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REPORT OF THE MEETING OF THE OIE WORKING GROUP ON WILDLIFE DISEASES
Paris, 28 – 31 January 2008

The meeting of the OIE Working Group for Wildlife Diseases (WGWD) was held from the 28 to 31 January, 2008, at the OIE headquarters in Paris. The meeting was chaired by Dr Roy Bengis, and Prof. Ted Leighton was appointed as rapporteur.

The agenda and list of participants in the *ad hoc* Working Group meeting are given in Appendices I and II

1. Outline and purpose of the meeting

Dr. Bernard Vallat, Director General of the OIE, welcomed the members of the Group and emphasized that pathogens that infect wildlife are growing in importance in OIE programs. The OIE has an increasing need for expert advice with respect to wildlife. *Compartmentalization* and *zoning* are two aspects of particular importance with respect to pathogens that infect wild animals. He urged the Group to review the wildlife related aspects of priority diseases such as foot and mouth disease, classical and African swine fever and to assess if all the relevant aspects, especially those related to trade, are sufficiently addressed. Dr vallat emphasised the importance of establishing good working relationships and contacts with non-governmental organisations involved with wildlife such as hunting organisations. He also urged the Group to review their working procedures to enable more direct and interactive input in relation to wildlife related aspects. Dr. Brückner noted that there is also a general need for inclusion of wildlife in various aspects of the OIE Standards. The Group was urged to reflect on the broad needs of the OIE with respect to wildlife, and to propose a program of activities to meet OIE needs.

2. Wildlife in relation to the strategic objectives of the OIE

The Working Group engaged in intensive and detailed discussions about the place and significance of wild animals and their pathogens to the full range of OIE programs and activities. The OIE List of Diseases was reviewed and provisionally categorized with respect to wildlife involvement (Appendix III). The Working Group also identified several pathogens in wildlife as of particular importance to the OIE program:

First Priority	Second Priority	
Avian influenza (HPAI)	Bluetongue/EHD:	Emerging in Europe and North America
Bovine Tuberculosis		
Classical Swine Fever	CWD:	Emerging in North America
African Swine Fever		
Foot and Mouth Disease	Rift Valley Fever:	Emerging in Africa (Europe at risk)
Newcastle Disease		
Rabies	Tularemia:	Possibly emerging in Europe, North America
	West Nile Virus:	Emerging in several places
	Peste des petits ruminants:	No longer in the shadow of Rinderpest, significant large area affected

The Working Group proposed a list of OIE needs with respect to wildlife and then listed these in order of priority with respect to OIE global responsibilities. Following these discussions, the Working Group developed a list of priority wildlife issues for the OIE and then created a work plan for the Working Group for the next three years that could address these issues. (See item 8, below)

3. OIE Collaborating Centre on Wildlife Diseases - Program proposal

The Working Group reviewed the three-year program proposal of the OIE Collaborating Centre on Wildlife Disease, Surveillance and Monitoring, Epidemiology and Management. Project 1 (Regional Seminars) and the International Wildlife Disease Incident Network are of particular importance to the OIE wildlife priorities identified by the Working Group. The Working Group will seek assistance from the Collaborating Centre to create a global directory of wildlife health and disease expertise to aid the WGWD in identifying international experts on wildlife disease topics. The WGWD fully supports the three-year program proposal of the OIE Collaborating Centre.

4. Response and matters arising from the 2007 report of the WGWD to the OIE international committee

Dr. Artois reported on his presentations on the work of the Working Group to both the Scientific Commission and to the International Committee. The report was well-received and the Working Group was encouraged to continue its work. The Working Group reports to the Scientific Commission and it is anticipated that this will bring the Working Group more directly into the central activities of the OIE. It was also confirmed by the Director General at the general Session that representation from Latin America and Asia would be secured for the Working Group. Delegates were again urged to appoint national wildlife focal points.

5. Global wildlife disease situation

A total of 48 annual wildlife disease questionnaires, out of a possible 172, were received by 30 January 2008. The response rate by Members was lower than in previous years. Forty-one countries which had reported to OIE in previous years did not send in a report this year. It is hoped that by incorporating the reports on wildlife diseases within the WAHIS, it would improve the reporting on the global occurrence of diseases of wildlife. In the reports that were submitted, more than 1,100 different disease occurrences were reported. A complete tabulation of diseases reported is in [Appendix IV](#). Some examples of diseases reported were:

- **Bat Lyssaviruses**

Bat lyssavirus was reported from 4 different countries (Australia, Denmark, Germany, UK). In Australia, six Black Flying Fox (*P. alecto*), one Grey-headed Flying Fox (*P. poliocephalus*) and one Spectacled Flying Fox (*P. conspiciellatus*) tested positive for ABLV in NSW and Queensland. The diagnosis was confirmed using clinical signs, histopathology, PCR and/or FAT.

A fatal human case of Duvenhage virus (Lyssavirus-Genotype 4) was confirmed in the Netherlands, 4 weeks after the victim had been scratched by a small bat while holidaying in Kenya. This is only the third case of human Duvenhage virus infection ever recorded. The two previous cases were recorded in South Africa in 1970 and 2006.

- **Bovine tuberculosis**

Bovine tuberculosis (*Mycobacterium bovis*) was reported from 12 different countries (Canada, El Salvador, France, Ireland, Italy, Myanmar, South Africa, Chinese Taipei, UK, USA, Zimbabwe, Zambia).

In South Africa, bovine tuberculosis (BTB) in buffalo has now spread throughout the entire length of the Kruger National Park (KNP), with clinical cases finally being detected in the far north, close to the Limpopo river. BTB was also confirmed in 13 lions (*Panthera leo*), 18 buffalo, and 3 greater kudu (*Tragelaphus strepsiceros*) in the KNP. Elsewhere in the country, BTB was confirmed in approximately 50 buffalo and a single lion in Hluhluwe / Imfolosi Park, where a test and slaughter technique is being used to manage BTB in buffalo. On private game ranches in South Africa, BTB was also confirmed in 5 buffalo, a lion, a bushbuck (*Tragelaphus scriptus*) and an impala. *Mycobacterium bovis* infection has also been confirmed to be circulating and maintained in a suricate subpopulation in the Kalahari district of Northern Cape Province in South Africa.

Bovine TB continues to smolder in the Kafue / Lochinvar region of Zambia, and in 2007, 14 cases were confirmed in Kafue lechwe (*Kobus leche*) and one case in an impala. In the Queen Elizabeth National Park in Uganda, BTB continues to cycle in buffalo and warthog (*Phacochoerus africanus*).

In Eastern Africa, BTB has been detected opportunistically in the Serengeti ecosystem, where passive surveillance is being carried out. Bovine tuberculosis was reported in two captive lions in Zimbabwe.

In the United States, in northwestern Minnesota, bovine TB infection has been confirmed in 8 cattle herds and 17 wild white-tailed deer since 2005, including 4 deer taken by hunters during November 2007. In wild deer, BTB prevalence appears very low and confined to a small geographic area. The *M. bovis* isolates from deer and cattle are similar and genetically consistent with strains from the southwestern USA and Mexico. Deer population reduction efforts continue in the affected in order to reduce exposure of susceptible deer and to prevent potential deer to deer and deer to cattle transmission of *M. bovis*. Additional information on countries that detected bovine tuberculosis and the mammalian species involved are in Appendix IV.

Human tuberculosis (*M. tuberculosis* infection)

M. tuberculosis infection was confirmed in three baboons (*Papio ursinus*) in the Western Cape Province of South Africa

- **Cyanobacterial bio-intoxication**

Mortalities involving at least 9 white rhinoceros (*Ceratotherium simum*), 10 zebra (*Equus burchelli*) and 10 blue wildebeest (*Connochaetes taurinus*) were reported in the Kruger National Park, South Africa.

- **Leishmaniasis**

In Australia, in 2000, a novel *Leishmania* sp. that caused cutaneous lesions in captive Red Kangaroos (*Macropus rufus*) was reported in the North. The same *Leishmania* sp. now has been identified in Northern Territory captive Northern Wallaroos (*M. robustus*). A simple Protein A ELISA also has identified circulating antibodies to *Leishmania* antigens in Agile Wallabies (*M. agilis*), Antilopine Wallaroos (*M. antilopinus*) and Northern Wallaroos (*M. robustus*) from the Northern Territory.

- **Simian-associated zoonoses**

Ebola hemorrhagic fever Research in Gabon has demonstrated that Ebolavirus strains A & B, are circulating and may be recombining to form new emerging strains.

An ongoing outbreak of Ebola hemorrhagic fever in the Bundibugyo region of Uganda has claimed the lives of 37 people, including a doctor and 4 health workers. Dead primates (unspecified) also have been found in the area.

An outbreak of Marburg hemorrhagic fever occurred in mine workers in the Kamwenge district of Uganda. In follow up research, the Marburg virus was isolated from a fruit bat for the first time. Most virus isolations have been obtained from primates.

An outbreak of monkey pox in humans was reported from Likouola region in the Democratic Republic of Congo. At least 60 cases have been confirmed. This zoonotic infection appears to be related to the bush meat trade, when infected primates, rodents and squirrels are butchered or eaten.

- **Crocodile Diseases**

- Trichinellosis was diagnosed in 6 Nile crocodiles (*Crocodylus niloticus*) in Zimbabwe.
- Deficiency related aortic aneurisms and encephalopathies were diagnosed in captive crocodiles in Zimbabwe.
- Hepatitis caused by *Adenovirus* infection was reported in farmed crocodiles in Zimbabwe.

- Coccidiosis also was diagnosed in farmed crocodiles in Zimbabwe.
- A single outbreak of viral-type meningo-encephalitis was diagnosed at one crocodile facility in Zimbabwe.
- In South Africa, husbandry – related stress resulted in septicaemias caused by *E. coli*, Salmonellas (B Group, Aeromonas and Morganella in farmed crocodiles. *Edwardsiella tarda* pneumonia and *Mycoplasma crocodyli* polyarthritis were also reported.
- Fatal salmonellosis (unspecified) was reported in a crocodile in Botswana

- **Diclofenac in Africa**

The Working Group noted with concern that the non-steroidal anti-inflammatory drug, *diclofenac*, was recently introduced for veterinary use in eastern Africa, placing at risk the many species of vulture in Africa which share the lethal sensitivity to this drug with the *Gyps* vultures of the Indian sub-continent. This drug is fatal to these birds in the very low doses which they receive from consuming carcasses of livestock treated with the drug prior to death. These Asian birds face potential extinction as a direct consequence of the use of this drug. The same fate may face similar species in Africa if the drug is widely used there.

The Working Group recommended to the Scientific Commission that the OIE use its meetings and influence to reduce or eliminate the use of this drug in livestock in Africa as well as the Indian subcontinent, and to work with countries to identify suitable substitutes which do not have important ecological consequences.

5. Diseases of special concern

- **Highly Pathogenic Avian Influenza**

In 2007, the OIE was notified of several HPAI H5N1 outbreaks in wild birds: Peoples' Republic of China, Czech Republic, Egypt, France, Germany, Hong Kong, Japan, Nigeria, Pakistan, Poland as well as the UK early in January 2008.

After the large outbreak in Europe late in the winter of 2005-2006, this continent remained apparently free of the clinical infection in wild birds until the summer of 2007. The OIE was notified of the following outbreaks in wild water birds: 307 in Germany (from 24 June onward), 1 in the Czech Republic (from 26 June onward; now resolved), and 3 in France (from 28 June onward, now resolved).

In addition to the Mute Swan (*Cygnus olor*), a species frequently affected in the winter of 2005-2006, it appears that the Black-Necked Grebe (*Podiceps nigricollis*) was primarily affected in Germany.

Later in the year in Poland, 10 outbreaks were recorded in November (now resolved) and four mute swans recently were found infected in the Southern part of the UK. The sporadic distribution of these outbreaks in Europe suggests that the HPAI H5N1 virus may silently propagate amongst wild waterfowl. Most recent outbreaks in wild birds have no apparent direct (or documented) epidemiological link with outbreaks in proximity to poultry farms.

In Japan HPAI H5N1 was found in a mountain hawk eagle.

On the African Continent, highly pathogenic avian influenza (HPAI) involving the H5N1 virus has been reported in poultry in Benin. No wild bird cases were reported.

Additional information including numbers and scientific names of affected birds, as well as methods of diagnosis ([Appendix IV](#)).

- **Low pathogenic avian influenza**

In Australia, coordinated surveillance of wild birds is providing valuable information concerning circulating AI virus subtypes. During the period 2005-2007 no HPAI viruses were detected among approximately 10,000 samples tested. However, results indicate that many low pathogenic subtypes are present at low a level. Major surveillance activities for avian influenza in wild birds are continuing. Wild bird mortality events have been investigated for the presence of avian influenza virus with negative results.

In New Zealand, a comprehensive surveillance program for avian influenza has been undertaken for many years. Results are similar to Australia. No HPAI has been detected but a range of LPAI subtypes have been found among approximately 5,000 samples tested.

In South Africa, low pathogenicity avian influenza virus infections were detected in ostrich (H6N8) and Egyptian goose (*Alopochen aegyptiacus*) (H1N8), and H5N8 was isolated from a swift tern (*Sterna bergii*) during routine surveillance activities. Low pathogenic avian influenza viruses were detected in samples from 408 waterfowl in Zambia.

In Europe, in France there were 949 dead birds and 1288 live birds tested. Seven H5 subtype viruses of low pathogenicity were detected. More than 3,000 wild birds were sampled in the UK and several viruses of low pathogenicity were recovered.

In the United States, a total of 247,529 samples from wild birds or their environments have been tested for highly pathogenic avian influenza subtype H5N1 since 1 April 2006. From 1 April 2006 – 31 March 2007, some 164,553 samples were tested: 49,000 from live wild birds, 63,100 from hunter-killed birds, 2,200 from wild birds from morbidity/mortality investigations, 600 sentinel birds, and 50,200 environmental samples consisting of feces or water. Since 1 April 2007, a total of 81,993 samples from these same five types of sources were tested. Highly pathogenic avian influenza viruses have not been detected in any of the samples. However, H5N1 avian influenza virus of low pathogenicity has been detected on 12 occasions. Sample collection and testing continue to be conducted through cooperative efforts of numerous state and federal wildlife and animal health agencies.

