Guidelines for disease risk management in wildlife trade supply chains and markets

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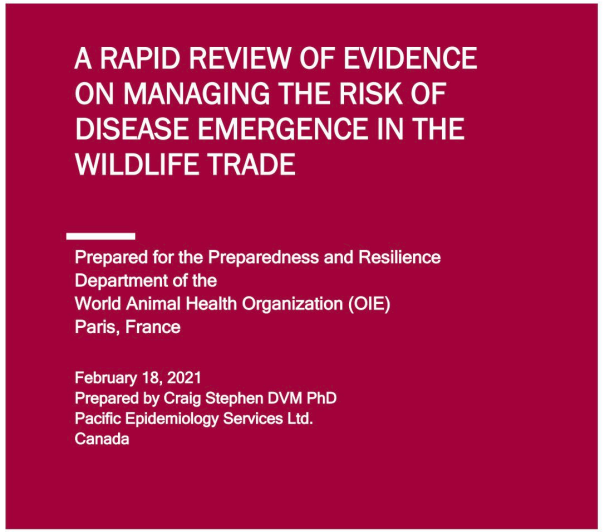
Background

- In April 2020, the OIE Wildlife Working Group released a statement highlighting the complexities, and challenges of wildlife trade and called for guidelines.
- Early in 2021, a consultant-led 'rapid review of evidence on managing the risk of disease emergence in the wildlife trade' was completed.
- The review emphasised:
  - Current evidence base to inform risk mitigation strategies for wildlife trade is weak.
  - Limited number of studies, many with biases towards zoonoses, certain geographical regions, specific activities (animals for food and live animals).
  - Risk management solutions need to be attentive and adaptable to different socio-ecological, socio-political and/or cultural settings.



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Stephen C, Berezowski J et al. 2021 Rapid Review of Evidence on Managing the Risk of Emerging Diseases in the Wildlife Trade. Prepared for the Preparedness and Resilience Department.

WOAH *Ad Hoc Group*

- WOAH drew together an Ad Hoc Group (AHG) to develop guidance for risk management.
- Seed-funding from the Australian Government.
- Participants
  - from multiple sectors and multilateral organisations
  - with expertise in wildlife crime, wildlife trade, animal welfare, risk assessment, veterinary services, animal health standards, ecology, public health, social and behavior change and systems-thinking.
- Content developed :
  - Over a series of 7 virtual meetings in addition inter-sessional work since June 2021,
  - Informed by the subject matter expertise of the group, previous work (e.g. IBPES, WHO-UNEP-OIE report) and complemented by ongoing literature review and resource sharing.

