1. Context

Population growth estimates suggest that the world population will reach 8.5 billion by 2030 and 10 billion by 2050. In Latin America and the Caribbean (LAC), the population is projected to increase from the current 660 million people to 730 million by 2030 and 780 million by 2050. So questions arise as to whether global agriculture and food systems will cope with the growing demand for food from a population that, in addition to being larger, will also have greater purchasing power. Will it be possible to meet the necessary production, even as pressure on already scarce land and water resources increases and the negative impacts of climate change intensify? And if it is possible to increase production, will it be achieved in a way that is socially inclusive and environmentally friendly? These are puzzling questions to answer, given that today 820 million people are hungry, nearly two billion are overweight or obese and 35 percent of all food produced is wasted. In addition, food systems account for up to 80 percent of biodiversity loss, 80 percent of deforestation and 70 percent of all freshwater consumption.¹ ²

LAC is home to some of the world's main net food producing and exporting countries, the most important of which are Argentina, Brazil, Chile, Costa Rica, Ecuador, Paraguay and Uruguay.³ Agricultural products account for a quarter of the region's total exports. Furthermore, the region's agricultural sector plays a key role at the global level, accounting for a 16 percent of total exports of primary agricultural products and food and it is expected to be the world's leading food producer by

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2030, being of utmost importance for its potential role in the production of healthy food, ecosystem services and competitive economic development.\(^4\)

Livestock is the basis of food security and livelihoods for more than one billion people globally, accounting for around 40 percent of the value of global agricultural production and is one of the fastest growing sub-sectors of the agricultural economy.\(^5\) Although LAC accounts for only 13.5 percent of the world's population, it produces just over 23 percent of the world's beef and buffalo meat, and 21.4 percent of global poultry meat. In the case of eggs and milk, the region's share is more than 10 percent and 11.2 percent by weight, respectively.\(^6\) Aquaculture production has increased significantly, growing by 20 percent in Central America and 34 percent in South America between 2004 and 2013, while seafood exports increased by 75 percent in Central America during the same period.\(^7\)

However, the increasing intensification of livestock production to meet the population's demand for protein could increase the incidence and risks of transboundary animal diseases, including zoonoses. The increased density of domestic animals and humans, the expected increase in transcontinental transit, and the expansion of the agricultural frontier will cause major changes in ecosystems, increasing the risk of emergence and spread of pathogens.

The COVID-19 pandemic is a clear example of the risk of intensifying the use of resources at the expense of increased emergence of rapidly spreading infectious diseases. According to WHO estimates, the incidence of diseases caused by the consumption of contaminated food and water in Latin America is currently lower than in other regions of the world, but its impact on public health is still high, with more than 8,000 cases and more than 2,500 deaths per 100,000 inhabitants per year, affecting people of all ages, particularly children under the age of five, and low-income people. These are revealing data for the region, as national records are considered to be underestimated; and this will be the basis of the risks of the emergence of new diseases and health crises such as COVID-19.

The United Nations has stated that in a world where the food supply chain has become more complex, any adverse food safety incident can have negative effects on public health, trade and the global economy, urging countries to focus their inspection, surveillance and control efforts on identifying and controlling the pathogens having the greatest impact on public health, and determining the means responsible for their transmission, implementing actions to define adequate levels of population health protection.\(^8\) 9

To date, there is no evidence that the virus responsible for the current COVID-19 pandemic can be transmitted through food products of animal origin such as poultry, pigs, small ruminants or cattle. However, local and international livestock production and trade have suffered significant disruptions due to the measures taken during the pandemic, highlighting the need to strengthen and develop sanitary protocols for the production of food of animal origin, that are adapted and responsive to the challenges of maintaining food supply chains in times of health emergencies, and that respond to

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\(^5\) FAO, FIDA, OPS, WFP y UNICEF. (2020). Panorama of food security and nutrition in Latin America and the Caribbean 2020. Obtained from https://doi.org/10.4060/cb2242es


major issues such as food safety, antimicrobial resistance, zoonoses and climate change, requiring better coordination between stakeholders for a multi-sectoral response.\(^\text{10, 11}\)

In order to meet the 2030 Agenda and the sustainable development goals, livestock farming needs to be reformulated in terms of productivity, inclusion, sustainability and resilience. In this line, environmental and animal food safety traceability certifications are key elements to build trust in the livestock production sector and along the entire value chain, from production systems to consumers.