Additional information on countries that detected LPAI and the avian species involved in surveillance ([Appendix IV](#)).

- **African swine fever**

In Zambia and Kenya, domestic pigs suffered severe outbreaks of African swine fever (ASF) that apparently originated from sylvatic maintenance cycles in wild porcines and argasid ticks. More than 1,000 pigs died in these outbreaks.

In Europe, ASF was reported for the first time in the Caucasus region in June 2007, when several outbreaks were recorded in free-range domestic and family owned pigs from Georgia. Within two months, the disease spread westward in the country and, since then, has been reported also in Armenia and Azerbaijan.

Concern was expressed that the virus could be transmitted by direct or tick-mediated contacts to wild boar (*Sus scrofa*), a widespread species susceptible to ASF infection, and they would become ASF reservoirs, making disease eradicate difficult. Unfortunately, early in November, the infection was diagnosed in several wild boar, both clinically affected and apparently healthy boar culled for control, in the Russian Republic of Dagestan, close to the border of Georgia.

- **Bluetongue and Epizootic hemorrhagic disease**

In Europe, deer have tested seropositively for antibodies against bluetongue virus (BTV) in Germany and Italy, and BTV was isolated from one deer in each of these countries.

In the United States, during late summer and early autumn of 2007, a very large orbiviral epizootic occurred in numerous states in the eastern and central to western portions of the country. The primary species affected was white-tailed deer (*Odocoileus virginianus*) with additional wild ruminants, such as mule deer (*Odocoileus hemionus*), pronghorn (*Antilocapra americana*) and others. Epizootic hemorrhagic disease virus (EHDV) – serotype 2 caused the vast majority of cases. Additional virus types isolated in low numbers included EHDV-1, BTV types-10,11, and 17, as well as EHDV-6, which is not regarded as endemic in the USA, but which also was isolated from white-tailed deer in 2006. Other non-endemic orbiviruses (BTV-1 and BTV-3) have been isolated from wild deer in the USA in the last 4 years emphasizing the importance of thorough wildlife mortality investigations.

- **Rift Valley fever**

Climatically, 2007 was a *La Niña* year, characterized by above average rainfall in eastern and tropical Africa. Typically, outbreaks of vector borne diseases are associated with the wet climatic conditions, and in eastern Africa, three major outbreaks of Rift Valley fever occurred.

Early in the year the first clinical outbreak was reported in the Arusha and Tanga regions of Tanzania where cases were first reported in small stock and later in humans. A total of fifty eight human cases were subsequently identified and these resulted in 14 deaths.

A second major epidemic of Rift Valley fever was reported in livestock and humans in the north eastern Province of Kenya (Garissa and Ijara districts), and in southern Somalia. These areas experienced extremely heavy rainfalls with flooding, which stimulates the hatch of dormant Aedine mosquito eggs which are infected with the RVF virus. A total of 354 human cases were reported which resulted in 106 mortalities.

Later in the year (October), a third RVF outbreak was reported in the White Nile, Sinnar and Gezira states of Sudan. More than 125 human cases were recorded with at least 60 mortalities.

Strangely, there were no reports of disease amongst animals until November, when the outbreak was reported to OIE as a result of ELISA positive reactions in sheep. It is thought that mechanical needle transmission of RVF may have occurred during vaccination campaigns in some affected countries.

Significant numbers of African buffalo have been found to be seropositive for exposure to the causative virus and results of additional serological tests are pending. Of historical note, an abortion storm occurred in 1999 in a buffalo breeding project in South Africa in the Kruger Park and RVF virus was isolated.

6. Review of *ad hoc* Group reports

6.1. *Ad hoc* Group on Climate Change and Surveillance for Vector-borne Diseases

The Working Group reviewed the report from the *ad hoc* Group and recommended its acceptance by the Scientific Commission. It noted the Terms of Reference and the broad mandate with respect to climate change. These terms of reference were considered highly appropriate and necessary for the OIE.

The Working Group agreed with the need for to the OIE to provide practical guidelines for surveillance of vectors to veterinary services. Vector-borne diseases are likely to become increasingly important in association with climate change, and wild animals often contribute to the circulation and maintenance of vector-borne pathogens. Members should be urged to report and investigate the occurrence of vector-borne diseases in wild animals as well as domestic animals. The Working Group reiterated the need to continue to participate in this *ad hoc* Group.

The Working Group wishes to draw the attention of the Scientific Commission to the current world crisis in expertise on vector taxonomy and ecology. The number of competent taxonomists capable of identifying arthropod vectors to the species level is critically small and is decreasing. Experts in the general biology of these species also are very few in number. Global animal health capacity in this area is marginal and requires serious and immediate attention.

6.2. *Ad hoc* Group on Epidemiology/Newcastle Disease/Avian Influenza

The Working Group reviewed the report of the *ad hoc* Group. The Working Group agreed with the general points made in the report but requested a re-consideration of two statements:

Item 3, 1 paragraph, sentence: “The reason countries are carrying out surveillance in wild birds is basically for public health and consumer interest.” The Group indicated that surveillance for AI and ND in wild birds is carried out for a range of very legitimate and important reasons beyond those referred to in the sentence in question, including vigilance and early detection of highly pathogenic strains of these viruses and acquisition of information on the prevalence and genetic composition of virus strains in wildlife that inform risk assessment and biosecurity considerations in commercial poultry.

Item 3, paragraph 8:

- “... objectives of the surveillance shall be clearly defined.” - the word “shall” is an inappropriate imperative and the word “should” is more appropriate here.
- “... on the possible exposure of free ranging poultry.” The words “free-ranging” are inappropriate here. Their use assumes fully effective biosecurity in housed poultry, and this certainly often is not true. The words “free ranging” should be removed.

The Working Group recommended that it be given the opportunity to review the OIE Guidelines for surveillance of Avian Influenza and for Newcastle Disease to assess whether wild birds are appropriately included within these Guidelines.

6.3. *Ad hoc* Group on wildlife disease surveillance

The Group reviewed the report of the *ad hoc* Group and noted the proposal to complete review and revision of existing surveillance guidelines for specific diseases in order to include wildlife appropriately in each. It also took note of the proposal that a document be prepared which gives guidelines and practical examples of how to undertake disease surveillance in wild animals.

The WGWD agreed with these two proposals.

7. Epidemic potential of wildlife diseases

The working group discussed the concept and usefulness of weighting various disease determinants to assist in calculating the epidemic potential of infectious diseases in wildlife. It was decided that although it would be useful to be able to rank diseases according to their epidemic potential, the actual weighting of the agent, host, and environmental determinants would require some detailed mathematical modeling, which is beyond the expertise of the working group. The concept will be taken up with an appropriate academic epidemiological department.

8. Reporting of wildlife diseases through WAHIS

The Head of the OIE Animal Health Information Department, Dr. Karim Ben Jebara, joined the meeting and presented a proposal by which the reporting of pathogens in wildlife through the questionnaire of the Working Group could be incorporated into the WAHIS system. The Working Group agreed that the questionnaire, and related data entry and reporting functions, should be implemented on WAHIS and that wildlife focal points should be encouraged to report wildlife disease occurrences through WAHIS. Both paper and WAHIS versions of the questionnaire will be used in 2008.

The Working Group will work with Dr. Ben Jebara to implement this new reporting method during 2008. The Working Group itself will provide some of the information required by the OIE but it is proposed that a small *ad hoc* Group that includes Working Group members/wildlife experts be established to work directly with the Department on the details of implementation. The Working Group should also determine the output on wild animal pathogens that will be needed from the WAHIS system and how this new method of acquiring information on wildlife pathogens will affect future reports by the Working Group to the International Committee.

9. Proposed Terms of Reference and work plan for the Working Group (2008 to 2011)

The Group discussed in detail the formulation of a new work plan for the next three years, including a rationale, renewed terms of reference, and mode of operation. The Work Plan identifies priorities for the Working Group and the specific activities it will undertake in 2008-2011. The full work plan is reflected in [Appendix V](#).

.../Appendices

MEETING OF THE OIE WORKING GROUP ON WILDLIFE DISEASES

Paris, 28 – 31 January 2008

Agenda

- 1) **Welcome, household matters and analysis of Agenda time-frames** – *Dr Vallat/ Gideon Brückner & Roy Bengis*
- 2) **Wildlife in the Global OIE Program** – strategic discussion between the WDWG and the OIE Central Bureau with regards to OIE needs and the future structure, role, direction and responsibilities of the Working Group for Wildlife Diseases – *Dr Vallat /Gideon Brückner to lead.*
- 3) **Collaborating Centre for Wildlife Disease Surveillance and Monitoring, Epidemiology and Management: Review of Program Proposal 2008 – 2010** *Ted Leighton to lead.*
- 4) **Response and Matters arising from the 2007 report of the WDWG to the General Assembly** – *Marc Artois*
- 5) **Global wildlife disease situation: Regional wildlife disease reports** – *Torsten Mörner to lead: Each region to report highlights. Also to include:*
Specific Issue updates such as:
 - *Diclofenac – Asia and Africa – Mike Woodford and Roy Bengis*
 - *Avian Influenza – Chris Bunn, Torsten Mörner & Marc Artois*
- 6) **Vector-born animal and zoonotic diseases of international concern – extra limital emergence and the Climate Change link (Blue tongue, Rift Valley fever, African swine fever)- General Discussion**
 - **Networking with other Working Groups (Epidemiology, Surveillance, Climate Change and Zoonoses). Reports on recent meetings of the Working Groups on 1) Wildlife Disease Surveillance (23 – 25 January, 2008) and 2) Climate Change and Surveillance for Vector – Borne Diseases** – *brief reports by WDWG members who attended these two meetings*
- 7) **Epidemic potential of Wildlife Diseases: Concept of weighting disease determinants** – *Roy Bengis to introduce an idea.*
- 8) **Future changes in reporting and recording Wildlife Diseases: The transition from the Questionnaire to WAHIS.** –*General Discussion*
 - **Sub-group meeting on Thursday (31st) morning with Dr Ben Jabara and WAHIS team to discuss changes and a work plan and time line for transition.** –*Chris Bunn, Marc Artois, Torsten Mörner and Ted Leighton*
- 9) **Proposed Work Plan for the Wildlife Disease Working Group, (2008 – 2010)- based on discussions under Agenda points #2, #3 & #8.** - *General discussion*
- 10) **Any other matters** – *Open discussion including dates and time lines.*

MEETING OF THE OIE WORKING GROUP ON WILDLIFE DISEASES

Paris, 28 - 31 January 2008

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**Provisional Categorisation of OIE List Diseases
Working Group on Wildlife Diseases (January 2008)**

OIE Disease List - 2007	Wildlife/feral Infectable ?	Infection source for Domestic	Uncertain	Zoonosis
Multispecies				
Anthrax	Yes	No		X
Aujeszky's disease	Yes	Yes		X
Bluetongue	Yes		X	
Brucellosis (<i>Brucella abortus</i>)	Yes	Yes		X
Brucellosis (<i>Brucella melitensis</i>)	Yes		X	X
Brucellosis (<i>Brucella suis</i>)	Yes	Yes		X
Crimean Congo haemorrhagic fever	Unknown		X	X
Echinococco (granulosus)	Yes	Yes		X
Echinococcus multilocularis	Yes	Yes		X
Foot and mouth disease	Yes	Yes		
Heartwater	Yes	Yes		
Japanese encephalitis	Yes		x	x
Leptospirosis	Yes	Yes		x
New world screwworm (<i>Cochliomyia hominivorax</i>)	Yes	Yes		x
Old world screwworm (<i>Chrysomya b.</i>)	Yes	Yes		x
Paratuberculosis	Yes		x	
Q fever	Yes	Yes		x
Rabies	Yes	Yes		x
Rift Valley fever	Yes		x	x
Rinderpest	Yes	Yes		
Trichinellosis	Yes	Yes		x
Tularemia	Yes	Yes		x
Vesicular stomatitis	Yes		x	
West Nile fever.	Yes	Yes		x
Cattle				
Bovine anaplasmosis	Yes		x	
Bovine babesiosis			x	
Bovine genital campylobacteriosis			x	
Bovine spongiform encephalopathy	Yes	No		x
Bovine tuberculosis	Yes	Yes		x
Bovine viral diarrhoea	Yes		x	
Contagious bovine pleuropneumonia	No			
Enzootic bovine leukosis	No			
Haemorrhagic septicaemia			x	
Infectious bovine rhinotracheitis/infectious pustular vulvovaginitis			x	
Lumpy skin disease			x	
Malignant catarrhal fever (Wildebeest only)	Yes	Yes		
Theileriosis	Yes	Yes		
Trichomonosis			x	
Trypanosomosis (tsetse-transmitted).	Yes	Yes		x
Sheep and Goats				
Caprine arthritis/encephalitis			x	
Contagious agalactia			x	
Contagious caprine pleuropneumonia	yes		x	
Enzootic abortion of ewes (ovine chlamydiosis)			x	
Maedi—visna			x	
Nairobi sheep disease	Yes	Yes		
Ovine epididymitis (<i>Brucella ovis</i>)			x	

Appendix III (contd)

OIE Disease List - 2007	Wildlife/feral Infectable ?	Infection source for Domestic	Uncertain	Zoonosis
Peste des petits ruminants	Yes	Yes		
Salmonellosis (<i>S. abortusovis</i>)			x	
Scrapie	No			
Sheep pox and goat pox.	Yes		x	
Horses				
African horse sickness	Yes	Yes		
Contagious equine metritis			x	
Dourine			x	
Equine encephalomyelitis (Eastern)	Yes	Yes		x
Equine encephalomyelitis (Western)	Yes	Yes		x
Equine infectious anaemia	No			
Equine influenza			x	
Equine piroplasmiasis			x	
Equine rhinopneumonitis			x	
Equine viral arteritis			x	
Glanders			x	x
Surra (<i>Trypanosoma evansi</i>)	Yes	Yes		X (minor zoonosis)
Venezuelan equine encephalomyelitis	Yes	Yes		x
Pigs				
African swine fever	Yes	Yes		
Classical swine fever	Yes	Yes		
Nipah virus encephalitis	Yes	Yes		x
Porcine cysticercosis			x	x
Porcine reproductive and respiratory syndrome			x	
Swine vesicular disease			x	
Transmissible gastroenteritis.			x	
Birds				
Avian chlamydiosis	Yes		x	x
Avian infectious bronchitis			x	
Avian infectious laryngotracheitis			x	
Avian mycoplasmosis (<i>Mycoplasma agalactiae</i>)	Yes		x	
Avian mycoplasmosis (<i>Mycoplasma synoviae</i>)			x	
Duck virus hepatitis			x	
Duck Plague (DVE)	Yes		x	
Fowl cholera	Yes		x	
Fowl typhoid			x	
Highly pathogenic avian influenza/LP H5&H7	Yes		x	x
Infectious bursal disease (Gumboro disease)			x	
Turkey rhinotracheitis			x	
Pullorum disease			x	
Marek's disease			x	
Newcastle Disease	Yes	Yes		
Lagomorphs				
Myxomatosis	Yes	Yes		
Rabbit haemorrhagic disease.	Yes	Yes		
Bees				
Acarapisosis of honey bees				
American foulbrood				
Other				
Camelpox	Yes		x	
Leishmaniasis	Yes	Yes		x
Chronic Wasting Disease	Yes	Yes		