The *Guidelines* - Overview

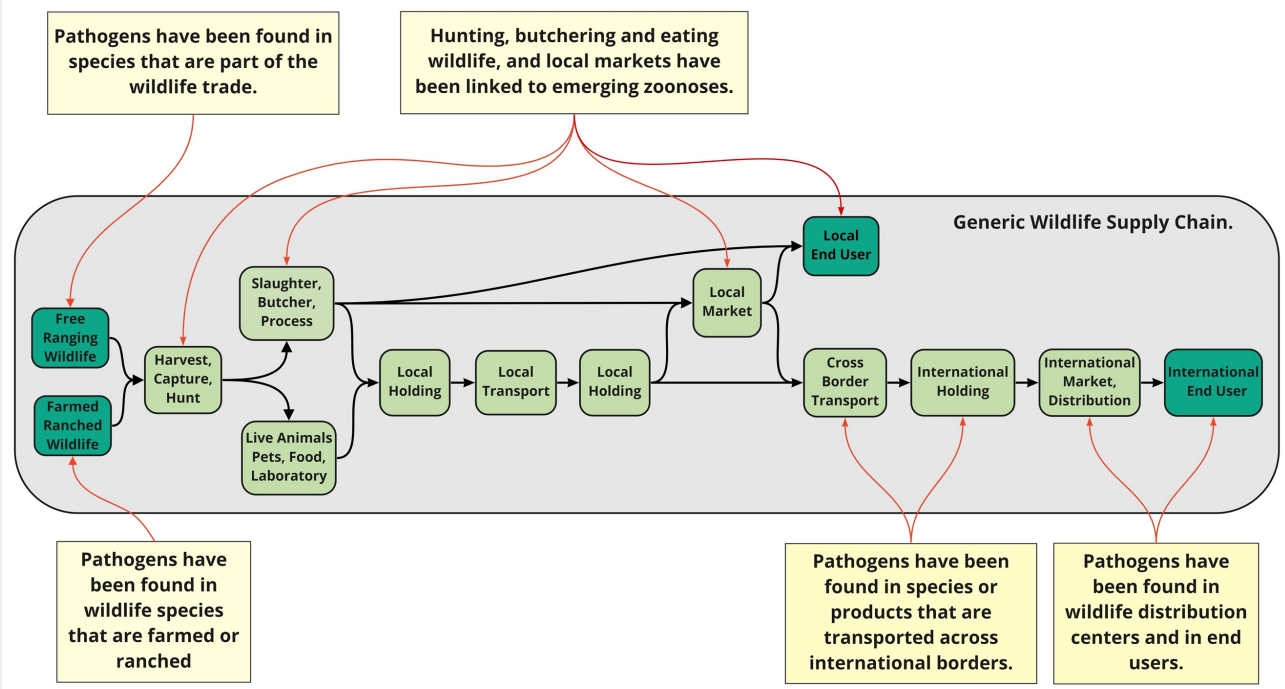
Overview

- Provides a framework to support informed decision-making in the face of uncertainty and complexity.
- Approaches to enable users to select pragmatic and relevant risk reduction / intervention strategies according to identified risk, context and need.
- The guidance portion of this document is split into four main sections:
- 1. Engagement with stakeholders and system mapping
- 2. Risk analysis
- 3. Monitoring and evaluation
- 4. Tools and guidance

Image: pixabay.com

Overview

- **Primary audience** : Veterinary Services, Wildlife Authorities , Public Health Authorities , other Competent Authorities with a mandate on animal health and welfare, public health, wildlife management and trade, law enforcement.
- **Any potential or infectious pathogen at any interface.**
- Commercial and non-commercial, legal (both regulated and unregulated) and illegal wildlife trade.
- **Wildlife includes wild animals and captive wild animals** . Feral were out of scope.
- Guidelines acknowledge that wildlife trade and related supply chains are highly variable and complex, including both illegal and legal trade.



Generic Wildlife Supply Chain [CreditDr. John Berezowki, adapted from Stephen C,Berezowski J et al. 2021 Rapid Review of Evidence on Managing the Risk of Emerging Diseases in the Wildlife Trade. Prepared for the Preparedness and Resilience Department.

The *Guidelines* - Content

Steps

Describe the wildlife trade system for which risks are to be addressed and the objectives to be achieved.

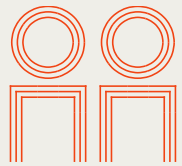
Identify and engage with stakeholders , champions and experts.

Conduct **risk analysis via engagement** with subject matter experts.

Identify and prioritize the risky wildlife trade activities.

Use **structured decision -making** to address complex, multidimensional problems and trade-offs.

