Food and Agriculture Organization of the United Nations

20 Years of the FAO Emergency Centre for Transboundary Animal Diseases (ECTAD) Programme

Transforming national animal health systems

Required citation:
FAO. 2024. *20 Years of the FAO Emergency Centre for Transboundary Animal Diseases (ECTAD) Programme. Transforming national animal health systems.*

Introduction

Established in 2004, the Food and Agriculture Organization of the United Nations (FAO) Emergency Centre for Transboundary Animal Diseases (ECTAD) plans and delivers animal health assistance to countries responding to the threat of high-impact diseases. By helping to avoid national, regional and global spread, FAO ECTAD has made a significant contribution to the protection of people and animals from disease and other health threats.

In the past 20 years, the number of countries served by FAO ECTAD has grown to this year having nearly 50 Members Nations, with new FAO ECTAD teams established in Africa, Asia and the Pacific, Europe, Latin America and the Caribbean, as well as the Near East. This number is expected to grow further, with more countries indicating their desire to institute FAO ECTAD teams.

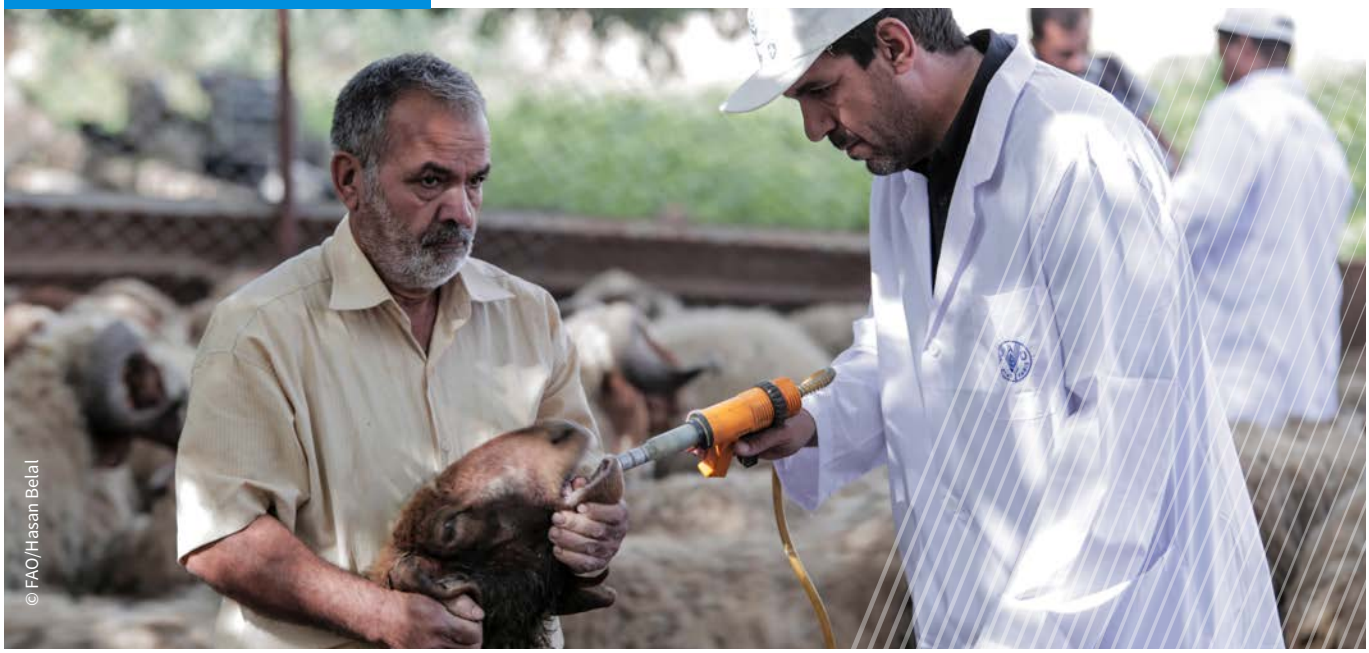
Through the work of FAO ECTAD, FAO forecasts outbreaks by conducting research and analysis to better understand viruses, and how human and animal behaviour can affect disease spread. The Organization supports early disease detection by providing essential diagnostic equipment and improving the infrastructure of laboratories. This has helped to reduce the time taken from field sampling to accurate diagnosis of priority zoonotic diseases, thereby leading to faster and more effective response.