World WDWG disease report for 2007

Country	OIE listed disease	Latin name	Disease seen 2007	# animals/cases	Clinical	Pathology	Culture, agent identification	Serology
UK	Adenovirus enteritis in red squirrels	<i>Sciurus vulgaris</i>	yes	6		Y	EM	
Italy	African Swine Fever	<i>Sus scrofa meridionalis</i>	yes	55		x	x	
France	Anaplasmosis	<i>Capreolus capreolus</i>	oui	14			PCR	
USA	Anaplasmosis	deer	y - subclinical infection					
Zambia	Anaplasmosis	Kudu	yes	4		X	X	
Iran	Anthrax	<i>Ovis gmelini</i> sp	y	<8	x		x	
Botswana	Anthrax	Zebra and Springbok	yes	2				X
Cameroon	Anthrax	Chimpanzee (<i>Pan troglodytes</i>)	1					x
Cameroon	Anthrax	Gorilla (<i>Gorilla gorilla</i>)	3					x
Myanmar	Anthrax	Asian Elephant (<i>Elaphus maximus</i>)	yes	10	x	x	x	
Namibia	Anthrax	Numerous species	yes					
USA	Anthrax	Deer	y - sporadic					
Zambia	Anthrax	<i>Crocodylus niloticus</i>	yes	3	X	X	X	
Zambia	Anthrax	<i>Hippopotamus amphibius</i>	yes	65	X	X	X	
USA	Arboviruses	Multiple wild bird species	y - endemic					
France	Arthritis/encéphalite caprine	<i>Rupicapra rupicapra</i>	oui	5				oui
UK	Aspergillosis	<i>Cygnus cygnus</i>	yes	3	Y	Y		
UK	Aspergillosis	<i>Larus argentatus</i>	yes	1		Y		
France	Aujeszky's Disease	Wild boar (<i>Sus scrofa</i>)	oui	2			isolement viral	
Germany	Aujeszky's Disease	<i>Sus scrofa</i>	yes	unknown			x	x
Italy	Aujeszky's Disease	<i>Sus scrofa</i>	yes	137				x
Poland	Aujeszky's Disease	<i>Sus scrofa</i>	yes	59				X
Portugal	Aujeszky's Disease	<i>Sus scrofa</i>	yes	432			x	
Slovenia	Aujeszky's Disease	<i>Sus scrofa</i>	yes	115				
USA	Aujeszky's Disease	<i>Sus scrofa</i>	Y - Endemic in several states					
Andorra	Avian Chlamydiosis	<i>Columba</i> sp.	yes	5				
Australia	Avian Chlamydiosis	<i>Polytelis swainsonii</i> , <i>Platycercus elegans</i> , <i>Glossopsitta pusilla</i> , <i>Cacatua leadbeateri</i> , <i>C. roseicapilla</i> , Columbidae	yes	13		ü	ü	
Germany	Avian Chlamydiosis	Species not specified	yes	unknown			x	
Namibia	Avian Chlamydiosis	Parrot	yes	13				♪
Poland	Avian Chlamydiosis	<i>Eudocimus ruber</i>	yes	1				
Poland	Avian Chlamydiosis	<i>Philomachus pugnax</i>	yes	1				
Portugal	Avian Chlamydiosis	Parrot	yes	3				x
USA	Avian Chlamydiosis	Numerous spp.	y-endemic					
Canada	Avian Cholera	American crow <i>Corvus brachyrhynchos</i>	yes	1			X	X
Canada	Avian Cholera	Black-legged kittiwake <i>Rissa tridactyla</i>	yes	7			X	X
Canada	Avian Cholera	Common eider <i>Somateria mollissima</i>	yes	45			X	X
Canada	Avian Cholera	Double crested cormorant <i>Phalacrocorax auritus</i>	yes	12			X	X
Canada	Avian Cholera	Double crested cormorant <i>Phalacrocorax auritus</i>	yes	1040		X		
Canada	Avian Cholera	Dovekie <i>Alle alle</i>	yes	1			X	X
Canada	Avian Cholera	Ducks Family Anatidae	yes	1		X		
Canada	Avian Cholera	Glacous gull <i>Larus hyperboreus</i>	yes	20			X	X
Canada	Avian Cholera	Great black-backed gull <i>Larus marinus</i>	yes	41			X	X
Canada	Avian Cholera	Gulls <i>Larus</i> sp.	yes	6		X		
Canada	Avian Cholera	Herring gull <i>Larus argentatus</i>	yes	1		X		
Canada	Avian Cholera	Herring gull <i>Larus argentatus</i>	yes	3			X	X
Canada	Avian Cholera	Icelandic gull <i>Larus glaucoideus</i>	yes	2			X	X
Canada	Avian Cholera	Mallard <i>Anas platyrhynchos</i>	yes	1		X		
Canada	Avian Cholera	Raven <i>Corvus corax</i>	yes	1			X	X
Canada	Avian Cholera	Raven <i>Corvus corax</i>	yes	1			X	X
Canada	Avian Cholera	Rock Dove <i>Columba livia</i>	yes	1			X	X
Canada	Avian Cholera	Sandpiper <i>Calidris</i> sp.	yes	1		X		
Norway	Avian Cholera	<i>Somateria mollissima</i>	yes	2	x	x		
USA	Avian Cholera	Waterfowl	y-sporadic					
Czech Rep.	Avian Influenza HPAI	<i>Cygnus olor</i>	yes	1				
Germany	Avian Influenza HPAI	<i>Anas</i>	yes	1			x	x

Appendix IV (contd)

Germany	Avian Influenza HPAI	<i>Anas platyrhynchos</i>	yes	2			x	x
Germany	Avian Influenza HPAI	<i>Anser anser</i>	yes	1			x	x
Germany	Avian Influenza HPAI	<i>Aythya</i>	yes	2			x	x
Germany	Avian Influenza HPAI	<i>Branta canadensis</i>	yes	1			x	x
Germany	Avian Influenza HPAI	<i>Cygnus olor</i>	yes	20			x	x
Germany	Avian Influenza HPAI	<i>Cygnus sp.</i>	yes	2			x	x
Germany	Avian Influenza HPAI	<i>Laridae</i>	yes	2			x	x
Germany	Avian Influenza HPAI	<i>Podiceps cristatus</i>	yes	12			x	x
Germany	Avian Influenza HPAI	<i>Podiceps nigricollis</i>	yes	282			x	x
Germany	Avian Influenza HPAI	<i>Rallidae</i>	yes	1			x	x
Japan	Avian Influenza HPAI	Mountain hawk eagle, <i>Spizaetus nipalensis</i>	yes	0/1	x	o		
Poland	Avian Influenza HPAI	<i>Buteo buteo</i>	yes	2				x
Poland	Avian Influenza HPAI	<i>Ciconia ciconia</i>	yes	1				x
Turkey	Avian Influenza HPAI	<i>Passer montanus</i>	yes	1/1			x	
Australia	Avian Influenza LPAI	<i>Anas spercilliosa</i> , <i>Chenonetta jubata</i> , <i>Anas spp./ Malacorhynchus membranaceus/ A. rhynchotis</i> , <i>A. gracilis</i> , <i>A. castanea</i> , <i>A. rhynchotis</i> , <i>Calidris ruficollis</i> , <i>Anas spp./ A. superciliosa/ Tadorna tadornoides</i> , <i>Anas spp./ A. superciliosa/ A. rhynchotis</i> , <i>M. membranaceus/ Anas spp., Aves</i>	Disease not seen. Evidence of agent detected on routine surveillance	31			ü	
Czech Rep.	Avian Influenza LPAI	<i>Anas platyrhynchos</i>	yes	20				
Denmark	Avian Influenza LPAI	Various birds	yes	34			x	
Finland	Avian Influenza LPAI	<i>Anas platyrhynchos</i>	yes	9			9	
Finland	Avian Influenza LPAI	<i>Larus argentatus</i>	yes	4			4	
Finland	Avian Influenza LPAI	<i>Larus fuscus</i>	yes	1			1	
France	Avian influenza LPAI	<i>Anas clypeata</i>	oui (surv. active)	1			souche H5 FP	
France	Avian influenza LPAI	<i>Anas crecca</i>	oui (surv. active)	1			souche H5 FP	
France	Avian influenza LPAI	<i>Anas platyrhynchos</i>	oui (surv. active)	5			souches H5 FP	
France	Avian influenza LPAI	<i>Anas platyrhynchos</i>	oui (surv. passive)	2			isolement viral	
France	Avian influenza LPAI	<i>Cygnus olor</i>	oui (surv. passive)	5			isolement viral	
Germany	Avian Influenza LPAI	<i>Anas platyrhynchos</i>	y	3			x	x
Germany	Avian Influenza LPAI	<i>Anser albifrons albifrons</i>	y	1			x	x
Germany	Avian Influenza LPAI	<i>Cygnus</i>	y	2			x	x
Germany	Avian Influenza LPAI	<i>Cygnus olor</i>	y	1			x	x
Italy	Avian Influenza LPAI	<i>Anas clypeata</i>	yes	3			x	
Italy	Avian Influenza LPAI	<i>Anas crecca</i>	yes	2			x	
Italy	Avian Influenza LPAI	<i>Anas penelope</i>	yes	1			x	
Italy	Avian Influenza LPAI	<i>Anas platyrhynchos</i>	yes	29			x	
Italy	Avian Influenza LPAI	<i>Anas querquedula</i>	yes	1			x	
Italy	Avian Influenza LPAI	<i>Cygnus atratus</i>	yes	1			x	
Italy	Avian Influenza LPAI	<i>Cygnus olor</i>	yes	1			x	
Italy	Avian Influenza LPAI	<i>Larus ridibundus</i>	yes	1			x	
Italy	Avian Influenza LPAI	<i>Tadorna tadorna</i>	yes	1			x	
Norway	Avian Influenza LPAI	<i>Anas platyrhynchos</i> , <i>Anas crecca</i> , <i>Larus argentatus</i>	no	12		x		
Poland	Avian Influenza LPAI	<i>Larus ridibundus</i>	yes	5				x
Portugal	Avian Influenza LPAI	canards (<i>Anas sp</i>)	yes	3			x	
Sudan	Avian Influenza LPAI	House sparrow (<i>Passer domesticus</i>)	yes					x
Sweden	Avian Influenza LPAI	Various birds	yes					
UK	Avian Influenza LPAI	<i>Anas acuta</i>	yes	1			LPH5	
UK	Avian Influenza LPAI	<i>Anas acuta</i>	yes	1 / 239			H5N2	
UK	Avian Influenza LPAI	<i>Anas crecca</i>	yes	1			H3N8	
UK	Avian Influenza LPAI	<i>Anas crecca</i>	yes	2			H3N8	
UK	Avian Influenza LPAI	<i>Anas crecca</i>	yes	1 / 281			H3N8	
UK	Avian Influenza LPAI	<i>Anas platyrhynchos</i>	yes	1			H3N8	x
UK	Avian Influenza LPAI	<i>Anas platyrhynchos</i>	yes	1/1310			H3N6	x
UK	Avian Influenza LPAI	<i>Anas platyrhynchos</i>	yes	1/1310			H5N2	
UK	Avian Influenza LPAI	<i>Anas platyrhynchos</i>	yes	1/1310			H6N2	
UK	Avian Influenza LPAI	<i>Anas platyrhynchos</i>	yes	1/1310			H1N2	
UK	Avian Influenza LPAI	<i>Anas platyrhynchos</i>	yes	1/1310			H5N1	
UK	Avian Influenza LPAI	<i>Anser anser</i>	yes	1 / 163			H2N9	
UK	Avian Influenza LPAI	<i>Cygnus olor</i>	yes	1			LPH5	
UK	Avian Influenza LPAI	<i>Cygnus olor</i>	yes	1 / 1012			H5	
USA	Avian Influenza LPAI	Waterfowl, shorebirds	Y - Endemic and subclinical					
Zambia	Avian Influenza LPAI	Waterfowl	yes	408			X	X
South Africa	Avian Influenza LPAI H6N8)	<i>Struthio camelus</i>	yes	1				x

