



bulletin

No. 2015 - 1

Food safety

Oie

Protecting animals, preserving our future • World Organisation for Animal Health



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The OIE alongside WHO to ensure food safety

In 2015 – as every year since its creation by the World Health Organization (WHO) in 1950 – World Health Day is celebrated on 7 April. The OIE is delighted to join in this event alongside its international partner, on the theme chosen for 2015: food safety.

In this era of globalisation, ensuring the safety and wholesomeness of food is more than ever a key issue for all countries. World demand for animal protein (milk, eggs, meat) is set to rise by an estimated 70% by the year 2050¹. To be able to meet this demand, while ensuring the safety of food of animal origin, it is crucial to control pathogens at their source in animals. Eliminating or controlling food hazards at source (i.e. a preventive approach) is a more effective and less costly means of eliminating the risk of unwanted health effects, particularly human health effects, than relying on control of the final product (i.e. a final 'quality check' approach).

To this end, since 2002, the OIE has been developing, adopting and publishing standards on 'animal production food safety'. These standards are primarily aimed at eliminating potential hazards that exist prior to the slaughter of animals or the primary processing of their products (meat, milk, eggs, etc.) that could be a source of risk for consumers. The OIE's Reference Centres for food safety also provide essential expertise for the development of science-based standards.

Synergies between the standard-setting activities of the OIE and those of the Codex Alimentarius Commission are ensured and further strengthened

Eliminating or controlling food hazards at source is a more effective and less costly means of eliminating the risk of unwanted health effects, particularly human health effects, than relying on control of the final product

by a permanent OIE Working Group on Animal Production Food Safety, which operates in coordination with senior representatives of the Codex, FAO and WHO.

Food safety and quality are best assured by an integrated, multidisciplinary approach all along the food chain. It is essential to create links between the food production, processing and consumption phases, within the framework of a 'farm to fork' approach.

¹ FAO source: www.fao.org/animal-health/en/ (as at 28 February 2015)

The education and training that veterinarians receive, covering both animal health (including zoonoses) and food hygiene, make them well equipped to play a central role, in collaboration with other professionals, in ensuring the sanitary safety of food of animal origin. Veterinary Services are therefore often responsible for food safety controls at the national level, throughout the food chain. Veterinary Services are present at the farm level to ensure that animals are kept under good conditions of hygiene and welfare and they play a role in the early detection, effective surveillance and rapid control of animal diseases. They are present at abattoirs to inspect live animals (ante mortem) and carcasses (post mortem). They are involved in sanitary certification, to attest that products for national consumption or for export meet animal health and food safety standards, and they may also carry out inspection activities related to transport, distribution and catering.

Yet, many countries, especially developing countries, still lack the necessary legislative framework and financial and human resources to maintain fully functional animal health systems and Veterinary Services. This is an alarming situation, as in many parts of the world animal production is the main source of income for the majority of the rural population, many of whom meet the criteria for poverty. In recently published papers, available for consultation in the *OIE Scientific and Technical Review*, Volume 33 (3), the OIE provides evidence of the link between improving animal health, improving livestock productivity and reducing poverty. They emphasise the need to allocate additional resources to animal health systems to improve animal health management worldwide. Such support would have a direct impact on the economic situation of poor

WHO's choice of food safety as the theme for World Health Day 2015 provides an excellent opportunity to highlight the importance of the much-needed strengthening of animal

livestock keepers and their access to healthy food in sufficient quantities but also on the political and economic stability of countries.

Furthermore, animals (whether wild or domestic, terrestrial or aquatic) act as sentinels of the health of the ecosystems in which they live. Animal production food safety is also directly impacted by the quality of inputs of production systems, such as water quality, the composition and sanitary safety of animal feedstuffs, and good farming practices. Prudent use of antibiotics, vaccines, antiparasitics and other veterinary medicinal products is also an integral aspect of good management of food-producing animals to ensure that food of animal origin is healthy and of good quality. It should be noted that veterinary supervision is essential to prevent antimicrobial resistance, as about 70% of the antimicrobials used in food-producing animals on farms are administered directly by non-specialists.

Against this background, the OIE supports its Member Countries day after day through programmes to strengthen national competencies and through the PVS Pathway, which includes the evaluation of the performance of Veterinary Services. These

2 Pradère J.-P. (2014). – Improving animal health and livestock productivity to reduce poverty. *Rev. sci. tech. Off. int. Epiz.*, **33** (3), 723-734

Pradère J.-P. (2014). – Links between livestock production, the environment and sustainable development. *Rev. sci. tech. Off. int. Epiz.* **33** (3), 745-763

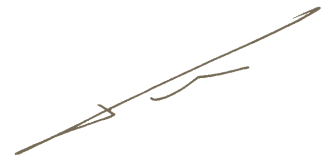


health systems, and especially the Veterinary Services, to enable them to prevent health hazards linked to food products of animal origin by eliminating them at the primary production stage

tools are made available to Member Countries and are intended to strengthen animal health systems worldwide, thereby promoting sustainable food security and food safety, from a public health but also an environmental health perspective. Furthermore, each of the OIE's 180 National Delegates is encouraged to designate a Focal Point on Animal Production Food Safety, to support them in this field and help them to monitor more closely the preparation and implementation of international standards at the national level. Together, these National Focal Points on Animal Production Food Safety form a high-quality global network on this topic.

WHO's choice of food safety as the theme for World Health Day 2015 therefore provides an excellent opportunity to highlight the importance of the much-needed strengthening

of animal health systems, and especially Veterinary Services, to enable them to prevent health hazards linked to food products of animal origin by eliminating them at the primary production stage. This preventive approach must be accompanied by close collaboration with the various professionals in the food chain, from the producer to the distributor. The launch of this year's theme is being celebrated on 7 April, but related international, regional and national activities and events will continue throughout 2015.

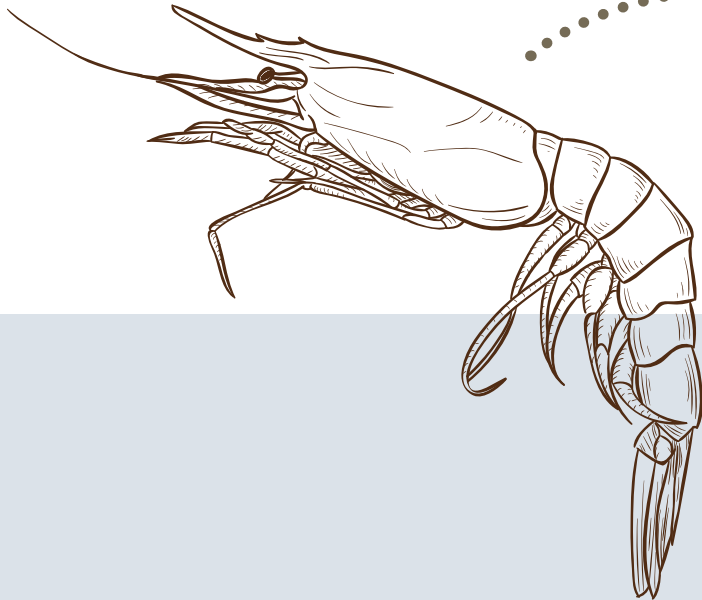


Bernard Vallat
Director General



Terrestrial Animal Health Code

- The role of the Veterinary Services in food safety (Chapter 6.1.)
- Control of biological hazards of animal health and public health importance through ante- and post-mortem meat inspection (Chapter 6.2.).



The importance of Veterinary Services for public health and consumer safety

The decision of Dr Margaret Chan, Director General of the World Health Organization (WHO), to choose 'Food Safety' as the theme of World Health Day on 7 April 2015 highlights the vital importance of the OIE's collaboration with WHO and the Codex Alimentarius Commission to align science-based standards for food safety during animal production with those applied for the protection of public health.

World Health Day presents an important opportunity to demonstrate the crucial role that Veterinary Services play in food safety at the national level, and their relationship with national health services through veterinary public health activities and meat inspection. Since food safety is also a prerequisite for nutrition and food security, the important contribution of Veterinary Services to





productivity, economic performance and development should also be brought to the forefront.

With the current reality of global supply chains and the increasing demand for animal protein, food safety is both a challenge and a responsibility which is taken very seriously by the OIE on behalf of its Members.

The inclusion of food safety as a priority task under the OIE's Third Strategic Plan (2001–2005), adopted in May 2000, was truly timely as it recognised *that the OIE should be more active in the area of public health and consumer protection by offering its competence in the field of zoonoses and diseases transmissible to humans through food, whether or not animals are affected by such diseases and that such interventions should be carried out in consultation with the World Health Organization and the Codex Alimentarius and cover all factors that could be the source of zoonoses.*

Food-borne zoonoses are an important area of the OIE's activities, given that the determinants of food safety are very broad and also include potential chemical and biological toxins and radio-nuclear contamination, as well as allergens, all of which can pose significant health challenges for the consuming public.

Terrestrial and aquatic animals and wildlife are, of course, sentinels of ecosystem health. Consequently, the safety of products derived from animals for human consumption is heavily influenced by the inputs into animal production. These include water quality, the composition and safety of animal feedstuffs, and husbandry practices, such as the prudent use of antibiotics, anthelmintics and other therapeutants.

In addition, new technologies continue to emerge that need to be assessed for their food safety impacts, both by the



Codex Alimentarius, in terms of human consumption, and by the OIE, at the level of animal production.

One such technology is biological fortification or 'biofortification', as it is more commonly known. While crops that may be consumed directly by humans or incorporated into animal feeds have traditionally been developed to improve pest or drought resistance, efforts are now well advanced to develop new crops with increased micronutrient content, including iron, zinc, selenium and vitamin A, to combat anaemia, stunting, immune system dysfunction and vision impairment.

While the primary beneficiary is human health through the direct consumption of biofortified plants, vegetables and cereals, attention is increasingly being turned to assessing the potential for including such biofortified crops or their by-products into animal feeds, to obtain animal products with similar nutritional and health benefits for human consumption. The most common commercial product to date is Omega 3 eggs.

Consequently, the OIE is in the preliminary stages of reviewing the potential for biofortification to become a regulatory issue, which could have a significant effect on the safe international movement of food products derived from animals. What role, if any, should the OIE play in providing science-based guidance for animal production if the Codex Alimentarius goes ahead with developing biofortification standards for human food?

The theme of World Health Day recognises that food safety is part of a continuum of risk management that requires integrated efforts, not only on the part of international organisations but also from those who 'use' nature, hunters, fishermen, producers, abattoirs, transporters, processors, retailers, the food service industry and consumers.

It also reminds us that, while our historic and current activities remain very relevant, the OIE and its worldwide network of Reference Centres must also be ever-vigilant to new and emerging sciences and their application.

new OIE publications



Trilingual publication

April 2015

29.7 x 21 cm

300 pages

ISBN 978-92-9044-979-9

Price: EUR 70

New developments in major vector-borne diseases Part One: An overview

Scientific and Technical Review, Vol. 34 (1)

*Coordinators and editors: S. Zientara,
D. Verwoerd & P.-P. Pastoret*

This issue of the *Scientific and Technical Review* is the first of two issues on vector-borne diseases. It focuses on the most important arthropod vectors (insects and ticks) and describes their taxonomy, biology, competence and development. It begins by defining 'vector', 'vector-borne disease' and 'emerging disease' and provides explanations that are in line with OIE standards. The zoonotic risks of infections transmitted by arthropod vectors are also discussed, as is the genetic resistance of certain vertebrate hosts to infection. In addition, this issue considers the influence of climatic and anthropogenic changes on the distribution of vectors and the infections they transmit. The last part of this issue focuses on surveillance and control methods for these infections.



In English

2015

29.7 x 21 cm

184 pages

ISBN 978-92-9044-985-0

Price: EUR 25

Veterinary Education and the Role of the Veterinary Statutory Body Ensuring excellence and ethics of the Veterinary Profession

Proceedings of the OIE Global Conference Foz do Iguaçu, Brazil, 4–6 December 2013

The Conference, attended by over 1,000 participants from over 100 countries, addressed the need for better global harmonisation and quality of veterinary education worldwide, based on OIE guidelines. It also focused on strengthening the role of Veterinary Statutory Body (VSBs) in regulating veterinarians and veterinary paraprofessionals, ensuring their quality and ethics.

These proceedings incorporate the text of the 26 papers presented by internationally renowned experts. These manuscripts confirm the essential role of VSBs in regard to veterinary registration and accreditation of Veterinary Education Establishments, at national, regional, and global level, and support the OIE guidelines promoting quality veterinary education. They also confirm the need for sustainable investment in veterinary education to strengthen the performance of the national Veterinary Services and to meet the growing demand for qualified veterinarians.

Applying OIE standards and recommendations on Veterinary Education and VSB's ensures quality in the delivery of professional services, increases credibility of the Veterinary Services and contributes to the development of good governance.



selected OIE publications on food safety



Trilingual publication
2013
29.7 x 21 cm
296 pages
ISBN 978-92-9044-920-1
Price: EUR 65



Coordinating surveillance policies in animal health and food safety 'from farm to fork'

Scientific and Technical Review, Vol. 32 (2)
Coordinator and editor: S.A. Storch

This issue of the Review addresses the recognised need for better coordination of surveillance policies for animal health, food pathogens and foodborne diseases. It examines the role of Veterinary Services and highlights the need to work closely with the other services involved. The mechanisms for promoting such coordination are discussed, together with the implications for international organisations, including the OIE and the WHO. Included are examples of the integration of animal health, food pathogen and foodborne disease surveillance programmes for different pathogens and in different regions of the world. The scientific and technical tools for promoting the coordination of surveillance policies, which protects the safety of the entire food chain, are also discussed. These tools include improved analytical methods and traceability mechanisms that link live animals to foods derived from them.

Animal production food safety: priority pathogens for standard setting by the OIE

In this short study, expert opinion and a literature review were used to identify the pathogens that should be prioritised by the OIE for the development of future standards for animal production food safety. Prioritisation was based on a pathogen's impact on human health and amenability to control using on-farm measures. As the OIE mandate includes alleviation of global poverty, the study focused on developing countries and those with 'in-transition' economies. The regions considered were Eastern Europe, Asia, the Middle East, Africa and South America.

Salmonella and pathogenic *Escherichia coli* were considered to be top priorities. *Brucella* spp., *Echinococcus granulosus* and *Staphylococcus aureus* were also mentioned by experts. As *Salmonella*, and to a lesser extent pathogenic *E. coli*, can be controlled by on-farm measures, these pathogens should be considered for prioritisation in future standard setting.

In Africa, *E. granulosus*, the causative agent of hydatidosis, was estimated to have the greatest impact of all relevant pathogens. It was also listed for the Middle East and thought to be of importance by both South American experts consulted. *Taenia saginata* was thought to be of importance in South America and Africa and by one expert in the Middle East.

The full text of the study, signed by T.J.D. Knight-Jones, G.E. Mylrea and S. Kahn, is available on the OIE website:
web.oie.int/boutique/extrait/08knightjones523535.pdf

You can also find this article in the *Scientific and Technical Review*, volume 29 (3), along with 24 more articles submitted by experts from across the world.



Trilingual publication
2010

29.7 x 21 cm
295 pages
ISBN 978-92-9044-782-5
Price: EUR 60



Trilingual publication
2006

29.7 x 21 cm
396 pages
ISBN 92-9044-662-5
Price: EUR 50

Animal production food safety challenges in global markets

Scientific and Technical Review, Vol. 25 (2)
 Coordinator and editor: S.A. Storch

In the global context of animal production in both the industrialised and developing world, this Review describes the various hazards that can occur during the production stage, including problems associated with fish and shellfish farming. It also deals with responses to food safety challenges, including policy development and practical implementation of on-farm food safety measures, the link between food safety and market access, the responsibilities of the Veterinary Services and public investment in strengthening these and other food safety services. In addition, the implementation of traceability systems and the issue of antimicrobial resistance and the prudent use of antibiotics are discussed. The last section deals with the global perspectives – international standard-setting organisations and stakeholders.

news from headquarters

Staff movements

Arrivals



International Trade Department

Dr Jae Myong Lee

Chargé de mission

Import risk analysis and disease control and management are the fields of expertise of Dr Jae Myong Lee, who joined the

International Trade Department as a Chargé de Mission, on assignment from the Ministry of Agriculture, Food and Rural Affairs of the Republic of Korea, on 1 December 2014. Dr Lee comes to us from the position of Deputy Director of the Quarantine Policy Division in Korea. His work will involve providing support to the Terrestrial and Aquatic Animal Health Standards Commissions, as they set normative standards for international trade. He will also be liaising with other intergovernmental standard-setting bodies. With more than seven years' experience in this particular field, his contribution will be very welcome.

Scientific and Technical Department

Dr Morgane Dominguez

Project officer

Dr Morgane Dominguez joined the Scientific and Technical Department on 12 November

2014, as a Project Officer to help facilitate the international movement of sport horses for competitive events. This new position is, among others, part of the OIE's partnership agreement with the International Federation of Horseracing Authorities (IFHA).

Dr Dominguez has experience in project management, the coordination of scientific working groups and epidemiological surveillance and investigations, gained through her placements with the Institut de Veille Sanitaire (InVS), France, the French Agency for Food, Environmental and Occupational Health and Safety (ANSES) and the Food and Agriculture Organization of the United Nations (FAO).

She obtained her Doctorate of Veterinary Medicine in 2006 and her Master's in Public Health in 2010 and is presently completing a PhD in epidemiology. We hope she will be as happy in the Department as we are to have her.