In this sense, the UN Food Systems Summit 2021 represents an opportunity to showcase the key role of national and international trade in livestock products as part of agrifood systems, and in turn to present a clear agenda for action for the LAC region to promote the development of a livestock sector that considers environmental sustainability and is able to contribute to food security in the region and worldwide, through the production of nutritious, safe and affordable food for all.

2. Trade of animal products and by-products

COVID-19 has heterogeneously impacted value chains, depending on the nature of the production system, the country, etc. The pandemic affected producers of exporting, importing and self-sufficient countries in the region in a variety of ways. While import-dependent countries in the region had to suspend the supply of goods, some exporting countries saw an increase in exports and, in general, in self-sufficient countries, the impact on production was lower. In this context, one issue that came to the fore during the pandemic in many countries was the political reinforcement of the food self-sufficiency approach. \(^\text{12}\)

Assessing and quantifying these impacts is therefore important in order to design different policy interventions that facilitate the recovery process between countries and production systems.\(^\text{12}\)

During 2020, agri-food exports in LAC withstood the impact of COVID-19 more than total merchandise exports, with an increase of 2.7 percent, while total merchandise exports showed a decline of 9.1 percent.\(^\text{13}\)

China's agricultural purchases from LAC increased by USD 7.2 billion or 24.8 per cent between January and September 2020, compared to the same period in 2019. Of the total agricultural purchases during that period, 10.7 percent corresponds to beef, 3.6 percent to poultry meat, and 1.3 percent to pork meat. This corresponds to an increase of 217 percent in pork meat imports, 72.3 percent in beef imports, and 35.9 percent in poultry meat imports. The largest increase was from Brazil amounting to 165.9 percent or USD 1.9 billion, which almost doubled its share of the Chinese market from 22.2 percent in 2019 to 41.3 percent in 2020 (of the total increase in Chinese beef imports, 85 percent was from Brazil). For Argentina, the increase was 1.6 billion dollars in beef (22.1 percent increase). In Chile, the increase was from USD 38.4 million between January and September 2019 to USD 66.9 million during the same months in 2020 (74.1 percent increase).\(^\text{14}\)

Despite the encouraging figures, all this poses a major challenge: 86 percent of agri-food exports go to just three markets: the United States with 23 percent, followed by East Asia with 19 percent, where China alone accounts for 13 percent, and the European Union with 18 percent. Likewise, LAC agri-food exports concentrate on a limited number of products, since 51 percent of the value exported is


concentrated in ten products, while the global equivalent is 29 percent, and most of these are products with little added.\textsuperscript{15} \textsuperscript{16} This distribution of exports may represent a risk, due to the concentration of trade in a few countries. Faced with this situation, COVID-19 recovery actions provide an opportunity to increase market share in the region, which demands healthy, nutritious food, with better health, safety and quality standards, and produced under appropriate environmental management, thus reducing the aforementioned trade risk.

But while formal producers and their value chains managed to maintain the production and marketing of their products at full capacity, millions of small producers and informal farmers and their value chains found themselves in a complex situation to sell their products, due to the restrictive measures implemented, aggravating the social and economic problems that afflict them, generating a profound sense of uncertainty. The difficulty of this population to recover on their own and continue their contribution to the general welfare through the supply of food puts food sovereignty and everyone's health at risk.\textsuperscript{17} This represents a major setback regarding the progress made in reducing poverty and achieving the SDGs. It is estimated that there are 16.6 million small productive farms across Latin America where approximately sixty million people live and work.\textsuperscript{18} Timely intervention through evidence-based policy decisions avoids undesired impacts on food security and nutrition. Support through joint actions also reduces the additional effects of the impoverishment of rural population, the increase in social conflicts, the indiscriminate increase in the use of natural resources for survival, migration to urban areas increasing the concentration of the population, among others. All this is a breeding ground for future health crises, which, as COVID-19 showed, are increasingly capable of spreading globally.\textsuperscript{19}

There is a clear need to identify strategies for the transformation of international and local trade and logistics, which are essential for the supply of goods and food to the entire population, especially the most vulnerable. While the post-pandemic scenario is not yet clear, trends show a transformation of the economy towards a more regionalised trade strategy, where short production cycles and circular economies with lower carbon footprints and lower levels of health risks will be more important.\textsuperscript{20}