South Africa	Avian Influenza LPAI (H1N8)	<i>Alopochen aegyptiacus</i>	yes	1				x
Canada	Avian Influenza LPAI ¹	American black duck <i>Anas rubripes</i>	yes	247				PCR
Canada	Avian Influenza LPAI ¹	American crow <i>Corvus brachyrhynchos</i>	yes	2				PCR
Canada	Avian Influenza LPAI ¹	American wigeon <i>Anas americana</i>	yes	16				PCR
Canada	Avian Influenza LPAI ¹	<i>Anatidae</i>	yes	18				PCR
Canada	Avian Influenza LPAI ¹	Blue winged teal <i>Anas discors</i>	yes	175				PCR
Canada	Avian Influenza LPAI ¹	Canada goose <i>Branta canadensis</i>	yes	3				PCR
Canada	Avian Influenza LPAI ¹	Ducks <i>Anas</i>	yes	5				PCR
Canada	Avian Influenza LPAI ¹	Gadwall <i>Anas strepera</i>	yes	2				PCR
Canada	Avian Influenza LPAI ¹	Glaucous gull <i>Larus hyperboreus</i>	yes	2				PCR
Canada	Avian Influenza LPAI ¹	Great horned owl <i>Bubo virginianus</i>	yes	1				PCR
Canada	Avian Influenza LPAI ¹	Green winged teal <i>Anas crecca</i>	yes	141				PCR
Canada	Avian Influenza LPAI ¹	Gull <i>Laridae</i>	yes	1				PCR
Canada	Avian Influenza LPAI ¹	Herring gull <i>Larus argentatus</i>	yes	1				PCR
Canada	Avian Influenza LPAI ¹	Kilder <i>Charadrius vociferus</i>	yes	1				PCR
Canada	Avian Influenza LPAI ¹	Lesser black-backed gull <i>Larus fuscus</i>	yes	1				PCR
Canada	Avian Influenza LPAI ¹	Mallard <i>Anas platyrhynchos</i>	yes	669				PCR
Canada	Avian Influenza LPAI ¹	Mourning dove <i>Zenaidra macroura</i>	yes	1				PCR
Canada	Avian Influenza LPAI ¹	Mute swan <i>Cygnus olor</i>	yes	1				PCR
Canada	Avian Influenza LPAI ¹	Northern gooselark <i>Accipiter gentilis</i>	yes	2				PCR
Canada	Avian Influenza LPAI ¹	Northern pintail <i>Anas acuta</i>	yes	53				PCR
Canada	Avian Influenza LPAI ¹	Osprey <i>Pandion haliaetus</i>	yes	1				PCR
Canada	Avian Influenza LPAI ¹	Purple finch <i>Carpodacus</i>	yes	1				PCR
Canada	Avian Influenza LPAI ¹	Redhead <i>Aythya americana</i>	yes	3				PCR
Canada	Avian Influenza LPAI ¹	Ring-billed gull <i>Larus delawarensis</i>	yes	5				PCR
Canada	Avian Influenza LPAI ¹	Sharp-shinned Hawk <i>Accipiter striatus</i>	yes	1				PCR
Canada	Avian Influenza LPAI ¹	Shoveler <i>Anas clypeata</i>	yes	1				PCR
Canada	Avian Influenza LPAI ¹	Song sparrow <i>Melospiza melodia</i>	yes	1				PCR
Canada	Avian Influenza LPAI ¹	Trumpeter swan <i>Cygnus buccinator</i>	yes	1				PCR
Canada	Avian Influenza LPAI ¹	Wood duck <i>Aix sponsa</i>	yes	16				PCR
South Africa	Avian Influenza LPAI (H5 N8)	<i>Sterna bergii</i>	yes	1				x
Canada	Avian Malaria	American crow <i>Corvus brachyrhynchos</i>	yes	8			X	X
Canada	Avian Malaria	Merlin <i>Falco columbarius</i>	yes	1			X	
Canada	Avian Malaria	Mourning dove <i>Zenaidra macroura</i>	yes	1			X	X
USA	Avian Malaria	Multiple wild bird species	y - endemic					
Sudan	Avian pox	Guinea fowl (<i>Meleagris</i>)	yes		x			
Sweden	Avian pox	Great tit (<i>Parus major</i>)	yes	1		x	x	
Sweden	Avian pox	Magpie (<i>Pica pica</i>)	yes	1		x	x	
UK	Avian pox	<i>Columba palumbus</i>	yes	9	Y	Y		
UK	Avian pox	<i>Columba livia</i>	yes	1		Y		
UK	Avian pox	<i>Parus major</i>	yes	1				Histopathology
UK	Avian pox	<i>Prunella modularis</i>	yes	1	Y			
UK	Avian pox	<i>Prunella modularis</i>	yes	1 / 2		Y	Y	
UK	Avian pox	<i>Streptopelia decaocto</i>	yes	1	Y	Y		
Australia	Avian Pox	<i>Platycercus elegans</i>	yes	1	ü	ü	ü	
Denmark	Avian Pox	<i>Columba palumbus</i>	yes	2		x		
Finland	Avian Pox	<i>P. caeruleus</i>	yes	2		2		
Finland	Avian Pox	<i>Parus major</i>	yes	3		3		
Finland	Avian Pox	<i>Pica pica</i>	yes	1		1		
Germany	Avian Pox	Falconiformes	yes	1				x
Germany	Avian Pox	Other wild bird species	yes	1				x
Italy	Avian Pox	<i>Asio otus</i>	yes	1	x	x	x	
Phillippines	Avian Pox	Blue eared pheasant (<i>Crossoptilon aurithum</i>)	yes	1	x			
Phillippines	Avian Pox	Peafowl (<i>Pavo cristatus</i>)	yes	2	x			
Phillippines	Avian Pox	Red jungle fowl (<i>Gallus gallus</i>)	yes	1	x			
Phillippines	Avian Pox	Whit bellied sea-eagle (<i>Halichoerus leucogaster</i>)	yes	1	x			
UK	Avian Pox	<i>Fringilla coelebs</i>	yes	1 / 8	Y			
USA	Avian Pox	Numerous species	y - endemic					
Australia	Avian Tuberculosis	<i>Casuaris casuaris</i>	yes	1		ü	ü	
Denmark	Avian Tuberculosis	<i>Buteo lagopus</i> , <i>Aythya fuligula</i>	yes	2		x		
Finland	Avian Tuberculosis	<i>Bucephala clangula</i>	yes	1		1	1	
Finland	Avian Tuberculosis	<i>Columba palumbus</i>	yes	1		1	1	
Finland	Avian Tuberculosis	<i>Tetrao tetrix</i>	yes	1		1	1	
France	Avian tuberculosis	<i>Anser</i> sp.	oui	1				Ziehl
France	Avian tuberculosis	<i>Ardea cinerea</i>	oui	1				Ziehl
France	Avian tuberculosis	<i>Buteo buteo</i>	oui	1				Ziehl
France	Avian tuberculosis	<i>Capreolus capreolus</i>	oui	4	non	oui	oui	non
France	Avian tuberculosis	<i>Carduelis chloris</i>	oui	1				Ziehl
France	Avian tuberculosis	<i>Columba palumbus</i>	oui	1				x
France	Avian tuberculosis	<i>Falco tinnunculus</i>	oui	1	oui	oui	oui	non

Appendix IV (contd)

France	Avian tuberculosis	<i>Phasianus</i> sp.	oui	1			Ziehl	
France	Avian Tuberculosis	<i>Sus scrofa</i>	oui (Seine-Maritime et P.Atl.)	28	non	oui	oui	non
Germany	Avian Tuberculosis	Alcedinidae	yes	2			x	
Germany	Avian Tuberculosis	Corvidae	yes	1			x	
Germany	Avian Tuberculosis	Coturnix	yes	1			x	
Germany	Avian Tuberculosis	Dromaiidae (zoo animal)	yes	1			x	
Germany	Avian Tuberculosis	Galliformes	yes	6			x	
Germany	Avian Tuberculosis	Gruidae	yes	1			x	
Germany	Avian Tuberculosis	Laridae	yes	2			x	
Germany	Avian Tuberculosis	Meleagridinae	yes	2			x	
Germany	Avian Tuberculosis	Passerin birds	yes	1			x	
Germany	Avian Tuberculosis	<i>Phasianus colchicus</i>	yes	3			x	
Germany	Avian Tuberculosis	Psittaciformes (zoo animal)	yes	1			x	
Germany	Avian Tuberculosis	<i>Rheidae</i> sp (zoo animal)	yes	1			x	
Ireland	Avian Tuberculosis	Fallow deer (<i>Dama dama</i>)	yes	1			x	
Italy	Avian Tuberculosis	<i>Accipiter nisus</i>	yes	2			x	
Italy	Avian Tuberculosis	<i>Cervus elaphus</i>	yes	2			x	
Italy	Avian Tuberculosis	<i>Falco peregrinus</i> , <i>Circus aeruginosus</i> , <i>Pandion haliaeetus</i> , <i>Ardea cinerea</i> , <i>Tyto alba</i>	yes	29			x	
Italy	Avian Tuberculosis	<i>Meles meles</i>	yes	1			x	
Italy	Avian Tuberculosis	<i>Sus scrofa</i>	yes	3			x	
Norway	Avian Tuberculosis	<i>Alces alces</i>	yes	1	x	x		
Serbia	Avian Tuberculosis	Pheasant (<i>Phasianus colchicus</i>)	yes	2		x	x	
Switzerland	Avian Tuberculosis	Common buzzard (<i>Buteo buteo</i>)	yes	1		x		
UK	Avian Tuberculosis	<i>Anas acuta</i>	yes	1		Y	ZN staining	
UK	Avian Tuberculosis	<i>Anas penelope</i>	yes	2		Y	ZN staining	
UK	Avian Tuberculosis	<i>Anas platyrhynchos</i>	yes	1		Y	Y	
UK	Avian Tuberculosis	<i>Anas platyrhynchos</i>	yes	12		Y	ZN staining	
UK	Avian Tuberculosis	<i>Anser brachyrhynchos</i>	yes	2		Y	ZN staining	
UK	Avian Tuberculosis	<i>Capreolus capreolus</i>	yes	3 / 217		Y	Y	
UK	Avian Tuberculosis	<i>Cervus elaphus</i>	yes	4 / 70		Y	Y	
UK	Avian Tuberculosis	<i>Cygnus cygnus cygnus</i>	yes	1		Y	ZN staining	
UK	Avian Tuberculosis	<i>Cygnus olor</i>	yes	1		Y	ZN staining	
UK	Avian Tuberculosis	<i>Cygnus olor</i>	yes	1		Y		
UK	Avian Tuberculosis	<i>Dama dama</i>	yes	6 cases / 111 examined		Y	Y	
USA	Avian Tuberculosis	Birds and mammals	Y - Ubiquitous					
UK	Avian Tuberculosis, cutaneous	<i>Buteo buteo</i>	yes	1		Y	Y	
USA	Avian Vacuolar Myelinopathy	<i>Haliaeetus leucocephalus</i> (8), <i>Fulica americana</i>	Y - Low activity	GA, SC				
France	Babésiose	<i>Rupicapra rupicapra</i>	oui	2		oui	examen coloration	
France	Babésiose à <i>Babesia capreoli</i> et <i>Babesia</i> EU 1	<i>Capreolus capreolus</i>	oui	21 sur 39 testés	non	non	examen coloration	
Italy	Babesiosis	<i>Capreolus capreolus</i>	yes	18				x
Myanmar	Babesiosis	Asian Elephant (<i>Elaphus maximus</i>)	yes	9			x	
South Africa	Babesiosis	<i>Ceratotherium simum</i>	yes	3			x	
South Africa	Babesiosis	<i>Equus burchelli</i>	yes	2			x	
Sudan	Babesiosis	African buffalo (<i>Syncerus caffer</i>)	yes		x			
Sudan	Babesiosis	Warthog	yes		x			
USA	Babesiosis	Rodents	y - subclinical					
Zambia	Babesiosis	Waterbuck	yes	2			X	
Zimbabwe	Babesiosis	Zebra	yes	1	x			
Australia	Bat Lyssaviruses	<i>Pteropus alecto</i> , <i>P. poliocephalus</i> , <i>P. conspicillatus</i>	yes	8	ü	ü	ü	
Denmark	Bat Lyssaviruses	<i>Chiroptera</i>	yes	2			x	
Germany	Bat Lyssaviruses	<i>Microchiroptera</i>	yes	6			x	
UK	Bat Lyssaviruses	Daubenton's bat (<i>Myotis daubentonii</i>)	yes	1		FAT, RT-CIT, MIT, RT-PCR & sequencing if positive	Y	
Canada	Baylisascaris spp.	Raccoon <i>Procyon lotor</i>	yes	13			X	X