Scientific and Technical Department

Dr Kazutoshi Matsuo
Chargé de mission

The Scientific and Technical Department is very pleased to welcome Dr Kazutoshi Matsuo to the position of Chargé de Mission, on assignment from the Ministry of Agriculture, Forestry and Fisheries of Japan, effective from 3 November 2014.

In addition to providing support for the Scientific Commission for Animal Diseases and the Ad Hoc Groups for Disease Status Recognition and Epidemiology, Dr Matsuo will also assist in coordinating work among the Specialist Commissions.

Dr Matsuo has a PhD in Veterinary Medicine from the University of Tokyo and a Master's in Preventive Veterinary Medicine, focusing on epidemiology, bio-statistics and food safety, from the University of California, Davis, USA.

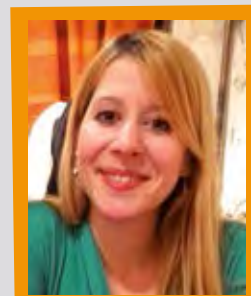
Regional Activities Department

Ms Camille Loi
Secretary

Ms Camille Loi joined the OIE on 1 October 2014 as Secretary in the OIE Regional Activities Department.

Camille Loi holds a Master 1 & 2 in European affairs from University Paris IV Sorbonne and a Master 2 in human rights and international humanitarian law from University Paris II Panthéon Assas. She worked at the United Nations Children's Fund (UNICEF) France on promoting children's rights and subsequently at the Office of the French Human Rights Defender on promoting fundamental rights and proposing reforms to the French government. Prior to joining the OIE, Camille Loi worked as legalisation assistant in the French Citizens Abroad and Consular Administration Department of France's Ministry of Foreign Affairs.

Camille Loi's role in the OIE Regional Activities Department is to provide administrative support, update the intranet/extranet pages on the Department's activities and coordinate articles submitted by Regional and Sub-Regional Representations for publication in the OIE *Bulletin*.



Departure

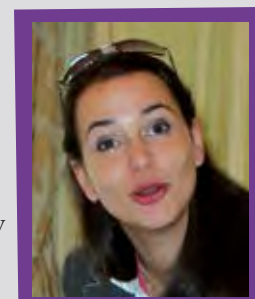
Regional Activities Department

Dr Marie Edan

Dr Marie Edan joined the Regional Activities Department in February 2009 as a Chargée de Mission. After qualifying as a veterinarian in 2003, she worked in a laboratory specialising in poultry production. From 2004 to 2006, she worked safeguarding small farms during the avian influenza epizootic in Vietnam.

She then spent four months with the World Animal Health and Welfare Fund Coordination Unit from 5 May to 5 September 2008 as part of her Master's in Public Health at the Institute of Epidemiology, Public Health and Development, at the University of Bordeaux, France.

Then, during her time with the Regional Activities Department, Dr Edan worked with great enthusiasm and efficiency on the implementation of the OIE PVS Pathway, to improve the performance of Veterinary Services. We greatly appreciate Marie's contribution to the work of this Department and to the OIE in general, and we wish her all the best in her future challenges.

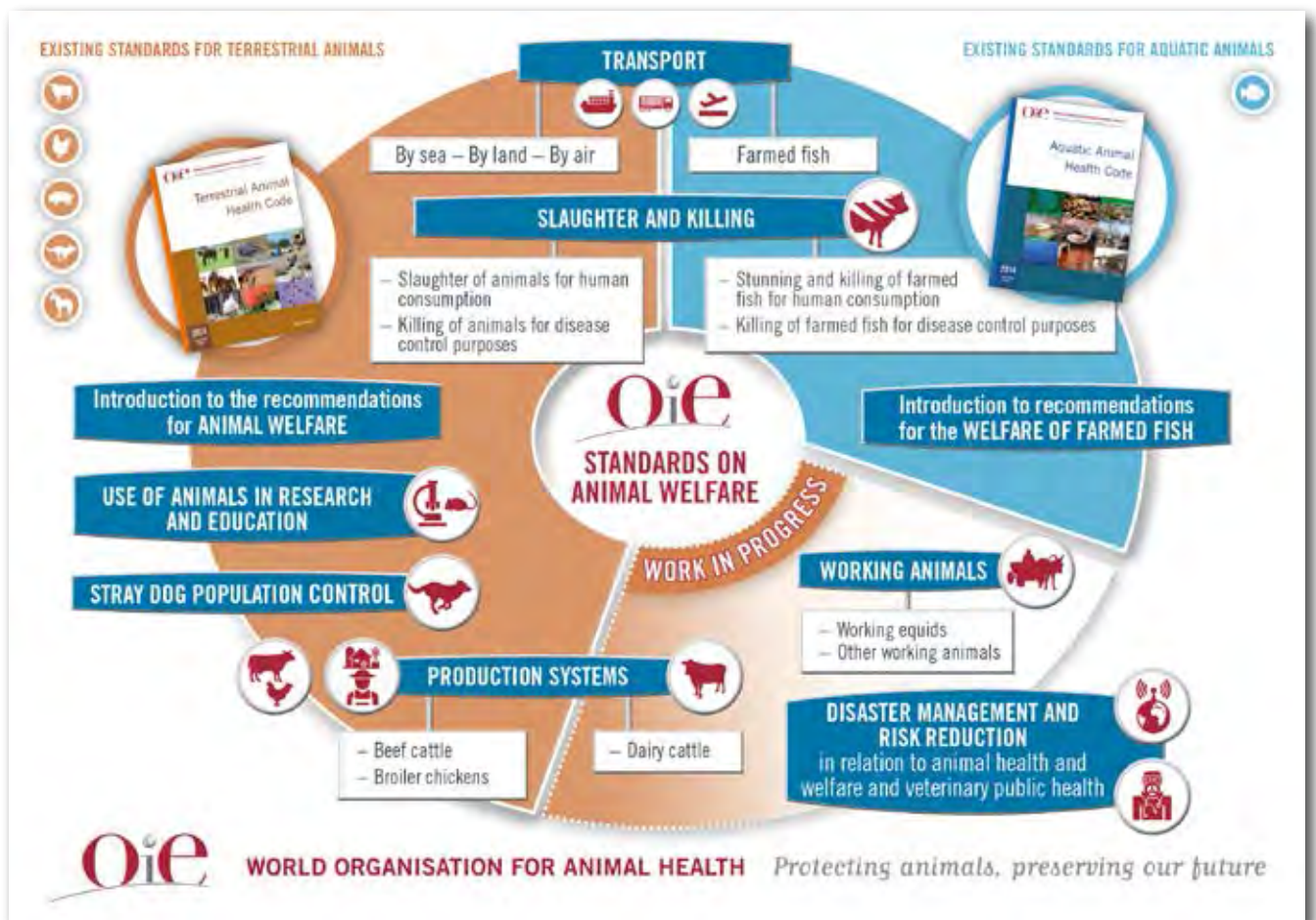




Activities of the Communication Unit

An overview of OIE standards on animal welfare: a new interactive infographic

Over recent decades, animal welfare has become an issue of growing concern in society in general and thus has become a priority area in the work of the OIE. The first OIE intergovernmental standards on animal welfare were published in 2005 and now cover a broad range of topics. This new infographic is a useful tool for introducing the animal welfare standards and gaining ready access to their texts, adopted by consensus by all 180 OIE Member Countries.



Animal welfare is a complex and multifaceted issue, which involves scientific, ethical, economic, cultural, social, religious and political dimensions. Animal production systems and the transport and slaughter of animals are examples of situations in which perceptions of animal welfare may differ from one region and one culture to another, and from one person to the next.

In the early 2000s, in the absence of any global regulatory framework to advance this important matter, the OIE Member Countries mandated the OIE to take the international lead on animal welfare and to develop science-based standards in this field.

To date, these standards cover the welfare of terrestrial and aquatic animals in key areas, such as production,





Activities of the Communication Unit

transport and slaughter and the treatment of laboratory animals. Furthermore, they are constantly being updated. All 180 OIE Member Countries have committed themselves to the endorsement of these standards at the national level, independent of the cultural practices or economic situation found in the Member Country concerned.

Notwithstanding the progress made over the last few decades, there are still many challenges to overcome. The OIE is currently working on the development of new

standards and recommendations in important areas of animal welfare, such as working animals and dairy cattle production systems.

This new infographic illustrates all the topics covered and published in the *Terrestrial and Aquatic Animal Health Codes*, as well as the areas of work currently being undertaken with a view to proposing new standards. All these texts, which have been adopted by the World Assembly of OIE Delegates, are accessible through the hyperlinks.

Infographic on OIE standards for animal welfare:
www.oie.int/en/for-the-media/infographies/StandardsAW

The World Veterinary Day Award 2015 will focus on vector-borne diseases with zoonotic potential

World Veterinary Day was instigated by the **World Veterinary Association** in 2000 to be celebrated annually on the last Saturday of April. In 2008 the OIE and the WVA agreed to create the **World Veterinary Day Award** to reward the most successful celebration of the veterinary profession to society. The theme that has been selected for this year is 'Vector-borne diseases with zoonotic potential'.



Vector-borne zoonotic diseases are becoming a major public health concern in all world regions and are not exclusively limited to tropical and subtropical areas.

Global climate changes influence the increase of emerging and re-emerging vector-borne diseases and disease outbreaks (e.g. West Nile disease, leishmaniosis, etc.).

Vector-borne zoonotic diseases are an important example of the interdependence that exists between vectors, animal hosts, climate conditions, pathogens, and susceptible human population.

Veterinarians are key actors of the One Health Concept at the animal-human-environment interface. Therefore, they play a central role in safeguarding public health.

Collaboration and coordination between veterinarians and physicians are fundamental in the prevention and treatment of vector-borne diseases.

The winner of the 2015 Award will be announced at the Opening Ceremony of the 83rd General Session of the OIE to be held in Paris, France on 24 May 2015 and will be invited to the 32nd World Veterinary Congress, 13-17 September in Istanbul, Turkey to receive the USD 1,000 prize.

The competition is open to all WVA veterinary associations, individually, or in cooperation with any other selected veterinary body.

For more information:
<http://goo.gl/K6VY4E>



Activities of the Scientific and Technical Department

Summaries of the OIE Specialist Commission,
Working Group and *Ad hoc* Group meetings

October to December 2014

Working Groups

Wildlife

Taipei, Chinese Taipei, 4–7 November 2014

The OIE Working Group on Wildlife discussed the situation of rabies in wildlife and the particular situation of Chinese Taipei. The Working Group was informed of past, recent and future OIE activities of interest, and provided advice on questions related to the list of wildlife diseases (non-OIE-listed diseases) and the use of the new WAHIS–Wild interface.

The Working Group addressed several requests from the Scientific Commission for Animal Diseases, including further development of the concept of trans-frontier conservation areas (TFCAs) in relation to the OIE standards for disease-free zones. The Group also discussed the role of hunters in disease surveillance of wildlife and encouraged the OIE to pursue the goal of enhancing wildlife disease surveillance by gaining the organised participation of hunters in surveillance programmes. With regard to the new Collaborative Partnership on Sustainable Wildlife Management (CPW), the Group agreed to assist the OIE and provide comments on CPW documents, including Factsheets¹, when relevant.

The Working Group was asked to review Chapter 7.5. (Slaughter of animals) of the *Terrestrial Animal Health Code*, in light of growing official and public concern about the humane treatment and euthanasia of pythons and crocodilians for leather and other purposes. It decided that additional consideration of reptiles would be beneficial and will review the chapter in more detail to develop suggestions for revision or additional sections.

The Working Group also reviewed other health issues and emerging disease events in wildlife that occurred in 2014 and included a summary in its meeting report.

Ad hoc Groups

Evaluation of Foot and Mouth Disease Status of Member Countries

OIE Headquarters, Paris, 30 September – 3 October 2014

The Group evaluated five dossiers submitted by Member Countries: one for the official recognition of a country free from foot and mouth disease (FMD) without vaccination, one for the refinement of an already recognised FMD-free zone without vaccination, three from Member Countries applying for official recognition of a total of seven FMD-free zones with and without vaccination. Two dossiers submitted from Member Countries for the endorsement of their official control programmes for FMD were also evaluated.

Evaluation of CBPP Status of Member Countries

Electronic correspondence, October – November 2014

In October and November 2014, the Group evaluated, through electronic correspondence, two dossiers submitted by Member Countries for the 2014–2015 cycle of evaluation: one applying to be recognised as a country free from contagious bovine pleuropneumonia (CBPP), the other applying to have its official control programme endorsed by the OIE. A teleconference was also organised on 9 December 2014 to finalise the evaluation of the dossiers.

Evaluation of Classical Swine Fever Status of Member Countries

OIE Headquarters, Paris, 3–6 November 2014

This was the first meeting to evaluate the classical swine fever (CSF) status of Member Countries, in which the Group evaluated 25 applications: 24 for official recognition of CSF-free country status and one for official recognition of a CSF-free zone within a Member Country.

The Group also reviewed and endorsed, with minor changes, the draft form for annual reconfirmation of CSF-free status.

¹ CPW Factsheets: www.fao.org/forestry/wildlife-partnership/87684/en/





Activities of the Scientific and Technical Department

High-Throughput Sequencing, Bioinformatics and Computational Genomics

OIE Headquarters, Paris, 13–14 November 2014

The Group met for the second time and discussed the challenges presented by the increasing use of high-throughput sequencing and bioinformatics and computational genomics (HTS-BCG) in pathogen discovery and characterisation, and subsequent interpretation of the results in regard to clinical disease manifestation and the validity of diagnostic tools and vaccines. The Group acknowledged that HTS-BCG was a rapidly developing technology, mostly driven by the platforms and software packages available for sequence generation, with few standards for quality assurance of the results. The Group recognised both the need and the opportunity to develop standards for the generation of sequence information. It confirmed that leadership would be necessary to assess the implications of this new technology for animal health, international trade and disease status and control, and that the OIE was the appropriate organisation to provide this leadership.

The Group had two main tasks: to further develop the concept for the Pilot Project for the 'Creation of an OIE platform for the collection and management of genomic sequences in animal health', and to develop standards for HTS-BCG for inclusion in the OIE *Manual of Diagnostic Tests and Vaccines for Terrestrial Animals (Terrestrial Manual)*. The Group agreed that two work plans would be required, and that these would need to progress in parallel. One work plan would be needed to advance the OIE pilot project, the other should consider the development of appropriate OIE standards.

Finally, the Group also provided input on the programme for the one-day OIE Seminar on 'New Diagnostic Technologies and International Standard-Setting', to be held on 17 June 2015 in Saskatoon, Saskatchewan, Canada, during the 17th International Symposium of the World Association of Veterinary Laboratory Diagnosticians (WAVLD). The Group suggested that the seminar use whole-genome sequencing as an example of diagnostic method and that the discussions be structured around the sections of the draft *Terrestrial Manual* chapter on HTS-BCG.

Evaluation of Foot and Mouth Disease Status of Member Countries

OIE Headquarters, Paris, 18–20 November 2014

The Group continued the evaluation of four dossiers, begun at the previous meeting, for which clarifications had

been requested and received. The Group also evaluated three additional dossiers submitted for OIE endorsement of Member Countries' official control programmes for FMD. These had not been evaluated at the first meeting, due to lack of time. The Group also assessed the documentation provided by two Member Countries whose official control programmes have already been endorsed by the OIE.

BSE Risk Status Evaluation of Member Countries

OIE Headquarters, Paris, 25–27 November 2014

The Group evaluated eight dossiers submitted by Member Countries which were recognised as having a controlled risk status and applied for a negligible bovine spongiform encephalopathy (BSE) risk status. The Group also discussed how the OIE procedure for the recognition of BSE risk status and the *Terrestrial Animal Health Code* Chapter 11.4. on BSE should be revised to consider atypical BSE.

Antimicrobial Resistance

OIE Headquarters, Paris, 10–12 December 2014

This meeting was organised in two parts. In the first, the Group finalised the template and instructions for OIE Member Countries to report data on the use of antimicrobial agents in animals to the OIE, with a view to developing a global database. In the second part, the Group reviewed the technical comments received on the adopted version of the OIE list of antimicrobial agents of veterinary importance, as well as those received from Member Countries on the adopted version of the *Terrestrial Animal Health Code* chapters on antimicrobial resistance and the use of antimicrobial agents.

Peste des Petits Ruminants' Status Evaluation of Member Countries

OIE Headquarters, Paris, 16–17 December 2014

The *Ad hoc* Group on Peste des Petits Ruminants' (PPR) Status Evaluation of Member Countries evaluated dossiers submitted by five Member Countries: four requesting recognition of historical PPR-free status for the whole country and one applying for recognition of the historical PPR-free status of a defined zone. The Group was also updated on the progress made by the Global Framework for the progressive control of Transboundary Animal Diseases (GF-TADs) PPR working group in charge of developing the Global Strategy for the Control and Eradication of PPR.



Activities of the International Trade Department

Summaries of the OIE Specialist Commission,
Working Group and *Ad hoc* Group meetings

October to December 2014

Specialist Commissions

Aquatic Animal Health Standards Commission

OIE Headquarters, Paris, 29 September – 3 October 2014

The Aquatic Animals Commission met from 29 September to 3 October 2014 in Paris, to review the comments received from Member Countries on the report of its February 2014 meeting, including comments received at the 82nd General Session. The Commission also reviewed the report of the OIE *ad hoc* Group on Disinfection of Aquaculture Establishments.

