

EPA Tools & Resources Webinar: One Health

Presented by:

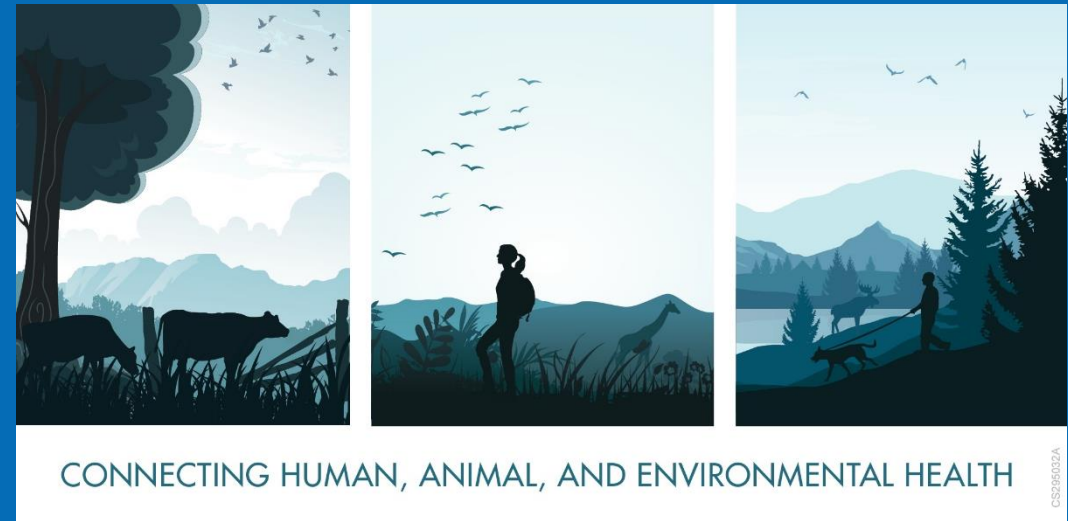
USEPA Office of Research and Development (ORD)

Association of Fish & Wildlife Agencies (AFWA)

Association of State & Territorial Health Officials (ASTHO)

Environmental Council of the States (ECOS)

November 16, 2022



Outline

- Overview
- AFWA-ASTHO-ECOS-EPA Collaboration
 - Accomplishments
 - New project
- Examples & Resources
 - Alaska
 - Missouri
 - AFWA White Paper & Resolution
 - EPA

Overview

One Health is a collaborative, multisectoral, and transdisciplinary approach—working at the local, regional, national, and global levels—with the goal of achieving optimal health outcomes recognizing the interconnection between people, animals, plants, and their shared environment.

One Health is the idea that the health of people is connected to the health of animals and our shared environment.



When we protect **one**,
we help protect **all**.

Why do we need One Health?

Why **ONE HEALTH** is Important

As Earth's population grows, our connection with animals and the environment changes:



People live
closer together



Changes in climate
and land use



More global
travel and trade



Animals are more
than just food

These factors make it easier for diseases to spread between animals and people.

A One Health approach tackles shared health threats by looking at all angles—human, animal, plant, and environmental