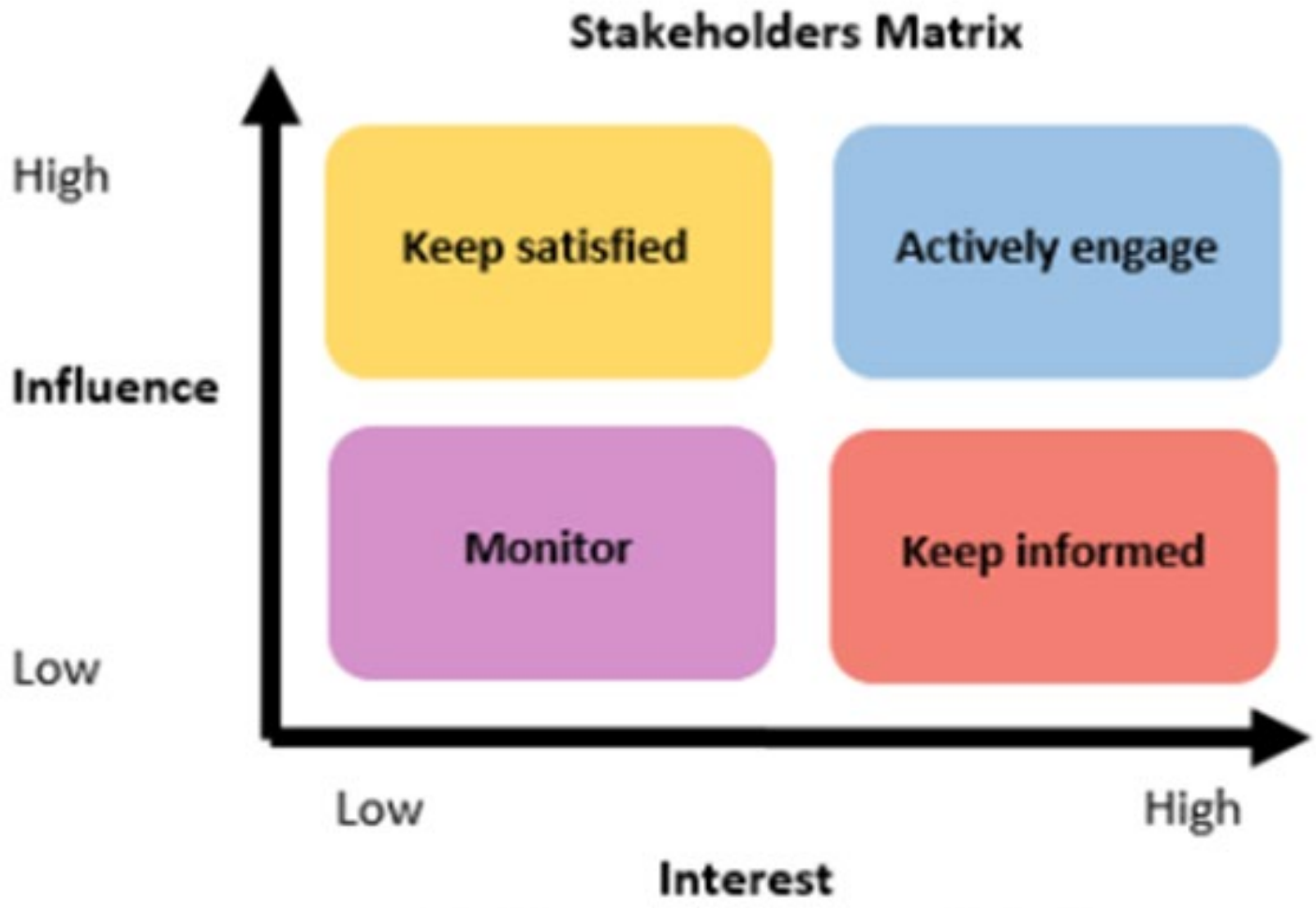
Develop management and **intervention strategies using the Hierarchy of Controls** or other approaches.



Develop metrics for each intervention and **monitor and assess effectiveness. Adjust accordingly.**