The Commission circulated to Member Countries the revised text on the following subjects for the *Aquatic Code*:

- User's guide
- Glossary
- Notification of diseases and epidemiological information (Chapter 1.1.)
- Diseases listed by the OIE (Chapter 1.3.)
- Import risk analysis (Chapter 2.1.)
- Recommendations for disinfection of salmonid eggs (new Chapter 4.X.)
- Control of hazards in aquatic animal feed (Chapter 4.7.)
- General obligations related to certification (Chapter 5.1.)
- Certification procedures (Chapter 5.2.)
- Risk analysis for antimicrobial resistance arising from the use of antimicrobial agents in aquatic animals (Chapter 6.6.)
- Amphibian disease-specific chapters (8.1. and 8.2.)
- Articles X.X.7. and X.X.11. of disease-specific chapters
- corrections in Articles 10.4.4. and 10.4.6.

The Aquatic Animals Commission also reviewed several *Aquatic Manual* chapters, and revised existing texts for the following chapters:

- Infectious hypodermal and haematopoietic necrosis (Chapter 2.2.2.)
- Necrotising hepatopancreatitis (Chapter 2.2.4.)
- Taura syndrome (Chapter 2.2.5.)
- Yellow head disease (Chapter 2.2.8.)
- Infection with *Perkinsus olseni* (Chapter 2.4.6., Section 2.2.1.)

The Aquatic Animals Commission also updated its 2014–2015 work programme.

Ad hoc Groups

Salmonella in Cattle

OIE Headquarters, Paris, 16–18 December 2014

The *Ad hoc* Group on *Salmonella* in Cattle was convened from 16 to 18 December 2014 to draft a new Chapter 6.X., 'Prevention and control of *Salmonella* in commercial cattle production systems', for the *Terrestrial Animal Health Code*. The purpose of this chapter is to provide recommendations for the prevention and control of *Salmonella* to reduce the burden of disease in cattle and the risk of human illness through food-borne contamination, as well as human infections resulting from direct or indirect contact with cattle.

The report of the *Ad hoc* Group was presented to the February 2015 meeting of the Terrestrial Animal Health Standards Commission.



regional activities

Staff movements

Africa

Arrival

OIE Sub-Regional Representation for North Africa



Dr Jocelyn Mérot

Veterinary Public Health Officer, Dr Jocelyn Mérot, joined the OIE Sub-Regional Representation for North Africa on 1 November 2014 as Programme Officer, on secondment from the French Ministry of Agriculture. He takes over from Dr Vincent Brioude, who has joined the National School of Veterinary Services in Lyons, France.

Dr Mérot graduated from the School of Veterinary Medicine in Nantes (France) in 1994 and was awarded a PhD at the University of Paris VII, which allowed him to take up a doctoral fellowship in the United States.

Before moving to Tunis, he held various positions in the private sector (veterinary practitioner, scientific editor) and the public sector, i.e. in the Veterinary Services of New Caledonia and at the French Directorate General for Food at the French Ministry of Agriculture, entrusted with food safety issues. Thereafter he joined FranceAgriMer, a national agency dealing with agricultural and marine products and dedicated to promoting trade with French agricultural and agri-food exporting companies.

Dr Mérot will be in charge of supporting the OIE Sub-Regional Representative in Tunis by providing technical support and advice in the field of epidemiology, as well as providing support to networks in the Mediterranean region, such as the Mediterranean Animal Health Network (REMESA) and the Mediterranean Network of Establishments for Veterinary Education (REEV-Med). He will spend at least three years with us at the OIE Sub-Regional Representation for North Africa, where he will also contribute to the capacity-building programme of OIE Delegates and Focal Points in the region.

Asia – Pacific

Arrivals

OIE Regional Representation for Asia and the Pacific



Dr Yoko Aoyama

Dr Yoko Aoyama joined the OIE Regional Representation for Asia and the Pacific as a Regional Veterinary Officer on 1 October 2014.

Dr Aoyama graduated from Yamaguchi University in Japan with a Bachelor's degree in Veterinary Medicine in 2005. In the same year, she joined the Animal Quarantine Service of the Ministry of Agriculture, Forestry and Fisheries (MAFF) in Japan. She spent more than five years with MAFF before obtaining two Master's degrees in the United Kingdom: an MSc in Veterinary Science (Veterinary Infection and Disease Control) from the University of Liverpool in 2011 and an MSc in Veterinary Epidemiology from the Royal Veterinary College of the University of London in 2012. Returning to MAFF in her native Japan, she helped to organise the 18th Session of the FAO/WHO (Codex) Coordinating Committee for Asia in 2012 in Tokyo and then turned her focus to international trade discussions for the exportation of Japanese animal products, working with the Animal Health Division for two years.

The OIE Regional Representation for Asia and the Pacific is very pleased to welcome her to the team.



OIE Sub-Regional Representation for South-East Asia

Dr Pennapa Matayompong

Dr Pennapa Matayompong joined the OIE Sub-Regional Representation for South-East

Asia in October 2014 as a Programme Coordinator under the Stop Transboundary Animal Diseases and Zoonoses (STANDZ) Initiative. She will coordinate the Strengthening Initiative for Veterinary Services (STRIVES) Project, which includes technical support for the implementation of the OIE PVS Pathway and promoting improvements in veterinary education and training, communication and legislation. She will also assist in the managerial, financial and technical operation of the OIE Sub-Regional Representation for South-East Asia.

Dr Matayompong graduated as a DVM, with honours, from Chulalongkorn University (Thailand), and has a Bachelor's degree in Business Administration from Ramkhamhaeng University (Thailand), a Master's in Agricultural Science from the University of Melbourne (Australia) and a PhD in Animal Science (meat science) from the University of Nebraska (USA). She spent more than 29 years as a government officer in the Department of Livestock Development in Thailand, where she accumulated a wealth of experience in the inspection and certification of animal products for export, negotiation on animal health requirements with trade partner countries and animal welfare. She represented the Department at several international meetings on sanitary and phytosanitary (SPS) issues and also became the OIE National Focal Point on Animal Welfare.

Dr Matayompong will support the Sub-Regional Representative and will pursue her interests in veterinary public health, animal welfare and SPS issues at the OIE Sub-Regional Representation for South-East Asia.



Dr Corissa Miller

Dr Corissa Miller joined the OIE Sub-Regional

Representation for South-East Asia as a Project Officer in October 2014, where she provides technical support to the Sub-Regional Representative through various projects under the Stop Transboundary Animal Diseases and Zoonoses (STANDZ) Initiative, with a particular focus on the South-East Asia and China Foot and Mouth Disease (SEACFMD) Campaign and 'One Health' programmes.

Dr Miller graduated with a Bachelor of Veterinary Science from the University of Queensland, Australia, in 2008, and spent the following years working in wildlife management and domestic clinical practice in Australia, and internationally while completing a Master of Veterinary Studies in Conservation Medicine through Murdoch University. In 2012 she co-founded Ecotone Wildlife Veterinary Services, an Australian-based wildlife management business providing veterinary services to government and private research institutes. In recent years, her interest in One Health and zoonoses has led her to work in Nepal and Bangladesh with the United States Agency for International Development (USAID) Predict programme, the Center for Molecular Dynamics Nepal (CMDN), and the FAO Emergency Centre for Transboundary Animal Diseases (FAO-ECTAD).

Dr Corissa Miller is currently completing a Master of Veterinary Public Health at the University of Sydney, and looks forward to pursuing her interests in epidemiology, transboundary animal diseases and emerging infectious diseases. We welcome her important contribution to the work of the OIE Sub-Regional Representation for South-East Asia.



Dr Phillip Widders

Dr Phillip Widders joined the OIE Sub-Regional Representation for South-East Asia in November 2014 as Programme Coordinator under the Stop Transboundary Animal Diseases and Zoonoses (STANDZ) Initiative supporting the OIE Sub-Regional Representative. He will be coordinating the South-East Asia and China Foot and Mouth Disease (SEACFMD) Campaign, assisting with the management of FMD vaccination programmes in northern Laos and in central Myanmar.

Dr Widders has BVSc (Vet.) and BVSc degrees (from the University of Sydney, Australia) and a PhD in veterinary immunology (from the University of Bristol, United Kingdom). Before heading into academia, he worked in private mixed practice in regional Victoria (Australia). After completing his PhD, he was appointed Assistant Professor at Washington State University (United States of America), with teaching and research interests in immunology and the pathogenesis of infectious diseases. He then returned to Victoria as manager of the Bacteriology Laboratory, Victorian Institute of Animal Science (Attwood), with diagnostic and research interests in infections relevant to animal and public health. From there he joined the Australian Quarantine and Inspection Service (Australian Department of Agriculture), as Chief Quarantine Officer (Animals) New South Wales for more than 17 years. He also holds an appointment as Adjunct Associate Professor at the University of Sydney Veterinary School, where he has lectured on infectious diseases since 2002.

Dr Widders' interests include microbial pathogenesis and laboratory diagnostics, and he has followed those interests through a number of OIE-listed diseases, including haemorrhagic septicaemia and contagious equine metritis. He looks forward to expanding his repertoire of diseases via his work with the OIE Sub-Regional Representation for South-East Asia and we look forward to having him there.

Arrivals

OIE Sub-Regional FMD Coordination Unit Office in Astana, Kazakhstan



Dr Mereke Taitubayev

Dr Mereke Taitubayev joined the OIE as Head of the OIE Sub-Regional Foot and Mouth Disease (FMD) Coordination Unit Office in Astana, Kazakhstan, on 1 November 2014.

Dr Taitubayev enrolled at the Veterinary Faculty in 1997. In 2002 he graduated with honours and began his career as a bacteriologist at the Akmola Regional Veterinary Laboratory, in Kazakhstan. He joined the Kazakh Ministry of Agriculture in 2003, going on to serve in many different capacities: as Head of Department at the Akmola regional bacteriology branch of the Republican Veterinary Laboratory (2003–2007); Head of the National Collection of the National Reference Laboratory (2007–2009); Chief Bacteriologist at the Republican Veterinary Laboratory (2009–2010); member of the Expert Committee of the State Inspectorate (2010–2011); Deputy Chair of Veterinary Control and Supervision (2011–2013); and Head of Department at the Department of Veterinary and Food Security (2012–2013). Before joining the OIE, between 2013 and 2014, Dr Taitubayev served as Head of the Veterinary Service of Kazakhstan and Delegate of Kazakhstan to the OIE.

In addition, Dr Taitubayev was awarded the degree of Candidate of Veterinary Sciences (PhD) in 2010, and received the State Award for Labour Services in 2013. We're very glad to welcome him to the team.



Dr Assylbek Kozhumratov

Dr Assylbek Kozhumratov studied at the Zootechnical Veterinary Institute of Saratov,

Russia, where he graduated as a veterinarian. He joined the OIE Sub-Regional Foot and Mouth Disease (FMD) Coordination Unit Office in Astana, Kazakhstan, as a Technical Assistant on 1 November 2014.

Before joining the office in Astana, Dr Kozhumratov worked as a veterinarian on a state farm. He then took up a position as a civil servant, occupying several posts in the Kazakh Ministry of Agriculture: as Chief Director of the North-West Directorate of Veterinary Control on Borders and Transport at the Republican Veterinary Laboratory Almaty regional branch; as Director of the Veterinary Control Department, and as Deputy Chair of the State Inspection Committee. He has also worked as Deputy Director of the Joint Stock Company 'Astana-Onym'; Head of the Astana Territorial State Inspection; Deputy Director of the Chief Directorate 'Republic Anti-epizootic Brigade'; and as Advisor to the Chair of the Board of the Joint Stock Company 'KazAgroFinance'.

Since his appointment to the OIE Sub-Regional FMD Coordination Unit Office in Astana, Dr Kozhumratov has been assisting Dr Mereke Taitubayev, Head of the Office since 1 November 2014.

Departure

OIE Sub-Regional FMD Coordination Unit Office in Astana, Kazakhstan



Dr Askar Kozhayev

Dr Askar Kozhayev, Technical Assistant of the OIE Sub-Regional FMD Coordination Unit Office in Astana, Kazakhstan, left the OIE in November 2014. Dr Kozhayev provided technical support in the implementation of various projects for the prevention and control of animal diseases in the Eurasian region, mainly foot and mouth disease.

Dr Kozhayev had significant experience in the production of vaccine and diagnostic kits on an industrial and semi-industrial scale. Before joining the OIE, he was a lecturer at the Chamber of Biosafety at Kazakhstan National Agrarian University in Almaty, and worked on harmonising animal health requirements at the Department of Animal Breeding Development and Veterinary Safety of the Kazakh Ministry of Agriculture, under a programme named 'Normative and methodical support of development of branches of the agro-industrial complex'. He was also Chief Executor of the Competitive Fellowships System Project, for the development of technical regulations at the Kazakh Ministry of Agriculture.

His colleagues from the OIE wish Dr Kozhayev every success in his new assignments.

Meetings

OIE and AU–IBAR conduct training on harmonisation of veterinary legislation at REC level

This article reports on the events and outcomes of the first two seminars of the series. The first was held in Yaounde, Cameroon (October 2014), for Member Countries of the Economic Community of Central African States, and the second took place in Khartoum, Sudan (November 2014), for Member Countries of the Intergovernmental Authority on Development.

The goal of the European Union-funded programme, 'Reinforcing Veterinary Governance in Africa' (VET-GOV), is to achieve efficient and effective Veterinary Services in Africa by strengthening the national and regional institutional environment so that Veterinary Services can ensure that the livestock sector actively contributes to food security and safety, economic growth and wealth creation in Africa.

The VET-GOV programme builds on the success of the long-term partnership between the European Union, the African Union Interafrican Bureau for Animal Resources (AU–IBAR), the OIE and FAO. This partnership led to the eradication of rinderpest in 2011, one of the major transboundary animal diseases affecting Africa.

In collaboration with the regional economic communities (RECs) in Africa, these partners have again joined forces to implement VET-GOV. AU–IBAR has responsibility for the overall coordination of the programme while the FAO and OIE are responsible for carrying out activities aimed at achieving specific results in the RECs, at both the country and regional level.

Under the framework of the VET-GOV programme, the OIE is entrusted with the implementation of activities to:

- a) strengthen the capacity of countries to assess their compliance with the standards of the OIE
- b) build the capacity of countries through veterinary legislation
- c) ensure interoperability between AU–IBAR's Animal Resources Information System (ARIS) and WAHIS.

To implement point *b*), the OIE has developed, in collaboration with AU–IBAR, a series of one-week seminars to promote the development of harmonised regional veterinary legislation. It is expected that, by the end of 2016, up to seven seminars will have been conducted in the regional economic communities recognised by the AU (ECCAS¹, IGAD², EAC³, SADC⁴, ECOWAS⁵, COMESA⁶ and UMA⁷/CEN-SAD⁸).

The objectives of these seminars on the regional harmonisation of veterinary legislation are to:

- a) identify an area of the veterinary field in which REC Member Countries have a shared interest in harmonising their regional legislation
- b) review the international standards for veterinary legislation related to the selected area of the veterinary domain
- c) review representative legislation from outside the region which embodies the international standards

that apply to that area of the veterinary domain

- d) provide veterinarians and lawyers from REC Member Countries with the opportunity to review the principles of quality legislative drafting

- e) apply those principles to the critical evaluation of their existing legislation in the chosen area of the veterinary domain

- f) identify gaps, overlaps and conflicts between the relevant laws of the REC Member Countries, and

- g) begin the group process among REC Member Countries of jointly drafting regional legislation for the chosen area of the veterinary domain.

The methodology that the OIE is applying to these seminars is innovative. First, the designated participants are veterinarians and lawyers involved in the development and implementation of regulations. Secondly, formal presentations are minimised to make room for a series of workshops in which three mixed groups of veterinarians and lawyers can carry out practical exercises. The aim is for participants to become familiar with the logical consecutive steps that will eventually lead to the development of efficient and harmonised regulation in a regional context: defining objectives, developing and planning a strategy to achieve these objectives, identifying actions to be taken (including

1 ECCAS: Economic Community of Central African States
 2 IGAD: Intergovernmental Authority on Development
 3 EAC: East African Community
 4 SADC: Southern African Development Community

5 ECOWAS: Economic Community of West African States
 6 COMESA: Common Market for Eastern and Southern Africa
 7 UMA: Arab Maghreb Union
 8 CEN-SAD: Community of Sahel-Saharan States

legislation), and defining indicators that will allow them to evaluate the effectiveness of the actions.

The first seminar in this series was held in Yaoundé, Cameroon, from 27 to 31 October 2014, for Members of ECCAS, comprising Angola, Burundi, Cameroon, the Central African Republic, Chad, the Republic of Congo, the Democratic Republic of Congo, Gabon, Equatorial Guinea and São Tomé and Príncipe.

The seminar covered regulations on animal health. A team of experts from the OIE was led by Dr Martial Petitclerc and included Dr Christian Rondeau, former president of the French Veterinary Council and a veterinarian with a Ph.D. in law; Dr Xavier Roy, a private veterinary surgeon in Guadeloupe who is heavily involved in local policies on the prevention and control of animal diseases, and Dr Sylvie Pupulin, OIE programme officer.

After a presentation of the objectives and methodology of the seminar, participants closely analysed a sample of national regulation (identifying the objectives, law enforcement challenges and the reasons why these challenges exist) and then worked on the development of a regional system (formulation of objectives, strategy development, choice of indicators, among others), before moving to the implementation of a regional strategy (assessment of resources needed and planning of implementation).