www.cdc.gov/onehealth



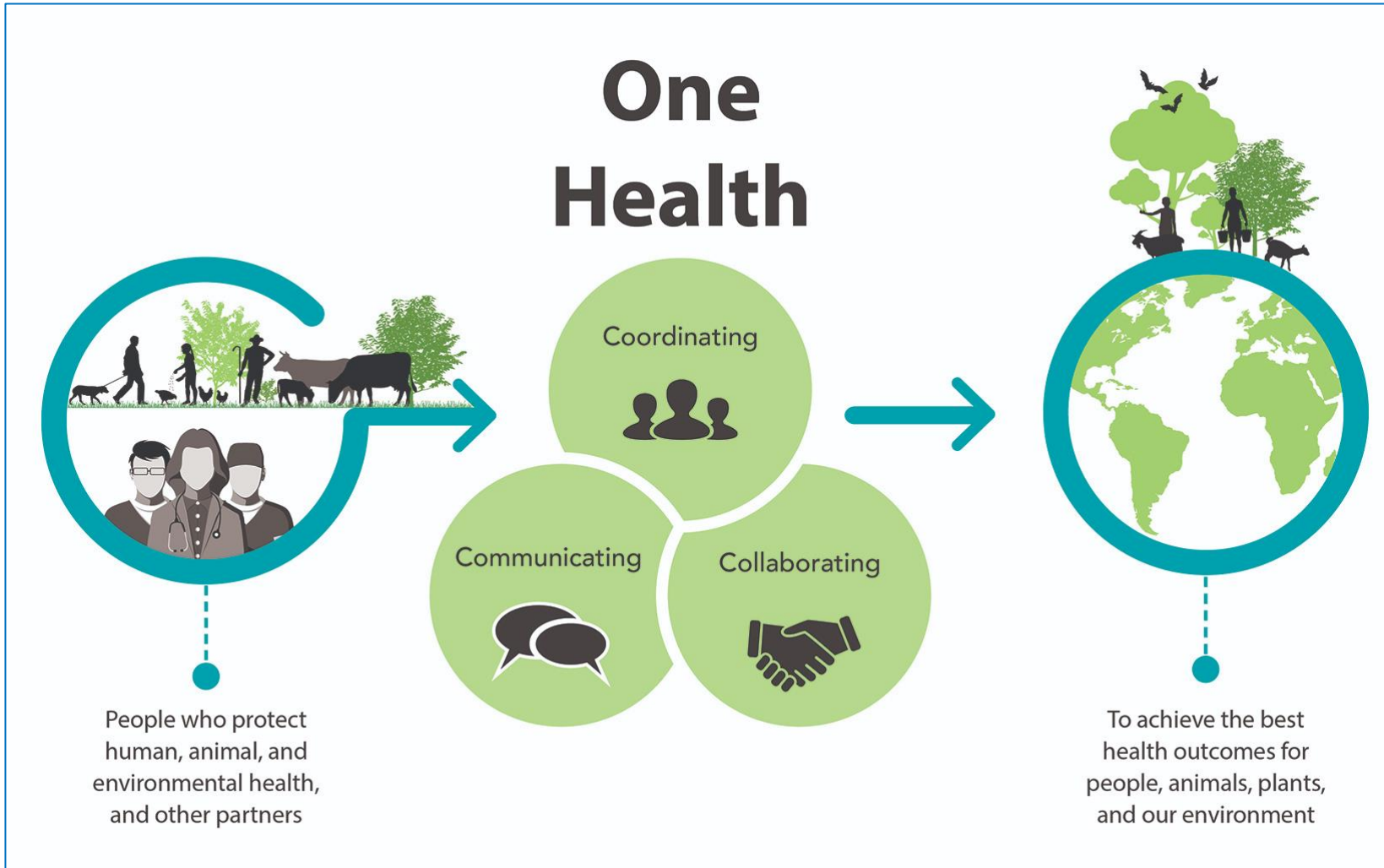
Why do we need One Health?

- The One Health approach allows us to see the whole picture and get to the route of the problem
 - Example: PFAS
 - Humans can be exposed to PFAS through cow's milk, [deer meat](#), etc.
 - Need to protect animals from PFAS in order to protect humans from PFAS
 - By removing PFAS from the environment, both animals and humans can be protected
- The One Health approach recognizes that humans have better mental health when they are around healthy animals and environments
 - Human-animal bonding
 - Time spent in nature

Elements of One Health

1. Multiple and integrated sources of hazards to humans, animals, and plants in their shared environments
2. Multiple exposure pathways that connect humans and animals
3. Combined health impacts across multiple sectors
4. Socio-economic factors that increase exposure to chemical hazards and pathogens that impact disease prevention and mitigation strategies
5. Ecological and evolutionary impacts of climate change that affect health of humans, animals, and plants
6. Population and community health vulnerabilities

Partnering on One Health



One Health Collaboration: AFWA, ASTHO, ECOS and EPA

Goal: To discuss the importance of the One Health approach and the role of different health professionals within the One Health framework, and to identify potential projects to collaborate on at both the state and national levels



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E C O S



One Health Collaboration: AFWA, ASTHO, ECOS and EPA

Accomplishments/Activities to date

One Health Public Webinar Series *(Nov. 2021)*

- **Part 1:** Environmental perspective (EPA and ECOS)
- **Part 2:** Environmental Health (ASTHO) and Natural Resource (AFWA) perspectives

One Health Virtual Workshop *(Dec. 2021)*

- Explored One Health topics of interest to states
- Built and enhanced relationships between state environmental, health, and natural resource/fish and wildlife agencies

One Health Community of Practice *(began in Feb. 2022)*

- Quarterly meeting to focus on environmental pillar of One Health and missions that are relevant to EPA, ECOS, ASTHO, and AFWA
- Open to state and federal agencies

