for South Asia, announced a proposed project on development of vaccines for prioritized exotic and emerging animal diseases (2022-25). Trilochan Mohapatra, secretary of DARE and director general of ICAR, advised the team to follow all international and national guidelines while developing vaccines and exporting and importing organisms. He recommended that CGIAR develop a new workplan to start from 2023, after having a discussion with the Subject Matter Divisions of ICAR, that has to be signed before the end of 2022.

## ILRI organizes virtual consultation on preventing transboundary infectious diseases in South Asia

ILRI, the National Academy of Agricultural Sciences (NAAS), the South Asian Association for Regional Cooperation (SAARC) and the Bangladesh Academy of Agriculture (BAAG) organized a consultative meeting to explore ways to prevent transboundary infectious diseases (TADs) in the livestock and poultry sectors of South Asian countries on 15 February 2022. The meeting was chaired by Trilochan Mohapatra, secretary of DARE, director general of ICAR and president of NAAS. The meeting was also attended by the director general of Animal Husbandry, chief veterinary officers of India, Nepal, Bangladesh, Bhutan and Sri Lanka, the office bearers of NAAS, ILRI, SAARC and BAAG, and guests from international organizations and the private sector.

The following recommendations came from the meeting:

- Building a regional network of scientists and researchers;

- Exchanging human resources for capacity development;
- Boosting vaccination against TADs in border areas to create an immune belt and planning dialogue between member countries;
- Planning virtual stakeholder meetings and formulating a member-country joint program to attract funding;
- Creating a disease database from member countries, which would facilitate the exchange of disease information between these countries and help to plan effective control and preventive measures; and
- Creating a SAARC cooperation unit for TADs, which would play a key role in disease control and prevention in the region.

## ILRI's Jimmy Smith gives lecture on dairy development to mark India's 75 years of independence

Jimmy Smith, director general of ILRI, gave a lecture titled 'Insights from the transformation of dairy sector in India' in celebration of the country's 75 years of independence (Azadi Ka Amrit Mahotsav). The lecture was given virtually on 17 February 2022 at the invitation of Trilochan Mohapatra, DARE secretary and ICAR director general. In his address, Smith spoke about the transformation of the dairy sector in India since independence, trends, lessons learned for improvement and future prospects. He also discussed sustainability strategies.

'Doubling milk yield through better feeding, genetics and health could reduce India's total methane emissions by 25%,' he said. 'A small change in crop residue quality could have a significant impact on milk production and using spin-off technologies from second-generation biofuel production can turn crop residues from "waste" into high-quality concentrates.'

While highlighting the importance of a One Health approach in the Indian context, Smith also discussed different areas of the animal-human health interface where ICAR and ILRI can work together.

## Nepal's Ministry of Agriculture and Livestock Development explores collaboration opportunities with ILRI

Collaboration opportunities to strengthen Nepal's livestock sector were top of the agenda when Shri Mahindra Ray Yadav, Nepal's minister for Agriculture and Livestock Development along with his private secretary, Dinesh Kumar Yadav, visited ILRI. During the courtesy call to the institute's New Delhi office on 8 June 2022, Yadav and ILRI's regional representative for South Asia, Rahman Habibar, discussed technical support in the livestock sector, capacity development and women's empowerment.

In his address, Yadav appreciated the Government of India and ILRI for providing capacity development opportunities for Nepal in various streams of agricultural and allied sciences and assured the



institute of his support for the newly established country office. He expressed optimism that joint efforts would help Nepal become self-sufficient in domestic agricultural production in coming years.



Nepal's minister for Agriculture and Livestock Development, Shri Mahindra Ray Yadav, speaks during his visit to the ILRI office in New Delhi, India, on 8 June 2022 (photo credit: ILRI).

## Project news

### FAO and ILRI experts work on plan to control African swine fever in Assam, India

Daniel Beltran Alcrudo, advisor (Animal Health), FAO; Mark Hovari, consultant, ILRI, Marius Masulis, consultant, ILRI and Ram Pratim Deka, scientist, ILRI visited districts affected by African swine fever (ASF) in Assam State, India, from 24–27 April 2022 as part of measures to design a comprehensive ASF control and management plan. The experts held meetings with officials from the Animal Husbandry and Veterinary Department (AHVD), Assam Rural Infrastructure and Agricultural Services (ARIAS) Society and Northeast Regional Disease Diagnostic Laboratory (NERDDL). They also met specialists from ICAR and state institutions, including the National Research Centre on Pig and Advanced Animal Disease Diagnosis and Management Consortium under Assam Agricultural University to better understand the surveillance systems, communication tools as well as epidemiology and biosecurity measures required to control the disease.



Experts from ILRI and FAO conduct a site visit in ASF-hit Dhemaji District of Assam State in India (photo credit: ILRI).

### Partner workshop on ASF management in Assam State

On 7-8 April 2022, ILRI, AHVD and ARIAS Society organized a two-day state-level workshop on ASF management planning under the Assam

Agribusiness and Rural Transformation Project (APART) at the Assam Livestock and Poultry Corporation Limited Company. The objective of the event was to design a comprehensive ASF management plan in response to the negative impacts of the disease on the livelihoods of backyard farmers in the Indian states. Attendees developed a strategy comprising the development of a comprehensive ASF management plan in the next five months with the support from national and international experts and implementation of the plan in the next three years under APART project.