The second seminar in this series was held in Khartoum, Sudan, from 23 to 27 November 2014 for the Members of IGAD, composed of Djibouti, Eritrea, Ethiopia, Kenya, Somalia, South Sudan, Sudan and Uganda. Eritrea did not attend. This seminar covered regulations on animal health.



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Dr Walter Masiga, OIE Sub-Regional Representative for East Africa and the Horn of Africa, officially represented the OIE at the opening. The team of experts from the OIE was led by Dr David Sherman, Coordinator of the OIE Veterinary Legislation Support Programme, and included Ms Gloria Mintah, OIE Legal Consultant and former Senior Counsel for the Legal Services department of the Canadian Food Inspection Agency, and Dr Moetapele Letshwenyo, OIE Sub-Regional Representative for Southern Africa, former Deputy Permanent Secretary of the Ministry of Agriculture and former Director of Veterinary Services of Botswana. Representatives of FAO and IGAD also contributed by facilitating the group work conducted by participants during the four-and-a-half day seminar.

After a series of background presentations on the OIE international standards for veterinary legislation, methodologies for drafting legislation, the principles of policy-making and the basic elements of animal disease control, delivered on the first day, the participants were divided into three working groups, in which they analysed examples of national legislation on animal disease control and

identified obstacles to implementing this legislation. The following day, the groups worked on the development of a framework for addressing animal disease control legislation on a regional basis and then on the implementation of the regional framework that they had developed. The final morning was given over to reviewing and evaluating the seminar activities and mapping a way forward to continue these efforts to harmonise regional legislation on animal disease control for IGAD Members.

Given the intense interest, high level of participation, depth of understanding and excellent cooperation shown between the veterinarians and the legal experts, and the establishment of clear roadmaps for further development of regionally harmonised legislation, it can be safely concluded that both these seminars were successful.

The next seminars will be held in 2015 for Members of the SADC and UMA.

22nd Conference of the OIE Regional Commission for the Americas

Guadalajara, Jalisco, Mexico, 10–14 November 2014



At the kind invitation of the Government of Mexico, the 22nd Conference of the OIE Regional Commission for the Americas was held in Guadalajara city from 10 to 14 November 2014.

The conference was attended by 86 participants, including OIE Delegates and/or nominees from 24 Member Countries and 2 observer countries, together with senior officers from 9 regional and international organisations.

At the opening ceremony, welcome messages were received from the following senior Mexican and OIE officials: Mireille Roccatti Velázquez (Lic.), Attorney General of Mexico's Secretariat of Agriculture, Livestock, Rural Development, Fisheries and Food (SAGARPA); Dr Joaquín Braulio Delgadillo Álvarez, Delegate of Mexico to the OIE; Héctor Padilla Gutiérrez (Lic.), Head of the Jalisco State Department of Rural Development (SEDER); Dr Bernard Vallat, Director General of the OIE; Dr Karin Schwabenbauer, President of the World Assembly of OIE Delegates; Dr Guilherme Henrique Figueiredo Marques, President of the OIE Regional Commission for the Americas; and Dr Luis Barcos, OIE Regional Representative for the Americas.

The conference was also honoured by the presence of: Javier Guízar Macías (Ing.), SAGARPA Delegate in the State of Jalisco; Dr Monique Eloit, Deputy Director General of the OIE; Dr Alejandro Thiermann, President of the OIE Terrestrial Animal

Health Standards Commission; Dr François Caya, Head of the OIE Regional Activities Department; Dr Mara Gonzalez, Deputy Head of the OIE Regional Activities Department; Dr Montserrat Arroyo Kuribreña, OIE Sub-Regional Representative for Central America; and Dr Paula Cáceres, Head of the OIE World Animal Health Information and Analysis Department.

The conference agenda provided an opportunity for varied and productive discussions on issues of utmost importance to the region, including two technical items.

Technical item I was on the issue of 'Veterinary education on aquatic animals and its impact on aquatic animal disease control strategies in the region'. The item was presented by Dr Alicia Gallardo Lagno, Head of the Animal Health Unit of Chile's National Fisheries and Aquaculture Service (SERNAPESCA). The Regional Commission adopted a number of recommendations, including that: Member Countries in the region should establish minimum requirements for the continuing education of public and private veterinary service professionals working in the area of aquatic animal health, based on OIE recommendations on minimum competencies; Member Countries should seek opportunities to undertake twinning projects of relevance to aquatic animal health; and they should take advantage of the publication of the first edition of the OIE PVS Tool: Aquatic (2013) to request PVS evaluation missions of Aquatic Animal Health Services.

Technical item II on 'Implementation of the compartmentalisation concept: practical experience and perspectives', was presented by OIE consultant Dr Sarah Kahn.

Two of the key recommendations adopted were that: governments should conduct a proper review of national veterinary legislation and should establish a legal framework, based on OIE standards and guidelines, for the use of compartmentalisation in their respective countries and for the recognition of compartments established both in their own countries and by trading partners; and that Member Countries should strive unceasingly to maintain and strengthen their Veterinary Services and Aquatic Animal Health Services, including through participation by both terrestrial and aquatic animal sectors in the OIE PVS Pathway, in support of negotiations for export markets based on zoning, compartmentalisation and other OIE-approved approaches.

The recommendations adopted by the Regional Commission will be presented at the General Session of the World Assembly of Delegates in May 2015.

Further issues of relevance were presented and discussed at the meeting, including: OIE activities and vision for the 21st century; an approach to the OIE PVS Pathway; OIE approach and collaboration between the World Health Organization (WHO) and the OIE with respect to the 'One Health' concept; the impact of the OIE capacity-building programme on the relationship between OIE Delegates and National Focal Points; and the animal health situation of Member Countries in the region during the first semester of 2014.

The closing ceremony provided an opportunity for members of the OIE Regional Commission for the Americas, the OIE Director General and delegation members, as well as country representatives, representatives of regional and international organisations and observers, to extend their heartfelt gratitude to the Government of Mexico not only for the warm welcome and support provided to all participants during their stay in Guadalajara but also for the excellent organisation of the conference.

Asia – Pacific

Joint SEACFMD LabNet and EpiNet meeting

Ho Chi Minh City, Vietnam, 6–8 October 2014

The OIE Sub-Regional Representation for South-East Asia held a joint meeting of the SEACFMD¹ Laboratory Network (LabNet) and Epidemiology Network (EpiNet), in Ho Chi Minh City, Vietnam, from 6 to 8 October 2014.

The meeting was attended by Foot and Mouth Disease (FMD) Epidemiology and Laboratory Focal Points or their representatives from the 11 SEACFMD Member Countries, partners and the OIE.

Dr Mai Van Hiep, Deputy Director General of the Department of Animal Health, Ministry of Agriculture and

Rural Development of Vietnam, noted the importance assigned to FMD by the Vietnamese government, as exemplified by its USD 30 million national FMD programme for 2011–2015. Vietnam, he said, recognises the need for international cooperation and building relationships to address and manage transboundary animal diseases in a timely manner.

Dr Ronello Abila, OIE Sub-Regional Representative for South-East Asia, explained that the joint meeting aimed to address the issue of sub-optimal sample submission from the region and to reinforce the understanding of

international standards relevant to FMD epidemiology and laboratory practices.

Other issues which were relevant to both networks were discussed, such as: global, regional and national FMD situations and the research and activities of the OIE Reference Laboratory for FMD in the region, as well as research and activities on FMD conducted by partner organisations and countries, particularly in the laboratory and in epidemiology.

Two separate sessions were then conducted to highlight the importance of the OIE *Terrestrial Animal Health Code (Terrestrial Code)* and *Manual*

¹ SEACFMD: South-East Asia and China Foot and Mouth Disease campaign



of *Diagnostic Tests and Vaccines for Terrestrial Animals (Terrestrial Manual)*. These sessions also aimed to ensure that the Focal Points were familiar with their role in preparing dossiers for their country's targeted diseases and in identifying gaps and preparing action plans to address any identified needs.

The first session divided participants into two groups: the LabNet group and the EpiNet group. Each group was asked to identify gaps and write action plans to address each of these gaps.

The SEACFMD LabNet group analysed the responses of the SEACFMD Laboratory Focal Points to a questionnaire that had been sent out before the seminar. The gaps identified by the group were:

- the poor quality and quantity of samples submitted to the national laboratory
- the low submission rate of samples to reference laboratories
- the lack of strategic selection of representative samples from the region
- the lack of systematic collation of the results from all characterised isolates from the region
- the lack of a system to link outbreak/epidemiological data to the characterised isolates
- the fact that FMD-free countries were ill prepared to identify or confirm the FMD virus
- concerns about the lack of a succession plan and the fast turnover of trained personnel
- the fact that some countries did not participate in the proficiency testing administered by the Reference

Laboratory in Pakchong, Thailand

- the lack of corrective action taken by laboratories with a sub-optimal performance, based on their proficiency testing findings
- the poor communication of proficiency testing results.

The SEACFMD EpiNet group identified gaps related to surveillance programmes and to the ability of Member Countries to fulfil OIE requirements for applications to recognise their freedom from FMD or to endorse their control plans. Countries which had overcome these problems were studied as examples.

The second session divided participants into three groups, according to their country's FMD status and geography, to identify the most common gaps and develop potential actions to address these.

The first group, composed of FMD-free countries, recommended improving support for stakeholders in FMD control, including more training for diagnosticians and veterinary para-professionals.

The second group, comprising Malaysia, Thailand and Myanmar, considered possible contact between susceptible domestic livestock and wild species as a major gap that could be overcome by improving animal husbandry guidelines and by the establishment of units to monitor communication between the wildlife and livestock sectors.

The third group, made up of Cambodia, the People's Republic of China, Laos and Vietnam, identified the need for more and improved surveillance, particularly of high-risk groups, and identified this as an

area where a joint initiative between countries may help.

The meeting closed with the adoption of the following recommendations:

- to increase the submission of optimal quality samples
- for Members to continue compiling information to demonstrate their compliance with the OIE *Terrestrial Code* and *Terrestrial Manual*, in preparation for future applications to the OIE for status recognition or endorsement of their official FMD control programme
- to support studies on animal movement and other risk factors involved in the spread of FMD
- to implement, monitor and evaluate action plans being developed for SEACFMD LabNet and EpiNet
- for SEACFMD LabNet to submit the results of regional inter-laboratory proficiency testing within one month
- for FMD-free countries (or zones) to actively investigate suspected FMD cases and to have a procedure in place for quick confirmation.



FAO/OIE Workshop on Swine Disease Control in Asia

Beijing, People's Republic of China, 18–20 November 2014

Pig production is an important component of regional agriculture and a key source of income for farmers in Asia. This region accounts for almost 60% of the pig-raising industry in the world and 56% of the global pork supply. As the demand for pork and its products grows in Asia, a number of swine diseases have been reported in the region, e.g. foot and mouth disease (FMD), classical swine fever (CSF), highly pathogenic porcine reproductive and respiratory syndrome (PRRS) and porcine epidemic diarrhoea (PED). The current dynamics of African swine fever (ASF) mean that there is an increasing risk of the introduction of this disease into Asia. The socio-economic impact of pig diseases has become more significant than ever.

The OIE Regional Representation for Asia and the Pacific and the FAO Regional Office for Asia and the Pacific organised a joint FAO/OIE Workshop on Swine Disease Control in Asia from 18 to 20 November 2014, in Beijing, to address the current situation and answer the challenges posed by the pig industry and swine disease control. The specific objectives of this workshop were to share information on the status of swine disease in the region and to discuss control measures and countries' success in implementing these, as well as to identify the main gaps and to find a way forward on swine disease control in the Asian region.

The workshop was officially opened by Dr Zhang Zhongqiu, Delegate of the People's Republic of China to the OIE and Director General of the Veterinary Bureau of the Chinese Ministry of Agriculture. Forty-six participants attended the workshop, including seven senior experts from Asia, the European Union, the FAO and the OIE, as well as 29 participants from Member Countries in South-East Asia and East Asia. Each session included presentations from experts on each disease (ASF, swine FMD, PRRS, CSF and PED) and presentations from Member Countries, to share their experiences and the lessons learned while conducting control measures.

The participants from Member Countries had been asked to prepare a report on their country in advance, and the OIE Regional Representation for Asia and the Pacific presented



a summary of this information at the meeting. Backyard pig farming is dominant in most Member Countries, although some Member Countries have more commercialised pig-farming operations. Of 14 Member Countries who took part, most reported that FMD in swine, CSF and PRRS were notifiable diseases in their country. Most Member Countries had a national surveillance plan and compulsory vaccination for FMD and CSF, but this was less likely to be true for other diseases and in other Member Countries.

The purpose of the workshop was to encourage Member Countries to fulfil their obligation to report swine diseases to the OIE, in the interests of information-sharing and enhanced communication among stakeholders. It was also to emphasise the importance of developing a control strategy and action plan for swine diseases at the national, sub-regional and regional levels, under the guidance of FAO and the OIE. The importance of being prepared for emerging, re-emerging and exotic diseases, such as ASF, by developing contingency and surveillance plans, as well as conducting regular training and risk assessment, was highlighted as a particular concern.

Participants were invited to visit the China Animal Disease Control Centre, OIE Reference Laboratory for PRRS, where possible technical assistance and future collaborations were discussed.

This workshop was partially funded by a voluntary contribution from the Government of the People's Republic of China to the OIE World Animal Health and Welfare Fund.

5th Regional Workshop on Multi-sectoral Collaboration for the Prevention and Control of Zoonoses

Bangkok, Thailand, 24–26 November 2014



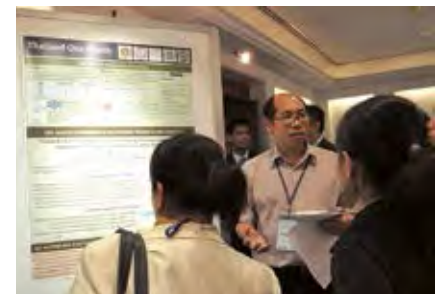
Ninety-three participants from 21 countries, 13 partner agencies, and five regional and sub-regional offices of the Tripartite (FAO–OIE–WHO) in the Asia–Pacific region gathered on 24 to 26 November 2014 in Bangkok for the Fifth Asia–Pacific Workshop on Multi-sectoral Collaboration for the Prevention and Control of Zoonoses. The purpose of this year's meeting was to provide updates on the zoonosis situation, review progress made so far, and further improve the existing collaboration and coordination mechanisms in the region. With the European Union-funded Highly Pathogenic and Emerging Diseases (EU–HPED) programme having come to a close in 2014, the workshop also provided a venue for the FAO, OIE and WHO to showcase their respective activities, highlights and achievements during the course of the project. The impact of the programme, with its One Health approach, and experience gained at the regional and country levels were of special interest.

The OIE and FAO presented updates on regional zoonoses in the

animal health sector, while WHO did the same for human health. Eighteen of the 21 participating countries also presented posters, collectively representing 71 zoonotic events for the year 2014. These included 29 (41%) bacterial zoonosis events (e.g. anthrax, brucellosis, leptospirosis, *Escherichia coli*, Lyme disease, plague, *Streptococcus suis*, tick-borne rickettsiosis and tuberculosis); 29 (41%) viral zoonosis events (e.g. avian influenza, Crimean-Congo haemorrhagic fever, Japanese encephalitis, Middle East Respiratory Syndrome coronavirus or MERS-CoV, Nipah virus, rabies and tick-borne encephalitis); and 13 (18%) parasitic zoonosis events (e.g. anisakiasis, cysticercosis, echinococcosis, schistosomiasis, toxoplasmosis and trichinellosis). Rabies, avian influenza, anthrax, leptospirosis and brucellosis appear to be the most commonly reported zoonoses in the region. Several neglected tropical diseases, such as echinococcosis, schistosomiasis and cysticercosis, continued to be reported from several countries during 2014.

In addition to this regional disease situation update, the workshop also provided scientific briefings on key emerging diseases of international concern, including zoonotic influenza, MERS-CoV and Ebola.

To review progress so far, a survey was conducted to follow up on the 11 recommendations from the Fourth Workshop, held in November 2013. Fourteen of the participating countries responded, reporting a total of 148 actions related to these recommendations. They included capacity-building; coordination; the development of guidelines, strategies and standard operating procedures (SOPs) or plans; generating information; interventions, operational



Dr Karoon Chanachai, Department of Livestock Development, Thailand, explains the poster



Dr Gardner Murray, OIE Special Adviser, speaking

improvements, political engagement and organisational improvements. Of these, 127 (85.8%) were classified as multi-sectoral activities and only 21 (14.2%) were handled solely by either the animal or human health sector. The majority of these activities (84.5%) involved government funding in full or in part, while international organisations (58.1%) and other funding bodies (23.0%) also contributed to these activities. Although the Tripartite flagship issues – zoonotic influenza, rabies, and antimicrobial resistance – were mostly well addressed, the recommendation on antimicrobial resistance appears to have been the most poorly addressed in the region, with only six of the 14 countries (42.9%) reporting any initiatives related to this recommendation.

To support zoonosis prevention and control in the region, Members also discussed laboratory and epidemiology networking, as well as the newly developed WHO–OIE Operational Framework for good governance at the human–animal interface (PVS–IHR) and the OIE PVS Pathway laboratory missions. To meet any gaps, and also to explore possible opportunities, the workshop discussed Tripartite and partner organisation initiatives related to the practical implementation of One Health and zoonosis prevention and control. Building upon three days of discussion and the points raised by participants during the workshop, several recommendations were developed by the participants.