One Health Virtual Workshop

13 states and 8 EPA Regions represented



One Health Virtual Workshop

13 states and 8 EPA Regions represented

Polling Results – Pick three of greatest concern to your organization in the following areas:

- Water, Sanitation, and Hygiene
 - Water quality & quantity
 - HABs
 - Watershed protection & management
- Immediate & Emerging Contaminants and Hazards
 - Chemicals
 - Extreme weather events
 - Air pollutants
- Outbreaks/Invasions
 - Invasive species
 - Zoonotic infections
 - Vector borne diseases

One Health Collaboration: AFWA, ASTHO, ECOS and EPA

New Project

One Health Project under EPA-ECOS-ASTHO Memorandum of Agreement Objectives:

- ASTHO and ECOS will collaborate at the national level to raise awareness of One Health
- In 2023, develop four case studies (two led by ECOS, two led by ASTHO) on states that have adopted the One Health framework, using PFAS, harmful algal blooms (HABs), climate adaptation, lead or other topics as examples of shared challenges
- Support the One Health community of practice with EPA and states to educate, inform and share best practices

One Health in Alaska

Alaska

- One Health approach has been used in Alaska since 2001
 - Staff is limited, big state to cover – relying on other state and federal agencies allowed for better disease surveillance and response to morbidity/mortality
- One Health approach to Avian influenza
 - Current strain of Avian Influenza is affecting domestic poultry, wild birds, and some non-avian species (fox, skunks, racoons, marine animals)
- Utilized One Health approach to distribute outreach materials with a uniform message to the public, as each state agency (animal, environmental, and public health) has a unique group that they communicate with on a regular basis
 - Also rely on other agencies such as the Alaska Native Tribal Health Consortium to assist in distribution to remote communities



State DOH One Health Resources

- Celebrating One Health Day (Nov. 3) with California DOH on [ASTHO's Newscast](#)
- State One Health Committees and Task Forces:
 - [Washington One Health Collaborative](#)
 - [Pennsylvania One Health Taskforce](#)
 - [Tennessee One Health Committee](#)
 - [Minnesota One Health Antibiotic Stewardship Collaborative](#)
 - [New Jersey One Health Task Force](#)
- Additional State Resources:
 - [Arizona One Health Toolkit](#)
 - [Utah's One Health work](#)

One Health in Missouri

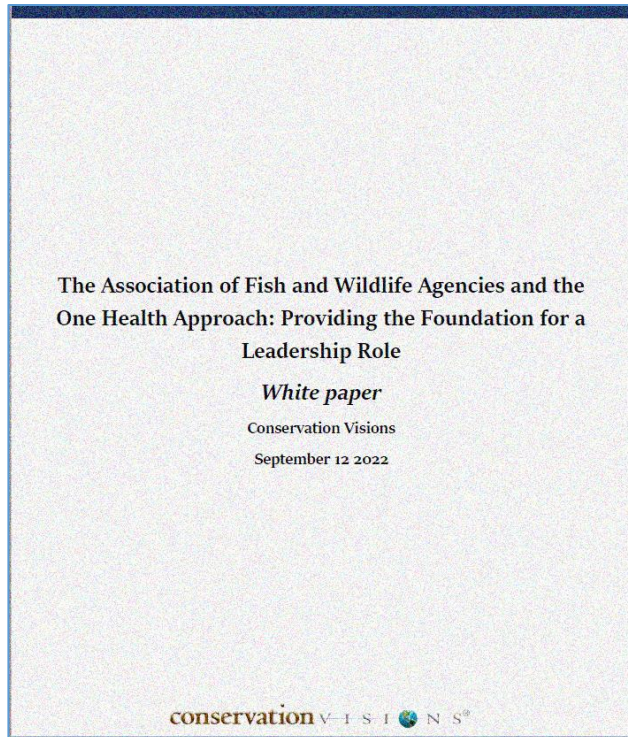
Missouri Department of Conservation

- Formed an interagency coordination team to foster collaboration across the Departments of Agriculture, Natural Resources, Health and Senior Services, and Conservation
- Training for state health, education, and natural resources employees
- Development of risk communication strategies to make the science and technology behind One Health accessible to wider audiences
- [Health Benefits of Nature](#)
- [Virtual One Health Seminars for Educators](#)
- Read the story: [Showing the Way for One Health Collaboration](#)