Canada	Baylisascaris spp.	Skunk <i>Mephitis mephitis</i>	yes	10			X	X
Germany	Baylisascaris spp.	Procyon lotor	yes	unknown			x	
USA	Baylisascaris spp.	Raccoon, black bear	Y - Endemic and subclinical					
France	Besnoitiose	<i>Rupicapra rupicapra</i>	souçon	1	oui			
Canada	Besnoitiosis	Caribou <i>Rangifer tarandus</i>	yes	11			X	X
Germany	Bluetongue	Cervidae	yes	7			x	x
Italy	Bluetongue	<i>Camelus dromedarius</i>	yes	6				x
Italy	Bluetongue	<i>Cervus elaphus</i>	yes	4			x	x
Italy	Bluetongue	<i>Cervus elaphus corsicanus</i>	yes	7				x
Italy	Bluetongue	<i>Dama dama</i>	yes	4				x
Italy	Bluetongue	<i>Ovis musimon</i>	yes	1				x
USA	Bluetongue	<i>Antilocapra americana</i>	Y - Sporadic BTV-17	WY				
USA	Bluetongue	<i>Odocoileus virginianus</i>	Y - Sporadic BTV-10, -11	MO				
Australia	Botulism	<i>Anas superciliosa</i> , <i>A. castanea</i> , <i>Angulliformes</i> , <i>Strepera versicolor</i> , <i>Coraciiformes</i> , <i>Cygnus atratus</i>	yes	102	ü		ü	
Canada	Botulism	Black duck <i>Anas rupripes</i>	yes	5		X		X
Canada	Botulism	Blue-winged teal <i>Anas discors</i>	yes	3				X
Canada	Botulism	Green winged teal <i>Anas crecca</i>	yes	4		X		X
Canada	Botulism	Kilder <i>Charadrius vociferus</i>	yes	2				X
Canada	Botulism	Lesser yellowlegs <i>Tringa flavipes</i>	yes	2				X
Canada	Botulism	Loon <i>Gavia immer</i>	yes	12				X
Canada	Botulism	Mallard <i>Anas platyrhynchos</i>	yes	2		X		X
Canada	Botulism	Mallard <i>Anas platyrhynchos</i>	yes	16		X		X
Canada	Botulism	Northern pintail <i>Anas acuta</i>	yes	6				X
Canada	Botulism	Red-necked grebe <i>Podiceps grisegena</i>	yes	3				X
Canada	Botulism	Ring-billed gull <i>Larus delawarensis</i>	yes	2		X		X
Canada	Botulism	Shoemaker <i>Anas clypeata</i>	yes	2				X
Czech Rep.	Botulism	<i>Anas platyrhynchos</i>	yes	1				
Czech Rep.	Botulism	<i>Larus sp.</i>	yes	2				
Czech Rep.	Botulism	<i>Cygnus olor</i>	yes	2				
Denmark	Botulism	Coot (<i>Fulica atra</i>)	yes	2			x	
Denmark	Botulism	Mallard (<i>Anas platyrhynchos</i>)	yes	1			x	
Italy	Botulism	<i>Anas platyrhynchos</i>	yes	8			x	
Italy	Botulism	<i>Circus aeruginosus</i>	yes	2			x	
Italy	Botulism	<i>Cygnus olor</i>	yes	1			x	
Italy	Botulism	<i>Larus ridibundus</i>	yes	1			x	
Sweden	Botulism	Mallard (<i>Anas platyrhynchos</i>)	yes	1				
UK	Botulism	<i>Anas platyrhynchos</i>	yes	11	Y		ELISA	
UK	Botulism	<i>Larus argentatus</i>	yes	1 / 33 suspect	Y			
UK	Botulism	<i>Larus fuscus</i>	yes	1 / 12 suspect	Y			
USA	Botulism	Waterfowl Types C & E, gulls	y - sporadic epornitics					
Zambia	Botulism	<i>Hippopotamus amphibious</i>	yes	3			X	
UK	Botulism (suspected)	<i>Larus argentatus</i>	yes	2	Y			
UK	Botulism (suspected)	<i>Larus marinus</i>	yes	2	Y			
France	Botulisme (type C uniquement)	<i>Phasianus sp.</i>	oui	2				typage protéine par PCR
France	Botulisme (type C uniquement)	Waterfowl	oui	très nombreux !	x			culture, PCR, test sur souris, ...
El Salvador	Bovine tuberculosis	Mono capuchino (<i>Cebus sp.</i>)	si	4	X			
France	Bovine tuberculosis	<i>Sus scrofa</i>	oui (Seine-Mar itime, P.Atl. et Corse)	122	non	oui	oui	non
Ireland	Bovine tuberculosis	Badger, <i>Meles meles</i>	yes	endemic				
Ireland	Bovine tuberculosis	Fallow deer (<i>Dama dama</i>)	yes	31			x	
Ireland	Bovine tuberculosis	Sika deer (<i>Cervus nippon</i>)	yes	2			x	
UK	Bovine Tuberculosis	<i>Meles meles</i>	yes	0/5		Y		
UK	Bovine Tuberculosis	<i>Meles meles</i>	yes	7/53		Y	Y	
Zambia	Bovine tuberculosis	<i>Aepyceros melampus</i>	yes	1		X	X	
Zambia	Bovine tuberculosis	<i>Kobus leche kafuensis</i>	yes	14		X	X	
Zimbabwe	Bovine tuberculosis	Lion (<i>Panthera leo</i>)	yes	2		x		x
Canada	Bovine Tuberculosis	Elk <i>Cervus elaphus</i>	yes	3			X	X
Italy	Bovine Tuberculosis	<i>Cervus elaphus</i>	yes	2			x	
Italy	Bovine Tuberculosis	Lanner falcon (<i>Falco biarmicus</i>)	yes	1			x	
Italy	Bovine Tuberculosis	Peregrine falcon (<i>Falco peregrinus</i>)	yes	1			x	
Italy	Bovine Tuberculosis	Red Fox (<i>Vulpes vulpes</i>)	yes	2			x	
Italy	Bovine Tuberculosis	<i>Sus scrofa</i>	yes	6			x	x
Myanmar	Bovine Tuberculosis	Asian Elephant (<i>Elaphus maximus</i>)	yes	1	x	x		
Myanmar	Bovine Tuberculosis	Baboon (<i>Papio sp.</i>)	yes	2	x	x		

Appendix IV (contd)

Myanmar	Bovine Tuberculosis	Leopard (<i>Panthera pardus</i>)	yes	1	x	x		
Myanmar	Bovine Tuberculosis	<i>Macaca fascicularis</i>	yes	2	x	x		
Myanmar	Bovine Tuberculosis	<i>Macaca mullata</i>	yes	6	x	x		
Portugal	Bovine Tuberculosis	<i>Cervus elaphus</i>	yes	24			x	
Portugal	Bovine Tuberculosis	<i>Sus scrofa</i>	yes	2			x	
South Africa	Bovine Tuberculosis	<i>Aepyceros melampus</i>	yes	1		x	x	x
South Africa	Bovine Tuberculosis	African buffalo (<i>Syncerus caffer</i>)	yes	68		x	x	x
South Africa	Bovine Tuberculosis	<i>Panthera leo</i>	yes	14		x	x	x
South Africa	Bovine Tuberculosis	<i>Tragelaphus scriptus</i>	yes	1		x	x	x
South Africa	Bovine Tuberculosis	<i>Tragelaphus strepsiceros</i>	yes	3		x	x	x
Chinese Taipei	Bovine Tuberculosis	Formosan sambar (<i>Cervus unicornis swinhoei</i>)	yes	1			X	
Chinese Taipei	Bovine Tuberculosis	Aoudad (<i>Ammotragus lervia</i>)	yes	1			X	
Chinese Taipei	Bovine Tuberculosis	Formosan sika deer (<i>Cervus nippon taiouanus</i>)		1			X	
UK	Bovine Tuberculosis	<i>Capreolus capreolus</i>	yes	4 / 217		Y	Y	
UK	Bovine Tuberculosis	<i>Cervus elaphus</i>	yes	16 / 70		Y	Y	
UK	Bovine Tuberculosis	<i>Cervus elaphus</i>	yes	3 / 3		Y	Y	
UK	Bovine Tuberculosis	<i>Dama dama</i>	yes	2 / 111		Y	Y	
USA	Bovine Tuberculosis	<i>O. virginianus</i>	Y Northern Minnesota	11 in 2007				
USA	Bovine Tuberculosis	<i>O. virginianus, C. elaphus</i>	Y - Endemic in part of NE Michigan	(~25-30 culture positive per year of ~15,000 examined)				
UK	Bovine Tuberculosis Trapped study site area	<i>Meles meles</i>	yes	4/165		Y	Y	
France	Bovine tuberculosis	<i>Cervus elaphus</i>	oui	15	non	oui	non	non
UK	Bovine Tuberculosis Found dead: study area	<i>Meles meles</i>	yes	2/9		Y	Y	
Italy	Brucella abortus	<i>Sus scrofa meridionalis</i>	yes	1				x
South Africa	Brucella abortus	African buffalo (<i>Syncerus caffer</i>)	yes	6		x	x	
USA	Brucella abortus	<i>Cervus elaphus, Bison bison</i>	Y - Endemic in Greater Yellowstone Area					
France	<i>Brucella ceti</i>	<i>Tursiops truncatus</i>	oui	3			culture	
Italy	Brucella melitensis	<i>Sus scrofa</i>	yes	2			x	
South Africa	Brucella melitensis	<i>Hippotragus niger</i>	yes	1		x	x	x
Czech Rep.	Brucella sp.	<i>Lepus europaeus</i>	yes	5				
Italy	Brucella sp.	Roe deer (<i>Capreolus capreolus</i>)	yes	1			x	
Italy	Brucella sp.	<i>Sus scrofa</i>	yes	112			x	x
Italy	Brucella sp.	<i>Vulpes vulpes</i>	yes	1			x	
UK	Brucella sp.	<i>Lagenorhynchus acutus</i>	yes	6 / 6			Y	Neg
UK	Brucella sp.	<i>Lutra lutra</i>	yes	1 / 35			Neg	Pos
UK	Brucella sp.	<i>Phocoena phocoena</i>	yes	5 / 10			Y	Neg
UK	Brucella sp.	<i>Tursiops truncatus</i>	yes	1			Y	Y
UK	Brucella sp.	<i>Tursiops truncatus</i>	yes	1 / 3			Y	Y
Zambia	Brucella spp	Kobus leche	yes	7			X	X
Canada	Brucella suis	Caribou <i>Rangifer tarandus</i>	yes	3			X	X
Czech Rep.	Brucella suis	<i>Lepus europaeus</i>	yes	3				
Germany	Brucella suis	Leporidae	y	unknown			x	
Germany	Brucella suis	<i>Sus scrofa</i>	y	unknown			x	
Italy	Brucella suis	<i>Sus scrofa</i>	yes	34			x	
USA	Brucella suis	<i>Rangifer tarandus</i>	y	AK				
USA	Brucella suis	<i>Sus scrofa</i>	Y - Endemic in several states					
France	<i>Brucella suis biovar 2</i>	<i>Lepus europaeus</i>	oui	5			culture	
France	<i>Brucella suis biovar 2</i>	<i>Sus scrofa</i>	oui	1			culture	
UK	Capariniosis mange	<i>Erinaceus europaeus</i>	y	6			Parasitol	
UK	Capariniosis mange	<i>Erinaceus europaeus</i>	y	85	Y		Micro	
France	Chlamydiae aviaire	<i>Anas platyrhynchos</i>	oui	1				Clearview
Australia	Chytridiomycosis	<i>Litoria aurea</i>	yes, endemic	10			ü	
Canada	Chytridiomycosis	Northern leopard frog <i>Rana pipiens</i>	yes	16			X	
Canada	Chytridiomycosis	Western toad <i>Bufo boreas</i>	yes	2			X	
USA	Chytridiomycosis	<i>Notophthalmus viridescens</i>	y	VA - 8				
Australia	Circoviruses	<i>Psephotus haematodotus, Trichoglossus haematodotus, Cacatua galerita</i>	yes	6	ü	ü		
Canada	Circoviruses	Pigeon <i>Columba livia</i>	yes	2			X	X
Canada	Circoviruses	Ring-billed gull <i>Larus delawarensis</i>	yes	3			X	X
Italy	Circoviruses	<i>Sus scrofa</i>	yes	9			x	
France	Classical Swine Fever	<i>Sus scrofa</i>	oui	2 sur 11435 sangliers testés			isolement viral	
France	Classical Swine Fever	<i>Sus scrofa</i>	oui	5125 sur 10704 sangliers testés				sérologie
Germany	Classical Swine Fever	<i>Sus scrofa</i>	y	11			x	x
Italy	Classical Swine Fever	<i>Sus scrofa meridionalis</i>	yes	1				x

Japan	Classical Swine Fever	<i>S. scrofa leucomystax</i>	no	—				x
UK	Colibacillosis (Agent: <i>E. coli</i> O86 profile)	<i>Carduelis spinus</i> and <i>Carduelis carduelis</i>	yes	11 / 145	No	x	yes	No
UK	Colibacillosis (Agent: <i>E. coli</i> Serotype 086)	<i>Carduelis spinus</i> and <i>Carduelis carduelis</i>	yes	Case(s) confirmed at 6 sites	No	Gross pathology	yes	No
Italy	Contagious Ecthyma	<i>Rupicapra rupicapra</i>	yes	3			x	
Switzerland	Contagious Ecthyma	<i>Ibex (Capra ibex)</i>	yes	1		x		
South Africa	Cyanobacterial intoxication	<i>Ceratotherium simum</i>	yes	9		x	x	
South Africa	Cyanobacterial intoxication	<i>Connochaetes taurinus</i>	yes	10		x	x	
South Africa	Cyanobacterial intoxication	<i>Equus burchelli</i>	yes	10		x	x	
UK	Duck Plague (DVE)	<i>Anas platyrhynchos</i>	yes	2		Y		
USA	Duck Plague (DVE)	Waterfowl	Y - Subclin infections detected in survey; mortality in FL, VA	FL-40; VA-18				
UK	DVE	<i>Anas platyrhynchos</i>	yes	6		Y		
UK	E coli 08 K+ colisepticaemia	<i>Carduelis chloris</i>	yes	1 confirmed 5 suspected		Y	Y	
South Africa	Echinococcus granulosus / hydatid disease	African buffalo (<i>Syncerus caffer</i>)	yes	2		x		
South Africa	Echinococcus granulosus / hydatid disease	<i>Equus burchelli</i>	yes	1		x		
South Africa	Echinococcus granulosus tape worms	<i>Panthera leo</i>	yes	3		x		
Australia	<i>Echinococcus granulosus</i>		endemic					
Canada	<i>Echinococcus granulosus</i>	Caribou <i>Rangifer tarandus</i>	yes	1			X	
Canada	<i>Echinococcus granulosus</i>	Elk <i>Cervus elaphus</i>	yes	1			X	
Finland	<i>Echinococcus granulosus</i>	<i>Canis lupus</i>	yes	3			3	
Italy	<i>Echinococcus granulosus</i>	<i>Sus scrofa</i>	yes	1		x		
Poland	<i>Echinococcus granulosus</i>	<i>Sus scrofa</i>	yes	4		x		
USA	<i>Echinococcus granulosus</i>	<i>Canis lupus</i>	y	AK				
Zambia	<i>Echinococcus granulosus</i>	<i>Hippopotamus amphibious</i>	yes	4		X		
Czech Rep.	<i>Echinococcus multilocularis</i>	<i>Vulpes vulpes</i>	yes	277				
Germany	<i>Echinococcus multilocularis</i>	<i>Nyctereutes procyonoides</i> (final host)	y	9			x	
Germany	<i>Echinococcus multilocularis</i>	Primates (zoo animal; intermediate host)	y	1			x	
Germany	<i>Echinococcus multilocularis</i>	<i>Vulpes vulpes</i> (Final host)	y	293			x	
Japan	<i>Echinococcus multilocularis</i>	<i>Vulpes vulpes</i>	yes	161/—				x
Switzerland	<i>Echinococcus multilocularis</i>	European beaver (<i>Castor fiber</i>)	yes	1		x		
USA	<i>Echinococcus multilocularis</i>	Wild furbearers	y - subclinical infection	Northern Midwest				
France	<i>Echinococcus multilocularis</i>	<i>Ondatra zibethicus</i>	oui	1			PCR	
France	<i>Echinococcus multilocularis</i>	<i>Vulpes vulpes</i>	oui	147			Sedimentation Counting Technique	
France	Ecthyma contagieux	<i>Rupicapra rupicapra</i>	oui	1			microscope électronique	
USA	Epizootic Hemorrhagic Disease (EHD)	<i>O. virginianus</i>	Y - Large outbreak in 2007 in multiple states	EHDV-1: AR, MO, MS EHDV-2: CO, GA, IL, IN KS, MD, MO, MS, NC, NJ, NY, PA, VA, WV TX; EHDV-6: IL, IN				
Chinese Taipei	Equine Herpesvirus	Przewalskii Horse (<i>Equus przewalski</i>)	yes	1			X	
UK	<i>Erysipethothrix rhusiopathiae</i>	<i>Sciurus vulgaris</i>	yes	1 / 8		Y	Y	
Denmark	European Brown Hare Syndrome (EBHS)	European brown hare (<i>Lepus europaeus</i>)	yes	4		x		
Finland	European Brown Hare Syndrome (EBHS)	European brown hare (<i>Lepus europaeus</i>)	yes	8		8	7	
Finland	European Brown Hare Syndrome (EBHS)	Mountain hare (<i>Lepus timidus</i>)						
France	European Brown Hare Syndrome (EBHS)	<i>Lepus europaeus</i>	oui	40		oui pour 3	ELISA Ag pour 37	
Italy	European Brown Hare Syndrome (EBHS)	<i>Lepus europaeus</i>	yes	501		x	x	
Slovenia	European Brown Hare Syndrome (EBHS)	<i>Lepus europaeus</i>	yes	7			X	
Sweden	European Brown Hare Syndrome (EBHS)	Brown hare (<i>Lepus europaeus</i>)	yes	endemic				
USA	Feline Leukaemia (FLV)	<i>Felis concolor</i>	yes					
Portugal	Feline Panleucopenia	<i>Panthera tigris</i>	yes	2			x	
USA	Fibropapillomatosis in sea turtles	<i>Chelonia mydas</i>	yes	FL, HI				

