



Preventing new pandemics in Asia and the Pacific

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The issue

Disease and illnesses have plagued humanity since the earliest days. However, it was not until the marked shift to agrarian communities that the scale and spread of diseases increased dramatically. Population growth, destruction of natural habits, substandard markets and uncontrolled trade especially in Asia have created new opportunities for human and animal interactions, accelerating the emergence of new diseases, some with the potential of becoming pandemics. In addition, the threat of bacteria and other pathogens such as viruses, parasites and fungi becoming resistant to antimicrobials and previously functioning drugs – known as antimicrobial resistance (AMR) - is considered a “silent” pandemic that the world has been facing incrementally over the last decade. Coronaviruses (CoV) have been identified as pathogens since the 1960s, infecting humans as well as various animals. Coronavirus disease 2019 (COVID-19) is an infectious disease caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), first identified in December 2019, resulting in an ongoing pandemic, affecting lives and livelihoods across the world.

Lessons learned from the current pandemic include the unprecedented human and socio-economic global impacts of an emerging zoonotic disease. “Prevention is better than cure”, it is now more important than ever to address drivers of disease emergence, and spillover, investing in coordinated mechanisms, policies and capacities at national, regional and global levels to prevent, prepare and respond to health threats at animal-human-environment interfaces.

The current COVID-19 pandemic emphasizes the need to prepare, prevent, detect and respond at the primary spillover level where the next pandemic is likely to start. Main risk settings for new pandemics are locations where close interaction between wildlife, livestock and humans provide the setting for pathogen spillover between different species. Early detection and response are essential. This requires the establishment or strengthening of current surveillance and laboratory systems as well as development and adoption of emergency preparedness procedures, contingency plans and standard operating procedures (SOPs) and availability of emergency funds to intervene rapidly and limit the spread and impact beyond the initial outbreak.

Furthermore, AMR threatens the effective prevention and treatment of an ever-increasing range of infections caused by bacteria, parasites, viruses and fungi, posing a serious threat to global public health that requires urgent action across all government sectors and society.

Addressing health threats at animal-human-environment interfaces requires collaboration of various ministries from health, agriculture, natural resources and the environment, ideally under the umbrella of an inter-ministerial committee and/or task force (multi-sectoral, One Health approach). While various countries in Asia and the Pacific have established One Health coordination mechanisms, it is important to determine how well they operate and the level of coordination for the development and adoption of policies/strategies aimed at reducing the risk of pathogen emergence and spillover, pandemic potential as well as AMR.

Budget

USD 30 million

Time frame

Jan 2021 – Dec 2024

SDGs



Related FAO policy notes on COVID-19

- ▶ Guidance for emergency livestock actions in the context of COVID-19: addressing emerging needs related to the pandemic and reprogramming ongoing critical activities
- ▶ FAO Guidelines to mitigate the impact of the COVID-19 pandemic on livestock production and animal health

The action

1 Stocktaking of drivers for disease emergence for policymaking to prevent new pandemics

Identifying drivers of zoonotic disease emergence and spillover to inform policymaking

Threats from infectious disease and AMR are increasing in magnitude worldwide. The main risk settings for new pandemics are interfaces with close interaction of humans and livestock with wildlife, or the misuse of antimicrobials for human health, terrestrial and aquatic animals as well as in plant production. Asia is the most diverse region in the world, harbouring 60 percent of the world population and home to dynamic systems in which biological, social, ecological, and technological processes interconnect and enable microbes to exploit new ecological niches. Population growth, urbanisation, changes in food production, agriculture and land use, water and sanitation, and the increasing use of antibiotics in intensifying animal production systems have led to the generation of (multi-) drug resistance and emerging (zoonotic) pathogens. Understanding the prevailing conditions in countries and analysing risk factors and drivers that lead to these threats is the basis for developing scientifically sound and practicable policies, by engaging stakeholders from relevant sectors and across disciplines through a One Health approach.

Key activities

- ▶ desk review studies and assessments on various topics (stocktaking) such as wildlife-livestock-human interface characterization, the importance of intensification of animal production including wildlife farming and trade, dynamic animal value chains and the role of traditional/fresh markets and slaughterhouse/processing plants in disease emergence and spread, to map the key drivers for disease emergence and spillover as well as AMR in selected countries;
- ▶ share evidence and develop strategies and policy options to mitigate the risks of disease emergence and spillover, AMR and pandemic threats (through country stakeholder consultations and validation workshops for stocktaking analyses);
- ▶ prepare FAO publications on these relevant topics for information dissemination and resource mobilization.

2 Good governance and functioning animal and public health systems

Capacity development for preparedness for and response to disease emergence

The capacities of animal and public health emergency preparedness and response systems will influence the speed at which they address emerging diseases and AMR and mitigate/contain their further spread. In addition, good governance, legislative systems and policies provide the basis for mechanisms to prevent and respond to emerging diseases and AMR. The need for a competent and motivated workforce is part of a functioning response system to outbreaks.

Key activities

- ▶ provide institutional, technical and regulatory support as well assist in resource mobilization to build national capacities to detect early and respond in a timely manner to emerging pathogens and/or health threats (e.g. AMR) through robust surveillance, animal and product traceability, early warning and rapid response systems;
- ▶ evaluate and enhance animal health and food safety laboratory capacities in detection and diagnosis of emerging pathogens and AMR;
- ▶ support countries to develop policies and strategies for prevention and control of emerging diseases and AMR as well as investment plans to build infrastructure, regulatory mechanisms and human resources;
- ▶ set up capacity development and awareness programmes to enhance and share knowledge and build capacities of key stakeholders.