Our focus

FAO, through ECTAD, supports Member Nations to help prevent, detect and respond to animal and public health emergencies, including antimicrobial resistance (AMR). Implementing FAO ECTAD projects at the global, regional and country levels, the Organization collaborates with the most vulnerable and economically compromised Member Nations to strengthen their animal health systems, improve their capacities to support disease control programmes and contribute to eliminating poverty.

In doing so, FAO ECTAD's multidisciplinary teams contribute to the enhancement of food safety and security, and the protection of global health. By supporting national governments' training capacities and providing equipment and technical assistance for prevention and control, FAO contributes to the tackling of priority zoonotic diseases.

The Organization also supports animal health services in Member Nations to contribute to disease surveillance and response under the One Health approach utilizing laboratory and community animal health services.


© FAO/Hasan Belal

How do we support a better world?

In line with the FAO Strategic Framework 2022–31, and the four betters, FAO's work in the area of animal health, including through ECTAD, contributes to the objectives of better life and better production. Specifically contributing to the Priority Programme Areas "Agriculture and food emergencies", "Resilient agrifood systems" and "One Health".

The FAO Strategic Framework 2022–31 has been developed to ensure that FAO's work is fundamental in sustainably solving food crises and helping countries achieve the Sustainable Development Goals.

The work of ECTAD contributes directly to a key overarching priority for FAO: The coordinating and facilitating of the corporate target of assisting 80 million people annually with emergency and resilience interventions.

FAO ECTAD's actions in particular, and FAO Animal Production and Health activities more broadly, play an important role in enhancing the livelihoods of agropastoralists – through including, but not limited to, the provision of emergency animal health services (vaccination campaigns, treatment through community-based animal health workers, etc.), the training of animal health workers and the monitoring, controlling and reporting of animal health diseases.

In this way, emergency livestock interventions protect and strengthen the food security, nutrition and livelihoods of agropastoralists against various shocks and crises.

Through ECTAD's support, FAO has been able to manage and coordinate a global animal health capacity development programme, supporting the most vulnerable and economically challenged Member Nations to improve their capacities to implement disease control programmes. This support contributes to eliminating poverty, enhancing food safety and security, and protecting global health. Thanks to ECTAD, FAO remains one of the largest contributors to global health security.

SUCCESSES OVER THE LAST 20 YEARS

Nearly

50

countries served in 2024

Over

400

staff globally

$757

Million USD Invested

314

FAO ECTAD projects implemented

From 2014 to 2023, almost **7 000** trainees each year (25% of trainees are women)

