World Organisation for Animal Health

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WOAH Collaborative Centre Reports Activities 2025

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CENTRE INFORMATION

***Title of WOAH Collaborating Centre**	Research, Diagnosis and Surveillance of Wildlife Pathogens
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***Name of the writer:**	Damien Joly

TOR 1 AND 2: SERVICES PROVIDED

1. Activities as a centre of research, expertise, standardisation and dissemination of techniques within the remit of the mandate given by WOAH

Category	Title of activity	Scope
Epidemiology, surveillance, risk assessment, (true)	Targeted and scanning surveillance for diseases of importance to wildlife conservation, domestic animal health and human health.	Targeted surveillance for diseases of conservation, economic, and health importance, such as Avian Influenza, White Nose Syndrome, Rabies, Chronic Wasting Disease, African Swine Fever, New World screwworm myiasis, as well as viruses including but limited to, filoviruses, henipaviruses, hantaviruses, and SARS-CoV-2 etc. Scanning surveillance: necropsy of wild animal submissions nationwide to ascertain cause of death, reportable diseases, and diseases of scientific interest. All information generated from surveillance is distributed to stakeholders through necropsy reports, website reporting, technical and scientific reports, and individual reports as necessary.
Training, capacity building (true)	Teaching	Various wildlife health-related courses taught at the five veterinary schools across Canada to veterinary students, typically in 3rd or 4th years. NWHC provided coral reef health and avian disease training to multiple locations in the Pacific Basin. Additional capacity building was provided by WCS to

		government and other partners standing up wildlife health monitoring activities in Peru, Bolivia, Colombia, Guatemala, Republic of Congo, Cambodia, Lao PDR and Indonesia.
Zoonoses (true)	Surveillance	Surveillance for and identification of different zoonotic diseases as part of targeted and scanning surveillance.
Wildlife (true)	Surveillance	All three partners deal almost exclusively with free-ranging wildlife, with a small number of cases of rehabilitation animals and zoo animals.
Avian diseases (true)	Surveillance	Through targeted and scanning surveillance, the CWHC, WCS, and NWHC monitor for a wide number of diseases in avian species, such as HPAI, West Nile Virus, Avian Botulism, Avian Cholera, Newcastle Disease, Trichomonosis etc. In calendar year 2025, NWHC tested samples collected from 309 carcasses for presence of avian influenza virus (AIV) as part of its avian mortality surveillance program in the United States. Tested carcasses were received from 27 U.S. states. Samples from 5 of the carcasses tested positive for the AIV matrix gene, 48 of the samples tested positive for H5- or H7- subtypes of AIV, and 47 samples tested positive for highly pathogenic AIV H5N1 clade 2.3.4.4b In calendar year 2025, NWHC tested samples collected from 8 wild-bird carcasses for presence of avian paramyxovirus-1, including Newcastle Disease Virus (NDV), as part of its avian mortality surveillance program in the United States. Tested carcasses were received from 3 U.S. states, and samples from 1 of the carcasses tested positive for the NDV matrix gene. CWHC tested 2463 birds for avian influenza in 2025 through its scanning surveillance program, of which 635 tested positive (or presumptive positive) for H5- or H7- subtypes of AIV (i.e., matrix-positive). Data on avian influenza in Canadian wildlife are available from: https://www.cwhc-rcsf.ca/avian_influenza.php
Aquatic animal diseases (true)	Surveillance	The CWHC has conducted a marine mammal health surveillance program since 2023, monitoring marine mammal health on both eastern and western coasts of Canada. Further, we have conducted a capacity building project to improve capacity in Canada's Arctic to train wildlife officers and community members to safely collect biological specimens from marine mammals in the Arctic. The NWHC Honolulu Field station provides technical assistance and applied research to elucidate causes of wildlife disease and mortality in Hawaii and thePacific Basin, including such issues as diseases affecting fish, marine birds,marine invertebrates and sea turtles. WCS conducted surveillance for SARS-CoV-2 and Avian Influenza (with follow up non-targeted metagenomic assays) in marine mammals in Alaska and is supporting surveillance and response for HPAI in marine mammals in South America.

