



## Joined up investments reduce health risks and burdens to people, livestock and ecosystems

**Complex health problems affecting people, animals and the environment are best tackled through integrated 'one health' investments and policies.**

### Key Messages

One Health practices unite medical, veterinary, environment and socio-economic expertise for healthy people, animals and ecosystems. It promotes a trans-disciplinary approach working alongside people from different backgrounds, specialisms and sectors, and being prepared to do things differently.

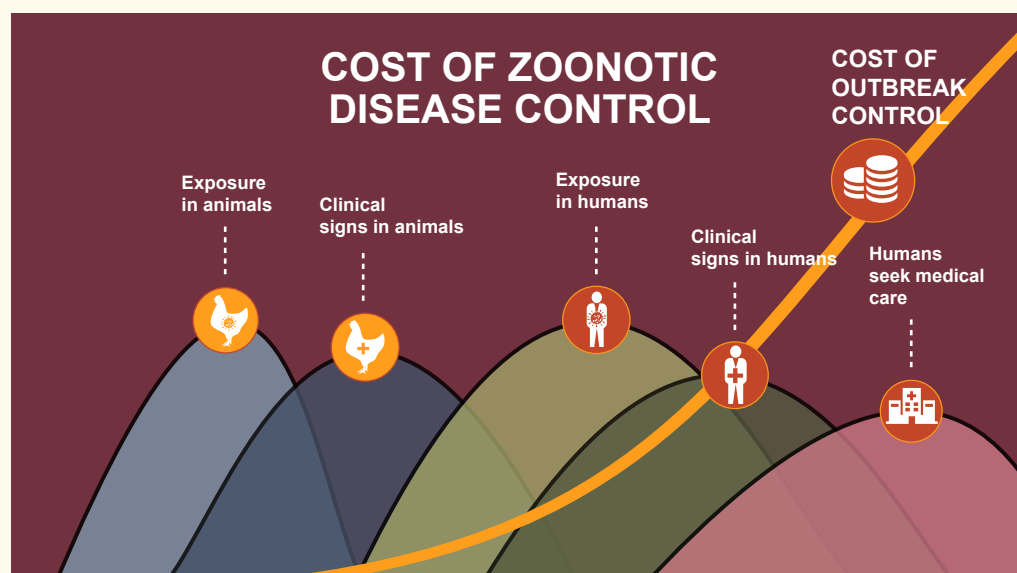
To do this, a One Health approach requires a change in outlook and action. It demands a shift from a disease-focused approach to more systems-based one. This includes refocusing from disease treatment and control to disease prevention, surveillance and preparedness.

This means also rethinking new ways of working, institutional arrangements as well as technological solutions. It also requires new ways to share evidence, data and learning across disciplines and sectors. For example, One Health avoids duplication of work and services by having different stakeholders working towards a common goal, each contributing with their area of expertise, fostering synergies, and avoiding duplication. When disease outbreaks do occur, One Health minimises the lives affected and lost.

A One Health approach brings all-round benefits. One dollar invested in One Health approaches can generate five dollars' worth of benefits at the country level through increased GDP and the individual level. For example, the cost of treating and controlling bird flu (avian influenza) in people is vastly outweighed by the cost of vaccinating poultry against the disease. Savings can be used to build resilience to absorb health shocks.