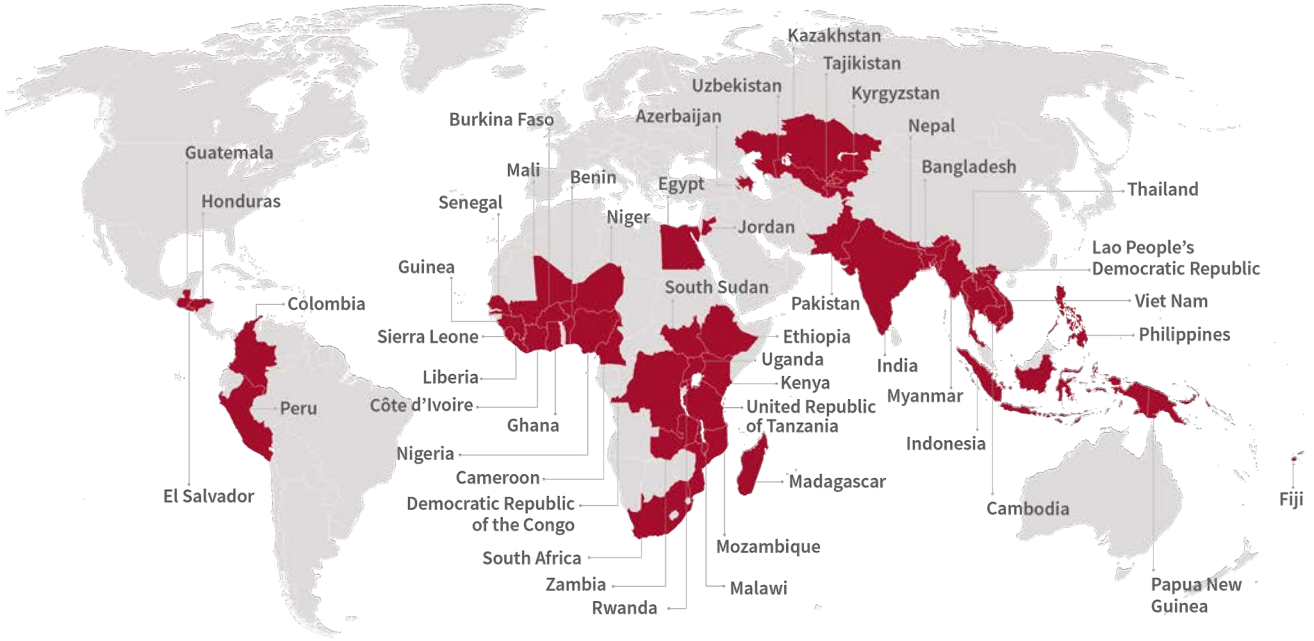
Provided support for the investigation of and/or response to more than

250

disease outbreaks **in 2023 alone**

Enhanced the capacities of **160** laboratories

In 2023, FAO ECTAD developed and reviewed **20 national strategies**



The final boundary between the Sudan and South Sudan has not yet been determined. Final status of the Abyei area is not yet determined. The dotted line represents, approximately, the Line of Control in Jammu and Kashmir agreed upon by India and Pakistan. The final status of Jammu and Kashmir has not yet been agreed upon by the parties.
Source: United Nations Geospatial. 2023. Map of the World. In: United Nations. New York, USA, UN. [Cited 10 July 2024]. https://www.un.org/geospatial/content/map-world-1

Where we work

Since its establishment, FAO ECTAD has developed a network of multidisciplinary teams, which represents one of the largest global animal health capacity development programmes.

Comprising over 400 experts, FAO ECTAD serves nearly 50 countries worldwide, including: Azerbaijan, Bangladesh, Benin, Burkina Faso, Burundi, Cambodia, Cameroon, Chad, Colombia, Côte d'Ivoire, Democratic Republic of the Congo, Dominican Republic, El Salvador, Egypt, Ethiopia, Fiji, Ghana, Guatemala, Guinea, Honduras, India, Indonesia, Jordan, Kazakhstan, Kenya, Kyrgyzstan, Lao People's Democratic Republic, Liberia, Madagascar, Malawi, Mali, Mozambique, Myanmar, Nepal, Niger, Nigeria, Papua New Guinea, Peru, Philippines, Rwanda, Senegal, Sierra Leone, South Africa, South Sudan, Tajikistan, Thailand, Uganda, United Republic of Tanzania, Uzbekistan, Viet Nam and Zambia.

Our partners

FAO ECTAD values continuous support from resource and implementing partners. Our strength lies in the unwavering, long-term, collaborative partnerships formed with many and varied stakeholders at national, regional and global levels. Effective control of transboundary animal diseases requires a united approach between the private and public sectors.