Identify and Engage with Stakeholders, Champions and Experts

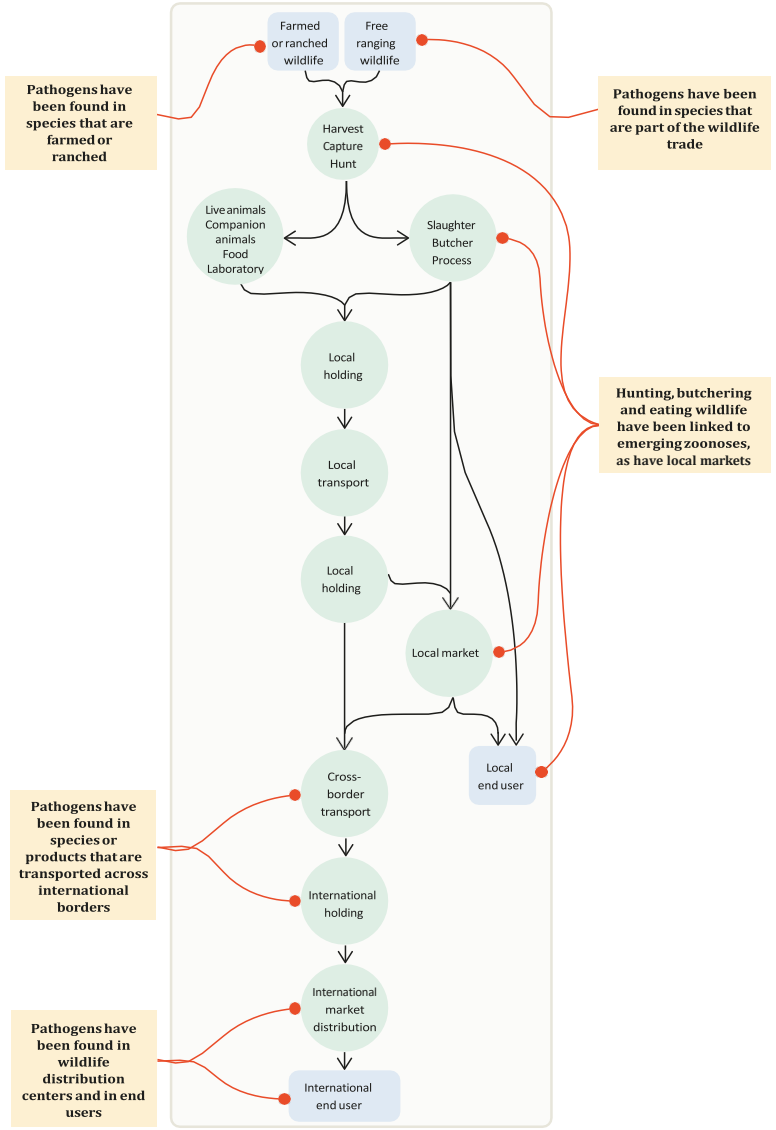
- Collaboration and inclusive approaches required at all stages.
- Communication and engagement critical to build awareness, understanding and support.
- Equitable treatment of all stakeholders.



Source: Modified from Mendelow's stakeholders map

Map the Wildlife Trade

- Geographic scale
- Wildlife supply chain or market type:
- Legal or illegal?
- Type of wildlife: Which taxa or species are involved?
- Volume of trade
- Existing strategies and policies
- Knowledge gaps or limitations