The COVID-19 pandemic is also demanding structural changes in the sector, through the adaptation of value chains in response to the containment measures required to control the spread of the disease through, for example, implementation of biosecurity measures, process automation to address the problem of labour availability due to limited mobility, which could lead to increased concentration in the sector, suggesting the demise of many players.\textsuperscript{21}

To ensure the efficient supply of safe and quality livestock products to consumers, animal health and food safety policies must be strengthened. An integrated approach such as "One Health" is very appropriate, as it recognises the connection between human health, animal and plant health and the environment, reducing the risks of transmission of zoonotic pathogens, which could lead to antimicrobial resistant organisms, among others.\textsuperscript{22} These policy developments require institutional, political and regulatory harmonisation between different countries, in order to facilitate foreign trade

\textsuperscript{20} ECLAC. (2020). The effects of the coronavirus disease (COVID-19) pandemic on international trade and logistics. SPECIAL REPORT Nº 6 COVID-19 Obtained from https://repositorio.cepal.org/bitstream/handle/11362/45877/1/S2000497_es.pdf
but which, at the same time, consider the need for regulatory differentiation according to the conditions of each country, and even at the territorial level; measures which are not exclusive but which benefit the region as a whole, based on scientific and technical grounds, aimed at protecting health and promoting the social and economic development of the livestock sector.

In order to facilitate these processes, governments should allocate financial, technical, scientific and cooperation resources, with the support of international organisations, to speed up the required responses, as well as establish strategies that allow the flow of information to ensure the efficiency of the processes that guarantee the application of the standard; make information on the application of animal health control and food safety regulations available in a transparent manner. Finally, to actively participate in the evaluation of the results of the processes at national and regional level, through the scientific analysis of information and technical cooperation with other countries. The aim is to improve risk management, establish priorities for action, build national and regional capacity for policy decisions and monitor the impact of these decisions to ensure everyone's welfare. 23

3. Role of the private sector in optimising trade in products and by-products of animal origin

Livestock smallholders are the main suppliers of the value chains that market animal products. In this sense, primary production is essential to ensure products safety and quality so, at this stage, it is necessary to reduce risk factors, due to inadequate management of health aspects related to animal production. It should be recalled that the main pathogens causing food- and waterborne diseases (FBDs) worldwide are of zoonotic origin. The impact of FBDs on public health in Latin America is still high: Campylobacter spp., non-typhoid S. enterica, Norovirus, Taenia solium and T. gondii are the pathogens with the highest contribution of disability-adjusted life years (DALYs) lost due to disease in an individual or population in the region. 24 In many cases the animals do not get sick with these pathogens, so care and prevention at farm level and then at slaughter is essential, to avoid contamination that could reach the consumer.

The role of livestock producers is to ensure that risks related to animal health and product safety are reduced in their production systems. Good practices should be related to aspects such as animal health and safety, records of treatments, animal identification, biosecurity on farms, ensuring product and process safety, among others.

Processors and the supply chain are responsible for implementing food safety management plans to manage risks to human health. This means being responsible for good hygienic practices, cleanliness and sanitation, control of suppliers, storage, distribution and transport, personal hygiene and implementation of biosecurity measures, with emphasis on developing skills along the value chain to efficiently implement such measures and to develop and mitigate the risk of disease outbreaks.

To this end, regional strategies should be sought to advance the implementation of the various guidelines available, which establish policies, standards and regulations to ensure food safety and quality in terms of contaminants, hygienic practices, labelling, additives, inspection and certification, nutrition and residues of veterinary drugs and pesticides to facilitate trade. 25 26

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The application of these standards in informal sectors represents a challenge in today's food system. Informal sectors, whose infrastructure and financial capacity to implement these control systems is limited, become critical points for safety assurance. Consideration should therefore be given to developing strategies for live animal and fresh food markets, retail markets, and the informal food vending sector, which were also severely affected by sanitary measures during the current pandemic, forcing the permanent closure of many businesses, and where biosecurity measures will change their business structure forever.27

4. Traceability and transparency in livestock production

Traceability is a critical component of the agricultural value chain, food safety and international trade. Livestock value chains should ensure compliance with quality and safety standards in order to access both domestic and international markets; but more importantly, to respond to the demands of consumers, who increasingly expect detailed information on origin, production conditions and schemes, animal welfare, product composition and safety, among others.28