Partnerships are integral to our mandate to enhance global health security; therefore, FAO seeks to expand its collaboration with resource partners, the private sector, regional organizations, and many more to continue and expand its contribution in tackling diseases at source, ensuring food safety and security while protecting livelihoods.

FAO ECTAD's partners over the past 20 years have included:

Countries:

- Angola
- Australia
- Bangladesh
- Belgium
- Canada
- France
- Germany
- Ireland
- Italy
- Japan
- Mongolia
- Netherlands
- New Zealand
- Norway
- Republic of Korea
- Spain
- Sweden
- Tunisia
- United Kingdom of Great Britain and Northern Ireland
- United States of America
- Viet Nam

Organizations:

- African Development Bank
- African Union – Interafrican Bureau for Animal Resources
- Asian Development Bank
- Bill & Melinda Gates Foundation
- Civilian Research and Development Foundation
- European Union
- International Livestock Research Institute
- OPEC Fund for International Development
- Skoll Global Threats Fund
- The Sudan Common Humanitarian Fund
- United Nations Assistance Mission in Afghanistan
- United Nations Development Programme
- United Nations Office for Project Services
- United Nations Office for the Coordination of Humanitarian Affairs
- United States Agency for International Development (USAID)
- World Animal Protection
- World Bank
- World Health Organization
- World Organization for Animal Health (WOAH)

Programmatic approach

FAO ECTAD has been working with Member States to strengthen the capacities of their animal health sectors since 2004. It continues to support countries to reduce the risk of animal health threats that can devastate livelihoods and threaten food security. By building countries capacities to prevent, detect and respond to these threats, FAO ECTAD plays an essential role in protecting the health of people and animals, and safeguarding farmers' livelihoods, economies and food security.

In particular, FAO ECTAD supports the implementation of activities in the following range of areas:

Assessment

FAO ECTAD develops and performs assessments of national laboratory performance, surveillance capacity, epidemiology capacity, animal health workforce and information systems for animal diseases, AMR and One Health policy frameworks.
Through 360-degree evaluations using FAO ECTAD's assessment tools, gaps in national laboratory performance, surveillance, epidemiology capacity, animal health workforce and information systems for animal diseases are identified and country-specific recommendations for improvement implemented in close collaboration with national counterparts. An initial external assessment is conducted to establish baselines against which progress assessments can be measured, through either external evaluation or a self-assessment applied by trained national assessors.

- **FAO Assessment Tool for Laboratories and AMR Surveillance**

Systems (FAO-ATLASS). FAO-ATLASS helps countries to systematically describe and assess their AMR surveillance and monitoring in the food and agriculture sectors. It includes modules for surveillance and laboratory assessment. Since the development of FAO-ATLASS in 2016, over 50 countries and more than 180 laboratories have used the tool to assess their capacities and plan actions for improvement.

- **Surveillance Evaluation Tool (SET).** FAO launched SET in 2017 under the Global Health Security Agenda programme to support countries with the development of efficient animal disease surveillance systems. SET reveals the strengths and weaknesses of the assessed surveillance system, encompassing the country's institutional organization, laboratory operations, surveillance activities, epidemiologic surveillance workforce, data management, communications and evaluation, all of which are divided into 96 indicators.
  To date, SET has been used in over 34 countries across Africa, the Americas and Asia to provide veterinary services with an objective, standardized, comprehensive and systematic evaluation.

Success story from Iraq

Iraq successfully implemented SET in 2020 and outputs were used to develop a full-fledged, targeted training plan to enhance the surveillance capacity of veterinary services. FAO Iraq, in consultation with government counterparts, assigned tasks to the trainees to implement SET's short-term technical recommendations. Other recommendations were also supported by the project, such as building up a real-time disease reporting system using FAO's Event Mobile Application (EMA-i).