World Organisation for Animal Health

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Mammalian Diseases (true)	Surveillance	In calendar year 2025, NWHC tested samples collected from 11 wild lagomorphs originating from 5 US states for presence of rabbit hemorrhagic disease virus type 2 (RHDV2). Samples from 3 lagomorphs tested positive for RHDV2 CWHC tested 478 terrestrial and marine mammals for avian influenza through its scanning surveillance program, of which 26 tested positive (or presumptive positive) for H5- or H7-subtypes of AIV (i.e., matrix-positive). Data on avian influenza in Canadian wildlife are available from: https://www.cwhc-rcsf.ca/avian_influenza.php Numbers of mammals examined for other diseases by the CWHC and NWCH are available at these URLS: CWHC: https://www.cwhc-rcsf.ca/quarterly_report.php NWHC: https://www.usgs.gov/centers/nwhc/data

TOR 3: HARMONISATION OF STANDARDS

2. Proposal or development of any procedure that will facilitate harmonisation of international regulations applicable to the main fucus area for which you were designated

Proposal title	Scope/Content	Applicable Area
WOAH Aquatic Code and Aquatic Manual	Reviewed Annexes 4-19 in support of the Canadian Delegate	Health Management
WOAH Terrestrial Manual	Supported revision of Chapter 1.1.2 (Collection, submission, and storage of diagnostic specimens)	Laboratory Expertise
WOAH Outbreak Investigation Standard Operating Procedure	Supported development of the SOP (via WildNet)	Wildlife Health and Biodiversity
Wildlife Disease Case Definitions	The CWHC and NWHC are jointly developing wildlife disease case definitions for use by diagnostic laboratories to standardize diagnostic reporting. Work was initiated on 10 case definitions in 2025	Wildlife Health and Biodiversity

3. In exercising your activities, have you identified any regulatory research needs* relevant for WOAH?

No

4. Did your Collaborating Centre maintain a network with other WOAH Collaborating Centres (CC), Reference Laboratories (RL), or organisations designated for the same specialty, to coordinate scientific and technical studies?

Yes

Name of WOAH CC/RL/other organisation(s)	Location	Region of networking Centre	Purpose
		África	WOAH WildNetsupports WOAH in improving wildlife health globally and supports the implementation of

WOAH WildNET	Global	América Asia y el Pacífico Europa Oriente Medio	WOAH's wildlife health strategy by contributing to the development and the dissemination of knowledge, sharing of information – including innovation– and expertise, as well as at global, regional and national levels.
WOAH Coordination Group on Wildlife Health in the Americas	Americas	América	Our collaborating centre is chairing this newly established coordination group. The purpose of the group is to promote, guide, and support the development and implementation of a regional action plan in the Americas.

TOR 4 AND 5: NETWORKING AND COLLABORATION

5. Did your Collaborating Centre maintain a network with other WOAH Collaborating Centres, Reference laboratories, or organisations in other disciplines, to coordinate scientific and technical studies?

Yes

Name of WOAH CC/RL/other organisation(s)	Location	Region of networking Centre	Purpose
Wildlife Health Information Network	Global	Africa Americas Asia and Pacific Europe Middle East	The Wildlife Health Intelligence Network (WHIN) is a consortium of organizations that all believe that the solutions to scaling wildlife surveillance globally go beyond the capacity of a single organization. The CWHC, WCS and NWHC participate in ongoing WHIN networking sessions and manuscript development with WCS currently co-chairing the steering committee.
		Africa	The Task Force on Protected Areas and One Health has synthesized existing knowledge regarding how to integrate One Health interventions with area-based conservation practices and identify gaps where future research, policies, and funding are needed. This Task Force has focused especially on efforts to reduce the risks of emerging infectious diseases and the burdens of endemic disease. In 2025 the