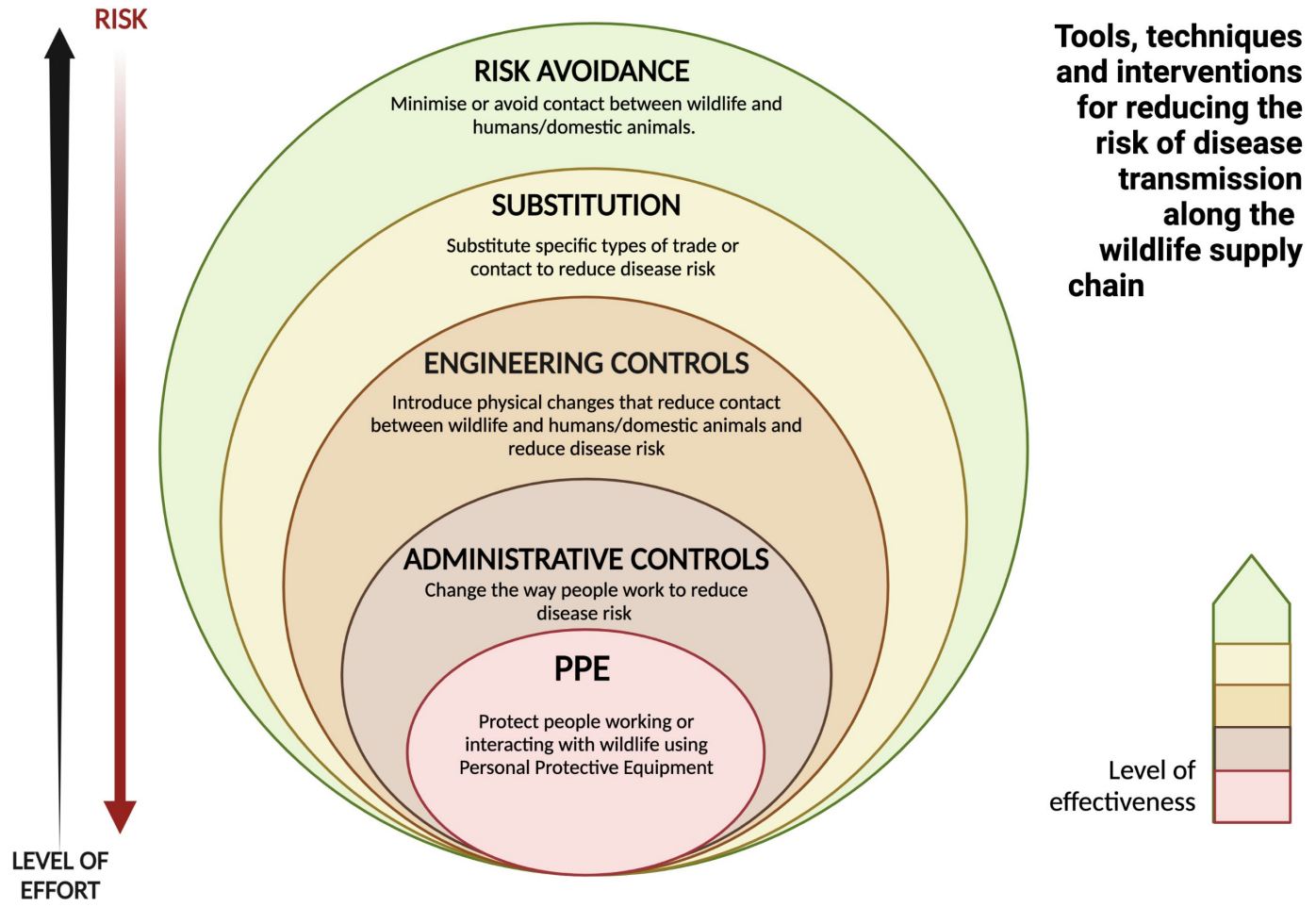
Risk Analysis

IUCN SSC Species Survival Commission

IUCN-OIE Guidelines for Wildlife Disease Risk Analysis

Risk Management: Hierarchy of Controls

- Tailor intervention strategies to regionally and locally unique socio-ecological conditions and interactions.
- Prior to and during implementation, consider and document any potential unintended consequences upstream or downstream.



Modified from US Centers for Disease Control. Hierarchy of Controls. Website. 2022. https://www.cdc.gov/niosh/topics/hierarchy/default.html