Capacity development

Through capacity building efforts, FAO ECTAD assists animal health laboratories across several regions to ensure quality diagnostic services that are standardized and maintained for priority diseases and AMR; builds animal health capacities in field epidemiology, value chain analysis and emergency preparedness to prevent, detect and respond to animal diseases and related threats; and provides tools and learning centres to measure and improve animal health capacities at national level.

- **In-Service Applied Veterinary Epidemiology Training (ISAVET).** The ISAVET programme aims to improve field epidemiology skills and competencies of national animal health staff in target countries using a One Health approach, thereby

strengthening national networks to promote collaboration and maximize efficient and sustainable use of available resources. Programme implementation by FAO ECTAD in Africa began with a regional pilot in 14 countries between 2018 and 2019, led by FAO with technical support from Texas A&M University. From 2020, the programme moved to national level implementation supported by national stakeholders in 17 countries in Africa.

Success story from Uganda

Dr Jackson Twebaze Ndahayo, a seasoned veterinarian with over seven years of experience, emerged as a pivotal figure in the fight against the Rift Valley fever (RVF) outbreak in Butaleja, Uganda. His journey from being an ISAVET trainee to District Veterinary Officer highlights his unwavering commitment to public health and animal welfare. In 2024, Dr Ndahayo confirmed an outbreak of RVF, which is rare in Uganda. FAO ECTAD provided personal protective equipment to aid in the RVF outbreak investigation. Subsequently, FAO and Uganda Health Activity supported RVF sensitization efforts, raising community awareness about RVF prevention and control measures. Dr Ndahayo's ISAVET training allowed him to respond effectively transforming how the disease was managed.

- **Field Epidemiology Training Programme for Veterinarians (FETPV).** FETPV provides government agencies with veterinary field epidemiologists who can conduct effective and timely outbreak response and surveillance for existing and emerging infectious diseases. The programme has been running since 2009, training and cultivating a network of veterinary field epidemiologists.

Success story from Indonesia

Indonesia has been working to strengthen its animal disease surveillance through FETPV. The country still faces significant challenges due to its complex geography and limited human resources, making it essential to train more veterinarians in field epidemiology. FETPV offers a proven and adaptable training model to fill in the epidemiology capacity gap in Indonesia, aimed at strengthening the country's animal disease surveillance and response capabilities. The programme focuses on building the skills of veterinary professionals in field epidemiology, which is crucial for effectively managing and controlling animal diseases.

FETPV has had a transformative impact on Indonesia's animal health infrastructure. The programme continues to enhance veterinary epidemiology capacity in Indonesia, ensuring a skilled workforce for detecting and responding to animal diseases. Graduates of FETPV have reported that their outbreak investigations and surveillance programmes are now more organized and systematic. This also means that response efforts can be more accurately targeted, leading to more efficient use of resources.

- **Laboratory.** Animal health laboratories play a crucial role in detecting pathogens before they emerge, spread and become difficult to control. Early detection of these pathogens will help countries to develop policies and protocols to enable timely and accurate confirmation of pathogens, which supports outbreak investigations and can break the chain of transmission to control outbreaks more rapidly. Therefore, having high quality and biosafe testing capabilities with well-equipped and well-trained personnel to detect animal diseases in a timely manner is one of FAO ECTAD's priorities. An assessment to identify priorities and gaps is essential to improve the capacity of animal health laboratories at national and regional levels, which is why FAO uses the Laboratory Mapping Tool (LMT) to measure and improve the quality of animal health laboratorie.

Success story from Egypt

FAO ECTAD Egypt has fully supported the development of the diagnostic capacity of national laboratories. It has provided considerable support to establish and enhance diagnostic capacities and systems for early detection and confirmatory diagnosis of emerging and re-emerging zoonotic diseases at central and subnational levels. This was achieved through a range of long-term interventions such as equipping the veterinary laboratories at national and subnational levels with high-quality diagnostic materials and reagents for confirmatory diagnosis. ECTAD Egypt also worked at enhancing the technical skills of the laboratory workforce at national and subnational veterinary laboratories and improving the biosafety levels of diagnostic laboratories. This allowed for the expansion of the national veterinary laboratories network, improvements in the national capacity for monitoring the efficacy of avian influenza vaccines that are under use in the poultry industry and promotion of networking among international partners. These long-term investments contributed to the development of the WOAH Reference Laboratory for Avian Influenzas and Brucella and the WOAH Reference Collaborating Centre for Quality Control of Veterinary Vaccines in the Middle East.