This annual zoonosis workshop began in 2010 and is jointly organised by the five regional offices of the



Listening to a speech by Dr Opart Karnkawinpong, Deputy Director General of Department of Disease Control, Ministry of Public Health (MoPH), Thailand



From left to right: Mr Hiroyuki Konuma (FAO Regional Representative for Asia and the Pacific), Dr Hirofumi Kugita (OIE Regional Representative for Asia and the Pacific) and Dr Richard Brown (WHO Thailand)

Tripartite (FAO–OIE–WHO) in the Asia–Pacific Region, i.e.:

- FAO Regional Office for Asia and the Pacific (FAO–RAP)
- OIE Regional Representation for Asia and the Pacific (OIE RR–AP)
- OIE Sub-Regional Representation for South-East Asia (OIE SRR–SEA)

– WHO Western Pacific Regional Office (WPRO)

- WHO Southeast Asia Regional Office (SEARO).

The Sixth Workshop will be held in Sapporo, Japan, in 2015 and will be spearheaded by the OIE Regional Representation for Asia and the Pacific.

Fourth OIE Sub-Regional Workshop for Veterinary Education Establishments and Veterinary Statutory Bodies

Hanoi, Vietnam, 8–10 December 2014

The Fourth OIE Sub-Regional Workshop for Veterinary Education Establishments and Veterinary Statutory Bodies was held by the OIE Sub-Regional Representation for South-East Asia from 8 to 10 December 2014, in Hanoi (Vietnam).

The main aims of the workshop was to follow up on progress made on veterinary education establishments (VEEs) and Veterinary Statutory Bodies (VSBs) in the Association of Southeast Asian Nations (ASEAN) with regard to compliance with OIE guidelines and standards, as well as to develop a plan of action for providing a sustainable and high-quality veterinary workforce for South-East Asia.

The meeting was opened by Dr Pham Van Dong, Delegate of Vietnam to the OIE and Director General of the Department of Animal Health at the Ministry of Agriculture and Rural Development (MARD), and by Dr Ronello Abila, OIE Sub-Regional Representative for South-East Asia. Representatives from VEEs, VSBs, veterinary medical associations and veterinary authorities of Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Thailand and Vietnam attended the workshop. The OIE Regional Representative for Asia and the Pacific and representatives from the ASEAN Secretariat and Federation of Asian Veterinary Associations (FAVA) were also present.

During the sessions, the roles of VEEs and VSBs were highlighted in relation to strengthening Veterinary Services. The critical role of Veterinary Services in promoting animal health and welfare, protecting public health and ensuring food security was also underscored. Participating Member Countries presented updates on their respective VEEs, VSBs, national veterinary association and Veterinary Authority. In particular, they updated the participants on progress made by their VEEs in aligning veterinary curricula with OIE guidelines for veterinary education ('Guidelines on veterinary education core curriculum' and 'Recommendations on the



competencies of graduating veterinarians'), on the activities of their VSBs with regard to compliance with OIE Day-1 Competencies, and on collaboration between their VEEs, VSBs, veterinary associations and Veterinary Services.

Aside from specific updates on selected VEEs and VSBs from the sub-region, the workshop also provided an opportunity for discussing ASEAN initiatives relating to the veterinary profession, including:

- the ASEAN Framework Agreement on Services (AFAS)
 - the ASEAN Mutual Recognition Agreement for the Veterinary Profession (MRA)
 - the ASEAN Qualifications Reference Framework (AQRf).
- The OIE initiatives on veterinary education and Veterinary Statutory Bodies in ASEAN were also recognised and highlighted through the presentations, namely:
- the ongoing veterinary education twinning project between Chiang Mai University (Thailand) and Minnesota University (USA)
 - the forthcoming twinning between Nong Lam University (Vietnam) and University of Queensland (Australia)
 - the pending VSB twinning of Thailand
 - the veterinary education partnership of Royal University of Agriculture (Cambodia) with Chulalongkorn University (Thailand) and University of the Philippines Los Baños – a partnership supported by the Stop Transboundary Animal Diseases and Zoonoses (STANDZ) initiative

- veterinary education improvement in Laos for the development of six-year veterinary curricula for the Doctor of Veterinary Medicine degree
- support for VSB establishment in Vietnam.

The participants also held a brainstorming session on the development of an action plan to provide a sustainable, high-quality veterinary workforce for South-East Asia. Working groups comprising representatives from different sectors of the veterinary profession in various countries pooled ideas to develop a list of short- and medium-to-long-term key actions to address the strengths, weaknesses, opportunities and threats they identified in relation to this regional initiative. These were then synthesised, summarised and further deliberated at the plenary session, after which agreement was reached on a sub-regional action plan to be developed by the OIE Sub-Regional Representation for South-East Asia.

The recommendations and conclusions of the Fourth OIE Sub-Regional Workshop for Veterinary Education Establishments and Veterinary Statutory Bodies included agreements to provide ongoing support for:

- the implementation of global recommendations for VEEs and VSBs
- strengthening Veterinary Services through the OIE PVS Pathway; and
- adoption of the OIE guidelines on veterinary education.

It also suggested continuing to explore the possibility of:

- establishing a VSB network
- setting up a sub-regional accreditation system for veterinary professionals through the ASEAN Mutual Recognition Agreement for the Veterinary Profession; and
- disseminating information on issues relating to the ASEAN Framework Agreement on Services, ASEAN Mutual Recognition Agreement for the Veterinary Profession and ASEAN Qualifications Reference Framework.

OIE portal on veterinary education:

www.oie.int/en/support-to-oie-members/veterinary-education/

OIE portal on veterinary statutory bodies:

www.oie.int/en/support-to-oie-members/veterinary-statutory-bodies/

Europe



OIE Platform
on Animal Welfare
for Europe

First anniversary of the OIE Platform on Animal Welfare for Europe

One year has passed by since the OIE Platform on Animal Welfare for Europe was launched¹ and its first triennial Action Plan (2014–2016) approved. The Platform aims to improve animal welfare in all 53 OIE Member Countries of Europe by empowering their Veterinary Services

to take action, particularly in the fields of slaughter, transport and stray dog populations, in compliance with OIE standards. The 2014 programme of activities stemming from the Action Plan was guided by the advice of the Platform Steering Group, which met in December 2013, May 2014 and

December 2014, in Paris, Moscow and Brussels, respectively.

Significant among the achievements of 2014 was the commitment of the Balkan countries to 'become fully compliant with OIE standards on stray dog population control by 2025'. This sub-regional vision was debated

¹ See *Bulletin*, no. 2014-1, pp. 46–47



Courtesy: AFSCA, Belgium



Members (and observers) of the Platform Steering Group during the meeting in Brussels, in December 2014

and agreed upon during the first seminar on stray dog population management (in Bucharest, June 2014)². National roadmaps will be developed to achieve this vision and progress will be measured on a regular basis, using a specific monitoring and evaluation tool developed by the OIE with its Collaborating Centre on Animal Welfare in Europe (IZSAM, Teramo, Italy), which is also a part of the Platform framework. Other notable achievements included the development of an interim website in English and Russian, which serves not only as a communications tool but also as an e-depository of best practices, collated from Member Countries. Finally, the Platform Secretariat (OIE Sub-Regional Representation in Brussels) produced an advocacy document and newsletter, and introduced the Platform at several regional events to raise the Platform's profile to partners and donors.

In 2015, two 'Training the Trainers' workshops on the issues of animal welfare during transportation, pre-slaughter and during slaughter will be organised for Russian-speaking countries in Russia and Georgia. As a result of these workshops, the newly briefed trainers will be requested to train those staff who are responsible for the implementation of the relevant OIE animal welfare standards in their country, and to work with their Veterinary Services and veterinary education establishments to encourage similar training of veterinary undergraduates. On the topic of stray dogs, the Secretariat will develop a

comprehensive 'stray dog awareness campaign package' and a pilot campaign will be organised in the Balkans, with the overall objective of promoting good dog ownership and minimising the abandonment of dogs in the streets, considered one of the main causes of stray

dogs in the region. A workshop on stray dog population management, similar to the one conducted in Bucharest in June 2014, will be organised for Central Asia and Caucasus countries in the second semester of 2015.

The OIE Platform is also envisioned as a mechanism to promote coordination and dialogue among all European countries and stakeholders involved in animal welfare, to ensure that they all share common goals and consistently work towards these goals, in accord with OIE standards. A special consultation meeting is scheduled in March 2015 with all stakeholders, with a view to sharing respective animal welfare activity portfolios and promoting a clear understanding of who does what in the European region. The Platform website will be upgraded so that it can play a significant communications role, by means of an e-forum and webinars.

All these activities are possible thanks to generous contributions from the European Commission, France, Germany, Switzerland, Romania, Russia, Belgium, and World Animal Protection.



Detailed information on the OIE Platform on Animal Welfare for Europe:
<http://rpawe.oie.int>

² See *Bulletin*, no. 2014-3, pp. 35–36

official acts

Appointment of permanent Delegates



21 November 2014

Philippines

Dr Rubina Cresencio

Chief Veterinary Officer, Director of the Bureau of Animal Industry (BAI), Livestock Development Division (LDD)



26 November 2014

Namibia

Dr Milton A. F. Maseke

Chief Veterinary Officer, Directorate of Veterinary Services, Ministry of Agriculture, Water and Forestry



28 November 2014

Gabon

Dr Daniel Obame Ondo

Directeur général de l'élevage, Direction générale de l'élevage, Ministère de l'agriculture, de l'élevage, de la pêche et de la sécurité alimentaire



2 December 2014

Nigeria

Dr Abdulganiyu Abubakar

Chief Veterinary Officer, Federal Ministry of Agriculture and Rural Development, Federal Department of Veterinary Services, Federal Capital Development Authority (FCDA) Secretariat



31 December 2014

Bangladesh

Dr Jatindra Nath Das

Director, Research Institute, Department of Livestock Services, Ministry of Fisheries and Livestock

1 January 2015

Brunei

Dr Diana Dennis Power

Veterinary Officer, Division of Livestock Industry, Department of Agriculture and Agrifood, Ministry of Industry and Primary Resources



7 January 2015

Thailand

Dr Ayuth Harintharanon

Director General, Department of Livestock Development, Ministry of Agriculture and Cooperatives



7 January 2015

Trinidad and Tobago

Dr David Kangaloo

Chief Veterinary Officer, Animal Production and Health Division, Ministry of Food Production



26 January 2015

Eritrea

Dr Yonas Woldu Tesfagaber

Senior Veterinarian, Technical Services, Ministry of Agriculture

1 March 2015

Belgium

Dr Philippe Houdart

Directeur, Département de la prévention et de la gestion des crises, Agence Fédérale pour la Sécurité de la Chaîne Alimentaire (AFSCA)



strengthening of Veterinary Services

OIE PVS Pathway for efficient Veterinary Services

PVS Evaluation missions

State of Play – as at 1 March 2015

OIE Region	OIE Members	Requests received	Missions completed	Reports available for distribution to donors and partners
Africa	54	53	51	41
Americas	29	25	23	18
Asia and the Pacific	32	24	22	11
Europe	53	18	16	12
Middle East	12	13	11	5
Total	180	133	123	87

PVS Evaluation mission requests

• Africa (53)

Algeria, Angola, Benin, Botswana, Burkina Faso, Burundi, Cameroon, Cape Verde, Central African Rep., Chad, Comoros, Rep. of the Congo, Dem. Rep. of the Congo, Côte d'Ivoire, Djibouti, Egypt, Equatorial Guinea, Eritrea, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Kenya, Lesotho, Liberia, Libya, Madagascar, Malawi, Mali, Mauritania, Mauritius, Morocco, Mozambique, Namibia, Niger, Nigeria, Rwanda, São Tomé and Príncipe, Senegal, Seychelles, Sierra Leone, Somalia, South Africa, Sudan, Swaziland, Tanzania, Togo, Tunisia, Uganda, Zambia, Zimbabwe.

• Americas (25)

Argentina, Barbados, Belize, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Rep., Ecuador, El Salvador, Guatemala, Guyana, Haiti, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, Suriname, Trinidad and Tobago, Uruguay, Venezuela.

• Asia-Pacific (24)

Australia, Bangladesh, Bhutan, Brunei, Cambodia, Fiji, Indonesia, Iran, Dem. People's Rep. of Korea, Laos, Malaysia, Maldives, Mongolia, Myanmar, Nepal, New Caledonia, Pakistan, Papua New Guinea, Philippines, Sri Lanka, Thailand, Timor Leste, Vanuatu, Vietnam.

• Europe (18)

Albania, Armenia, Azerbaijan, Bosnia and Herzegovina, Bulgaria, Georgia, Iceland, Israel, Kazakhstan, Kyrgyzstan, Former Yug. Rep. of Macedonia, Romania, Serbia, Tajikistan, Turkey, Turkmenistan, Ukraine, Uzbekistan.

• Middle East (13)

Afghanistan, Bahrain, Iraq, Jordan, Kuwait, Lebanon, Oman, Palestinian N.A. (observer), Qatar, Saudi Arabia, Syria, United Arab Emirates, Yemen.

In red: completed missions

Legislation missions

State of Play – as at 1 March 2015

OIE Region	OIE Members	Requests received	Missions completed
Africa	54	39	22
Americas	29	7	6
Asia and the Pacific	32	5	5
Europe	53	5	2
Middle East	12	4	4
Total	180	60	39

Legislation mission requests

• Africa (39)

Angola, Benin, Botswana, Burkina Faso, Burundi, Cameroon, Central African (Rep.), Chad, Comoros, Dem. Rep. of the Congo, Côte d'Ivoire, Djibouti, Eritrea, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Kenya, Lesotho, Libya, Madagascar, Malawi, Mali, Mauritania, Mauritius, Mozambique, Niger, Nigeria, Rwanda, Senegal, Seychelles, Sudan, Togo, Tunisia, Uganda, Zambia, Zimbabwe.

• Americas (7)

Barbados, Bolivia, Dominican Rep., Guatemala, Haiti, Honduras, Paraguay.

• Asia/Pacific (5)

Bhutan, Cambodia, Laos, Mongolia, Vietnam.

• Europe (5)

Armenia, Georgia, Israel, Kazakhstan, Kyrgyzstan.

• Middle East (4)

Afghanistan, Kuwait, Lebanon, United Arab Emirates.

In red: completed missions

PVS Gap Analysis missions

State of Play – as at 1 March 2015

OIE Region	OIE Members	Requests received	Missions completed	Reports available for distribution to donors and partners
Africa	54	46	43	25
Americas	29	15	12	10
Asia and the Pacific	32	18	13	7
Europe	53	9	7	2
Middle East	12	8	4	0
Total	180	96	79	44

PVS Gap Analysis mission requests

• Africa (46)

Algeria, Angola, Benin, Botswana, Burkina Faso, Burundi, Cameroon, Central African (Rep.), Chad, Comoros, Dem. Rep. of the Congo, Côte d'Ivoire, Djibouti, Egypt, Eritrea, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Kenya, Lesotho, Libya, Madagascar, Mali, Mauritania, Mauritius, Morocco, Mozambique, Namibia, Niger, Nigeria, Rwanda, Senegal, Seychelles, Sierra Leone, South Africa, Sudan, Swaziland, Tanzania, Togo, Tunisia, Uganda, Zambia, Zimbabwe.

• Americas (15)

Barbados, Belize, Bolivia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Haiti, Honduras, Jamaica, Nicaragua, Panama, Paraguay, Suriname.

• Asia-Pacific (18)

Bangladesh, Bhutan, Brunei, Cambodia, Fiji, Indonesia, Iran, Dem. People's Rep. of Korea, Laos, Mongolia, Myanmar, Nepal, Philippines, Sri Lanka, Thailand, Timor Leste, Vanuatu, Vietnam.

• Europe (9)

Armenia, Azerbaijan, Bosnia and Herzegovina, Israel, Kazakhstan, Kyrgyzstan, Serbia, Tajikistan, Turkey.

• Middle East (8)

Afghanistan, Kuwait, Lebanon, Oman, Palestinian N.A. (observer), Syria, United Arab Emirates, Yemen.

In red: completed missions

OIE Regional Workshops for focal points and Information Seminars for new Delegates

Asia – Pacific

Enriched Seminar for OIE National Focal Points for Animal Welfare and 8th meeting of the OIE Regional Animal Welfare Strategy Coordination Group

Canberra, Australia, 11–14 November 2014

Regional Animal Welfare Strategy Coordination Group Meeting 8

The eighth meeting of the Regional Animal Welfare Strategy Coordination Group (RAWS–CG Meeting 8) was held in Canberra, Australia, on 11 November, so that Members could:

- a) report on their activities;
- b) review progress under the Regional Animal Welfare Strategy;
- c) gain an understanding of key animal welfare issues globally, regionally and nationally; and
- d) consider future arrangements for RAWS after the current funding from Australia expires in June 2015.

This was the first meeting since the OIE Regional Representation for Asia and the Pacific took over the management of the RAWS Secretariat from the Australian Government's Department of Agriculture.

During the RAWS–CG Meeting 8, the following points were discussed:

- a recommendation that each country regularly report to the RAWS Secretariat on its progress with the organisation and promotion of the Action Plan and regulatory developments
- the need to circulate existing animal welfare education and training materials among Members to enable their wider use
- the need for Veterinary Services to actively participate in their local mirror committees of the national standards organisation involved in the development of an ISO Technical Specification on the welfare of animals raised for food production
- options for future RAWS management, coordination and funding
- the need to address, at the regional level, the animal welfare concerns associated with the transport and slaughter of animals for large festivals.