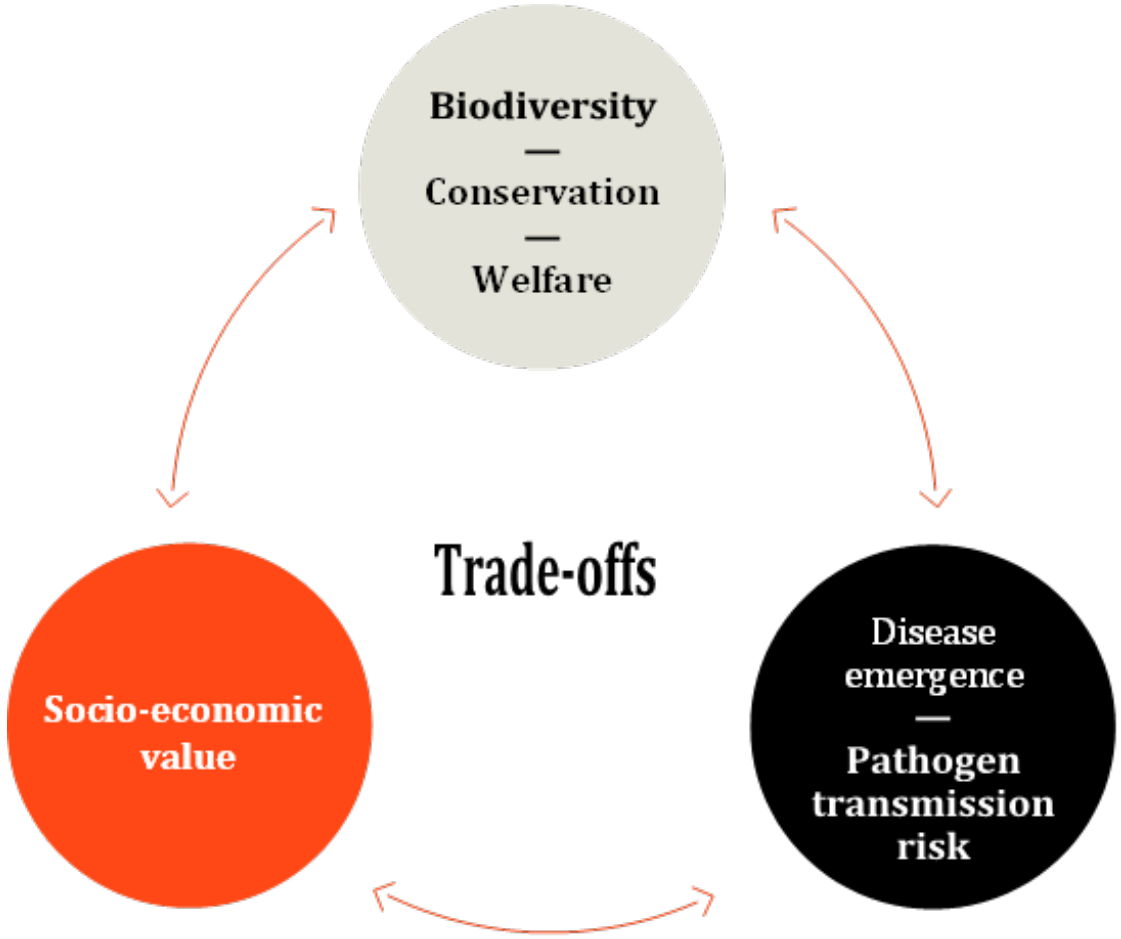
Application of the Hierarchy of Controls – Table of Examples is Provided

	Risk Avoidance	Substitution	Engineering	Administrative
Captive Wildlife (Wildlife Farms)	Discourage utilization or extraction of free ranging wildlife for protein (i.e., bats) – facilitate substitution with domestic sources of protein.	As for risk avoidance	Wildlife specific handling equipment and facilities to maximise welfare outcomes.	Regulate and inspect facilities in line with national or international guidelines. Example: CITES Guidance for inspection of captive breeding and ranching facilities.
Harvest, Capture, Hunting	Ban harvest/hunting in particular areas or of particular high-risk species	Outreach initiatives with incentives for communities that rely on hunting wildlife for their subsistence or livelihoods to identify alternative sources of protein and/or income derived from wildlife. Discussion: Secretariat of the Convention on Biological Diversity (2011) Livelihood alternatives for the unsustainable use of bushmeat. Report prepared for the CBD Bushmeat Liaison Group. Technical Series No. 60, Montreal, SCBD, 46 pages.	Techniques or tools that reduce risk of pathogen transmission during harvest, capture or hunting. Example: When boning out the carcass, keep both the head and spine intact, Avoid abdominal shots because these lead to contamination of the meat. Ref: American Veterinary Association. Disease precautions for hunters.	Additional surveillance or biosafety requirements for harvest, capture, and hunting – limited in scope and geographic range. Example: Michigan, USA, requirements for submitting specimens from hunter killed deer for TB surveillance. Vaccination of hunters and harvesters. Different rules for hunting based on community. Raise awareness of safe bushmeat use. Example: EBO-SUYRS Capacity building tools and resources

Managing Trade-offs

Multi-hazard risk reduction strategies that balance and account for risks to:

- Public health and disease emergence
- Conservation, and welfare
- Socio-economic values.