Technical support for risks mitigation

Through risk mitigation, FAO ECTAD aims to strengthen surveillance and early warning systems by supporting countries to implement the following activities:

1. Identify potential animal and zoonotic disease threats through a risk-based approach and detailed understanding of value chains.
2. Develop and share risk reduction strategies through multistakeholder engagement.
3. Estimate the burden of disease and evaluate the effectiveness of control measures.
4. Enhance emergency responses to priority diseases, such as African swine fever and highly pathogenic avian influenza (HPAI), minimizing the impacts of disease outbreaks and supporting livelihoods.

- **Early warning.** Early warning systems based on risk forecasting, early case detection, rapid reporting and analysis, and multistakeholder engagement, allow the timely dissemination of relevant information so that individuals and organizations can take appropriate actions to reduce risks. FAO has supported countries to develop field reporting and management systems for animal health disease events resulting in improvements in country and regional capacity to communicate, analyse and link data through

the establishment of real-time surveillance systems, including through interoperable and interconnected electronic reporting systems.

Success story from Viet Nam

The Viet Nam Animal Health Information System (VAHIS) is an internet-based platform for faster and more accurate animal disease reporting. Since VAHIS's official launch by the Ministry of Agriculture and Rural Development, USAID and FAO in August 2018, the system has become a crucial component of national animal health management for gathering and connecting animal disease information from grassroots to central levels, processing this data into meaningful and useful forms which are easy for veterinary authorities to use in implementing appropriate actions to control diseases, including those transmittable to humans.

Additionally, besides its contributions to disease monitoring, early warning, information sharing and for decision-making purposes at the country level, the system also helps the Viet Nam Department of Animal Health gather information to fulfil reporting responsibilities at regional and global levels.

- **Risk reduction along the value chain.** Working with colleagues from the FAO Emergency Prevention System for Animal Health, FAO ECTAD is engaging a wide range of value chain actors to implement evidence-based risk management and good practices to mitigate the risk, emergence and spread of disease threats. Our work goes from assessing practices and designing interventions, to their implementation and evaluation to inform evidence-based policies. To achieve this, FAO employs different methods, including experts' consultations to develop guidelines for both the public and private sectors; the assessment of knowledge, attitudes and practices and the analysis of business models through field surveys; and the design and piloting of risk reduction interventions that are co-created with local stakeholders and evaluated to guide scaling-up efforts and inform evidence-based policies.
  By combining these different methods with a pragmatic approach that draws attention to the local context and existing resource constraints, FAO is supporting countries to implement inclusive and scalable risk reduction interventions and improve food safety and livelihoods throughout the value chain.
- **Surveillance.** A robust surveillance system is crucial for countries to understand their local disease situation. It provides them with the necessary evidence to enact targeted disease management

programmes and allows for information-sharing at a regional level to ensure neighbouring countries are better prepared for the spread of these diseases.

Working closely with countries and partners, FAO ECTAD supports efforts to evaluate and improve disease surveillance capacities including enhanced cooperation to share information at regional and global levels. The Organization supports national animal health services to design and implement effective surveillance systems and foster cross-sectoral collaboration at the human–animal–environment interface for joint approaches to countering zoonotic diseases.

