

# One Health: Reducing Disease Risk

## Summary

- Disease risks are a growing threat to human health and species survival
- Changes in ecosystems and contact with wildlife and other animals are driving risks
- A One Health approach is essential to help identify and reduce sources of risk to prevent disease more proactively; conservation authorities have a key role to play
- The *Guidelines for Prevention, Detection, Response, and Recovery from Disease Risks* provide practical guidance for governments and site managers.

## What is the issue?

The COVID-19 pandemic has demonstrated the serious threat and impact of infectious diseases to humans and other species. In addition to devastating disease burden and loss of life, many livelihood and economic impacts were felt by protected and conserved areas.

The majority of pathogens infectious to humans are zoonotic, i.e., emerged from or can be transmitted between humans and animals. Biodiversity and protected areas themselves are not an inherent risk for pathogen spill over. Human changes to ecosystems – and changes in contact between species – create the conditions associated with zoonotic disease risk. Solutions require a One Health approach.

*“One Health is an integrated, unifying approach that aims to sustainably balance and optimize the health of people, animals and ecosystems.”*

To support governments and protected area managers, IUCN has developed Guidelines for Prevention, Detection, Response, and Recovery from Disease Risks in Protected and Conserved Areas. The guidelines provide practical knowledge on ten key disease risk reduction topics consistent with sound design and planning, effective management, and good governance, to help shift from reliance on expensive response toward more proactive prevention and preparedness.

## What should be done?

CBD Parties and environment agencies are urged to:

- Ensure conservation authorities are actively involved in their respective national One Health coordination platform;
- Align NBSAPs with National Action Plans for Health Security and sector-relevant strategies to ensure biodiversity and health mainstreaming;
- Consider disease risk in land and sea use plans and concessions, for comprehensive environmental and social impact assessment;
- Build in risk monitoring and mitigation, particularly at interfaces where wildlife-human or wildlife-domestic animal contact occurs that could lead to spillover;
- Conduct disease screening and risk assessment prior to reintroduction or other release of species;
- Develop information reporting and disease investigation protocols with other authorities and stakeholders;
- Ensure the timely movement of emergency diagnostic specimens from wildlife to inform disease investigation and response



[Managing disease in Ethiopian wolves](#): Diseases among wolves are detected at an early stage, diagnostic capacity is improved, and interventions implemented as soon as possible, saving the lives of many wolves. Read more: [PANORAMA Species Conservation](#)

## Why is it important?

Disease itself and the economic hardship presented by disease crises increase pressures on ecosystems and species. These undermine conservation investments and important and needed conservation progress.

Monitoring and mitigating these risks requires dedicated attention across sustainable development priorities, including in conservation planning and management efforts.

Protected and conserved areas vary in their design and protection status, some allowing tourism, extractive industries, agriculture and other activities in and around the site. Specific actions can be taken by biodiversity managers to contribute to disease risk reduction in:

- Disease risk assessment;
- Animal release;
- Site use planning and buffer zones;
- Monitoring and surveillance;
- Disease reporting and investigation;
- Safe wildlife viewing, handling, and use;
- Biosafety and Biosecurity;
- Control measures;
- Risk communication; and
- One Health coordination.

One Health coordination supports more effective consideration of trade-offs and co-benefits of potential decisions, including impacts to biodiversity.



[Training on Disease Prevention, Detection, Response and Recovery for Protected Area Managers in Vietnam](#): As part of the training exercise, Glo Germ was applied on participants to simulate exposures and emphasize the importance of proper hand washing procedures. Read more: [PANORAMA Species Conservation](#)

## One Health:

An integrated, unifying approach that aims to sustainably balance and optimize the health of people, animals and ecosystems. It recognizes the health of humans, domestic and wild animals, plants, and the wider environment (including ecosystems) are closely linked and inter-dependent.

## Useful tools and references

The Guidelines for Prevention, Detection, Response, and Recovery from Disease Risks in Protected and Conserved Areas provide practical background, approaches, and indicators for reducing zoonotic disease risk.

The [IUCN Green List](#) Standard provides criteria for assessing site performance toward fair and effective conservation outcomes.

The IUCN One Health Principles for Sustainable Tourism zoom in on best practices for the tourism sector to help promote sustainable and health tourism in PCAs.

The [OIE and IUCN Guidelines for Wildlife Disease Risk Analysis](#) provide an overview of the key steps involved in performing a disease risk analysis, to support national and site wildlife authorities.

The [PANORAMA - Solutions for a Healthy Planet Species Conservation Community](#) is a knowledge exchange platform that has real-life case studies on zoonotic and wildlife disease risk reduction strategies that have been successfully implemented.

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