

STRUCTURE

- Ministry of Environment and Forestry ([PUSKESLH](#))
 - Directorate of Species and Genetic Biodiversity Conservation (R016G)
 - Natural Resources Conservation Center
 - National Park Center
- Ministry of Agriculture
 - Directorate General of Livestock and Animal Health Services ([Guben P010](#))



POLICY

• Not specific

Related policies:

- Strategic Plan for Ministry of Environment and Forestry (Rencana Strategis Kementerian Lingkungan Hidup dan Kehutanan Tahun 2020-2024 (RPJL 2020-2024))
- States that authority of the national veterinary is present in livestock and aquatic, but not wildlife. Thus, recommendations to revise Regulation no. 3, 2021 on Veterinary Authority 2020-2024 (RPJL 2020-2024)
- States that four pilot projects have been conducted on prevention and control of zoonosis in wildlife to improve speed of detection, reporting, and response

LAW

- Legislation to support veterinary authority over wildlife not well-defined. Need improved regulation on conservation medicine and wildlife diseases
- Existing laws cover the aspect of wildlife health for control and prevention of disease in 'various ecosystem environments' and for the purpose of medical conservation
- Act on the Conservation of Biological Resources and their Ecosystems (Act No. 5 of 1992)
- Regulation of The Coordinating Minister for Human Development and Cultural Affairs of The Republic of Indonesia, No. 7 of 2022 - Concerning the Guideline Prevention and Control of Zoonosis and Emerging Infectious Diseases
- No. 18 of 2009 on Husbandry and Animal Health
- No. 47 of 2014 Concerning Control and Prevention of Animal Diseases

SOP/GUIDELINES

- [Guidelines](#) Prevention and Control of Zoonosis and Emerging Infectious Diseases
- Suggestion to improve guidelines on communication



COLLABORATION & OH

Official committee/network

- One Health Coordination Working Group (a Working Group for the Coordination of Prevention, Detection, and Response to Cross-Sectoral Zoonotic Diseases/ICDs under the [Guidelines](#))
 - Working groups
 - SIIZE Working group (Zoonosis and EID Information System) an integrated health surveillance information system that links public health, animal health, and wildlife health information systems to enable a One Health approach to disease surveillance in Indonesia
 - Community-based Surveillance (SIS) Working Group
 - Integrated Surveillance Working Group
- Good coordination on wildlife health between stakeholders and levels (central and local government)
 - Can improve through more frequent meetings
 - Poor implementation due to lack of budget and human resource
 - Information systems under different ministers
 - Weather, temperature, species diversity

RESEARCH

- Universities
 - support with surgery or diagnosis
- Limited wildlife health research
- More information needed on environment data for disease identification, wildlife population

INTERNATIONAL

- Wildlife Conservation Society
- Wildlife Paper Ongoing Project
 - US and WACS
 - HAASP (Australia)
 - IDGSS/ISVS

LOCAL

- Wildlife Response Unit (WRU)
 - Wildlife Rescue Unit
- Local Veterinarians
- INDOHUN
- Indonesian Primate Biological Association

FINANCIAL

- Funding provided by central government
- Emergency funding available
 - ASF

PHYSICAL

- Many facilities available
- Elephant hospital (2)
- Sumatan Tiger Clinic (1)
- Zoo (laboratory, ART-AI services)

HUMAN

- Currently, a team of five (5) for wildlife health
 - One veterinarian
- Recent hiring of 25 vets funded by government to specialize in wildlife veterinary
 - Inadequate personnel in wildlife health
 - Rely on assistance from partners

ANIMAL HEALTH

Subdivisions related to wildlife health:

- National Animal Health Laboratory (NAHL),
 - under the Department of Livestock and Fisheries (Ministry of Agriculture and Forestry)
 - national technical reference center for animal disease diagnosis and diagnostic product quality testing
 - responsible for human resource capacity development and research in relation to animal health and zoonosis
 - provide emergency treatment to wildlife (rarely)

Other organizations:

- NGOs
- Zoos
- Universities
- Elephant Hospital

Activities:

- Rescue, rehabilitation
- Laboratory diagnosis
- No vaccination
- No information on sufficiency of meds and biologicals

ANIMAL WELFARE

- Improving over the years
- Establishing legislation on animal welfare is challenging, requires circular letter (keputusan) to have legislation

SURVEILLANCE

Passive surveillance:

SENKAS (SATU) information system

Active surveillance:

- Usually conducted only during outbreaks

Disease-specific:

- Plasmodium (Kalimantan)
- Schistosomiasis (Lindu)
- Rabies (Bali and West Java)

LABORATORY

- No dedicated laboratory for wildlife
- Networks with MCH, MSA, and university laboratories
- Samples are tested locally
- Instal. Pertanian Bogor (IP) - BSL2
- Disease Investigation Centre (DIC) lead by MoA
- Improvements in cold-chain system over the past 5 years

DATA

Wildlife national e-Zoonosis platform

- Emerging infectious and zoonotic disease surveillance
 - Facilitating case reporting
 - Investigation
 - Logistics planning
- One Health Platform (OHSP)
- From Ministry of Health
 - zoonosis, EID, TB, Malaria, etc.
 - Information System for Zoonotic and Emerging Infectious Disease (SIIZE)
 - e-platform established in 2016
 - Combination of 3 systems:
 - Wildlife Health Information System (WHIS) (Indonesian Knowledge System for SATU)
 - Ministry of Environment and Forestry

Early Warning Alert and Response System (EWARS) (e-Zoonosis Platform, One Health Response, OHSP)

Integrated National Animal Health Information System (ISIKHNAS) (Integral Sistem Informasi Kesehatan Hewan Nasional)

Ministry of Agriculture

REPORTING

6 priority diseases of SIIZE under the One Health Zoonotic Disease Prioritization

- Zoonotic influenza (Avian influenza, Swine influenza, and other influenza viruses)
 - Zoonotic Coronavirus (COVID-19, MERS, and other Coronaviruses)
 - Arthritis
 - Rabies
 - Zoonotic TB
 - Leptospirosis
- SIIZE
- SIKSTR (National Conservation Agency) (74 units)
 - Mandated
- WAHIS
- Lack of timely reporting

RISK ANALYSIS & ZOOSES

- Collaboration with MCH and Ministry of Education and Culture
- High-risk interface: Bird-saltting
- Need to improve risk analysis
- Spread of wildlife disease is a constant challenge
- Suggests that besides spillover, spillover should also be considered

RESPONSE

- Need additional implementation units for early warning and disease investigation

ENVIRONMENT

- Evidence that birds may have been affected by pesticides
- Elephants eating plastics
- Collection of rainfall data (national parks)
 - Processed into excel file by DNP

ASSESSMENT

- Plans to develop assessment tools

TRAINING

- Wildlife modules in vet courses are limited
- FETP-WESE
- Need to enhance wildlife health training for vets in biodiversity and ecosystem

TRACEABILITY

- Department of Forestry
 - Identification of Wildlife and Wildlife Meat
- Need to improve collaboration with other agencies on border, traceability, and certifications

COMMUNICATION

- Awareness of spillover risks with development partners through various forms of outreach and media