Decision Frameworks

Wildlife Trade that has LOW ECONOMIC AND/OR SOCIO-CULTURAL VALUE

	Low Disease Emergence Risk	High Disease Emergence / Pathogen Spillover Risk
Low Biodiversity Threat	Allow	Restrict, with enhanced sanitary measures, and trade standards
High Biodiversity Threat	Restrict, with enhanced conservation measures	Prohibit

Wildlife Trade that has HIGH ECONOMIC AND/OR SOCIO-CULTURAL VALUE

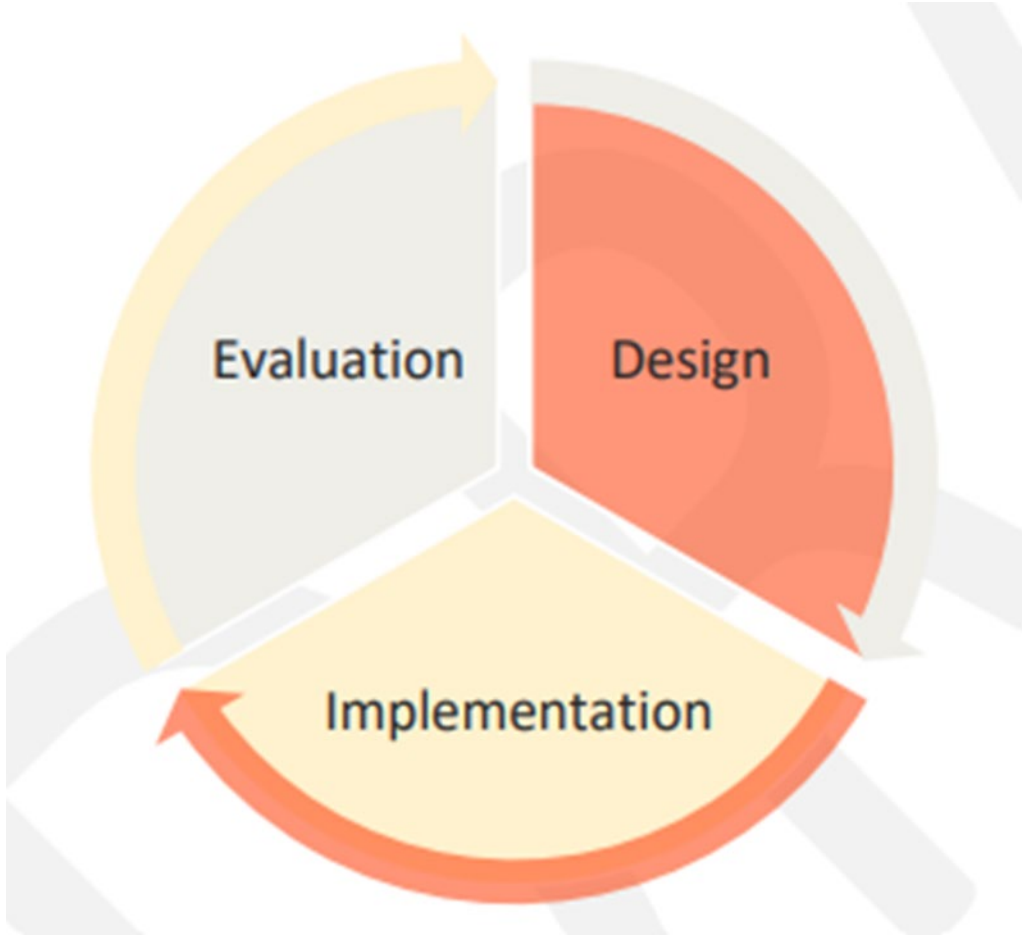
	Low Disease Emergence Risk	High Disease Emergence / Pathogen Spillover Risk
Low Biodiversity Threat	Allow	Manage, with enhanced sanitary measures, and trade standards
High Biodiversity Threat	Manage, with enhanced conservation measures	Range from restrict to prohibit, pending further evaluation and additional policy measures

Monitoring and Evaluation

It is important to measure the effectiveness of a risk management strategy.

It is also important to identify areas for improvement.

The monitoring and evaluation (M&E) process must be appropriate for the local context and supported by appropriate metrics.

