



STRUCTURE



- Ministry of Agriculture and Food Security (MAFF)
 - Directorate of Aquaculture and Fisheries
 - Department of Wildlife and Biodiversity
 - General Directorate of Animal Health and Production, Cambodia (GDAHP)
- Ministry of Environment - Department of Freshwater Wetlands Conservation (DFWC)
 - report sick and dead wildlife
- Provincial Animal Health and Production Office (PAHPO)
 - collect samples
- National Animal Health and Production Research Institute (NAHPI)
 - test samples
- Local authorities

POLICY

- Mandate on wildlife health is present under the Department of Wildlife and Biodiversity, but it is more focused on law enforcement and protection of wildlife.
- A gap between international advocacy and practical actions due to inadequate funding for wildlife health.
- Need more tangible actions and funding specific to wildlife health.
- Suggestion to emphasize wildlife as an important narrative in OH

LAW

- Wildlife health is not mentioned
- Legislation for wildlife health as a subset of animal health is being developed
- Law on Forestry 2002 - Article 49, it is strictly prohibited to hunt, harm or harass all wildlife.



SOP/GUIDELINES

- SOP on Wildlife Health Surveillance
- SOP is being developed for captive wildlife breeding such as macaques, wild pig, animal protein zoo (in draft in the next two years)

COLLABORATION & OH

Activities

- Rangers, hunters, community - collect samples for surveillance
- Ecosystem community representatives

Official committees/network

- Inter-ministerial Coordination Committee (IMCC) for One Health
 - Zoonotic technical working group (ZTWG)
 - Wildlife Health Surveillance Network Working Group (WHSN-WFG)
 - guide activities and SOPs for wildlife surveillance, facilitate information sharing on wildlife surveillance and outbreak response, coordinate capacity building
- Wildlife department is often overlooked during outbreaks, with limited consideration on disease risks from wildlife (eg. ASF)
 - Lack data sharing
 - Suggestion for WIOAH to take a stronger role in driving wildlife health initiatives and mobilizing stakeholder commitment.

RESEARCH

- Institut Pasteur du Cambodge (IPC)
 - test environmental samples
- Wildlife Conservation Society (WCS)
 - Defence Threat Reduction Agency (DTRA)
- Duke-National University of Singapore
- U.S. Naval Medical Research Unit 2 (NAMRU-2)
- International Development Research Centre (IDRC)
 - Asia Partnership on Emerging Infectious Diseases Research (APERD)
- USDA-Animal and Plant Health Inspection Service (APHIS)
- Fauna & Flora International (FFI)
- Canada research institute
- UC Davis

EDUCATION

- Royal University of Phnom Penh (RUPP)

INTERNATIONAL

- WCS - Wildlife Health Surveillance Network (WildHealthNet)
 - Funded by OTRA BTRP and builds on the WCS Health Program's expertise in One Health policy, pathogen surveillance (USAID's PREDICT1 and PREDICT2), and wildlife surveillance activities in Southeast Asia (ACAMNET)
- Four core components to develop wildlife surveillance networks
 - WildHealthHub: Iterative field implementation and policy development
 - WildHealthSkills: Capacity bridging
 - WildHealthTech: Improved data collection and management systems
 - Adopting the already widely used Spatial Monitoring And Reporting Tools (SMART) for Health data collection as part of WildHealthTech
- WildHealthResponse: Implementation of context-specific responses to wildlife health intelligence

FINANCIAL

- Highly very limited - <10k USD/year
- Highly dependent on international organizations
- No funding for emergencies

PHYSICAL

- Inadequate resources lacking in basic necessities
 - Available buildings and space but no equipment and materials
- No wildlife health laboratory
- Physical resources are not shared with other departments

HUMAN

- Lack human personnel and expertise
- During hiring process, we prioritize females/biologists. While livestock department will prioritize vets
- Share human resources/expertise with other departments/agencies

ANIMAL HEALTH

Subdivisions related to wildlife health:

- Phnom Penh [Wildlife Disease Centre](#)
 - run by the Forestry Administration in partnership with an NGO, [Wildlife Disease Centre](#)
 - wildlife were previously illegally traded, displaced due to habitat loss, donated by private owner, or rescued in human-wildlife conflicts
 - rescue operations mainly conducted by the Wildlife Rapid Rescue Team (made up of Forestry Administration and Military Police personnel)
- Wildlife Health Clinic (wells there)

Other organizations:

- Universities - for emergencies only

- Captive wildlife are well managed
- No specific legislation but can be indirectly link to Law on Forestry 2002 on harm to wildlife

Activities

- Rescue, rehabilitation, release
- No vaccination practices
- Basic meds and biologicals

ANIMAL WELFARE

- Rescue centre has big land but with limited capacity
- Lack of resources (eg. meds, food) are challenging for optimum treatment and care for rescued animals

SURVEILLANCE

- Lack resources for consistent surveillance activities. Highly dependent on development partners.