Success story from Indonesia

Since the severe outbreak of HPAI in Indonesia in 2003, the country has implemented various strategies to fight the influenza virus. One of the key initiatives launched in 2014, with the support of FAO and USAID, is the Influenza Virus Monitoring (IVM) network. This network serves as a comprehensive system for tracking the influenza virus situation across Indonesia. It strengthens multisectoral stakeholder coordination, including government agencies, the private sector and academic institutions, to provide timely and avian influenza-related recommendations to key stakeholders and to help shape informed policies.

The IVM network has been instrumental in reducing the incidence of HPAI in Indonesia. As the first coordinated effort to monitor influenza viruses across different sectors in Indonesia, IVM leverages data from various sources and provides a comprehensive overview of the virus's spread and characteristics, enabling more precise and timely responses. It supports evidence-based decision-making and represents a significant advancement in Indonesia's ability to monitor and respond to avian influenza viruses. By fostering collaboration across sectors and integrating advanced surveillance technologies, it has become a vital tool in the country's efforts to combat HPAI and improve animal health.

Looking to the future: the FAO Global Health Security Program 2022–2027

While FAO's global support in the animal health domain has moved countries closer to the goal of effectively dealing with zoonotic disease and AMR threats, gaps still remain. FAO and USAID have therefore agreed to extend their partnership through the 2022–2027 Global Health Security (GHS) Program.

The FAO GHS Program builds on the investments made over the past 18 years; targets additional countries in Africa and Asia and the Pacific and expands FAO ECTAD's work to Europe and Central Asia, Latin America and the Caribbean, and the Near East; and seeks to strengthen partnerships with the private sector. It also further enhances country and global capacity to forecast, prevent, detect, prepare for and respond to public and animal health threats along the livestock value chain.


© FAO/Marco Longari

Conclusion

Zoonotic diseases, diseases with zoonotic potential and non-zoonotic, high-impact transboundary animal diseases continue to pose a serious threat to livelihoods and food security around the world. Zoonotic diseases alone are responsible for an estimated 2.5 billion cases of human illness and approximately 2.7 million human deaths worldwide each year.

Health threats impact social and economic well-being across the globe, and jeopardize the progress towards the Sustainable Development Goals, as is starkly evidenced by the COVID-19 pandemic. At every level, our ability to prevent, detect and respond needs to be strengthened.

The scale of the challenge posed by the global health threats of zoonotic and transboundary animal diseases, as well as AMR, can only be met by maintaining robust animal health capacity at global, regional and country level. For this reason, efforts must continue to be made to make universal access to animal health care a reality.

FAO, through its ECTAD-implemented projects, is making a key contribution to the strengthening of animal health care where it is needed most.

Through its global animal health capacity development programme, FAO ECTAD is playing a vital role in supporting responses to disease outbreaks, while at the same time increasing in-country laboratory capacity and animal health workforces across Africa, Asia and the Pacific, Europe, Latin America and the Caribbean, and the Near East.

Building on the significant impact FAO ECTAD has had over the last 20 years the programme is enabling Member Nations to take ownership of the development of stronger animal health systems. Given the continued challenge of transboundary animal diseases and the potential threat of future pandemics, it is essential that these efforts are not only maintained but expanded and strengthened.

FAO is therefore committed to collaborating with Members Nations to help build the necessary capacities to prevent, detect and respond to animal and public health emergencies.

With the ECTAD network serving nearly 50 countries in 2024, and through the support of current and future resource partners and stakeholders, FAO can continue to leverage the lessons learned from two decades of successful implementation of the programme. In doing so, the Organization will help reduce the impact of threats arising from animals by developing healthy, resilient, inclusive and sustainable animal health systems, using a One Health approach.

Contacts

FAO Animal Production and Health Division
NSA-Director@fao.org
https://www.fao.org/agriculture/animal-production-and-health/en

FAO Office of Emergencies and Resilience
OER-Director@fao.org
www.fao.org/emergencies

Food and Agriculture Organization of the United Nations
Viale delle Terme di Caracalla
00153 Rome, Italy

CD2442EN/1/11.24