Appendix IV (contd)

Phillippines	Fibropapillomatosis in sea turtles	Green sea turtle (<i>Chelonia mydes</i>)	yes	1	x	x		
France	Fièvre catarrhale du mouton	<i>Cervus elaphus</i>	oui	2			PCR	
Botswana	Foot and Mouth Disease	Buffalo (<i>Syncerus caffer</i>) Surveys	yes	19				X
Israel	Foot and Mouth Disease	<i>Gazella gazella</i>	yes	69	y	y	y	
South Africa	Foot and Mouth Disease	African buffalo (<i>Syncerus caffer</i>)	yes	227				
South Africa	Foot and mouth disease	African buffalo (<i>Syncerus caffer</i>)	yes	49				x
Sudan	Foot and Mouth Disease	African buffalo (<i>Syncerus caffer</i>)	yes	2	x			
UK	Gastropathy&/or Enteropathy Salmonellosis	<i>Phocoena phocoena</i>	yes	4		Y		
UK	Generalised Bacterial Infection - Erysipelas	<i>Phocoena phocoena</i>	yes	1		Y	Y	
France	Grande douve du foie (<i>Fasciola hepatica</i>)	<i>Capreolus capreolus</i>	oui	5		x		
France	Hantavirus	<i>Chletrionomis glaeolus</i>	oui	18				ELISA Ag
Finland	Hantaviruses	Myodes (Clethrionomys) glareolus	yes	endemic			x	
Germany	Hantaviruses	Myodes glareolus	yes	unknown			x	
USA	Hantaviruses	Wild rodents	y - endemic and subclinical					
Phillippines	Histomoniasis	Peafowl (<i>Pavo cristatus</i>)	yes	1	x			
USA	Histomoniasis	<i>Meleagris gallopova</i>	y - endemic					
	Histomoniasis	<i>Phasianus colchicus</i>	yes	3				
Cameroon	Immunodeficiency viruses (Simian)	Chimpanzee (Pan troglodytes)	34					x
Cameroon	Immunodeficiency viruses (Simian)	Gorilla (<i>Gorilla gorilla</i>)	3					x
Australia	Inclusion Body Disease	<i>Morelia bredli</i> , <i>Morelia spilotes variegata</i> , <i>Morelia spilotes spilotes</i>	yes	4		ü		
Canada	Inclusion Body Hepatitis	Great horned owl <i>Bubo virginianus</i>	yes	1			X	PCR
Cameroon	Insuffisance rénale	Lion (<i>Panthera leo</i>)	2	1				x
USA	Iridovirus diseases	<i>Rana clamitans</i>	yes	FL - 150				
Canada	Large Liver Flukes	Caribou <i>Rangifer tarandus</i>	yes	10			X	X
Canada	Large Liver Flukes	Elk (<i>Cervus elaphus</i>)	yes	1			X	X
Canada	Large Liver Flukes	Muskox (<i>Ovibos moschatus</i>)	yes	12			X	X
Myanmar	Large Liver Flukes	Asian Elephant (<i>Elaphus maximus</i>)	yes	226			x	
Sudan	Large Liver Flukes	African buffalo (<i>Syncerus caffer</i>)	yes			x		
USA	Large Liver Flukes	<i>O. virginianus</i>	y - endemic and subclinical					
Zambia	Large Liver Flukes	Kobus leche	yes	58			X	
Australia	Leishmaniasis	<i>Macropus agilis</i>	yes	6		ü	ü	ü
USA	Leishmaniasis	Wild furbearers	y - endemic/ subclinical					
Australia	Leptospirosis	<i>Sus scrofa</i>	endemic					
Canada	Leptospirosis	Raccoon <i>Procyon lotor</i>	yes	2				X
Canada	Leptospirosis	Skunk (<i>Mephitis mephitis</i>)	yes	1				X
Italy	Leptospirosis	<i>Dama dama</i>	yes	1				x
Italy	Leptospirosis	<i>Sus scrofa</i>	yes	2			x	
Myanmar	Leptospirosis	Asian Elephant (<i>Elaphus maximus</i>)	yes	1		x	x	
Myanmar	Leptospirosis	Tiger (<i>Panthera tigris</i>)	yes	1		x	x	
Portugal	Leptospirosis	<i>Suricata suricata</i>	yes	2			x	
UK	Leptospirosis	<i>Vulpes vulpes</i>	yes	1 cub		Y	PCR	
USA	Leptospirosis	Wild furbearers	y - endemic/ subclinical					
France	Listériose	<i>Capreolus capreolus</i>	oui	7			x	
France	Listériose	<i>Lepus europaeus</i>	oui	2			x	
France	Listériose	<i>Oryctolagus cuniculus</i>	oui	1			x	
France	Listériose	<i>Sus scrofa</i>	oui	1			x	
Denmark	Listeriosis	Hedgehog (<i>Erinaceus europaeus</i>)	yes	2			x	
Finland	Listeriosis	Mountain hare (<i>Lepus timidus</i>)	yes	1		1	1	
Germany	Listeriosis	Alces (zoo animal)	y	1			x	
Germany	Listeriosis	Dama	y	4			x	
Germany	Listeriosis	Non human primates	y	1			x	
Germany	Listeriosis	Other zoo animals	y	2			x	
Germany	Listeriosis	Passeri	y	1			x	
Germany	Listeriosis	Psittaciformes (zoo animal)	y	1			x	
Germany	Listeriosis	Roe deer (<i>Capreolus capreolus</i>)	y	2			x	
Chinese Taipei	Listeriosis	Sugar glider (<i>Pteropus brevicauda</i>)	yes	1			X	X
UK	Listeriosis (monocytogenes)	<i>Lutra lutra</i>	yes	1			Y	
UK	Louping ill	<i>Lagopus lagopus scoticus</i>	yes	67 / 1428				Y
UK	Louping ill	<i>Lepus timidus</i>	yes	17 / 109				Y
Sudan	Lumpy skin disease	Reedbuck (<i>Redunca</i> sp.)	yes	>150	x			
Sudan	Lumpy skin disease	Tiang antelope	yes	>150	x			
Italy	Lyme borreliosis	<i>Cervus elaphus</i>	yes	1				x
Italy	Lyme borreliosis	Roe deer (<i>Capreolus capreolus</i>)	yes	30				x
Italy	Lyme borreliosis	<i>Rupicapra rupicapra</i>	yes	1				x

USA	Lyme borreliosis	<i>Peromyscus maniculatus</i>	y - subclinical reservoir					
Ghana	Lyssavirus	Straw-colored fruit bat (<i>Eidolon helvum</i>)	y	endemic				x
France	Lyssavirus des chiroptères	<i>Eptesicus serotinus</i>	oui	3			Immunofluorescence	
Germany	Malignant Catharral Fever	Bovidae (zoo animal)	y	2			x	
Norway	Malignant Catharral Fever	<i>Alces alces</i>	yes	2	x	x		
Chinese Taipei	Malignant Catharral Fever	Formosan sika deer (<i>Cervus nippon taiouanus</i>)	yes	1			X	X
Sweden	Meningeal worms of cervides	Moose (<i>Alces alces</i>)	yes	1				
Canada	Meningeal worms of cervids	Moose <i>Alces alces</i>	yes	4			X	X
Canada	Meningeal worms of cervids	Moose <i>Alces alces</i>	yes	1			1	
Norway	Meningeal worms of cervids	<i>Cervus elaphus</i> , <i>Alces alces</i> , <i>Rangifer tarandus</i>	yes	10	x	x		
USA	Meningeal worms of cervids	<i>O. virginianus</i>	y - endemic and subclinical					
France	<i>Mycobacterium "dassie bacillus"</i>	<i>Procapra capensis</i>	oui	1	oui	oui	oui	non
France	<i>Mycobacterium microti/pinnipedii</i>	<i>Lutra lutra</i>	oui	1	oui	oui	ou	non
France	<i>Mycobacterium pinnipedii</i>	<i>Arctocephalus australis</i>	oui	2	oui	oui	oui	non
France	Myxomatose	<i>Oryctolagus cuniculus</i>	oui	10	oui	histo sur 1		
Australia	Myxomatosis	<i>Lepus europaeus</i> , <i>Oryctolagus cuniculus</i>	yes, endemic	2			ü	
Portugal	Myxomatosis	<i>Oryctolagus cuniculus</i>	yes	1			x	
UK	Myxomatosis	<i>Oryctolagus cuniculus</i>	yes	33		Y		
UK	Myxomatosis	<i>Oryctolagus cuniculus</i>	yes	50		Y		
UK	Myxomatosis	<i>Oryctolagus cuniculus</i>	yes	193		Y		
Italy	Newcastle Disease	<i>Alectoris rufa</i>	yes	19				x
Italy	Newcastle Disease	<i>Phasianus colchicus</i>	yes	18				x
Portugal	Newcastle Disease	<i>Anas sp.</i>	yes	4				x
South Africa	Newcastle disease	<i>Bucorvus leadbeateri</i>	yes	1		x	x	x
South Africa	Newcastle Disease	<i>Struthio camelus</i>	yes	2		x	x	x
Sudan	Newcastle Disease	Guinea fowl (<i>Meleagris</i>)	yes	300	x			
Turkey	Newcastle Disease	<i>Columba livia</i>	yes	7/5				
USA	Newcastle Disease	<i>Phalacrocorax auritus</i>	y	WI - 39				
Zimbabwe	Newcastle Disease	Ostrich (<i>Struthio camelus</i>)	yes	>10	x		x	x
Armenia	No diseases observed in wildlife							
Bulgaria	No diseases observed in wildlife							
Costa Rica	No diseases observed in wildlife							
Guinea Bissau	No diseases reported in wildlife							
Lesotho	No diseases reported in wildlife							
Marocco	No diseases reported in wildlife							
Mozambique	No diseases reported in wildlife							
Swaziland	No diseases reported in wildlife							
Vietnam	No diseases reported in wildlife							
Algeria	No report							
Angola	No report							
Argentina	No report							
Austria	No report							
Belarus	No report							
Benin	No report							
Bolivia	No report							
Boznia Herzeg	No report							
Brunei	No report							
Chile	No report							
Colombia	No report							
Congo	No report							
Cook islands	No report							
Croatia	No report							
Estonia	No report							
Ethiopia	No report							
Greece	No report							
Guatemala	No report							
Iceland	No report							
India	No report							
Ivory coast	No report							
Kenya	No report							
Kuwait	No report							
Luxembourg	No report							
Madagascar	No report							
Mauritius	No report							
Moldavia	No report							

Appendix IV (contd)

