

DRAFT TERMS OF REFERENCE FOR A REVIEW OF MIGRATION AND WILDLIFE DISEASE DYNAMICS AND THE HEALTH OF MIGRATORY SPECIES WITHIN THE CONTEXT OF ONE HEALTH AND ECOSYSTEM APPROACHES TO HEALTH.

Purpose and context

Environmental degradation and other drivers of migratory species declines are contributing to wildlife disease being a serious conservation threat to multiple species. There is also an increasing appreciation of the fundamental interdependence of wildlife health, livestock health, human health, and ecosystem health which are influenced by multiple factors, *inter alia*, socio-economics, sustainability of agriculture, demographics, climate and landscape changes.

For human health, taxa including bats, rodents, ungulates, waterbirds and primates are known to host zoonotic pathogens and some migratory species have been associated with the spread of such infections. And yet, the same human activities that are causing the increasing risk of infectious diseases from wild animals, on which COVID-19 has shined a spotlight, are also causing the decline of wild species of animals.

First is the direct use of wild species which includes the use of meat from wild animals as a source of food or income, use of animal parts for other commercial products, recreational hunting, and traditional healing practices. Wild animals unquestionably provide an important source of protein for some poor communities and indigenous populations in various parts of the world. But any use of wild species of animals needs to be sustainable. And the current use and trade of wild animals go far beyond food security for vulnerable communities.

Second is the destruction of natural habitats and the encroachment of activities that create interfaces bringing humans and their livestock in close proximity to wild species, increasing the risk of spillovers of pathogens to humans.

Key reports such as the 2020 [UNEP report on Preventing the Next Pandemic](#) reflect on the factors contributing to human pandemics and our relationships with wildlife.

Unfortunately, as the pressures on wild animals and their habitats are expected to grow exponentially over the coming decades, which will profoundly affect migratory behaviour, there is an urgent need to further investigate links between animal migration and disease infection dynamics. Interestingly, migration has been shown to reduce infection transmission in some species. In particular, reduction of length or suppression of migration has been associated with increased load in pathogens. Literature exists on the subject, but a recent review of current scientific knowledge is currently not available. Moreover, a high level review of the key health issues affecting migratory species is needed to help set priorities for further action.

Such a review could then inform the work of relevant CMS mechanisms, such as the Working Group on Working Group on Wildlife and Health established under the CMS Scientific Council, and the Scientific Task Force on Avian Influenza and Wild Birds, co-convened by CMS and United Nations Food and Agriculture Organization (FAO) as well as the ongoing “One Health” collaborative efforts such as the One Health High-Level Expert Group of the World Health Organization (WHO), World Organization for Animal Health (OIE), FAO and UNEP.

Furthermore a better understanding of the context and nature of risk of zoonoses will assist and contribute to the success of post-pandemic recovery as stated by the [UN-framework-for-the-immediate-socio-economic-response-to-COVID-19](#) published in April 2020.

Workplan

Objectives, output expectations

Objective

The overall objective of this consultancy is to inform the work of the Working Group on Wildlife and Health to assist them in their:

- development and prioritization of a work programme;
- contribution to initiatives such as the One Health High-Level Expert Group (involving UNEP, WHO, FAO and OIE) and other relevant initiatives.

Outputs

1) A report covering the following items:

- The context of health and conservation, the interdependence of health across the sectors and the need for One Health and ecosystem approaches.
- A review at a high level of the key health issues affecting migratory species, including key specific known issues for CMS-listed species.
- A review of disease dynamics in relation to migration, and potential consequences of migration disruption for zoonotic risks.

Specific tasks and responsibilities

The consultant will:

- a) Briefly provide a context of the issue of wildlife health and conservation and the need for One Health and ecosystem approaches.
- b) Review at a high level the key health issues affecting migratory species – to be provided in text and a tabular form for terrestrial, aquatic and avian taxa.
- c) Review disease dynamics in relation to migration highlighting potential consequences of migration disruption for zoonotic risks.
- d) Prepare a report covering the above items for review by the CMS Secretariat and the Scientific Council Working Group n Migratory Species and Health.