Members of the RAWS–CG also agreed to further promote RAWS implementation within the region by more engagement with Member Country Delegates and their National Animal Welfare Focal Points.



Front row from left to right: Dr Hirofumi Kugita, OIE Regional Representative for Asia and the Pacific; Dr Mark Schipp, Delegate of Australia to the OIE; Dr Paul Grimes, Secretary of the Australian Department of Agriculture; Dr Brian Evans, Deputy Director General of the OIE; Dr Abdul Rahman, Chair of the OIE Animal Welfare Working Group. **Next rows:** Animal Welfare Focal Points

The Regional Animal Welfare Strategy for Asia, the Far East and Oceania (RAWS–AFEEO) has shown considerable progress and evolution over the past few years and serves as a model for RAWS to be developed in other regions. There was strong support for the RAWS–CG to continue driving the implementation of OIE animal standards, and to share its experience and expertise with other regions.

Enriched Seminar for OIE National Focal Points for Animal Welfare (AWFP)

The fourth-cycle Seminar for National Focal Points for Animal Welfare in Asia and the Pacific was held in Canberra from 12 to 14 November 2014.

The meeting was attended by 53 participants, including 27 country representatives and three observers in the region, with the participation of the Delegate of Australia

to the OIE, Dr Mark Schipp, and the Secretary of the Australian Department of Agriculture, Dr Paul Grimes, who gave a warm welcome to the participants. The OIE was represented by Dr Brian Evans, Deputy Director General, and Dr Leopoldo Stuardo, Chargé de mission, both from OIE Headquarters; Drs Hirofumi Kugita, OIE Regional Representative, and Yooni Oh, both from the OIE Regional Representation for Asia and the Pacific; Dr Agnes Poirier from the OIE Sub-Regional Representation for South-East Asia, and Dr Gardner Murray, Special Adviser to the OIE and Chair of the RAWS–CG. Participants also included Dr Abdul Rahman, Chair of the OIE Animal Welfare Working Group (AWWG); Dr Tomoko Ishibashi of Japan’s Ministry of Agriculture, Forestry and Fisheries; representatives from various non-governmental organisations (NGOs) (i.e. Drs Ian Dacre from World Animal Protection and Bidida Jones from the Royal Society for the Prevention of Cruelty to Animals, Australia) and from Australian industry (Mr Graeme Hoare and Linley Miners from the Australian Livestock and Rural Transporters’ Association, and Ms Therese Herbert from the Australian Lot Feeders Association).

The seminar was opened by Dr Hirofumi Kugita and Dr Mark Schipp made some opening remarks.

Dr Evans gave a general presentation about the OIE, and information was given to the participants on

standard-setting procedures and the activities of the AWWG, including the development of the OIE Global Animal Welfare Strategy and an update on the OIE Improved Animal Welfare Programme (IAWP). Six National Focal Points for Animal Welfare (from New Zealand, the Philippines, the People’s Republic of China, India, Malaysia and the Republic of Korea) shared their experiences on the implementation of OIE animal welfare standards. The programme included presentations on stray dog population control as a key element of rabies control, and the role that NGOs play in improving animal welfare. Australian industry speakers also shared their experiences on the implementation of OIE animal welfare standards in the feedlot and transportation industries.

One session was dedicated to reviewing progress on the implementation of RAWS, including a report on the outcomes from the RAWS–CG Meeting 8, given by Dr Gardner Murray.

There were group discussions to enable participants to share information on the obstacles they had encountered during the implementation of OIE standards and possible solutions, including improving communication and awareness of acceptable animal welfare measures. There was also debate on the future management and strategic direction of RAWS–AFEO.



Group discussions

Regional Seminar for OIE National Focal Points for Veterinary Products

Tokyo, Japan, 3–5 December 2014



The third cycle of the Regional Seminars for the Asia and the Pacific region was organised in Tokyo to deepen the understanding of OIE National Focal Points for Veterinary Products on key issues, such as:

- the validation of diagnostic test methods and the OIE procedure for the registration of diagnostic kits
- antimicrobial use and resistance, including the joint efforts of the FAO/OIE/WHO Tripartite
- the general principles and outreach efforts of the International Cooperation on Harmonisation of Technical Requirements for Registration of Veterinary Medicinal Products (VICH)
- anti-parasitic drugs.

In all, some 50 participants attended the seminar, including OIE National Focal Points or representatives from 26 regional Member Countries, experts from OIE Collaborating Centres, two internship students from Nippon Veterinary and Life Science University and OIE staff. The seminar was

organised in plenary and working-group sessions.

The first working-group session focused on the validation, registration and marketing authorisation of diagnostic kits. Participating countries have different regulatory mechanisms for diagnostic kits, but most countries reported that the OIE Registration System for Diagnostic Kits could be useful for OIE Member Countries. There was a request for the provision of a common platform for sharing the lists of diagnostic kits registered in the different OIE Member Countries.

Antimicrobial resistance is one of the priority issues under the Tripartite concept. Focal Points were updated on the OIE's activities on antimicrobial resistance and, in particular, the development of an OIE database to collect data on the use of antimicrobial agents in animals worldwide. The second working-group session provided an opportunity to comment on the proposed OIE data collection template

and instructions. The participants were also asked which reporting options they would prefer to use. Most participants indicated that their country did not yet have a system in place to collect data on the use of antimicrobial agents in animals; however, they could access the relevant information. They also mentioned the likely need for resources to implement such a data-collection system and voiced their concern regarding off-label use of antimicrobial agents and the challenge of obtaining accurate data on such uses. However, they were confident of being able to complete the data collection sheet, in liaison with the relevant national partners, if additional resources were made available.

The third working-group session covered the approval, quality control and usage of anti-parasitic veterinary medicines. Presentations covered the use of anti-parasitic drugs, the development of resistance in anthelmintics, the importance of

integrated approaches focusing on diagnosis and drug management, and developing alternative control strategies to prevent and control resistance. Participants mentioned that anti-parasitic drugs are usually not used under veterinary supervision, even if they are registered as veterinary medicines. Participants also agreed that guidelines are needed for the use of such drugs, as most anti-parasitic drugs are available without prescription.

The last plenary session of the seminar addressed the governance of veterinary products and particular attention was paid to the use of veterinary products in aquatic animal health and risk assessment of fish

vaccines. It was pointed out that the use of fish vaccines would be potentially beneficial to reduce antimicrobial resistance and that the OIE Collaborating Centre for Diagnosis and Control of Animal Diseases and Related Veterinary Product Assessment in Asia (Japan) should continue its support to Member Countries to help them to conduct risk assessments of vaccines. Participants reiterated the need to develop standards and guidelines for veterinary products, especially anti-parasitic drugs and fish vaccines, and the importance of legal support for pharmacovigilance.

The OIE would like to thank the two participating OIE Collaborating Centres, the Collaborating Centre for Diagnosis and Control of Animal Diseases and Related Veterinary Product Assessment in Asia and the Collaborating Centre for Veterinary Medicinal Products, for their support, as well as the Focal Points and national representatives for their active participation.

Europe

Regional workshop for National Focal Points for Animal Disease Notification to the OIE on the subject of the World Animal Health Information System

Sofia, Bulgaria, 14–16 October 2014

As part of the effort to strengthen Veterinary Services, a European regional seminar for National Focal Points for Animal Disease Notification to the OIE was held on the subject of the World Animal Health Information System (WAHIS) in Sofia (Bulgaria) from 14 to 16 October

2014. The workshop was organised by the OIE Regional Representation for Eastern Europe and conducted by OIE Headquarters officials, namely Dr Paula Cáceres, Head of the World Animal Health Information and Analysis Department, and two of her staff: Dr Lina Awada, Veterinary



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OIE Regional Workshops for focal points and Information Seminars for new Delegates

Epidemiologist, and Ms Natalja Lambergeon, Animal Health Information Technician.

Twenty-one participants from the Europe Region attended the workshop together with five staff members from the OIE Regional and Sub-Regional Representations and the three officials from OIE Headquarters. Twenty countries took part in the three-day course: Belarus, Belgium, Cyprus, Georgia, Iceland, Ireland, Italy, Kazakhstan, Latvia, Luxembourg, Former Yug. Rep. of Macedonia, Netherlands, Norway, Portugal, Romania, Spain, Switzerland, Ukraine, United Kingdom and Uzbekistan.

The workshop was based on an interactive structure, with presentations on WAHIS and its World Animal Health Information Database (WAHID) public interface alternating with practical sessions on computers. The workshop was conducted in English with simultaneous interpretation provided in French and Russian. For the first time, the

practical sessions included online demonstrations to allow participants to familiarise themselves with WAHIS prior to creating reports. The participants worked on case studies featuring different scenarios to enable them to identify and correct inconsistencies in existing reports. They also discovered how to search for information in WAHID.

Overall the participants were very satisfied, especially with the new interactive training, with 91% stating that their expectations had been met, underlining the usefulness of such workshops. Positive feedback related chiefly to the quality of presentations, the exercises and the variety of thematic and technical support provided by OIE officials. Suggested improvements for future training seminars focused mainly on extending seminars by at least one or two days (to a minimum of four days). Participants improved their skills, showed great enthusiasm for the new approach and praised the speakers' professionalism.

Regional Seminar for OIE National Focal Points for Veterinary Products

Ohrid, Former Yug. Rep. of Macedonia, 18–20 November 2014

The Regional Seminar for Europe was organised by the OIE Regional Representation for Eastern Europe within the global programme for capacity-building for OIE Delegates and OIE National Focal Points (NFPs). This seminar constituted the third cycle of the seminars for NFPs for Veterinary Products, launched in 2010, and so far is the only one to have taken place for all 53 Member Countries from the European region. The first seminar for NFPs for Veterinary Products was held in Belgrade, Serbia (26–28 July 2010), followed by the second in Vienna, Austria (20–22 November 2012), both organised for selected OIE Member Countries of the Europe region, mostly from Eastern Europe. This seminar took place under the overall responsibility and technical guidance of the OIE

Scientific and Technical Department.

As 10 of the 32 participating countries were Russian-speaking, the official languages of the seminar were English and Russian.

The overall objectives of the seminar were to provide participants with:

- a) knowledge on OIE activities and the OIE strategy linked to veterinary products; namely: diagnostic test validation methods and kits, antimicrobial resistance, collecting quantitative data on the use of antimicrobial agents and the establishment of an OIE database, anti-parasitic drugs, veterinary products in general, and good governance
- b) information on the role, responsibilities and specific tasks of NFPs in this area

c) an opportunity to share experiences and promote discussion between the countries of the region.

The seminar also included a presentation and update on the general principles of the International Cooperation on Harmonisation of Technical Requirements for Registration of Veterinary Medicinal Products (VICH) and its Outreach Forum activities, aimed at promoting the wider international harmonisation of technical registration requirements for gaining marketing authorisation for veterinary medicinal products.

The agenda was organised into lectures and three small working-group sessions. The working-group sessions were dedicated to:

- a) the validation, registration and marketing authorisation of diagnostic kits



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b) testing the proposed data-collection template and instructions for the OIE database on antimicrobial agents used in animals

c) the approval, quality control and use of anti-parasitic veterinary medicines.

The opening ceremony was chaired by Prof. Dr Nikola Belev, Honorary President of the OIE Regional Commission for Europe and OIE Regional Representative for Eastern Europe. Mr Zoran Popovski, Director of the Food and Veterinary Agency of the Former Yugoslav Republic of Macedonia (FYROM), gave a warm welcome on behalf of the host country, underlining the importance of the seminar's topics. Dr Elisabeth Erlacher-Vindel, Deputy Head of the OIE Scientific

and Technical Department, welcomed participants on behalf of the OIE.

A variety of speakers then presented recent activities in the field of veterinary products, representing:

- the OIE Collaborating Centre for Veterinary Medicinal Products – ANSES Fougères, France
- the OIE Collaborating Center for Veterinary Drug Regulatory Programmes (Center for Veterinary Medicines, Food and Drug Administration, Washington, DC, USA)
- the national reference centre of Italy for beekeeping ('Istituto Zooprofilattico Sperimentale delle Venezie', Padua, Italy)
- the European Manufacturers of Veterinary Diagnostics (EMVD)
- the European Medicines Agency
- the French national veterinary statutory body ('Ordre National des Vétérinaires') and

– the Aristotle University of Thessaloniki, Greece.

The seminar proved very successful. Most participants emphasised the value of this opportunity to network, share experiences and debate various aspects of issues related to veterinary products. At the end of the seminar, many expressed their appreciation to OIE Headquarters and the OIE Regional Representation for Eastern Europe for a successful and stimulating format and the smooth running of the event.



meetings and visits

Names and positions of OIE permanent staff who participated in meetings or visits from October to December 2014

OIE Headquarters

General Directorate

Bernard Vallat	Director General
Alex Thiermann	Adviser to the Director General and President of the OIE Terrestrial Animal Health Standards Commission
Catherine Bertrand-Ferrandis	Head of the Communication Unit
Marina Domingo Monsonís	Chargée de mission
Yael Farhi	Chargée de mission
Monique Eloit	Deputy Director General (Administration, Management, Human Resources and Regional Activities)
Alain Dehove	Coordinator of the World Animal Health and Welfare Fund
Anne Reale-Bailly	Bilingual Secretary (World Fund)
Julie Macé	Project Officer (World Fund)
Emily Tagliaro	Project Officer (World Fund)
Victoria Wong	Project Officer (World Fund)
Sophie Rivière	Project Officer (World Fund)
Alix Weng	Head of the Budget and Financial Unit
Jean-Pierre Croiziers	Head of the Human Resources Unit
Gilles Seigneurin	Head of the Accounts Unit
Marie Bonnerot	Budget and Financial Manager
Romain Lemesnager	Accountant
Brian Evans	Deputy Director General (Animal Health, Veterinary Public Health and International Standards)

Administration, Logistics and Publications Department

Daniel Chaisemartin	Head of Department
Bertrand Flahault	1st Deputy Head of Department and Head of the Systems Management and Events Unit
Ingrid Contreras Arias	Trilingual Conference Coordinator
Annie Souyri	2nd Deputy Head of Department and Head of the Publications Unit

World Animal Health Information and Analysis Department

Paula Cáceres Soto	Head of Department
Neo Mapitse	Deputy Head of Department
Marija Popovic	Chargée de mission
Natalja Lambergeon	Animal Health Information Technician
Lina Awada	Veterinary Epidemiologist
Patricia Pozzetti	Chargée de mission
Aziza Yassin Mustafa	Chargée de mission

International Trade Department

Derek Belton	Head of Department
Gillian Mylrea	Deputy Head of Department
Rastislav Kolesar	Animal Welfare Coordinator
Tomasz Grudnik	Chargé de mission
Maria Elaine Joy Villareal	Chargée de mission
Masatsugu Okita	Chargé de mission (until 13 November 2014)
Leopoldo Humberto Stuardo Escobar	Chargé de mission
Jae Myong Lee	Chargé de mission

Scientific and Technical Department

Brian Evans	Head of Department
Elisabeth Erlacher-Vindel	Deputy Head of Department
Joseph Domenech	Adviser
Susanne Münstermann	Project Officer
Morgane Dominguez	Project Officer
Kiok Hong	Chargé de mission
François Diaz	Chargé de mission
Keith Hamilton	Officer in charge of the Reduction of Biological Threats
Laure Weber-Vintzel	Officer in charge of the Recognition of Countries' Animal Disease Status
Jennifer Lasley	Project Coordinator
Mariano Ramos	Chargé de mission
Gounalan Pavade	OFFLU Technical Assistant
Dietrich Rassow	Veterinarian Adviser
Min Kyung Park	Chargée de mission
Dawid Visser	Biosecurity Officer
Barbara Freischem	Chargée de mission
Simona Forcella	Chargée de mission
Gregorio José Torres Peñalver	Chargé de mission
Kazutoshi Matsuo	Chargé de mission
Sara Linnane	Scientific Editor

Regional Activities Department

François Caya	Head of Department
Mara Elma González Ortiz	Deputy Head of Department
Nathaly Monsalve	Conference Coordinator/Trilingual Secretary
Sylvie Pupulin	Chargée de mission
Marie Edan	Chargée de mission
Valentyna Sharandak	Chargée de mission
David Sherman	Chargé de mission
Martial Petitclerc	Chargé de mission