Netherlands	No report							
New Caledonia	No report							
New Zealand	No report							
Niger	No report							
Pakistan	No report							
Peru	No report							
Slovakia	No report							
Spain	No report							
Sri Lanka	No report							
Tanzania	No report							
Thailand	No report							
Tunisia	No report							
Uganda	No report							
Ukraine	No report							
Canada	Paramyxoviruses	Double crested cormorant (<i>Phalacrocorax auritus</i>)	yes	1			X	X
Canada	Paramyxoviruses	Pigeon <i>Columba livia</i>	yes	1			X	X
Norway	Paramyxoviruses	<i>Anas crecca</i>	no	1	x			
Philliphines	Paramyxoviruses	Flame breasted fruit dove (<i>Philinopus marche</i>)	yes	1	x			
Philliphines	Paramyxoviruses	North luzon slender tailed rat (<i>Phloemys pelldus</i>)	yes	10	x			
USA	Paramyxoviruses	Waterfowl APV-1	y - endemic					
Canada	Paramyxoviruses (Bat, Canine, Cetacean, Phocine)	Common dog (<i>Canis Familiaris</i>)	yes	4				
Canada	Paramyxoviruses (Bat, Canine, Cetacean, Phocine)	Opossum (<i>Didelphidae</i>)	yes	1			X	X
Canada	Paramyxoviruses (Bat, Canine, Cetacean, Phocine)	Raccoon (<i>Procyon lotor</i>)	yes	4			X	X
Canada	Paramyxoviruses (Bat, Canine, Cetacean, Phocine)	Skunk (<i>Mephitis mephitis</i>)	yes	4			X	X
Italy	Paramyxoviruses (Bat, Canine, Cetacean, Phocine)	Badger, <i>Meles meles</i>	yes	13		x	x	
Italy	Paramyxoviruses (Bat, Canine, Cetacean, Phocine)	Red Fox (<i>Vulpes vulpes</i>)	yes	37	x	x	x	
Italy	Paramyxoviruses (Bat, Canine, Cetacean, Phocine)	Wolf (<i>Canis lupus</i>)	yes	4				x
USA	Paramyxoviruses (Bat, Canine, Cetacean, Phocine)	Procyonids and canids	Y - Sporadic single cases and epizootics	Canine distemper: procyonids and canids				
UK	Paramyxoviruses Paramyxovirus 1	<i>Columbia livia</i>	yes	13	Y	Y	Y	
France	Paratuberculose	<i>Capreolus capreolus</i>	oui	1			PCR	
France	Paratuberculose	<i>Capreolus capreolus</i>	oui	4			Ziehl	
Germany	Paratuberculosis	Bovidae (zoo animal)	y	2			x	
Italy	Paratuberculosis	<i>Cervus elaphus</i>	yes	37		x		x
Italy	Paratuberculosis	<i>Cervus elaphus</i>	yes	2			x	
Italy	Paratuberculosis	Roe deer (<i>Capreolus capreolus</i>)	yes	3			x	x
Poland	Paratuberculosis	<i>Cervus elaphus</i>	yes	10				X
Poland	Paratuberculosis	<i>Oryx dammah</i>	yes	1		x	x	
Turkey	Paratuberculosis	<i>Ovis gmelinii anatolica</i>	yes	15/7	x	---	---	x
USA	Paratuberculosis	<i>Odocoileus virginianus</i>	Y - Florida Keys-Endemic;	Few deer				
UK	<i>Pasteurella multocida</i> + <i>Strep. equisimilis</i>	<i>Lutra lutra</i>	Yes	1 / 6		Y	Y	
France	Pasteurellose à <i>Mannheimia hemolytica</i>	<i>Capra ibex</i>	oui	2			culture	
France	Pasteurellose à <i>M. hemolytica</i>	<i>Capreolus capreolus</i>	oui	14			culture	
France	Pasteurellose à <i>M. hemolytica</i>	<i>Lepus europaeus</i>	oui	38			culture	
France	Pasteurellose à <i>M. hemolytica</i>	<i>Rupicapra rupicapra</i>	oui	6			culture	
France	Pasteurellose à <i>M. hemolytica</i>	<i>Sus scrofa</i>	oui	1			culture	
France	Pasteurellose à <i>Pasteurella multocida</i>	<i>Capreolus capreolus</i>	oui	6			culture	
France	Pasteurellose à <i>P. multocida</i>	<i>Lepus europaeus</i>	oui	29			culture	
France	Pasteurellose à <i>P. multocida</i>	<i>Pipistrellus pipistrellus</i>	oui	1			culture	
France	Pasteurellose à <i>P. multocida</i>	<i>Rupicapra rupicapra</i>	oui	2			culture	
France	Pasteurellose à <i>P. multocida</i>	<i>Sus scrofa</i>	oui	3			culture	
France	Pasteurellose à <i>P. multocida</i>	<i>Vulpes vulpes</i>	oui	2			culture	
France	Pasteurellose à <i>P. pneumotropica</i>	<i>Lepus europaeus</i>	oui	7			culture	
France	Pasteurellose à <i>Pasteurella sp.</i>	<i>Capra ibex</i>	oui	1			culture	

France	Pasteurellose à <i>Pasteurella</i> sp.	<i>Capreolus capreolus</i>	oui	6				culture	
France	Pasteurellose à <i>Pasteurella</i> sp.	<i>Lepus europaeus</i>	oui	10				culture	
France	Pasteurellose à <i>Pasteurella</i> sp.	<i>Oryctolagus cuniculus</i>	oui	1				culture	
France	Pasteurellose à <i>Pasteurella</i> sp.	<i>Rupicapra rupicapra</i>	oui	5				culture	
France	Pasteurellose à <i>P.a trehalosi</i>	<i>Lepus europaeus</i>	oui	1				culture	
France	Pasteurellose à <i>P. trehalosi</i>	<i>Rupicapra rupicapra</i>	oui	1				culture	
Czech Rep.	Pasteurellosis	<i>Phasianus colchicus</i>	yes	1					
Denmark	Pasteurellosis	European brown hare (<i>Lepus europaeus</i>)	yes	4				x	
Denmark	Pasteurellosis	Roe deer (<i>Capreolus capreolus</i>)	yes	1				x	
Finland	Pasteurellosis	Mountain hare (<i>Lepus timidus</i>)	yes	4			x	x	
Finland	Pasteurellosis	Rabbit (<i>Oryctolagus cuniculus</i>)		1			x	x	
Finland	Pasteurellosis	Ruff (<i>Philomachus pugnax</i>)		1			x	x	
France	Pasteurellosis	<i>Bubulcus ibis</i>	oui	3					culture
France	Pasteurellosis	<i>Columba palumbus</i>	oui	2					culture
France	Pasteurellosis	<i>Cygnus olor</i>	oui	1					culture
France	Pasteurellosis	<i>Gallinula chloropus</i>	oui	1					culture
Italy	Pasteurellosis	<i>Lepus europaeus</i>	yes	28	x			x	
Italy	Pasteurellosis	<i>Oryctolagus cuniculus</i>	yes	1				x	
Italy	Pasteurellosis	<i>Ovis musimon</i>	yes	4				x	
Italy	Pasteurellosis	<i>Phasianus colchicus</i>	yes	2				x	
Italy	Pasteurellosis	Roe deer (<i>Capreolus capreolus</i>)	yes	1				x	
Italy	Pasteurellosis	<i>Rupicapra rupicapra</i>	yes	2				x	
Italy	Pasteurellosis	<i>Sus scrofa meridionalis</i>	yes	2				x	
Myanmar	Pasteurellosis	Asian Elephant (<i>Elaphus maximus</i>)	yes	2	x	x	x	x	
Myanmar	Pasteurellosis	Serow (<i>Capricornis</i> sp)	yes	1	x	x	x	x	
Myanmar	Pasteurellosis	Snake (<i>Niga</i> sp)	yes	1	x	x	x	x	
Namibia	Pasteurellosis	Black Rhino (<i>Diceros bicornis</i>)	yes	1					♫
Poland	Pasteurellosis	<i>Branta leucopsis</i>	yes	1	1	x	x	x	
Portugal	Pasteurellosis	<i>Columba livia</i>	yes	8				x	
Portugal	Pasteurellosis	<i>Phyllopteryx taeniolatus</i>	yes	5				x	
Portugal	Pasteurellosis	Parrot	yes	1				x	
Portugal	Pasteurellosis	<i>Tragelaphus angasii</i>	yes					x	
Slovenia	Pasteurellosis	<i>Lepus europaeus</i>	yes	1					X
South Africa	Pasteurellosis	<i>Aepyceros melampus</i>	yes	2		x	x	x	
Sweden	Pasteurellosis	Lynx (<i>Lynx lynx</i>)	yes	1				x	
Sweden	Pasteurellosis	Wolf (<i>Canis lupus</i>)	yes	1				x	
Chinese Taipei	Pasteurellosis	Red necked wallaby (<i>Macropus rufogriseus</i>)	yes	1				X	X
UK	Pasteurellosis (<i>P. multocida</i>)	<i>Pipistrellus pipistrellus</i>	yes	1				Y	
UK	Pasteurellosis (<i>P. multocida</i>)	<i>Carduelis spinus</i> , <i>Passer domesticus</i>	yes	2 / 2	No	x	y	y	No
Sudan	Peste de Petits Ruminants	Reedbuck (<i>Redunca</i> sp)	yes	outbreak	x				x
France	Pestivirus	<i>Rupicapra rupicapra</i>	oui	2					oui: viropositifs à Liège (B)
France	Pestivirus	<i>Rupicapra rupicapra</i> , <i>Ovis gmelini musimon</i>	oui dans les Hautes-Alpes et les Pyrénées	30% séropos					oui
Andorra	Pestiviruses	<i>Rupicapra pyrenaica</i>	no						
Italy	Pestiviruses	<i>Cervus elaphus</i>	yes	1					x
Italy	Pestiviruses	Roe deer (<i>Capreolus capreolus</i>)	yes	1				x	x
UK	Pigeon Paramyxovirus 1 (PPMV-1)	<i>Columba livia</i>	yes	two	y	y			
Canada	PMV-1	American black duck <i>Anas rubripes</i>	yes	4					X
Canada	PMV-1	Green winged teal <i>Anas crecca</i>	yes	4					X
Canada	PMV-1	Mallard <i>Anas platyrhynchos</i>	yes	1					X
Czech Rep.	Pseudotuberculosis	<i>Capreolus capreolus</i>	yes	4					
Czech Rep.	Pseudotuberculosis	<i>Lepus europaeus</i>	yes	5					
Denmark	Pseudotuberculosis	Badger (<i>Meles meles</i>)	yes	1				x	
Denmark	Pseudotuberculosis	European brown hare (<i>Lepus europaeus</i>)	yes	2				x	
Denmark	Pseudotuberculosis	Roe deer (<i>Capreolus capreolus</i>)	yes	3				x	
Finland	Pseudotuberculosis	European brown hare (<i>Lepus europaeus</i>)		9			x	x	
Finland	Pseudotuberculosis	Mountain hare (<i>Lepus timidus</i>)		2			x	x	
Finland	Pseudotuberculosis	White tailed deer (<i>Odocoileus virginianus</i>)	yes	1			x	x	
Germany	Pseudotuberculosis	Leporidae	yes	1				x	x
Italy	Pseudotuberculosis	<i>Dama dama</i>	yes	1			x	x	
Italy	Pseudotuberculosis	<i>Lepus europaeus</i>	yes	15			x	x	
Italy	Pseudotuberculosis	<i>Rupicapra rupicapra</i>	yes	8				x	
UK	Pseudotuberculosis	<i>Lepus europeaus</i>	yes	1			Y	Y	
France	Pseudotuberculose à <i>Yersinia pseudotuberculosis</i>	<i>Castor fiber</i>	oui	1					culture
France	Pseudotuberculose à <i>Yersinia pseudotuberculosis</i>	<i>Lepus europaeus</i>	oui	35					culture

Appendix IV (contd)

France	Pseudotuberculose à <i>Yersinia pseudotuberculosis</i>	<i>Oryctolagus cuniculus</i>	oui	1			culture	
France	Pseudotuberculose à <i>Yersinia pseudotuberculosis</i>	<i>Perdrix perdrix</i>	oui	1			culture	
France	Pseudotuberculose à <i>Yersinia pseudotuberculosis</i>	<i>Sciurus vulgaris</i>	oui	2			culture	
Canada	Pseudotuberculosis	Blue jay <i>Cyanocitta cristata</i>	yes	1			X	X
UK	Pseudotuberculosis	<i>Fringilla coelebs</i> , <i>Sylvia atricapilla</i> and <i>Hirundo rustica</i>	yes	3	No	y	y	No
France	Psoroptic Mange	<i>Vulpes vulpes</i>	oui	1			examen	
Myanmar	Psoroptic Mange	Asian Elephant (<i>Elaphus maximus</i>)	yes	9			x	
South Africa	Psoroptic Mange	African buffalo (<i>Syncerus caffer</i>)	yes	3		x	x	
Sudan	Psoroptic Mange	Oribi gazelle	yes	endemic	x			
Sudan	Psoroptic Mange	Reedbuck (<i>Redunca</i> sp)	yes	endemic	x			
USA	Psoroptic Mange	Big horn sheep	yes					
France	Q fever	<i>capra ibex</i>	oui	2				elisa
Germany	Q-fever	Bovidae (zoo animal)	yes	3			x	x
Italy	Q-fever	<i>Canis lupus</i>	yes	2				x
Italy	Q-fever	<i>Cervus elaphus</i>	yes	2				x
Italy	Q-fever	Roe deer (<i>Capreolus capreolus</i>)	yes	1				x
Italy	Q-fever	<i>Ursus arctos marsicanus</i>	yes	1				x
Italy	Q-fever	<i>Vulpes vulpes</i>	yes	1			x	
Chinese Taipei	Q-fever	Formosan sambar (<i>Cervus unicolor swinhoei</i>)	yes	2				X
Albania	Rabbit Haemorrhagic Disease	European rabbit (<i>Oryctolagus cuniculus</i>)	yes	5			x	
Australia	Rabbit Haemorrhagic Disease	<i>Oryctolagus cuniculus</i>	endemic					
Cyprus	Rabbit Haemorrhagic Disease	Rabbit (<i>Oryctolagus cuniculus</i>)	yes	47			x	x
France	Rabbit Haemorrhagic Disease	<i>Oryctolagus cuniculus</i>	oui	10	oui	oui		ELISA Ag
Italy	Rabbit Haemorrhagic Disease	<i>Eryctolagus cuniculus</i>	yes	5				x
Italy	Rabbit Haemorrhagic Disease	<i>Lepus europaeus</i>	yes	32				x
Sweden	Rabbit Haemorrhagic Disease	Wild rabbit (<i>Oryctolagus cuniculus</i>)	yes	endemic				
Botswana	Rabies	Black backed jackal (<i>Canis mesomelas</i>)	yes	3				
Botswana	Rabies	Common duiker	yes	1		X		X
Botswana	Rabies	Genet, Caracal	yes	1				
Botswana	Rabies	Honey badger (<i>Mellivora capensis</i>)	yes	1				
Botswana	Rabies	Mongoose (unspecified)	yes	1				
Botswana	Rabies	Wild cat (<i>Felis silvestris</i>)	yes	2				
Brazil	Rabies	Canído salvaje	yes	4				
Brazil	Rabies	Quiróptero	yes	102				
Brazil	Rabies	Raposa (<i>Canis</i> sp)	yes	25				
Brazil	Rabies	Sagui (<i>Callitrichidae</i> sp)	yes	7				
Iran	Rabies	<i>Canis aureus</i>	yes	3	x	x	x	
Iran	Rabies	<i>Gazella dorcas</i>	yes	1	x	x	x	
Iran	Rabies	<i>Panthera pardus</i>	yes	1	x	x	x	
Iran	Rabies	Red Fox (<i>Vulpes vulpes</i>)	yes	12	x	x	x	
Iran	Rabies	Wolf (<i>Canis lupus</i>)	yes	27	x	x	x	
Israel	Rabies	<i>Canis aureus</i>	yes	1		y	y	
Israel	Rabies	<i>Herpestes ichneumon</i>	yes	1		y	y	
Israel	Rabies	<i>Vulpes vulpes</i>	yes	4		y	y	
Latvia	Rabies	<i>Lutra lutra</i>	yes	1				+
Latvia	Rabies	<i>Martes martes</i>	yes	4				+
Latvia	Rabies	<i>Meles meles</i>	yes	3				+
Latvia	Rabies	<i>Mustela lutreola</i>	yes	1				+
Latvia	Rabies	<i>Mustela nivalis</i>	yes	2				+
Latvia	Rabies	<i>Mustela putorius</i>	yes	5				+
Latvia	Rabies	<i>Nyctereutes procyonides</i>	yes	33				+
Latvia	Rabies	Roe deer (<i>Capreolus capreolus</i>)	yes	1				+
Latvia	Rabies	<i>Vulpes vulpes</i>	yes	95				+
Lithuania	Rabies	Badger, <i>Meles meles</i>	yes	2				
Lithuania	Rabies	European beaver (<i>Castor fiber</i>)	yes	1				
Lithuania	Rabies	Marten (<i>Martes foina</i>)	yes	25				
Lithuania	Rabies	Musk rat (<i>Ondatra zibethicus</i>)	yes	1				
Lithuania	Rabies	Otter, <i>Lutra lutra</i>	yes	1				
Lithuania	Rabies	Polecat (<i>Mustela putorius</i>)	yes	13				
Lithuania	Rabies	Raccoon dog, <i>N procyonides</i>	yes	122				
Lithuania	Rabies	Red fox, <i>Vulpes vulpes</i>	yes	142				
Lithuania	Rabies	Roe deer (<i>Capreolus capreolus</i>)	yes	5				
Lithuania	Rabies	Squirrel (<i>Squirus vulgaris</i>)	yes	1				
Namibia	Rabies	Antelope	yes	1				♪
Namibia	Rabies	Jackal (<i>Canis mesomelas</i>)	yes	11				♪
Namibia	Rabies	Kudu (<i>Tragelaphus strepsiceros</i>)	yes	70				♪
Namibia	Rabies	Mongoose (<i>Suricata suricatta</i>)	yes	2				♪