To address the potential risks to human, animal and environmental health from trade in animal products and by-products, it is necessary to strengthen risk management systems at institutional, political, social, scientific and technical levels of livestock production. It also required to modernize the institutional frameworks as well as public policies, standards, requirements, mechanisms and processes necessary for the implementation of efficient traceability systems; based on participatory processes with stakeholders along the value chain to generate, ensure, maintain and improve the traceability of the livestock production chain, health and safety of livestock products, in order to provide a multi-sectoral response to the needs of small, medium and large producers, and their value chains in a sustainable development framework.29

The current dispersion of public actions and visions, infrastructure and services, the lack of a comprehensive approach to policies and the absence of sustainability criteria need to be addressed in order to guarantee livelihoods, health and food security. In this sense, the COVID-19 pandemic has opened a window of opportunities for the transformation of livestock value chains and the reduction of the region's vulnerability to external shocks, given that, being a zoonotic disease, its spread put global health and trade systems to the test, highlighting their strengths and weaknesses. A joint evaluation of the health and epidemiological surveillance systems, the institutional structure, the national and regional response capacity to health emergencies is now required in order to define a roadmap for a timely response to future crises.30 The aim is to standardise, streamline and modernise processes based on concerted, multi-sectoral actions that, within the framework of pandemic recovery, will make it possible to establish cross-border strategies and coordinated approaches to public health alert and response, regional plans for risk reduction and prevention, and investment plans for the prevention of emergency and disaster situations.31

The objective is to protect human, animal and environmental health, and to align actions towards the consolidation of a harmonised national and regional strategy. Integration processes to address the One

Health challenges require actions in which all stakeholders actively participate, which is why actions in communication and education are required to unify criteria for prevention and epidemiological surveillance.  

To overcome the health, economic, social and environmental crisis, and the risk of a food crisis, LAC could make use of its potential and make progress in increasing food production as planned, with an integrated market approach that meets the needs of 660 million people in the region; this would result in great benefits by reducing supply or demand shocks generated outside the region and facilitating regional cooperation strategies. A regional market vision favours the productive integration of the livestock sector and its small and large-scale value chains, recovering the losses caused during the pandemic in the productive structure of LAC. This would also favour the implementation of strategies to ensure the safety of production and trade, favouring the implementation of regional public policies and reducing the region’s vulnerability to future health risks.

This requires the mobilisation of experts for diagnosis, surveillance and prevention of animal health diseases, and clear directions for response to future emergencies. Data gathering and analysis from different sectors is required for decision-making; hence, the use of technology will be of vital importance to obtain real-time information on animal health, this will ensure sustainable animal production and life protection.

There is a need to strengthen capacities, and encourage networking among stakeholders, regional cooperation, and the development of surveillance systems, tools and standards to implement transboundary management concepts; facilitate the involvement of the scientific community and industry in the development of technologies and strategies to ensure human and animal health. All stakeholders, including producers at all levels and capacities, should be involved in the design and implementation of disease and pest prevention and control measures to protect their livelihoods. These networks should facilitate collaboration and proximity trade, which will increase levels of intra-regional trade, which is currently limited. Regulatory and policy coordination, the use of digital solutions in the application of trade procedures, the modernisation of logistics and trade infrastructure, and capacity strengthening to ensure compliance with food safety standards are some of the strategies recommended to improve traceability and transparency in the production and marketing of livestock products.

Early warning systems should be adopted for decision making and risk mitigation and control plans for food and health threats, considering livelihoods protection.

Actions should be taken to address the challenges of primary production and food processing and distribution. For primary production it is important to establish preventive measures against infectious diseases in the connections between humans, animals and the ecosystem, strengthen biosecurity measures, prioritise actions for the early detection of zoonotic diseases and efficient traceability systems for surveillance and containment of new threats. As regards processing chains, work must be done, among other things, to mitigate the risk of food-borne disease outbreaks and their distribution systems, mainly in urban environments, where consumption and therefore dependence on the same food sources is high.