Passive surveillance:

- Based on notification of suspected wildlife cases from rangers and/or villagers, hunters
- Consequence sampling during field post mortem, breeding program, translocate and release program, interagency joint investigation)

Active surveillance:

- Based on specific targeted investigation of at-risk populations for evidence of infection

Disease priority:

- WHSN-WFG's priority:
 - ASF
 - AFI
 - NIV
- Others but not limited to:
 - Cowdria burnetti
 - Rickettsia prowazekii
 - Yersinia pestis
 - H5v
 - CBF
 - ND
 - PPR
 - FMD
 - ColVs

Disease	Surveillance	Response
ASF	Surveillance is based on notification of suspected cases from rangers and/or villagers, hunters	Rescue, rehabilitation, release
AFI	Surveillance is based on notification of suspected cases from rangers and/or villagers, hunters	Rescue, rehabilitation, release
NIV	Surveillance is based on notification of suspected cases from rangers and/or villagers, hunters	Rescue, rehabilitation, release
Cowdria burnetti	Surveillance is based on notification of suspected cases from rangers and/or villagers, hunters	Rescue, rehabilitation, release
Rickettsia prowazekii	Surveillance is based on notification of suspected cases from rangers and/or villagers, hunters	Rescue, rehabilitation, release
Yersinia pestis	Surveillance is based on notification of suspected cases from rangers and/or villagers, hunters	Rescue, rehabilitation, release
H5v	Surveillance is based on notification of suspected cases from rangers and/or villagers, hunters	Rescue, rehabilitation, release
CBF	Surveillance is based on notification of suspected cases from rangers and/or villagers, hunters	Rescue, rehabilitation, release
ND	Surveillance is based on notification of suspected cases from rangers and/or villagers, hunters	Rescue, rehabilitation, release
PPR	Surveillance is based on notification of suspected cases from rangers and/or villagers, hunters	Rescue, rehabilitation, release
FMD	Surveillance is based on notification of suspected cases from rangers and/or villagers, hunters	Rescue, rehabilitation, release
ColVs	Surveillance is based on notification of suspected cases from rangers and/or villagers, hunters	Rescue, rehabilitation, release

LABORATORY

- No specific wildlife lab. Using animal health lab
- Inadequate and unequipped labs
- Lack resources for proper cold chain support
- Sends samples to university (eg. Mahidul university)
- Network to transport samples from province to animal health lab
- National Animal Health and Production Research Institute (NAHPI) - most samples
- IPC - environmental samples

DATA

- Field morbidity and mortality monitoring using (SMART for Health) to enter data on sick and dead wildlife during ranger patrol
- Wildlife Health Intelligent Platform (WHIP) is a wildlife disease centralized database system that organizes data from SMART for Health
 - data includes reports of disease events, necropsies, photographs, storage of samples, result of diagnostic tests
- Lack commitment in data sharing
- wildlife-related activities involve different institutions
- disease incidences are poorly documented

REPORTING

- Issues with delayed reporting
- Notification of suspected cases from rangers (SMART for Health)
- Notification of suspected cases from villagers or hunters
- Wildlife Crime Hotline
- WAHIS

RISK ANALYSIS & ZOOONES

- Limited and incomplete risk analysis

RESPONSE

- Wildlife Rapid Rescue Team
- Provincial Animal Health and Production Office (PAHPO), Department of Freshwater and Wetlands Conservation (DFWC), local authorities and ecosystem community representatives
 - collect carcasses and incinerate
- Some aspects cannot be coded
- Eg. of multifactorial coordination for a [disease outbreak in wild birds](#)

ENVIRONMENT

- Not discussed

ASSESSMENT

- Suggested to do PVS for wildlife

TRAINING

- Not discussed

TRACEABILITY

- Not discussed

COMMUNICATION

- Increased awareness on wildlife health needed
- Education on disease risk that avoids vilifying wildlife needed