

Foreword

Although H5N1 highly pathogenic avian influenza (HPAI) virus has been known for over a decade, the enormous impact of outbreaks in poultry across Asia, Africa and Europe since 2003, as well as deaths in over 200 humans, over 230 million poultry and thousands of wild birds, has made H5N1 HPAI and “bird flu” a part of common daily parlance. However, the expression ‘highly pathogenic avian influenza’ is a chicken term, and should really not be used to describe the infection in other species (wild ducks, tigers, ferrets, or humans), even though the infection can be highly virulent in many species of animals. We prefer to call these infections AI virus infections or influenza viral infections of avian origin.

In response to the geographic spread of H5N1 and the deaths it has caused in wild bird populations to various degrees, as well as the concern that certain species of wild birds may play a role in the introduction and dissemination of the H5N1 virus along their flyways, FAO has been particularly interested to understand the interactions between wild and domestic birds. Within the Emergency Centre for Transboundary Animal Diseases (ECTAD), FAO has established a Wildlife Disease Programme to promote regional cooperation and action and increase in-country national and regional capacity building through the training and education of biologists, veterinarians, ornithologists and others to better integrate a common understanding of pathogen transmission in affected environments. To support this work, it produced a Manual entitled *Wild Bird Highly Pathogenic Avian Influenza Surveillance – sample collection from healthy, sick and dead birds* in 2006.

There is a wide variety of manuals available to understand the intricacies of the ecology and life cycles of wild bird species, including the wide spectrum of food and foraging habits, social interactions, migration strategies, nesting choices, habitat use. However, it was immediately apparent to FAO and other partners that there is a need for an introductory manual to support field efforts with regard to the study of bird populations and ecological aspects of avian influenza viruses. The topics covered in this Manual address monitoring technologies and sampling techniques, wild bird surveillance, some features of habitat use and migration ecology that are all important aspects of wildlife and disease ecology that need to be better researched.

This Manual is a collaborative effort of FAO, the Agricultural Research Centre for International Development of France (CIRAD), BirdLife International, Percy FitzPatrick Institute of African Ornithology, United States Geological Survey (USGS), Wetlands International, Wildfowl and Wetlands Trust, UK (WWT) and Wildlife Conservation Society (WCS).

The Manual has been brought to life by photographs kindly provided by a number of excellent photographers from around the world. FAO would like to thank Nyambayar Batbayar, Alexandre Caron, CIRAD, Ruth Cromie, Graeme Cumming, Karen M. Cunningham, Robert J. Dusek, Pieter van Eijk, Sasan Fereidouni, Clement Francis, J. Christian Franson, Friedrich-Loeffler Institut, Martin Gilbert, Mark Grantham, Nigel Jarrett, Rebecca Lee, Khanh Lam U Minh, Taej Mundkur, Rishad Naoroji, Kim Nelson, Scott Newman, PDSR/FAO Indonesia, Diann Prosser, Rob Robinson, Giuseppe Rossi, Paul Slota, Kristine Smith, David Stroud, John Takekawa, USGS Western Ecological Research Center, Alyn Walsh, Darrell Whitworth and

Yuan Xiao for offering their photographs for our use. The illustrations were created by Darrell Whitworth and Claudia Ciarlantini.

The contents of the Manual have greatly benefited from discussions, reviews and many suggestions made by Robyn Alders, Leon Bennun, Axel Braunlich, Alexandre Caron, Jackie Clark, Graeme Cumming, Ruth Cromie, Simon Delany, Leslie Dierauf, Paul Flint, Milton Friend, Nicolas Gaidet, Noburu Nakamura, Ward Hagemeijer, Richard Hearn, Jerry Hupp, Akiko Kamata, William Karesh, Rebecca Lee, Michael R. Miller, John Pearce and David Stroud.

Special thanks to Darrell Whitworth, Scott Newman, Taej Mundkur and Phil Harris for their efforts in drafting and editing the text and assembling the Manual. DeSimone Lorenzo created the maps and Claudia Ciarlantini, Monica Umena and Cecilia Murguia kindly assisted in producing the Manual.

Lastly we thank the governments of Canada, Sweden, Switzerland and United Kingdom which have supported the work of the Wildlife Disease Programme recognising the importance of disease-livestock-wildlife-environment interactions. Their funding support to FAO has made the publication of this Manual possible.

FAO encourages feedback and comments on this Manual.

Juan Lubroth

Head

Emergency Prevention System for Transboundary Plant

and Animal Diseases and Pests (EMPRES)

Animal Health Service

FAO, Rome