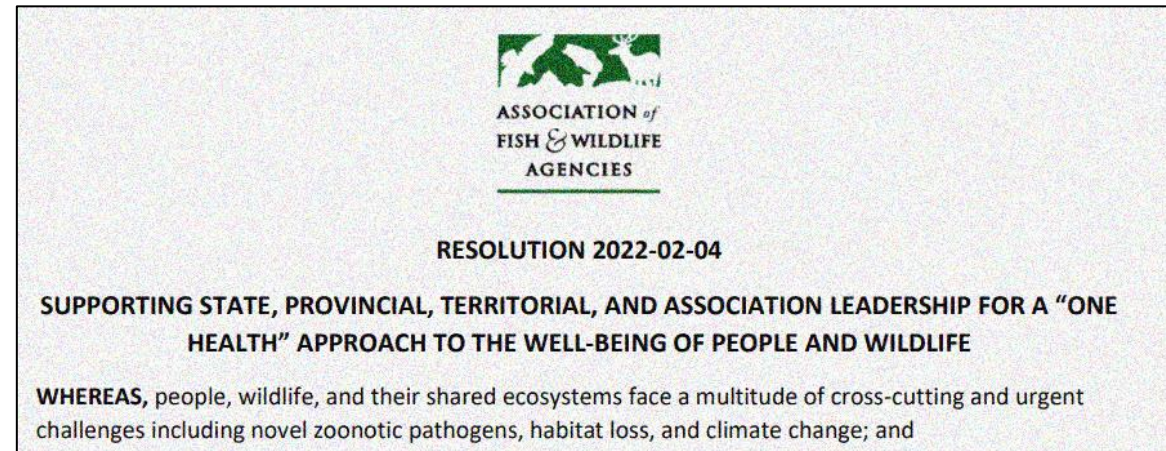


“One Health can be a uniting purpose for diverse constituent groups and organizations. Unlocking partnerships using the One Health lens is facilitating engagement and understanding of the importance of healthy ecosystems to human health.” – Missouri Department of Conservation Director Sara Parker Pauley

AFWA White Paper & Resolution



[Read the white paper](#)



NOW THEREFORE BE IT RESOLVED, that the Association endorses and supports the White Paper's findings and conclusions, and that the Association shall further deepen its fish and wildlife health capacity; provide guidance to its member agencies in developing One Health frameworks; collaborate with state, provincial, territorial, tribal, federal, private, and international entities in sharing information across sectors and disciplines; continually evaluate its policy priorities in light of One Health principles; and encourage application of these principles.

Key AFWA White Paper Recommendations



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1. Establish AFWA Expert Working Group
2. Collaborate with US/Canadian Public Health Experts
3. Bring Fish & Wildlife Expertise to North American One Health Community
4. Engage with the International One Health Community
5. Collaborate with Cross-sector and Cross-Discipline One Health Initiatives
6. Collaborate with Health Risk Assessment Processes to Ensure Human Action of Wildlife are Considered
7. Develop New Approaches to Reduce Hazards to Human and Wildlife Health
8. Develop Protocols for Monitoring, Diagnosis and Recovery from Zoonotic Disease
9. Support and Coordinate state/regional Efforts to Develop One Health Frameworks
10. Support Coordination and Communication on One Health Challenges and Progress
11. Develop Public Education & Awareness Initiatives on One Health
12. Engage with the Wildlife User and Non-user Groups to Demonstrate Inclusivity

Key AFWA White Paper Recommendations



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13. Make Proactive Work on One Health a Legislative Priority
14. Help People Understand the Affect of their Actions on Disease Impacts
15. Use Media and Publications to Inform Political Leaders, Policymakers and Public
16. Collaborate on Communicate through Journals, Conferences and Allied Networks
17. Engage with Development of the One Health Joint Action Plan
18. Engage and Collaborate with the One Health Commission
19. Collaborate on a North American Wildlife and One Health Strategy
20. Engage with Existing Efforts that have Relevance to One Health
21. Extend Current US and Canada Collaborations to Encompass Wildlife Health
22. Improve Professional and Public Engagement in Wildlife Surveillance, Monitoring, and Reporting
23. Strengthen Relationships between Scientists, Managers, Public Health Officials
24. Establish One Health Training for State, Provincial, Territorial and Tribal Agencies