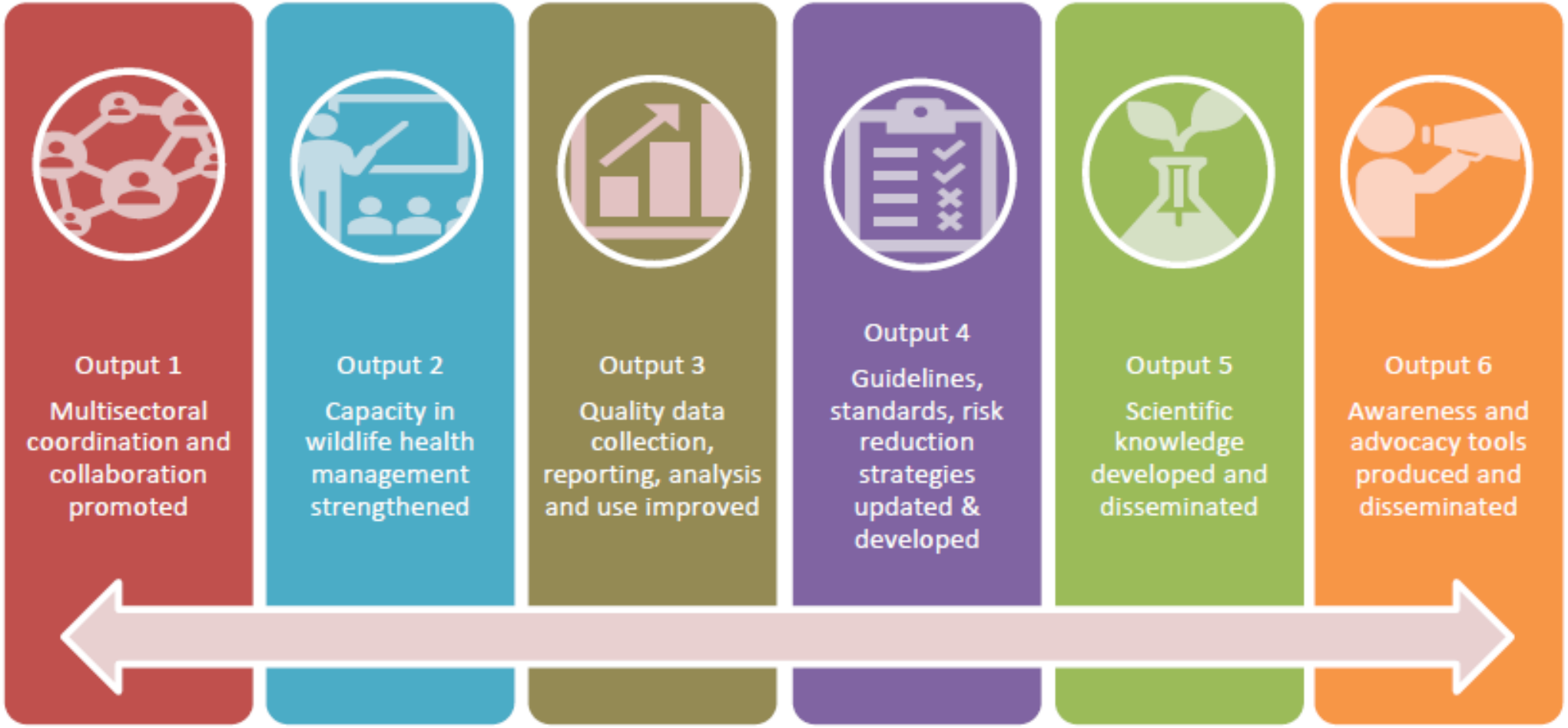


Additional Recommendations

Image: pixabay.com

- Share successful approaches and lessons learned to support a community of practice:
  - where evidence is currently lacking, and
  - allows adaptation and upscaling of approaches that work.
- Knowledge exchange and implementation data monitoring platforms:
  - PANORAMA Solutions for a Healthy Planet : https://panorama.solutions/en
  - WOAH Observatory: https://www.woah.org/en/what-we-do/standards/observatory/

Wildlife Health Management Framework



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