3 Establishment and operationalization of extended One Health platforms at regional and country/field levels

Coordination mechanism between relevant sectors

AMR and especially emerging zoonotic diseases transmissible between animals (domestic and wild) and humans require coordination and communication between various sectors. In the Asia-Pacific region, the Tripartite Regional One Health Coordination Group is operational. It comprises the the Food and Agriculture Organization of the United Nations (FAO) Regional Office for Asia and the Pacific, the World Organisation for Animal Health (OIE) Regional Office in Tokyo and Subregional Office in Bangkok as well as the World Health Organization Regional Offices for South-East Asia (SEARO) and for the Western Pacific (WPRO). The Tripartite Group has established strong collaboration and provides communication and guidance on a wide range of One Health issues such as zoonotic influenza and other emerging threats, neglected zoonotic diseases including rabies, AMR and food safety. The Group also collaborates with regional organizations such as the Association of Southeast Asian Nations (ASEAN), the South Asian Association for Regional Cooperation (SAARC) and the Pacific Community (SPC).



Key activities

- ▶ mobilize funding, provide institutional and regulatory support to establish and operationalize One Health platforms at various levels that strengthen dialogue and coordination among various sectors to jointly address health risks at the animal-human-ecosystems interface;
- ▶ support countries to develop and adopt coordinated contingency/emergency plans to prevent emerging diseases and AMR and support resource mobilization efforts;
- ▶ conduct simulation exercises to enhance communication, coordination and collaboration between relevant sectors through a multisectoral One Health approach.

Expected results

- ▶ improved understanding of drivers and risk factors for emergence and spillover of zoonotic and high impact diseases or health threats (e.g. AMR) requiring action;
- ▶ disease prevention and control strategies and policies developed/strengthened to timely address disease threats with pandemic potential and/or high impacts on livelihoods, food security and/or trade;
- ▶ strengthened and operational One Health mechanisms for multisectoral collaboration, coordination and communication at regional, national, subnational and field levels, including efficient cross-border collaboration;
- ▶ enhanced capacities of veterinary services and other stakeholders in addressing health threats at the animal-human-environment interface, with special attention to continuing professional development and partially supported through the Virtual Learning Centre at the FAO Regional Office for Asia and the Pacific.

Partnerships

- The World Organisation for Animal Health (OIE) - Regional Office in Tokyo and Subregional Office in Bangkok
- World Health Organization Regional Office for South-East Asia (SEARO) and Regional Office for the Western Pacific (WPRO)
- United Nations Environmental Programme (UNEP)
- United States Agency for International Development (USAID)
- Australia: the Department of Foreign Affairs and Trade (DFAT)
- European Commission (EC)
- The Southeast Asia One Health University Network (SEAOHUN)
- Association of Southeast Asian Nations (ASEAN)
- The South Asian Association for Regional Cooperation (SAARC)
- The Pacific Community (SPC)
- United Nations Development Programme (UNDP)
- United Nations Office on Drugs and Crime (UNODC)
- The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)
- The International Union for Conservation of Nature (IUCN)
- Wildlife Conservation Society (WCS)
- Wetlands International
- Eco-Health Alliance
- World Bank
- Asian Development Bank
- Academia
- Private sector, etc.





Programme links

Current relevant FAO COVID-19 and AMR projects

Since the start of the COVID-19 pandemic, FAO has approved two emergency Technical cooperation programme (TCP) projects in the region, one for China and one for the ASEAN and partner countries. The TCP project for China, entitled “Emergency response to mitigate the impact of coronavirus (COVID-19) on the most vulnerable persons in rural areas in China” envisages mitigating the adverse impact of COVID-19 in China. By enhancing awareness and capacities on zoonotic aspects of COVID-19 and other infectious diseases at the animal-human-ecosystems interface envisage to mitigate their effects on livelihoods and food security of the affected population.

A regional emergency TCP project entitled “Strengthening regional capacities to address COVID-19 impacts on the animal health sector in East and Southeast Asia” targets ASEAN Member States and partner countries. Both projects contribute to reducing the impacts of COVID-19 on food security and livelihoods through better understanding of its epidemiology and options for risk mitigation at the animal-human interface.

A number of proposals looking at wildlife, wet markets and trade have been submitted to various funders including the Department of Foreign Affairs and Trade (DFAT) of Australia and in collaboration with the United Nations Office on Drugs and Crime (UNODC) to understand the drivers of disease emergence and identify viable policy options to prevent spillover and spread.

There are currently two main funding sources for AMR in the Asia Pacific Region: United States Agency for International Development (USAID) and United Kingdom Fleming Fund. FAO regular budget has also funded projects on AMR in Thailand and the Maldives and, most recently, India.

The FAO/OIE/WHO/UNDP Antimicrobial Resistance Multi-Partner Trust Fund (MPTF) to support AMR related activities has granted projects to Cambodia and Indonesia that will be implemented by the Tripartite at country level. Furthermore, the role of the FAO Animal Production and Health Commission for Asia and the Pacific (AHPCA) with 18 member countries could be further explored as to link with FAO’s Hand-in-Hand Initiative for the transformation of food systems.

Regional and country focus

Afghanistan, Bhutan, Cambodia, Indonesia, Lao People’s Democratic Republic, Myanmar, Nepal, Pakistan, Papua New Guinea, The Philippines, Timor-Leste, Viet Nam, and Small Island Developing States (SIDS).

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