EPA's mission is to protect human health and the environment

Air



Water



Land



***One Health
in Action***

One Health Triad



Examples of EPA One Health Tools & Resources



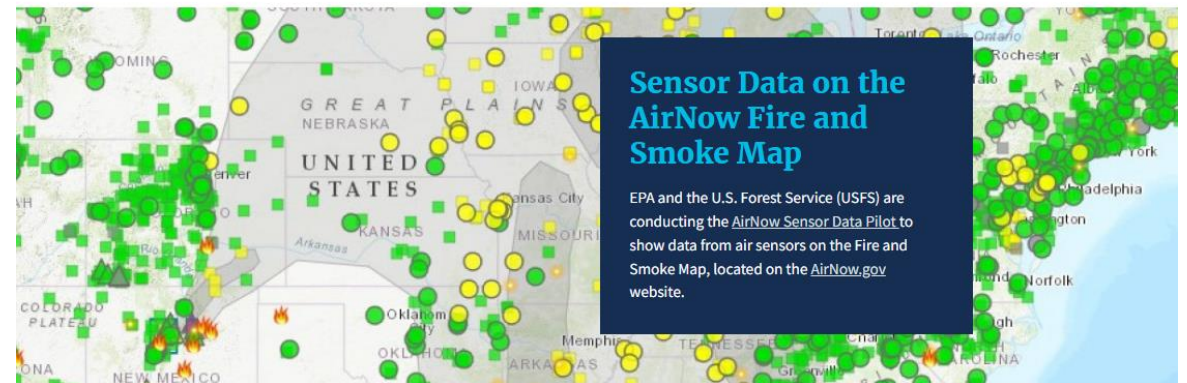
EPA's Report on the Environment (ROE)



Climate Change Adaptation Resource Center (ARC-X)



Air Sensor Toolbox



[EPA Science Inventory](#)

[EPA Resilience Tool Wizard](#)

To find more:

[Registry of EPA Models, Applications, and Data \(READ\)](#)

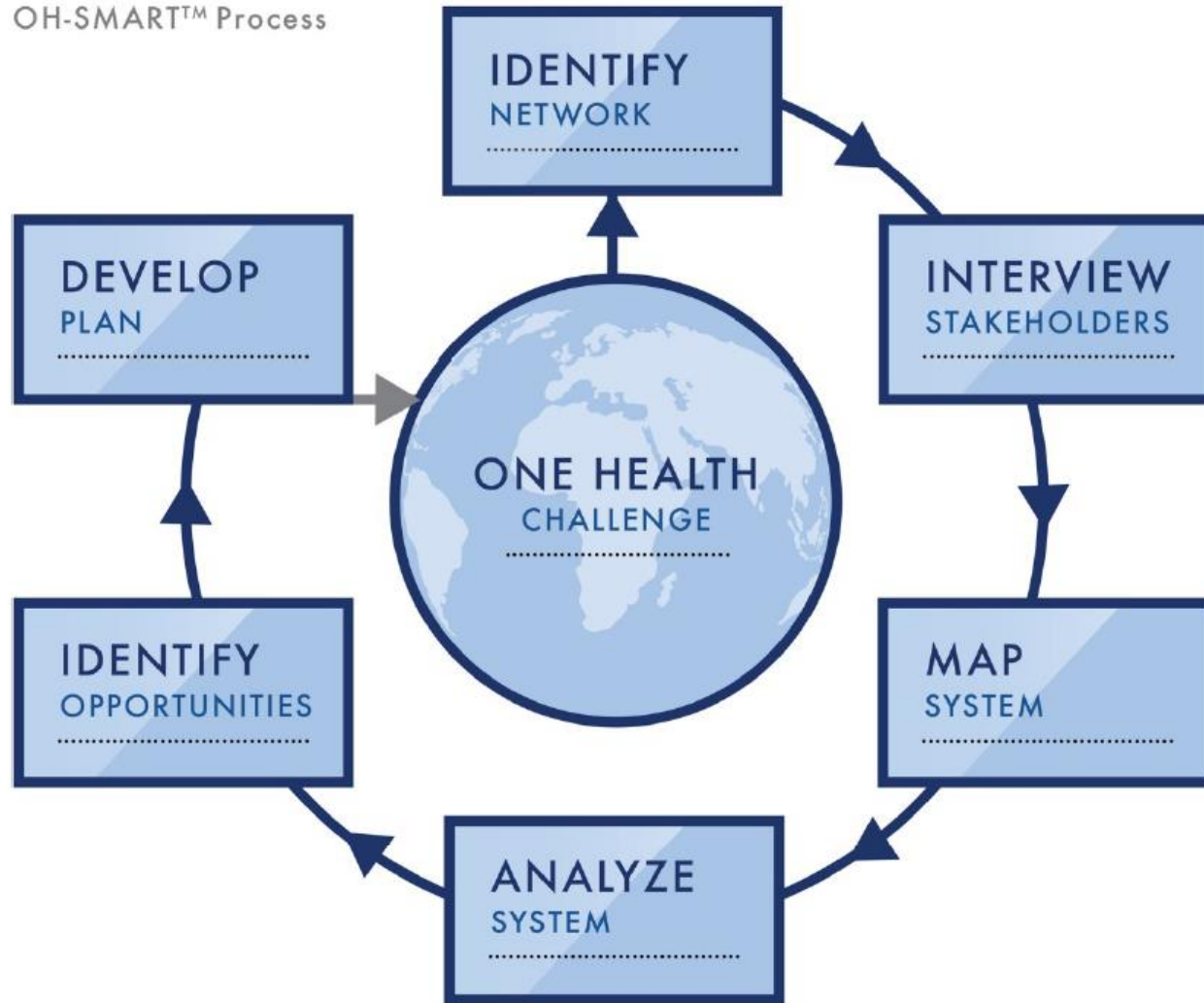
[EPA Science Models and Research Tools \(SMaRT\) Search Tool](#)