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It is necessary to reform regulations and support investments to strengthen sanitary measures, and to ensure that they are implemented in an effective manner. This is particularly urgent because - due to increasingly long supply chains - the origin of food is often unknown, increasing the risk if traceability systems are not efficient. Hence, preventing new diseases is particularly necessary, as the COVID-19 pandemic demonstrated the inability to control a disease once an outbreak has occurred. This implies that policies and investments will have to focus more on risk management and risk reduction, which has so far not progressed as expected.

These plans require a great institutional effort, but also a great commitment on the part of the primary producer and each of the members of the production chain, which implies a financial and technical effort, which is why it is necessary for governments to find mechanisms to facilitate their short-term adoption. To this end, decision-makers must design strategies for such implementation that favour both national and international markets, and that are reflected in benefits for producers, as they become an added value that differentiates their products, and therefore are transformed into economic benefits, regardless of the size of the production system; but also that this effort and benefit is reflected throughout the value chain, to ensure a sufficient supply of safe and quality food to end consumer.

5. Electronic certification of livestock products exports

The COVID-19 pandemic has revealed vulnerabilities in food production and control systems where a major one relates to the socio-economic impact of disruption to food trade, highlighting the potential benefits of food system digitisation.

Information systems for sanitary certification for the import and export of animal and plant products traded within and outside the region are available tools that some countries have successfully implemented. For example, Colombia has implemented the Electronic Certification - E-Cert, which integrates the Sanitary Information System for Import and Export of Agricultural and Livestock Products (SISPAP, acronym in Spanish), with the Single Windows for Trade of the Pacific Alliance Countries and the Netherlands Food and Consumer Product Safety Authority of the Kingdom of the Netherlands (NVWA, acronym in Dutch) for the exchange of phytosanitary certificates. According to the Colombian Agricultural Institute (ICA, acronym in Spanish), the system streamlines the transfer of guarantees and simplifies inspection processes of the competent authority, since by comparing the relevant data electronically, the risk of fraud in paper documents is reduced, the security of phytosanitary certificates for import and export is increased, the transparency of the certification process is ensured, customs transit is facilitated without delays enabling optimal control of agricultural products, real time trade data is available, and there are better inspections, risk management, logistics and communications.

Another country that has successfully implemented the electronic phytosanitary certification systems is Chile. The ePhyto system, is operating in twenty-six countries in Latin America and the European Union, covers up to 70 percent of the total annual phytosanitary certification. Its technical, scientific,
administrative and sanitary advantages are added to the costs reduction due to fewer procedures and resources in addition to the acceleration of processes.\(^{41}\)

After its implementation in Chile, the ePhyto system was implemented in Argentina for trading mainly with the United States, Sri Lanka and Costa Rica; it is expected to continue with the implementation in Paraguay, Colombia and Mexico.

The development of the "e-Phyto System" is an initiative of the FAO's International Plant Protection Convention (IPPC), which encourages contracting countries to implement it, enabling international trade of regulated goods in an easy, transparent, secure and digital way.

In addition, electronic certification has begun between Chile and Argentina, connecting the Livestock and Agricultural Service with the National Agri-Food Health and Quality Service (Senasa, acronym in Spanish) for phytosanitary products.

### 6. Recommendations

The importance of animal health is linked to the productivity of livestock systems and is a key pillar for the economic development of the livestock sector in the countries of the region, ensuring the competitiveness of the sector and providing the necessary guarantees to destination markets (local and international). It is therefore essential that the countries of the region manage to maintain and/or improve food quality and safety standards in order to guarantee the safe trade of food of animal origin. In this sense, enabling environments that are aligned at local, national and regional levels are essential to achieve sanitary and phytosanitary standards that will expand market options.

Structural changes in the agri-food sector, and in the livestock sector in particular, have promoted growth in production, trade and consumption of animal products, but have posed risks to the environment, public health and animal health. Changes in the business environment have also favoured specialised producers, widened the gap between them and smallholders, and jeopardised the permanence of livestock smallholders who lack access to production support services.

Family farmers have less access to veterinary services and face serious threats due to the high incidence of transboundary animal diseases and zoonotic diseases, jeopardising their income, public health and food and nutritional security of their families. This is why a good governance system for agri-food chains is essential, which promotes the development of local markets and the design of marketing support mechanisms that allow smallholders to link up with national, regional or global markets.