Sri Atul Bora, Assam's Minister for Agriculture, Horticulture, Animal Husbandry & Veterinary opens the workshop on ASF management in Assam State, India (photo credit: ILRI).

### CGIAR launches research initiatives in India

CGIAR launched its initiatives in India with a stakeholder meeting held in New Delhi on 14 June 2022. The meeting aimed to identify the key partners to engage in launching CGIAR in India and South Asia. Through this meeting, partners also got a better understanding of the CGIAR transformation process and explored enhanced mechanisms for sustainable collaborations. At the gathering, CGIAR introduced seven initiatives to be implemented in South Asia as part of the CGIAR 2030 Agenda. The launch was attended by Shri Narendra Singh Tomar, the Indian minister for Agriculture and Farmers Welfare, as well as leaders from state agencies, research institutions, academia, investors and CGIAR.

## Capacity development

### Veterinary officers training on pork testing

Six veterinary officers from various districts in India's Assam State attended a training session on testing of pork samples for quality and safety on 7, 9 and 10 June 2022. The event co-hosted by ILRI and the state's Animal Husbandry and Veterinary Department at the milk testing laboratory of the Assam Livestock & Poultry Corporation Ltd., focused on practical demonstration of microbiological safety and quality tests. The trainees are expected to perform these tests periodically at their respective district meat testing laboratories and raise awareness among pork consumers, pig farmers and pork traders on the risks and prevention of meat-borne zoonotic infections. The training was conducted by ILRI scientist Johanna Lindahl alongside local experts from ILRI-Guwahati.

## Dairy officers trained on milk sample testing

ILRI and Assam's Directorate of Dairy Development (DDD) trained dairy officers on the testing of milk samples for quality and safety to prevent the spread of zoonotic diseases through contaminated milk and milk products. The training was held at the central milk testing laboratory in Guwahati from 4-6 June 2022 for nine dairy officers from various districts of Assam State in India. The three-day course had theoretical and practical sessions on major human health risks in informal milk value chain, importance of testing milk for quality and safety, procedures of testing milk for various physical, chemical, microbiological and antimicrobial residue testing. Participants were also given a practical demonstration on the handling and functions of equipment and biosafety protocol to be followed in a milk testing laboratory.



Johanna Lindahl (in white), ILRI scientist delivers training to the officials of the Dairy Development Department, Government of Assam (Photo credit: ILRI).

## Post-harvest processing of fodder demonstration in Assam

On 9-10 June 2022, ILRI demonstrated silage making to 55 veterinary officers and farmers at

Dighali area of Nalbari district and Maloibari area of Kamrup (M) districts in Assam State, India. The objective was to introduce the participants to post-harvest processing of fodder so that farmers can replicate the technology for preservation of green fodder in their areas. Attendees were drawn from the two areas that actively took part in the fodder cultivation pilot implemented in the areas. Using the skills learnt at the demonstration, farmers started to cultivate the fodder and produce silage for feeding during scarcity period including during the time of floods. The World Bank appreciated the move and suggested to replicate in all the milk production belts of the state.

## Recent publications

Following are some recent publications by the ILRI South Asia team. To see more publications, please visit <https://cgspace.cgiar.org/>

- Biswal, J., Vijayalakshmy, K. and Rahman H. 2020. Impact of COVID-19 and associated lockdown on livestock and poultry sectors in India. *Veterinary World* 13(9):1928-1933.
- Malik, P.K., Trivedi, S., Kolte, A.P., Sejian, V., Bhatta, R. and Rahman, H. 2022. Diversity of rumen microbiota using metagenome sequencing and methane yield in Indian sheep fed on straw and concentrate diet. *Saudi Journal of Biological Sciences* 29(8):103345.
- Chadalavada, K., Anbazhagan, K., Ndour, A., Choudhary, S., Palmer, W., Flynn, J.R., Mallayee, S., Pothu, S., Prasad, K.V.S.V., Varijakshapanikar, P., Jones, C.S. and Kholová, J. 2022. NIR instruments and prediction methods for rapid access to grain protein content in multiple cereals. *Sensors* 22(10):3710.
- Sharma, G., Mutua, F., Deka, R.P., Shome, R., Bandyopadhyay, S., Shome, B.R., Kumar, N.G., Grace, D., Dey, T.K. and Lindahl, J. 2022. Comparing the effectiveness of different approaches to raise awareness about antimicrobial resistance in farmers and veterinarians of India. *Frontiers in Public Health* 10: 837594.



The International Livestock Research Institute (ILRI) works to improve food and nutritional security and reduce poverty in developing countries through research for efficient, safe and sustainable use of livestock. Co-hosted by Kenya and Ethiopia, it has regional or country offices and projects in East, South and Southeast Asia as well as Central, East, Southern and West Africa. [ilri.org](http://ilri.org)



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