OIE Regional and Sub-Regional Representations

Africa

Yacouba Samaké	Regional Representative for Africa (Bamako, Mali)	Chantanee Buranathai	Regional Project Coordinator (Tokyo, Japan)
Daniel Bourzat	Adviser to the Regional Representative for Africa (Bamako, Mali)	Tikiri Wijayathilaka	Regional Project Coordinator (Tokyo, Japan)
Abdrmane Sanogo	Accountant (Bamako, Mali)	Hnin Thidar Myint	Regional Project Coordinator (Tokyo, Japan)
Aïssata Bagayoko	Secretary (Bamako, Mali)	Yooni Oh	Regional Veterinary Officer (Tokyo, Japan)
Alou Sangaré	Administrative Assistant (Bamako, Mali)	Yoko Aoyama	Regional Veterinary Officer (Tokyo, Japan)
Moetapele Letshwenyo	Sub-Regional Representative for Southern Africa (Gaborone, Botswana)	Lushi Liu	Secondment Officer (Tokyo, Japan)
Mpho Mantsho	Administrative and Financial Assistant (Gaborone, Botswana)	Takako Hasegawa	Administrative Officer (Tokyo, Japan)
Nomsa Thekiso	Secretary (Gaborone, Botswana)	Chiharu Izumi	Administrative Officer (Tokyo, Japan) (until 28 November 2014)
Rachid Bouguedour	Sub-Regional Representative for North Africa (Tunis, Tunisia)	Kanako Koike	Accounting Officer (Tokyo, Japan)
Alessandro Ripani	Programme Officer (Tunis, Tunisia)	Ronello Abila	Sub-Regional Representative for South-East Asia (Bangkok, Thailand)
Jocelyn Mérot	Programme Officer (Tunis, Tunisia)	Agnès Poirier	Programme Coordinator (HPED) (Bangkok, Thailand)
Ines Guitouni	Administrative and Financial Assistant (Tunis, Tunisia)	Phillip Widders	Programme Coordinator (SEACFMD) (Bangkok, Thailand)
Walter Masiga	Sub-Regional Representative for Eastern Africa and the Horn of Africa (Nairobi, Kenya)	Jaruwan Kampa	Programme Coordinator (IDENTIFY) (Bangkok, Thailand)
Patrick Bastiaensen	Programme Officer (Nairobi, Kenya)	Mary Joy Gordoncillo	Science and One Health Coordinator (Bangkok, Thailand)
Grace Omwega	Administrative and Financial Assistant (Nairobi, Kenya)	Pennapa Matayompong	STRIVES Coordinator (Bangkok, Thailand)
Loise Ndungu	Secretary (Nairobi, Kenya)	Cecilia Dy	M&E Coordinator and Communication Officer (Bangkok, Thailand)

Americas

Luis Osvaldo Barcos	Regional Representative for the Americas (Buenos Aires, Argentina)	Karan Kukreja	Project Officer (Bangkok, Thailand)
Martín Minassian	Technical Assistant (Buenos Aires, Argentina)	Barbara Tornimbene	Project Officer–Epidemiologist (Bangkok, Thailand)
Alina Gutiérrez Camacho	Secretary (Buenos Aires, Argentina)	Melada Ruengjumroonath	Financial Officer (Bangkok, Thailand)
Leandro Barcos	Administrative Assistant (Buenos Aires, Argentina)	Preechaya Srithep	Administrative Officer (Bangkok, Thailand)
Montserrat Arroyo Kuribreña	Sub-Regional Representative for Central America (Panama City, Panama)	Onsiri Benjavejbhaisan	Administrative Officer (Bangkok, Thailand)
Lexy Castro de Ceballos	Secretary (Panama City, Panama)		

Asia and the Pacific

Hirofumi Kugita	Regional Representative for Asia and the Pacific (Tokyo, Japan)
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Europe

Nikola T. Belev	Regional Representative for Eastern Europe (Sofia, Bulgaria)
Aleksandra Miteva	Technical Assistant (Sofia, Bulgaria)
Rina Kostova	Secretary (Sofia, Bulgaria)

Kazimieras Lukauskas	Regional Representative in Moscow (Russia)	Assylbek Kozhumratov	Technical Assistant (Astana, Kazakhstan) (from 1 November 2014)
Ekaterina Panina	Technical and Administrative Assistant (Moscow, Russia)	Middle East	
Nadège Leboucq	Sub-Regional Representative in Brussels (Belgium)	Ghazi Yehia	Regional Representative for the Middle East (Beirut, Lebanon)
Stéphane de La Rocque	Chargé de mission – Veterinary Public Health (Brussels, Belgium)	Mustapha Mestom	Consultant (Beirut, Lebanon)
Stanislav Ralchev	Technical Assistant (Brussels, Belgium)	Xavier Pacholek	Technical Assistant (Beirut, Lebanon)
Mereke Taitubayev	Head of the Sub-Regional FMD Coordination Unit (Astana, Kazakhstan) (from 1 November 2014)	Ali El Romeh	Technical Assistant (Beirut, Lebanon)
Askar Kozhayev	Technical Assistant (Astana, Kazakhstan) (until 1 November 2014)	Rita Rizk	Trilingual Secretary (Beirut, Lebanon)
		Khodr Rejeili	Assistant (Beirut, Lebanon)
		Tony Atallah	Assistant (Beirut, Lebanon)

Names and positions of experts who represented the OIE in meetings or visits from October to December 2014

Sharie Michelle Aviso	Project Officer, Northern Laos FMD Project
Etienne Bonbon	Vice-President of the OIE Terrestrial Animal Health Standards Commission
Gideon Brückner	President of the OIE Scientific Commission for Animal Diseases
Susan Corning	OIE Consultant
Carlos A. Correa Messuti	Past President of the World Assembly of OIE Delegates and Delegate of Uruguay to the OIE
Ingo Ernst	Member of the OIE Aquatic Animal Health Standards Commission
Anthony Fooks	OIE Expert, OIE Reference Laboratory for Rabies (Weybridge, United Kingdom)
Bruno Garin-Bastuji	OIE Expert, OIE Reference Laboratory for Brucellosis (Maisons-Alfort, France)
Tomoko Ishibashi	OIE Expert
Huang Jie	Vice-President of the OIE Aquatic Animal Health Standards Commission
Sarah Kahn	OIE Consultant
Donald King	OIE Expert, OIE Reference Laboratory for Foot and Mouth Disease and Swine Vesicular Disease (Woking, United Kingdom)
Gardner Murray	OIE Special Adviser
Karin Schwabenbauer	President of the World Assembly of OIE Delegates and Delegate of Germany to the OIE

List of abbreviations

ANSES French Agency for Food, Environmental and Occupational Health and Safety	EFSA European Food Safety Authority	IGAD Intergovernmental Authority on Development
APHCA Animal Production and Health Commission for Asia and the Pacific	EU European Union	IHR International Health Regulations
ASEAN Association of South-East Asian Nations	EuFMD European Commission for the Control of Foot and Mouth Disease	ILRI International Livestock Research Institute
ASF African swine fever	FAO Food and Agriculture Organization of the United Nations	IMED International Meeting on Emerging Diseases and Surveillance
AU-IBAR African Union-Interafrican Bureau for Animal Resources	FEI International Equestrian Federation	IMHC International Movement of Horses Committee
AU-PATTEC African Union–Pan-African Tsetse and Trypanosomosis Eradication Campaign	FMD Foot and mouth disease	IMS International Meat Secretariat
BTSF Better Training for Safer Food (programme)	FVE Federation of Veterinarians of Europe	IVSA International Veterinary Students' Association
CABI Centre for Agricultural Bioscience International	GFSP Global Food Safety Partnership	IWTO International Wool Textile Organisation
CBRN Chemical, Biological, Radiological, and Nuclear	GF-TADs FAO/OIE Global Framework for the Progressive Control of Transboundary Animal Diseases	LinkTADs Linking Epidemiology and Laboratory Research on Transboundary Animal Diseases and Zoonoses in European Union and China
CCFH Codex Committee on Food Hygiene	HPED European Union-funded cooperation programme on highly pathogenic and emerging and re-emerging diseases in Asia	M&E Monitoring & Evaluation
CCFICS Codex Committee on Food Import and Export Inspection and Certification Systems	IAWP OIE Improved Animal Welfare Programme	NACA Network of Aquaculture Centres in Asia-Pacific
CMC-AH Crisis Management Centre – Animal Health	ICIPE International Centre of Insect Physiology and Ecology	NATO North Atlantic Treaty Organization
CORDS Connecting Organizations for Regional Disease Surveillance	ICPALD IGAD Centre for Pastoral Areas and Livestock Development	OECD Organisation for Economic Co-operation and Development
DG SANCO Directorate General for Health and Consumers of the European Commission	IDB Inter-American Development Bank	OFFLU Joint OIE/FAO worldwide scientific network for the control of animal influenzas
DGAL French Directorate General for Food	IDENTIFY USAID-funded Laboratory Capacity Building and Networking Project	OIE World Organisation for Animal Health
ECCAS Economic Community of Central African States	IFAH International Federation for Animal Health	PPR Peste des petits ruminants
		RAWS Regional Animal Welfare Strategy



List of abbreviations (contd)

RECs Regional Economic Communities	SPS Sanitary and phytosanitary measures	VetAgro Sup Institute of Higher Education and Research for Food, Animal Health, Agricultural Science and the Environment (France)
REEV-Med Mediterranean Network of Establishments for Veterinary Education	STANDZ Stop Transboundary Animal Diseases and Zoonoses	VETGOV Reinforcing Veterinary Governance in Africa (EU-funded project implemented by AU-IBAR in partnership with OIE and FAO)
REMESA Mediterranean Animal Health Network	STDF Standards and Trade Development Facility	VSPA Vaccine Standards and Pilot Approach to PPR Control in Africa (OIE programme supported by the Bill & Melinda Gates Foundation)
RPCA Food Crisis Prevention Network	STRIVES Strengthening Initiative for Veterinary Services	WAHIS OIE World Animal Health Information System
SEACFMD South-East Asia and China Foot and Mouth Disease Campaign	UN United Nations	WHO World Health Organization
SEAVSA South-East Asia Veterinary Schools' Association	UNODA United Nations Office for Disarmament Affairs	WTO World Trade Organization
SMP-AH Standard Methods and Procedures in Animal Health (AU-IBAR/USAID Project)	US United States	
SPC Secretariat of the Pacific Community	USAID United States Agency for International Development	

meetings and visits

October 2014

Title of the event	Place	Date	Participants
3rd Regional workshop of the regional task force on pastoralism of the Regional Sahel Pastoralism Support Project (PRAPS)	N'Djamena, Chad	30 September – 2 October	Dr Y. Samaké
ILRI Regional Colloquium: 'Livestock-based options for sustainable development', to mark ILRI 40-year-anniversary (ILRI@40)	Kabete, Kenya	1 October	Dr W. Masiga
Consultation-workshop on STANDZ Rabies Project Guideline, Protocols on Accountability, Monitoring and Evaluation	Quezon City, the Philippines	1–2 October	Dr R. Abila
Final meeting of the project 'Vaccine Standards and Pilot Approach to PPR Control in Africa' (VSPA)	OIE Headquarters, Paris, France	2–3 October	Dr A. Dehove, Ms E. Tagliaro, Dr J. Domenech & Dr R. Bouguedour
6th Workshop of the EU Reference Laboratories for Equine Diseases: Glanders and Equine Infectious Anaemia	Lyons, France	6–7 October	Dr S. Münstermann

meetings and visits

October 2014 (contd)

Title of the event	Place	Date	Participants
Joint SEACFMD Laboratory Network (LabNet) and Epidemiology Network (EpiNet) Meeting	Ho Chi Minh City, Vietnam	6–8 October	Dr L. Weber-Vintzel, Dr H. Kugita, Dr C. Buranathai, Dr R. Abila, Dr J. Kampa, Dr M.J. Gordoncillo, Dr K. Kukreja, Dr B. Tornimbene & Ms M. Ruengjumroonath
4th Regional Short-term Training on Risk Assessment for Veterinary Vaccines, organised by the National Veterinary Assay Laboratory, OIE Collaborating Centre for Diagnosis and Control of Animal Diseases and Related Veterinary Product Assessment in Asia, and the Ministry of Agriculture, Forestry and Fisheries	Tokyo, Japan	6–10 October	Dr Y. Oh & Dr Y. Aoyama
2nd Review of research proposals for Zoonoses anticipation and preparedness initiative (ZAPI) submitted to the Innovative Medicines Initiative (IMI), a public-private partnership	Brussels, Belgium	7–8 October	Dr B. Freischem
9th meeting of the EFSA Scientific Network on bovine spongiform encephalopathy and other transmissible spongiform encephalopathies	Parma, Italy	7–8 October	Dr M. Okita
Vaccination and blood collection for the evaluation of FMD vaccine in Vang Vieng District of Vientiane Province (Laos) (booster vaccination and 2nd collection)	Vang Vieng, Laos	8–9 October	Dr S.M. Aviso
FAO/OIE Expert Workshop on developing a Global PPR Control and Eradication Strategy	Rome, Italy	8–10 October	Dr J. Domenech, Dr S. Münstermann, Dr D. Bourzat, Dr R. Bouguedour, Dr P. Bastiaensen, Dr N. Leboucq & Dr G. Yehia
2nd Training Session of the OIE Improved Animal Welfare Programme (IAWP) in Iran	Tabriz, Iran	8–13 October	Dr R. Kolesar
Meeting DGAL-ANSES on: 'Rabies, a disease still in the news'	OIE Headquarters, Paris, France	9 October	Dr A. Dehove
Workshop on the 'safe and secure biomaterials' initiative at Chatham House	London, United Kingdom	9–10 October	Dr K. Hamilton
Meeting on bluetongue situation in Bulgaria and neighbouring countries, organised by the Ministry of Agriculture and Food of Bulgaria and the Bulgarian Food Safety Agency, in collaboration with EU experts	Sofia, Bulgaria	9–10 October	Dr A. Miteva
Seminar to launch institutional twinning between the European Union and Algeria	Algiers, Algeria	12 October	Dr R. Bouguedour
88th EuFMD Executive Committee Meeting	Sofia, Bulgaria	13–14 October	Dr J. Domenech



meetings and visits

October 2014 (contd)

Title of the event	Place	Date	Participants
Pre-Congress Seminar of the 7th Asian Zoo and Wildlife Medicine Congress, organised by the Asian Society of Zoo and Wildlife Medicine (ASZWM)	Hanoi, Vietnam	13–14 October	Dr T. Wijayathilaka
5th SEAVSA Annual Meeting	Bogor, Indonesia	13–15 October	Dr M.J. Gordoncillo & Dr P. Matayompong
Codex Committee on Food Import and Export Inspection and Certification Systems (CCFICS)	Brisbane, Australia	13–17 October	Dr G. Murray
3rd Global Conference of OIE Reference Centres: 'Challenges and expectations for the future'	Incheon, Seoul, Rep. of Korea	14–16 October	Dr K. Schwabenbauer, Dr B. Vallat, Ms M. Bonnerot, Mr R. Lemesnager, Dr D. Chaisemartin, Ms I. Contreras Arias, Dr E. Erlacher-Vindel, Dr K. Hong, Dr F. Diaz, Dr M.K. Park, Ms S. Linnane, Dr Y. Samaké, Dr A. Ripani, Dr M. Arroyo Kuribreña, Dr H. Kugita, Dr H. Thidar Myint, Dr Y. Oh, Dr R. Abila, Dr J. Kampa, Prof. K. Lukauskas, Dr N. Leboucq & Dr G. Yehia
OIE Regional (Europe) Training Workshop on WAHIS for National Focal Points for Animal Disease Notification to the OIE	Sofia, Bulgaria	14–16 October	Dr P. Cáceres Soto, Ms N. Lambergeon, Dr L. Awada, Prof. Dr N.T. Belev, Dr A. Miteva, Ms R. Kostova, Dr E. Panina & Dr S. Ralchev
Training course on animal welfare in pig production, in the framework of the BTSF initiative	Herning, Denmark	14–17 October	Dr T. Grudnik
1st Regional workshop on the implementation of United Nations Security Council Resolution 1540 (2004) for ASEAN Member States, focused on: "Effective physical protection and accounting of 'Related Materials'", hosted by the Government of Cambodia and in cooperation with the United Nations Office for Disarmament Affairs	Phnom Penh, Cambodia	15–17 October	Dr D. Visser
Strengthened multi-sectoral collaboration in addressing biosecurity threats in the ASEAN region	Jakarta, Indonesia	15–17 October	Dr M.J. Gordoncillo
Master on International Veterinary Cooperation	Teramo, Italy	15–18 October	Dr S. Forcella
Conference on: 'Mosquitos, ticks and fleas... vector-borne diseases on the offensive', organised by the Doctor Mérieux Biological Sciences Museum	Lyons, France	16 October	Dr S. de La Rocque
Informal WHO Member States Consultation on development of a Global Action Plan for tackling Antimicrobial Resistance	WHO Headquarters, Geneva, Switzerland	16 October	Dr S. Corning

meetings and visits

October 2014 (contd)

Title of the event	Place	Date	Participants
IMS Animal Care and Sustainable Meat Committee Meeting	Paris, France	16–17 October	Dr A. Thiermann & Dr L.H. Stuardo Escobar
2014 Korean Society of Veterinary Science (KSVS) International Conference on 'International Cooperation for Development of Veterinary Technology'	Jeju, Rep. of Korea	16–17 October	Dr E. Erlacher-Vindel, Dr M.K. Park, Dr G. Brückner, Dr A. Fooks, Dr B. Garin-Bastuji & Dr D. King
3rd WHO Strategic and Technical Advisory Group Meeting on Antimicrobial Resistance	WHO Headquarters, Geneva, Switzerland	17 October	Dr S. Corning
Opening Ceremony of the OIE Collaborating Centre for Food-borne Parasites from the Asia–Pacific Region	Changchun, P.R. China	18 October	Dr H. Kugita
1st Training Session of the OIE Improved Animal Welfare Programme (IAWP) in Israel	Beit She'an, Israel	19–24 October	Dr R. Kolesar & Dr T. Grudnik
Visit by Mr Kenneth Myers, Director of the US Defense Threat Reduction Agency (DTRA)	OIE Headquarters, Paris, France	20 October	Dr B. Vallat & Dr A. Dehove
Plenary meeting of the NATO Joint Health, Agriculture and Food Group	Brussels, Belgium	20 October	Dr N. Leboucq
WTO-STDF Working Group Meeting	WTO Headquarters, Geneva, Switzerland	20–22 October	Dr M. Okita
Annual meeting of the OIE Regional and Sub-Regional Representations	OIE Headquarters, Paris, France	21–24 October	OIE Headquarters' staff and OIE Regional and Sub-Regional Representatives
Training course on animal welfare in poultry production (laying hens and broiler chickens for meat production), in the framework of the BTSF initiative	Edinburgh, United Kingdom	21–24 October	Dr M.E.J. Villareal
3rd Meeting of the Technical Committee on Halal Food of the European Committee for Standardisation	Sarajevo, Bosnia and Herzegovina	22–23 October	Dr L.H. Stuardo Escobar
Twinning meeting	OIE Headquarters, Paris, France	24 October	Dr K. Hamilton & Dr G. Pavade
FAO/AU-IBAR Technical Workshop: 'Developing National and Regional Strategies to improve Early Warning Capabilities for Food Safety (in Africa)'	Nairobi, Kenya	27 October	Dr P. Bastiaensen
CORDS Board Meeting	FAO Headquarters, Rome, Italy	27–28 October	Dr A. Dehove
OFFLU meeting	OIE Headquarters, Paris, France	27–28 October	Dr K. Hamilton & Dr G. Pavade



meetings and visits

October 2014 (contd)