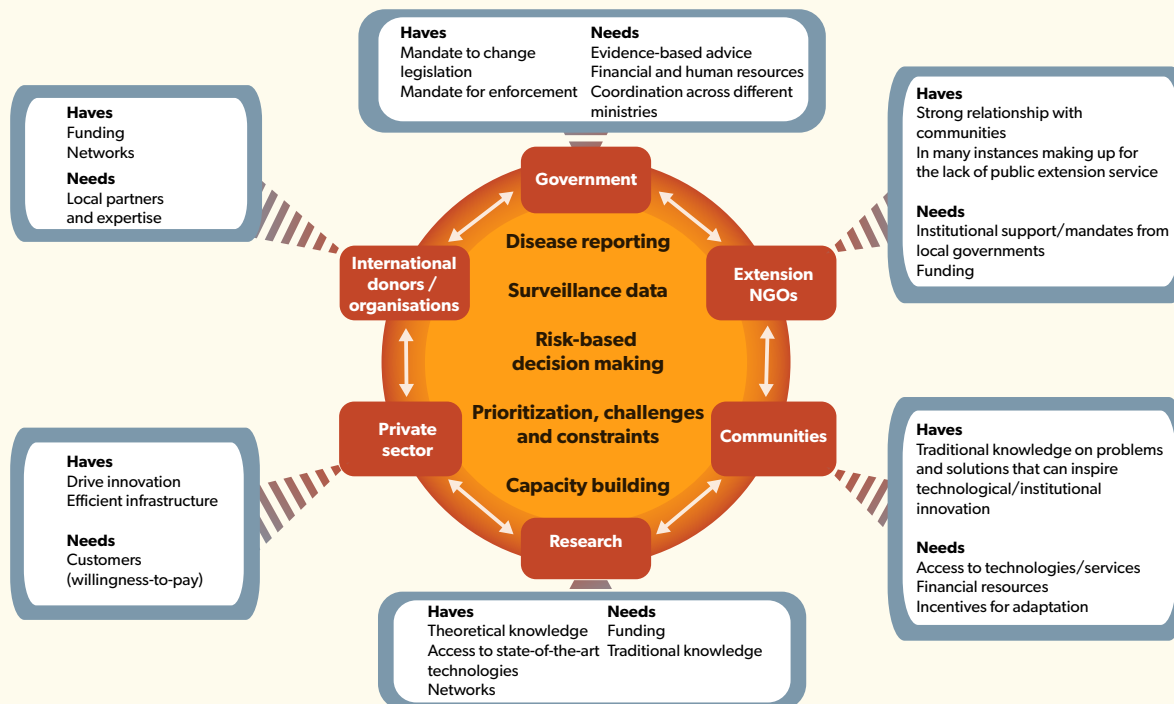
### Facts

- 60% of human infections originate from animals, and of all new and emerging human infectious diseases, some 75% "jump species" from animals to people.
- Rising animal to human disease transmission is driven by inter-related issues including: population growth, rise in demand for animal protein, unsustainable intensification of agriculture, land use change, urbanization, climate change, decrease in species biodiversity.
- Besides COVID-19, thirteen diseases transmitted from animals to people are estimated cause 2.4 billion cases of human illness and 2.2 million human deaths a year.
- Foodborne diseases, many of which have an animal origin, cost poorer countries US\$110bn a year in lost productivity and medical expenses.
- An estimated 700,000 people die every year from antibiotic-resistant bacterial infections, nine out of 10 of these in poorer countries.
- Strengthening human, environment and animal health capacity by the One-Health approach could result in 10%–30% cost saving in surveillance and communication costs.



Source: United Nations Environment Programme and International Livestock Research Institute (2020). Preventing the Next Pandemic: Zoonotic diseases and how to break the chain of transmission. Nairobi, Kenya.

## Haves and needs: implement One Health



### The siloed approach

Despite efforts to integrate, a disease-specific approach has been taken to disease management. Human health challenges in the past have been tackled by human health experts only, whether in government, in the private and non-governmental sectors or in the research world. Likewise, animal health and environmental health challenges have been taken up by disciplinary specialists, independent of other health sectors.

### Working together

The examples below highlight how One Health approaches have been used successfully in a range of contexts.

Rift Valley fever (RVF) in animals shows earlier than in people and can serve as an indicator for human health specialists to take action by taking preparedness measures, for instance sensitising high-risk groups such as meat handlers. This requires good cross sectoral communication. In 1996-7, an outbreak of RVF was unexpected. In all, 27,500 people got infected and 170 died. A more widespread RVF outbreak 10 years later resulted in just 700 suspected human cases and 90 deaths. The widely different outcomes have been attributed to a more coordinated response thanks to Kenya having adopted a One Health approach. In addition, Kenya has institutionalised One Health with the establishment of the Zoonotic Disease Unit (ZDU) that bring ministries of health, agriculture, livestock and fishery to control key zoonoses.