FAO suggests using the space of CODEGALAC to discuss and design joint support strategies related to animal health with a comprehensive approach. Therefore, considering the new FAO strategic framework, the work priorities established for the region\(^{42}\) and the information provided in this document, the Technical Secretariat of CODEGALAC proposes to focus its efforts considering the following actions/recommendations:

- Strengthen monitoring, surveillance and reporting systems at regional, national and local levels to prevent and detect the emergence of zoonotic and transboundary animal diseases to control their spread.
- Strengthen regional, national and local capacities to improve coordination and information exchange between institutions and stakeholders involved in animal health.

\(^{41}\) Chile’s Livestock and Agricultural Service. (2020). Chile y la Unión Europea conectan sus sistemas de certificación electrónica fitosanitaria. Obtained from [https://www.sag.gob.cl/noticias/chile-y-la-union-europea-conectan-sus-sistemas-de-certificacion-electronica-fitosanitaria](https://www.sag.gob.cl/noticias/chile-y-la-union-europea-conectan-sus-sistemas-de-certificacion-electronica-fitosanitaria)

\(^{42}\) Described in the document "Recovery with transformation for inclusive, resilient and sustainable livestock production."
• Strengthen strategies to ensure livestock production safety by strengthening the trade of products of animal origin.

• Strengthen the capacities of actors linked to livestock production systems for the prudent use of antimicrobials and veterinary medicines, in order to minimise risks related to antimicrobial resistance (AMR).

• Favour the transformation of livestock value chains to reduce the vulnerability of countries to animal health problems by promoting the development of inclusive and articulated chains that facilitate market access for smallholders and producer associations, reducing transaction costs, avoiding unnecessary intermediary agents and considering the necessary biosecurity measures.

• Develop legal frameworks and support policies to increase the competitiveness of smallholders in regional, national and local markets, encouraging effective and efficient public-private sector participation and partnerships, strengthening groups and associations of smallholders and livestock value chain actors.

• Support the development and/or improvement of traceability and animal identification systems to build confidence in the livestock production sector and along the entire value chain, from production systems to consumers, considering that they are increasingly demanding and require detailed information on the origin, conditions and production schemes, animal welfare, product composition and safety, among others.

• Promote packaging, labelling and certification processes to add value to products. Encourage the adoption of electronic certification mechanisms to trade products of animal origin, ensuring access to information and support services for small producers.

• Strengthen public and private extension services to improve livestock health conditions and provide livestock producers with access to animal health and nutrition services, technologies and infrastructure.

• Promote dialogue between agents of the agri-food and agro-industrial chains; private, public-private, state, science and technology organisations, among others, in the implementation of programmes and strategies related to animal health and trade in animal products, ensuring the participation of small producers, women and indigenous peoples, civil society organisations, public and private sectors in the development of strengthening strategies. Promote the establishment of public-private partnerships to coordinate territorial efforts.

• Promote decision making based on relevant information and analysis from social studies, scientific research, economic evaluation and the use of relevant indicators at territorial level. In this sense, the use of technology will be of vital importance to obtain real-time information on animal health, allowing detailed analysis of data for decision-making.

• Strengthen policies to enhance livestock systems biosecurity, particularly in family and smallholder systems, and promote greater integration between institutions responsible for animal health and institutions in charge of rural development and livestock services.

• Develop adequate market infrastructure for animal products, facilitating and improving access to inputs and infrastructure needed to preserve perishable products, e.g. in small-scale dairies.

Through the Technical Secretariat of the XV CODEGALAC, FAO offers technical assistance to the countries for the implementation of the actions described in this document, based on the new strategic framework and the priorities for work at the regional level:
• Supporting the improvement of governmental capacities to design legal frameworks, policies and programmes to strengthen animal health and trade in animal products, facilitating the support and spaces for evidence-based decisions that respond to the needs of the sector, facilitating the establishment of an effective governance that balances the interests of all stakeholders and the necessary institutions.

• Supporting the identification, systematisation and implementation of successful experiences (knowledge, good practices, policies, technology, resources, etc.) to improve animal health and trade, which can be replicated and/or considered in other countries and/or territories.

• Supporting the mobilisation of resources from diverse sources to enable the implementation of actions, strategies and programmes to strengthen integrated animal health.

• Strengthening dialogue at the regional level, between the public and private sectors, with a view to promoting the development and implementation of joint strategies and projects for the sustainable development of the livestock sector.