Namibia	Rabies	Oryx (<i>Taurotragus oryx</i>)	yes	3					♫
Poland	Rabies	Chiroptera	yes	2					
Poland	Rabies	<i>Eptesicus serotinus</i>	yes	1					
Poland	Rabies	<i>Martes foina</i>	yes	1					
Poland	Rabies	<i>Meles meles</i>	yes	1					
Poland	Rabies	<i>Mustela nivalis</i>	yes	1					
Poland	Rabies	<i>Nyctereutes procyonoides</i>	yes	7			x	x	
Poland	Rabies	<i>Vulpes vulpes</i>	yes	42					
Serbia	Rabies	Marten (<i>Martes martes</i>)	yes	1			x		x
Serbia	Rabies	Red fox (<i>Vulpes vulpes</i>)	yes	13			x		x
Serbia	Rabies	Weasel (<i>Mustela nivalis</i>)	yes	1			x		x
Slovenia	Rabies	<i>Vulpes vulpes</i>	yes	3					X
South Africa	Rabies	<i>Canis adustus</i>	yes	2			x	x	
South Africa	Rabies	<i>Canis mesomelas</i>	yes	14			x	x	
South Africa	Rabies	<i>Crocuta crocuta</i>	yes	2			x	x	
South Africa	Rabies	<i>Cynictus penicillata</i>	yes	12			x	x	
South Africa	Rabies	<i>Equus burchelli</i>	yes	1			x	x	
South Africa	Rabies	<i>Felis lybica</i>	yes	1			x	x	
South Africa	Rabies	<i>Herpestes sanguinia</i>	yes	2			x	x	
South Africa	Rabies	<i>Otocyon megalotis</i>	yes	15			x	x	
South Africa	Rabies	<i>Proteles cristata</i>	yes	2			x	x	
South Africa	Rabies	<i>Suricata suricata</i>	yes	7			x	x	
South Africa	Rabies	<i>Taurotragus oryx</i>	yes	1			x	x	
South Africa	Rabies	<i>Vulpes chama</i>	yes	2			x	x	
Turkey	Rabies	<i>Canis lupus</i>	yes						
Turkey	Rabies	<i>Meles meles</i>	yes						
Turkey	Rabies	<i>Vulpes vulpes</i>	yes	1,1,1				x	
USA	Rabies	Bats and carnivores	Y - Endemic						
Zambia	Rabies	Jackal	Yes	1				X	
Zimbabwe	Rabies	Baboon (<i>Papio</i> sp)	yes	1		x			
Zimbabwe	Rabies	Jackals sp.	yes	4		x			
Zimbabwe	Rabies	Spotted hyena	yes	1		x			
Zimbabwe	Rabies	Wild dogs	yes	2 packs		x			
Canada	Rabies ³	Big brown bat <i>Eptesicus fuscus</i>	yes	85				X	X
Canada	Rabies ³	Raccoon <i>Procyon lotor</i>	yes	53					
Canada	Rabies ³	Red fox <i>Vulpes vulpes</i>	yes	8				X	X
Canada	Rabies ³	Skunk <i>Mephitis mephitis</i>	yes	50					X
UK	Rana virus - significance uncertain	<i>Triturus vulgaris</i>	yes	1			Y	Y PCR	
Portugal	salmonella	Pigeon <i>Columba livia</i>	yes	8				x	
Portugal	salmonella	reptiles	yes	9				x	
Portugal	salmonella	canards (<i>Anas</i> sp)	yes	2				x	
Portugal	salmonella	lemur	yes	1				x	
Portugal	salmonella	greater koudou	yes	1				x	
France	Salmonellose à <i>Salmonella</i> O 4,5	<i>Carduelis chloris</i>	oui	5				culture	
France	Salmonellose à <i>Salmonella</i> O 4,5	<i>Fringilla coelebs</i>	oui	1				culture	
France	Salmonellose à <i>S. arizonae</i>	<i>Buteo buteo</i>	oui	1				culture	
France	Salmonellose à <i>S. coeln</i>	<i>Serinus serinus</i>	oui	4				culture	
France	Salmonellose à <i>S. enteritidis</i>	<i>Cygnus olor</i>	oui	1				culture	
France	Salmonellose à <i>Salmonella</i> groupe B	<i>Carduelis spinus</i>	oui	2				culture	
France	Salmonellose à <i>S. groupe B</i>	<i>Carduelis chloris</i>	oui	2				culture	
France	Salmonellose à <i>Salmonella</i> sp.	<i>Bubo bubo</i>	oui	1				culture	
France	Salmonellose à <i>Salmonella</i> sp.	<i>Buteo buteo</i>	oui	1				culture	
France	Salmonellose à <i>Salmonella</i> sp.	<i>Carduelis spinus</i>	oui	8				culture	
France	Salmonellose à <i>Salmonella</i> sp.	<i>Carduelis chloris</i>	oui	8				culture	
France	Salmonellose à <i>Salmonella</i> sp.	<i>Coccothraustes coccothraustes</i>	oui	2				culture	
France	Salmonellose à <i>Salmonella</i> sp.	<i>Fringilla coelebs</i>	oui	1				culture	
France	Salmonellose à <i>Salmonella</i> sp.	<i>Serinus serinus</i>	oui	1				culture	
France	Salmonellose à <i>Salmonella</i> sp.	<i>Streptopelia decaocto</i>	oui	1				culture	
France	Salmonellose à <i>Salmonella</i> sp.	<i>Sturnus vulgaris</i>	oui	1				culture	
France	Salmonellose à <i>S. typhimurium</i>	<i>Carduelis spinus</i>	oui	5				culture	
France	Salmonellose à <i>S. typhimurium</i>	<i>Carduelis carduelis</i>	oui	1				culture	
France	Salmonellose à <i>S. typhimurium</i>	<i>Carduelis chloris</i>	oui	8				culture	
France	Salmonellose à <i>S. typhimurium</i>	<i>Passer domesticus</i>	oui	4				culture	

Appendix IV (contd)

Australia	Salmonellosis	<i>Bufo marinus</i> , <i>Litoria caerulea</i> , <i>Setonix brachyurus</i> , <i>Macropus giganteus giganteus</i> , <i>Tiliqua scincoides scincoides</i> , <i>Varanus varius</i> , <i>Tiliqua nigrolutea</i> , <i>Egernia major</i> , <i>Cavia porcellus</i> , <i>Notomys alexia</i> , <i>Oxyuranus microlepidota</i> , <i>Boiga irregularis</i> , <i>Notechis scutatus</i> , <i>Pseudechis porphyriacus</i> , <i>Austrelaps superbus</i> , <i>Pseudonaja textilis</i> , <i>Morelia bredli</i> , <i>Morelia spilotes variegata</i> , <i>Morelia spilotes spilotes</i> , <i>Liasis childreni</i> , <i>Hoplocephalus bungaroides</i> , <i>Physignathus lesueurii howittii</i> , <i>Pogona barbata</i> , <i>Pogona vitticeps</i> , <i>Trachydosaurus rugosus</i>	yes	79				ü	
Canada	Salmonellosis	American robin <i>Turdus migratorius</i>	yes	1				X	X
Canada	Salmonellosis	Gulls <i>Laridae</i>	yes	6				X	X
Canada	Salmonellosis	Herring gull <i>Larus argentatus</i>	yes	2				X	X
Canada	Salmonellosis	House sparrow <i>Passer domesticus</i>	yes	21				X	X
Canada	Salmonellosis	Raccoon <i>Procyon lotor</i>	yes	1				X	X
Canada	Salmonellosis	Ring-billed gull <i>Larus delawarensis</i>	yes	4				X	X
Canada	Salmonellosis	Songbirds Passeriformes	yes	13				X	X
Czech Rep.	Salmonellosis	<i>Phasianus colchicus</i>	yes	3					
Czech Rep.	Salmonellosis	<i>Sqiuus vulgaris</i>	yes	2					
Denmark	Salmonellosis	Brambling (<i>Fringilla montifringilla</i>)	yes	1				x	
Denmark	Salmonellosis	Greenfinch (<i>Carduelis chloris</i>)	yes	3				x	
Denmark	Salmonellosis	Hedgehog (<i>Erinaceus europaeus</i>)	yes	17				x	
Denmark	Salmonellosis	Herring gull (<i>Larus argentatus</i>)	yes	1				x	
Denmark	Salmonellosis	Scarlet (<i>Carpodacus erythrinus</i>)	yes	2				x	
Denmark	Salmonellosis	Siskin (<i>Carduelis spinus</i>)	yes	9				x	
Denmark	Salmonellosis	Tree sparrow (<i>Passer montanus</i>)	yes	2				x	
Finland	Salmonellosis	Bullfinch (<i>Pyrrhula pyrrhula</i>)		3			x	x	
Finland	Salmonellosis	<i>Carduelis chloris</i>		2			x	x	
Finland	Salmonellosis	<i>Carduelis flammea</i>		25			x	x	
Finland	Salmonellosis	<i>Carduelis spinus</i>		2			x	x	
Finland	Salmonellosis	Eurasian jay (<i>Garrulus glandarius</i>)		1			x	x	
Finland	Salmonellosis	Hedgehog (<i>Erinaceus europaeus</i>)		2			x	x	
Finland	Salmonellosis	<i>L. ridibundus</i>		1			x	x	
Finland	Salmonellosis	<i>Larus argentatus</i>		15			x	x	
Finland	Salmonellosis	Lynx (<i>Lynx lynx</i>)	yes	1			x	x	
Finland	Salmonellosis	<i>Parus major</i>		1			x	x	
Germany	Salmonellosis	<i>Dama</i>	yes	1				x	x
Germany	Salmonellosis	<i>Erinaceidae</i>	yes	3				x	x
Germany	Salmonellosis	<i>Meles</i>	yes	1				x	x
Germany	Salmonellosis	<i>Mustela</i>	yes	1				x	x
Germany	Salmonellosis	Non human primates	yes	2				x	x
Germany	Salmonellosis	Roe deer (<i>Capreolus capreolus</i>)	yes	1				x	x
Germany	Salmonellosis	<i>Sus scrofa</i>	yes	3				x	x
Germany	Salmonellosis	Wild bird species	yes	7				x	x
Germany	Salmonellosis	<i>Vulpes</i>	yes	2				x	x
Italy	Salmonellosis	Birds	yes	2				x	
Italy	Salmonellosis	<i>Cervus elaphus</i>	yes	1				x	
Italy	Salmonellosis	<i>Cervus elaphus corsicanus</i>	yes	4					x
Italy	Salmonellosis	<i>Coturnix coturnix</i>	yes	1				x	
Italy	Salmonellosis	<i>Dama dama</i>	yes	2					x
Italy	Salmonellosis	<i>Larus argentarius</i>	yes	1			x	x	
Italy	Salmonellosis	<i>Lutra lutra</i>	yes	1			x	x	
Italy	Salmonellosis	<i>Martes martes</i>	yes	1				x	
Italy	Salmonellosis	<i>Meles meles</i>	yes	1				x	
Italy	Salmonellosis	<i>Ovis musimon</i>	yes	2					x
Italy	Salmonellosis	<i>Passer domesticus</i>	yes	2				x	
Italy	Salmonellosis	Roe deer (<i>Capreolus capreolus</i>)	yes	2				x	
Italy	Salmonellosis	<i>Sturnus vulgaris</i>	yes	1				x	
Italy	Salmonellosis	<i>Sus scrofa</i>	yes	120				x	
Italy	Salmonellosis	<i>Vulpes vulpes</i>	yes	3				x	
Myanmar	Salmonellosis	Asian Elephant (<i>Elaphus maximus</i>)	yes	4		x	x	x	
Norway	Salmonellosis	Passeriformes	yes	79		x	x		
Philliphines	Salmonellosis	Rufous hornbill (<i>Bruceros hydrocorax</i>)	yes	1		x			
Philliphines	Salmonellosis	Tarctic hornbill (<i>Penelopides panini</i>)	yes	1		x	x		
Poland	Salmonellosis	<i>Pelecanus crispus</i>	yes	1		2		x	
Poland	Salmonellosis	<i>Tetraogallus himalayensis</i>	yes	1					
Switzerland	Salmonellosis	Hedgehog (<i>Erinaceus europaeus</i>)	yes	1				x	
Chinese Taipei	Salmonellosis	Red-bellied parrot (<i>Poicephalus rufiventris</i>)	yes	1				X	X
UK	Salmonellosis	<i>Carduelis carduelis</i>	yes	1 / 3				Y	Y