IUCN World Commission on Protected Areas (WCPA) Protected Areas and One Health Task Force	Global	Americas Asia and Pacific Europe Middle East	Task Force worked to draft a peer-reviewed IUCN WCPA Technical Report titled, "Assessing and Reducing Infectious Disease Risks in Protected and Conserved Areas: the MAP-ACT-CREATE for One Health Toolkit" that will be published in English, Spanish and French in 2026. The toolkit targets managers of protected areas with information to perform basic initial assessments for infectious disease risks and infectious disease risk reduction. WCS currently co-chairs this Task Force and has other participating members.
WOAH WildNET	Global	Africa Americas Asia and Pacific Europe Middle East	WOAH WildNet supports WOAH in improving wildlife health globally and supports the implementation of WOAH's wildlife health strategy by contributing to the development and the dissemination of knowledge, sharing of information and expertise, at global, regional and national levels.
WOAH Coordination Group on Wildlife Health in the Americas	Americas	Americas	The purpose of the group is to promote, guide, and support the development and implementation of a regional action plan in the Americas.
Canadian Wildlife Health Cooperative	Canada	Americas	The CWHC maintains a national network of diagnostic laboratories, academics, federal, provincial, and territorial governments with regards to wildlife health from coast to coast to coast.

TOR 6: EXPERT CONSULTANTS

6. Did your Collaborating Centre place expert consultants at the disposal of WOAH?

No

TOR 7: SCIENTIFIC AND TECHNICAL TRAINING

7. Did your Collaborating Centre provide advice/services to requests from Members in your main focus area?

Yes

In both Canada and the US, the CWHC and the NWHC provide ongoing support to the WOAH Country Delegates on matters associated with wildlife disease issues, in addition to our respective roles as national wildlife disease surveillance systems. In Canada this support is provided directly via our role as WOAH Wildlife Focal Point, and in the US by supporting the Wildlife Focal Point.

8. Did your Collaborating Centre provide scientific and technical training, within the remit of the mandate given by WOAH, to personnel from WOAH Members?

No

TOR 8: SCIENTIFIC MEETINGS

9. Did your Collaborating Centre organise or participate in the organisation of scientific meetings related to your main focus area on behalf of WOAH?

Yes

National/International	Title of event	Co-organiser	Date	Location	No. Participants
Internationally	1era reunión del Grupo de Coordinación regional de Fauna Silvestre	María Mesplet, One Health Regional Officer for the Americas, WOAH	2025-12-14	Virtual	10
Internationally	73rd Annual Meeting of the Wildlife Disease Association	WDA2025 Organizing Committee	2025-07-26	Victoria, BC, Canada	650

TOR 9: DATA AND INFORMATION DISSEMINATION

10. Publication and dissemination of any information within the remit of the mandate given by WOAH that may be useful to Members of WOAH

a) Articles published in peer-reviewed journals:

93

The Collaborating Centre's 2025 publications span a wide range of wildlife health topics, with a strong emphasis on emerging and re-emerging zoonotic pathogens, wildlife health surveillance systems, and environmental drivers of disease. Major areas of focus include highly pathogenic avian influenza in wildlife and across livestock–wildlife interfaces; coronaviruses and influenza A viruses in wildlife reservoirs; and disease dynamics in northern and Arctic species, including muskoxen, caribou, and marine mammals. We also published articles on advances in wildlife health surveillance capacity building, stakeholder mapping, and data infrastructure, alongside applied research on contaminants, plastic pollution, and environmental stressors affecting wildlife health.

The Centre contributed publications addressing One Health workforce development and capacity building, including equitable investment in veterinary workforces as foundational to planetary wellbeing (Hassan et al., The Lancet, December 2025) and recognizing rangers as an essential One Health workforce for biodiversity preservation (Montecino-Latorre et al., Conservation Biology, in press). We also published extensively on sarcoptic mange in South American camelids, with articles examining mitigation challenges and opportunities in wild populations (Martin et al., Journal of Wildlife Management, October 2025), traditional treatment approaches in Bolivia (Mollericona et al., Ecología en Bolivia, October 2025), and disease severity analysis using ecological and epidemiological indicators (Beltrán-Saavedra et al., Mastozoología Neotropical, July 2025). Additional publications addressed avian influenza surveillance guidance for Bolivian wetlands (Gutiérrez et al., 2025), evolutionary rescue strategies for white-nose syndrome (Olson et al., Ecology and Society, July 2025), and pandemic prevention through international wildlife trade regulation (Reaser and Lieberman, The Lancet Planetary Health, January 2026).