After the Avian Influenza outbreak in 2003, Vietnam was one of the first countries in Asia to adopt a multi-sectoral approach. One health is integrated into all Government plans related to infectious disease and pandemic preparedness. It helped to contain and control several diseases such as SARS, HPAI and rabies. Vietnam developed and nationalised the Vietnam One Health Partnership at governmental level that serves as platform to bring institutions and actors in human health, animal health and the environment to work together to fight zoonoses, AMR and food safety. Academic One Health related curricula were developed by the Viet Nam One Health University Network to build One Health capacities for students (future leaders), lecturers, as well as human and animal health professionals at ministries and grassroots level. They work across sectors and disciplines and apply One Health in solving the problems on the ground.

In Ethiopia, approaches to participatory rangeland management are establishing One Health units to improve the health of humans, livestock and the natural environment. Better integration allows for better control of zoonotic diseases, helps to better tackle transboundary animal diseases through control programs and keeps an eye on the health of the rangelands themselves.

Recognizing the need for coordinated actions against animal and wildlife crimes, law enforcement agencies, customs services, veterinary services and public health agencies are working together in a One Health approach. For example, coordination across sectors is needed to reduce the trade in wildlife products, fight pet theft, and control animal smuggling.

World Health Organization collaborates closely with the Food and Agriculture Organization and the World Organisation for Animal Health to address risks from zoonoses and other public health threats existing and emerging at the human-animal-ecosystems interface. In 2020, the United Nations Environment Programme joined this 'Tripartite plus' collaboration signalling the importance and inter-connectedness of One Health interventions.

## What you can do

### 1. Mainstream One Health at policy and regulatory levels

It is essential that cross sectoral approaches are mandated and funded at all levels of government (national, state, district). This allows for joint planning and communication across departments and ministries. This can include establishing one health task forces or centres, establishing multi-sectoral surveillance and early warning mechanisms, setting up rapid response operating procedures and capacities, requiring One Health assessments in policies and investments or raising political and public awareness.

### 2. Build shared, collaborative One Health capabilities at technical and professional levels

One Health approaches should be incorporated into training and education in animal, human and environment health so health is understood in a holistic sense. It is important to establish a shared goal to address to foster collaboration and resource sharing. This will incentivize inter-sectoral opportunities to share information, address shared priorities and confirm roles and responsibilities. A common goal will reduce duplication of efforts and increase efficiency and effectiveness of efforts.

### 3. Invest in "South to south" learning, regional collaboration and data sharing

Countries throughout the world particularly in Africa and Asia have implemented innovative One Health approaches and strategies. There are excellent opportunities to leverage these experiences to speed up learning and implementation the sharing of learning and strengthening regional collaboration. This includes:

- Implementing regional programs where experience and capacity building can be shared. For instance, a regional project on Rift Valley Fever brings together ministries from Uganda and Kenya. Expertise and knowledge are leveraged across the project.
- Harmonize policies and guidelines through regional approaches. Diseases are not stopped by borders. It is essential that cross border collaboration is strengthened so that surveillance and similar approaches can be used across borders.
- Invest in strengthening cross country data standardization and sharing. There is a lack of baseline data in most low in middle income countries related to various diseases as well as Anti-Microbial Resistance. Moreover, investments can be made to ensure open data standards used to ensure data sharing across sector and countries.

## References

To view all the references for this brief visit [whylivestockmatter.org](http://whylivestockmatter.org)

## Reviewed by:

Bernard Bett, Head of the One Health Research, Education and Outreach Center for Africa (OHRECA), ILRI  
Hung Nguyen Viet, Co-Program Leader, Animal and human health program, ILRI  
Kristina Roesel, Scientist, Animal and human health program, ILRI

Investing in One Health directly tackles the wicked problems facing our health and the health of the animals and planet around us. One Health integrates and guides the collaborative efforts of multiple disciplines working locally, nationally and globally to attain optimal health for people, animals and our environment. This series of briefs provides evidence-based information on how One Health can support development efforts.

This series is produced by the Advancing Investment in Sustainable and Equitable Livestock Systems project, which is funded by the Bill & Melinda Gates Foundation and the CGIAR Research Program on Livestock and led by the International Livestock Research Institute. For more information, visit [www.whylivestockmatter.org](http://www.whylivestockmatter.org)



CC BY 4.0