Many government and non-governmental organizations, academics, and others have created a diverse array of tools to assist One Health practitioners and lifelong learners. These documents aid in health systems management, disease surveillance, research, learning and more. To help streamline awareness of and access to them, the One Health Commission has gathered tools and toolkits from across the web.

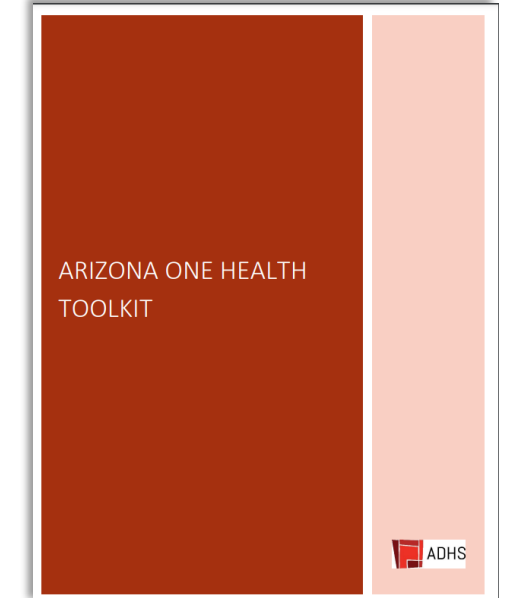
		
Zoonotic Disease Control	COVID-19 & other EIDs	Geospatial Analysis
		
Antimicrobial Resistance	Advocacy, Policy, & Governance	Organizational Management
		
Education	Event-Planning	Additional Resources

One Health Systems Mapping and Analysis Resource Toolkit ¹

OH-SMART™ Process



Example: [AZ OH Toolkit](#)



Arizona One Health Partners



Fig 1. OH-SMART steps. Overview of the six OH-SMART steps used to evaluate One Health Challenges.

<https://doi.org/10.1371/journal.pone.0219197.g001>

¹Developed by the University of Minnesota in collaboration with the United States Department of Agriculture (USDA)

Take Home Messages

- One Health recognizes the interconnectivity between human, animal and environmental health and the need for a collaborative, transdisciplinary approach to achieve optimal health outcomes.
- It is a systems approach that considers contributions of the environment, animals, humans, and plants in a holistic manner.
- The One Health approach requires a culture of collaboration between professionals in different fields of expertise. EPA is working with partners in the states, tribes, local communities, and public health organizations to use the One Health concept as a guide to meeting our shared missions.
- By taking these factors into consideration, better and more relevant data and decision support tools can be developed and used to address specific issues as part of a system that influences the outcome.

Additional Resources

November 3rd is One Health Day; Congress has designated January as National One Health Awareness Month

Watch a short [Centers for Disease Control video](#) explaining the One Health concept.

Read about examples of One Health work at EPA on our [One Health webpage](#).

Learn more about One Health and initiatives being led by our federal partners:

- [Centers for Disease Control One Health](#)
- [United States Department of Agriculture One Health](#)
- [National Institutes of Health One Health](#)
- [National Oceanic and Atmospheric Administration One Health](#)
- [United States Geological Survey One Health](#)
- [National Aeronautics and Space Administration One Health](#)

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