b) International conferences:

As a distributed Collaborating Centre (e.g., 6 Regional Centres in Canada, the USGS National Wildlife Health Center in the US, and the Wildlife Conservation Society based in the US and present in 50+ countries globally), it is problematic to track all scientist and student attendance at conferences. That said, our members routinely attend and present at national and international conferences. Some examples for 2025 include the 73rd Annual Meeting of the Wildlife Disease Association (Victoria BC, Canada), the IUCN World Conservation Congress (Abu Dhabi, UAE), The Society for Conservation Biology's 32nd International Congress for Conservation Biology (ICCB 2025, Brisbane/Meanjin, Australia) and the 11th International Symposium on Avian Influenza (St. John's, Newfoundland & Labrador, Canada).

c) National conferences:

As a distributed Collaborating Centre (e.g., 6 Regional Centres in Canada, the USGS National Wildlife Health Center in the US, and the Wildlife Conservation Society based in the US and present in 50+ countries globally), it is problematic to track all scientist and student attendance at conferences. For example, WCS country programs with active One Health programs, frequently participate and attend national veterinary or wildlife conferences as well as government-sponsored workshops or policy forums. And more generally, our Centre members routinely attend and present at national and international conferences on a range of wildlife health related topics and issues.

d) Other (Provide website address or link to appropriate information):

The Collaborating Centre supports our host countries' surveillance programs for avian influenza in wildlife, and play a significant role in publicly disseminating the results of this surveillance (e.g., the Canadian wildlife data are available here: https://www.cwhc-rcsf.ca/avian_influenza.php).

In addition to our scientific publications, both the CWHC and the NWHC produce periodic lay publications (e.g., https://healthywildlife.ca/ and

https://www.usgs.gov/centers/nwhc/science/wildlife-health-bulletins) and provide public outreach material through various websites (e.g. WCS Health Program YouTube, https://www.wcs.org/our-work/solutions/health).

11. What have you done in the past year to advance your area of focus, e.g. updated technology?
A significant effort across our collaborating centre is made to develop, improve, and maintain systems for the management of wildlife health data. In addition to the internal systems built and maintained by the Canadian Wildlife Health Cooperative and the National Wildlife Health Center, the Collaborating Centre, led by the Wildlife Conservation Society, has been supporting an international partnership and initiative, the Wildlife Health Intelligence Network (WHIN), to develop the Health and Wildlife Knowledge (HAWK) database.

HAWK supports the management of diverse data generated by multiple actors and methodologies, all within a harmonized structure and vocabulary facilitating data access, analysis, communication, and reuse. Data are secured through compartmentalization across organizations and users, while supporting compliance of FAIR and CARE data principles. HAWK is envisioned as a global public good to encourage data compatibility and best practices in the wildlife conservation and One Health communities, independent of languages and location, with minimal to no cost for users.

NWHC has made progress on the development of wildlife vaccines. One of the major previous impediments has been the application of vaccines at scale for wildlife. NWHC is investigating the use of various topical delivery methods for vaccines in bats that are showing promise for use to control bat rabies and white nose syndrome in bats.

NWHC has also made technological advances on prion diseases. Through the use of newly developed assays we may be able to differentiate prion strains and thereby infer movements and sources, a dilemma that has plagued prion scientists across the globe.NWHC is also developing new methods that can be used to detect prions on a variety of tissues and bodily fluids from live animals. The current assays require samples from dead animals and are slow, labor intensive, and can miss early infections. The newly developed assays will be much more sensitive and can detect infections earlier and on living hosts without invasive sampling methods.

12. Additional comments regarding your report:
It was an exciting year with the Wildlife Conservation Society (WCS) joining our Collaborating Centre in late May. With its global reach and extreme depth of wildlife health and conservation expertise and experience across the planet, WCS brings new international reach and capacity to our centre.