Title of the event	Place	Date	Participants
1st National Scientific Colloquium 'Health and biodiversity: does our health depend on biodiversity?', organised by VetAgro Sup and the association 'Humanity and Biodiversity', under the auspices of the OIE	Lyons, France	27–28 October	Dr S. de La Rocque
Regional Workshop on Promoting Full Implementation of United Nations Security Council Resolution 1540 (2004)	Seoul, Rep. of Korea	27–28 October	Dr C. Buranathai
Seminar on Biothreats/Biorisk: Bridging Science and Security	Penang, Malaysia	27–28 October	Dr S. Corning
Joint AU-IBAR/OIE Seminar on harmonisation of veterinary legislation at RECs level (for ECCAS Member States)	Yaounde, Cameroon	27–29 October	Dr S. Pupulin, Dr M. Petitclerc & Dr Y. Samaké
2nd Training Session of the OIE Improved Animal Welfare Programme (IAWP) in the Republic of Korea	Seogwipo, Rep. of Korea	27–31 October	Dr M.E.J. Villareal
Round table to discuss the new IFAH white paper entitled: 'Vector-borne diseases in humans and animals: optimising solutions and innovations across all species, across all regions'	Geneva, Switzerland	28 October	Dr G.J. Torres Peñalver
ILRI@40 special side-event on 'Livestock-based options for economic well-being in Africa', held by ILRI during the 6th All Africa Conference on Animal Agriculture (AACAA)	Nairobi, Kenya	28 October	Dr W. Masiga & Dr P. Bastiaensen
7th GF-TADs Global Steering Committee Meeting	OIE Headquarters, Paris, France	29–30 October	Dr B. Vallat, Dr M. Eloit, Dr A. Dehove, Dr D. Chaisemartin, Dr B. Evans, Dr S. Münstermann, Dr L. Weber-Vintzel, Dr G. Pavade, Dr D. Visser, Dr S. Forcella, Dr G.J. Torres Peñalver, Dr F. Caya, Dr N. Leboucq & Dr S. de La Rocque
EuFMD 2014 Open Session: 'Where science and policy meet: FMD risk management in a world of changing disease landscapes'	Cavtat, Croatia	29–31 October	Dr J. Domenech, Dr R. Abila & Dr K. Kukreja
Regional Workshop on Biothreats and Biosecurity: Multi-sectoral Coordination	Penang, Malaysia	29–31 October	Dr S. Corning
8th CMC-AH Steering Committee Meeting	FAO Headquarters, Rome, Italy	30 October	Dr K. Hamilton
7th National Scientific Conference of the Bulgarian Focal Center of the EFSA	Sofia, Bulgaria	30 October	Dr A. Miteva

meetings and visits

October 2014 (contd)

Title of the event	Place	Date	Participants
Task Force Meeting for OIE World Fund Results Indicators	OIE Headquarters, Paris, France	31 October	Dr A. Dehove, Ms E. Tagliaro & Dr S. Corning
Video conference presentation: 'The role of the OIE in a global disease reporting system' – Module on the epidemiological surveillance of vector-borne and animal diseases for the SEMHA Master degree: 'Epidemiological surveillance of human and animal diseases'	OIE Headquarters, Paris, France	31 October	Dr L. Awada
5th International Meeting on Emerging Diseases and Surveillance (IMED 2014)	Vienna, Austria	31 October – 3 November	Dr P. Cáceres Soto
Evaluation of rabies vaccination	Thimphu and field visits, Bhutan	31 October – 6 November	Dr T. Wijayathilaka

November 2014

Title of the event	Place	Date	Participants
Official inauguration of the ICIPE Regional (Africa) Reference Laboratory for Bee Health, built with the financial support of the EU-funded Bee Health Project	Kasarani, Kenya	3 November	Dr W. Masiga
2nd meeting of the Guiding Group for the formulation of the Livestock Development Strategy for Africa (LiDeSA)	Nairobi, Kenya	3 November	Dr W. Masiga & Dr P. Bastiaensen
Stakeholders' Consultation Workshop in East Africa focusing on 'Improving Food Safety On-Farm to Enhance Supply Chain Linkages and Consumer Product Safety'	Kabete, Kenya	3 November	Dr P. Bastiaensen
9th REMESA Joint Permanent Committee Meeting	Tunis, Tunisia	3–4 November	Dr M. Eloit, Dr R. Bouguedour, Dr A. Ripani, Dr J. Mérot, Dr G. Yehia & Dr X. Pacholek



meetings and visits

November 2014 (contd)

Title of the event	Place	Date	Participants
Global Partnership Centers of Excellence Sub-Working Group Meeting entitled: 'Road Map for Comprehensive and Sustainable CBRN Security Culture' – Global Partnership Working Group Kick-off Meeting – Side-event: Biological Security Sub-Working Group Meeting	Berlin, Germany	3–4 November	Dr D. Visser
FEI Veterinary Committee Meeting	FEI Headquarters, Lausanne, Switzerland	3–4 November	Dr S. Münstermann
UNODA Meeting: Review of the UN Secretary General's Mechanism for Investigation of alleged use of chemical and biological weapons – lessons learned from Syria	UN Headquarters, New York, United States	3–7 November	Dr K. Hamilton
3rd AU-IBAR/ICPE Steering Committee Meeting of the Project on Bee Health and AU-IBAR/ICPE Technical Advisory Committee Meeting	Kasarani, Kenya	4 November	Dr P. Bastiaensen
19th Session of the FAO/WHO Coordinating Committee for Asia	Tokyo, Japan	4 November	Dr H. Thidar Myint
38th APHCA Session	Chiang Mai, Thailand	4–5 November	Dr H. Kugita
Meeting on a draft project for a Global Veterinary Drug Residue Avoidance Knowledge System, proposed by CABI	OIE Headquarters, Paris, France	4–5 November	Dr B. Vallat, Dr B. Evans & Dr B. Freischem
Regional Symposium on Newcastle disease and PPR	Qingdao, P.R. China	4–6 November	Dr C. Buranathai
Workshop on the Improvement of Aquatic Animal Health Management and Strengthening Aquatic Biosecurity Governance in Africa and the Trade and Improved Livelihoods in Aquatic Production in Africa (TILAPIA) project	Durban, South Africa	5–7 November	Dr M. Letshwenyo
Workshop to validate the draft regional framework for the progressive control and eradication of PPR and other small ruminant diseases in the IGAD region, organised by ICPALD, in collaboration with AU-IBAR	Mombasa, Kenya	6–7 November	Dr P. Bastiaensen
International Conference 'ILRI@40': 'Livestock-based options for sustainable food and nutritional security, economic well-being and healthy lives'	Addis Ababa, Ethiopia	6–7 November	Dr W. Masiga
Tripartite Secretariat Meeting (by teleconference)	OIE Headquarters, Paris, France	7 November	Dr A. Dehove & Ms E. Tagliaro

meetings and visits

November 2014 (contd)

Title of the event	Place	Date	Participants
Training on the control of emerging avian diseases	Mira, Italy	10–12 November	Dr S. Forcella
Regional Meeting on Antimicrobial Resistance	Jaipur, India	10–13 November	Dr H. Thidar Myint
22nd Conference of the OIE Regional Commission for the Americas	Guadalajara, Mexico	10–14 November	Dr K. Schwabenbauer, Dr C.A. Correa Messuti, Dr B. Vallat, Dr A. Thiermann, Dr M. Eloit, Dr P. Cáceres Soto, Dr F. Caya, Dr M.E. González Ortiz, Ms N. Monsalve, Dr L.O. Barcos, Dr M. Minassian, Ms A. Gutiérrez Camacho, Dr M. Arroyo Kuribreña, Dr S. de La Rocque & Dr S. Kahn
SPS Regional Workshop for the Pacific Region, organised jointly with the Pacific Islands Forum Secretariat	Apia, Samoa	10–14 November	Dr G. Mylrea
8th RAWs Coordination Group Meeting	Canberra, Australia	11 November	Dr L.H. Stuardo Escobar, Dr Y. Oh, Dr K. Kukreja, Dr G. Murray & Dr T. Ishibashi
US Department of State Biosecurity Engagement Program Implementer's Workshop	Washington, DC (United States)	12–13 November	Dr K. Hamilton
6th Joint FAO/OIE Rinderpest Advisory Committee Meeting	OIE Headquarters, Paris, France	12–13 November	Dr D. Visser
FAO Sub-Regional Meeting on 'Strengthening Brucellosis control in Western Balkans and South Caucasus countries', under the GF-TADs for Europe	Skopje, Former Yug. Rep. of Macedonia	12–13 November	Dr S. Ralchev
AU-IBAR/VETGOV Advocacy Seminar for Principal Secretaries of line-Ministries of Animal Resources in Africa	Nairobi, Kenya	12–13 November	Dr W. Masiga
Regional Training Seminar for OIE National Focal Points for Animal Welfare	Canberra, Australia	12–14 November	Dr B. Evans, Dr L.H. Stuardo Escobar, Dr H. Kugita, Dr Y. Oh, Dr A. Poirier, Dr G. Murray & Dr T. Ishibashi
Symposium on Prevention and Control of FMD in East Asia	Tokyo, Japan	13 November	Dr C. Buranathai & Dr L. Liu
Launch of the Regional Sahel Pastoralism Support Project (PRAPS) for Mali	Bamako, Mali	13 November	Dr Y. Samaké
Review Committee of the WHO IHR	WHO Headquarters, Geneva, Switzerland	13–14 November	Dr A. Dehove
'Commitments to the Responsible Use of Antimicrobials in Humans': Global High-Level Consultation on Responsible Use of Antimicrobials to support the WHO Global Action Plan for Antimicrobial Resistance	Oslo, Norway	13–14 November	Dr S. Corning



meetings and visits

November 2014 (contd)

Title of the event	Place	Date	Participants
OIE mission to provide technical assessment to Brazil regarding the equine events for the 2016 Olympic Games	Rio de Janeiro, Brazil	15–21 November	Dr S. Münstermann & Dr L.O. Barcos
Working Group Meetings on the Establishment of CCFH Work Priorities and on the draft Guidelines on the Control of Foodborne Parasites	Lima, Peru	16 November	Dr G. Mylrea
2nd Training Session of the OIE Improved Animal Welfare Programme (IAWP) in Israel	Tel Aviv, Israel	16–21 November	Dr T. Grudnik
EFSA Expert Group Meeting on PPR	Parma, Italy	17 November	Dr J. Domenech
ASF Policy Event: 'Lessons learnt from Europe and policy challenges for Asia', within the framework of LinkTADS	Beijing, P.R. China	17 November	Dr G.J. Torres Peñalver, Dr C. Buranathai & Dr L. Liu
SPC Regional Meeting on Animal Welfare Framework: Regional Strategy, Legislation and Paravet Training	Nadi, Fiji	17–18 November	Dr Y. Oh
IDB/WTO Course on sanitary and phytosanitary measures (SPS) for Latin American countries	Montevideo, Uruguay	17–20 November	Dr S. Kahn
46th CCFH Session	Lima, Peru	17–21 November	Dr G. Mylrea
Working Party on Agricultural Policies and Markets	OECD Headquarters, Paris, France	18–19 November	Dr A. Dehove
Regional Training Seminar for OIE National Focal Points for Veterinary Products (3rd cycle)	Ohrid, Former Yug. Rep. of Macedonia	18–20 November	Dr E. Erlacher-Vindel, Dr F. Diaz, Dr B. Freischem, Prof. Dr N.T. Belev, Dr A. Miteva, Ms R. Kostova & Dr N. Leboucq
International Workshop on Feral Swine Disease and Risk Management	Fort Collins, United States	18–20 November	Dr D. Rassow
Joint FAO/OIE Workshop on Swine Disease Control in Asia	Beijing, P.R. China	18–20 November	Dr G.J. Torres Peñalver, Dr H. Kugita, Dr C. Buranathai, Dr L. Liu & Dr P. Widders
European Neighbourhood Food Safety Conference, organised by EFSA	Parma, Italy	19 November	Dr B. Evans
4th International Meeting on the Control of Neglected Zoonotic Diseases (NZDs): 'From Advocacy to Action'	WHO Headquarters, Geneva, Switzerland	19–20 November	Dr A. Thiermann & Dr N. Mapitse
2nd International Conference on Nutrition: 'Better Nutrition, Better Lives', co-organised by WHO and FAO	FAO Headquarters, Rome, Italy	19–21 November	Dr S. Corning

meetings and visits

November 2014 (contd)

Title of the event	Place	Date	Participants
Meeting with the OIE Delegate of Mali	Bamako, Mali	20 November	Dr Y. Samaké & Dr D. Bourzat
International Scientific and Practical Seminar on the Prevention and Control of Transboundary Animal Diseases	Dushanbe, Tajikistan	20–22 November	Prof. K. Lukauskas & Dr M. Taitubayev
FVE General Assembly	Brussels, Belgium	21–22 November	Dr S. Ralchev
OIE Improved Animal Welfare Programme (IAWP) Stakeholders' Workshop in Iran	Tehran, Iran	22–23 November	Dr R. Kolesar & Dr T. Grudnik
13th Asia Regional Advisory Group Meeting on Aquatic Animal Health – Network of Aquaculture Centres in Asia-Pacific (NACA)	Ho Chi Minh City, Vietnam	22–23 November	Dr H. Kugita, Dr H. Thidar Myint & Dr H. Jie
Regional Seminar on Legislative Drafting for Harmonisation of veterinary legislation at RECs level (for IGAD Member States)	Khartoum, Sudan	23–27 November	Dr D. Sherman, Dr M. Letshwenyo, Dr W. Masiga & Ms G. Omwega
Meeting of the DG SANCO Animal Health Advisory Committee	Brussels, Belgium	24 November	Dr N. Leboucq & Dr E. Bonbon
WHO Biosafety Advisory Group Meeting	WHO Headquarters, Geneva, Switzerland	24–26 November	Dr K. Hamilton
5th Asia-Pacific Workshop on Multi-Sectoral Collaboration for the Prevention and Control of Zoonoses	Bangkok, Thailand	24–26 November	Dr H. Kugita, Dr T. Wijayathilaka, Dr H. Thidar Myint, Dr Y. Oh, Dr R. Abila, Dr A. Poirier, Dr J. Kampa, Dr M.J. Gordoncillo, Ms O. Benjavejbhaisan, Dr G. Murray & Dr S. Corning
Meeting with Experts of the Wildlife Project – Maris Llorens Foundation	Asunción, Paraguay	24–28 November	Dr L.O. Barcos
9th Symposium on Diseases in Asian Aquaculture	Ho Chi Minh City, Vietnam	24–28 November	Dr I. Ernst
18th Steering Group Meeting of the Georgia's National Animal Health Programme	Tbilisi, Georgia	25 November	Prof. K. Lukauskas
National Agricultural Defense Conference	Florianópolis, Brazil	25–27 November	Dr M. Arroyo Kuribreña
9th OIE/FAO FMD Reference Laboratories Network Annual Meeting	Brescia, Italy	26–27 November	Dr J. Domenech & Dr M.K. Park
3rd AU-PATTEC Steering Committee Meeting	Harare, Zimbabwe	28 November	Dr M. Letshwenyo
National Conference in Livestock Diseases in India – Peste des petits ruminants (PPR)	New Delhi, India	28–29 November	Dr J. Domenech



meetings and visits

December 2014

Title of the event	Place	Date	Participants
IWTO multi-stakeholders' meeting: 'From sheep to shop: shaping and strengthening international policy for a sustainable wool industry'	Brussels, Belgium	1 December	Dr D. Belton & Dr G. Mylrea
150th Session of the FAO Council	FAO Headquarters, Rome, Italy	1–2 December	Dr B. Evans & Dr J. Domenech
1st Meeting of the Standing Group of Experts on ASF in the Baltic and Eastern Europe Region, under the GF-TADs Umbrella	Minsk, Belarus	1–2 December	Prof. K. Lukauskas & Dr N. Leboucq
18th Chilean Congress on Veterinary Medicine	Santiago, Chile	1–3 December	Dr L.H. Stuardo Escobar
PPR Vaccines Producers Workshop	Kathmandu, Nepal	1–3 December	Dr C. Buranathai
FAO/OIE/WHO Four-way linking workshop for assessing health risks at the human–animal interface	Savar, Bangladesh	1–4 December	Dr Y. Oh
OIE Expert Mission on FMD status in South Africa	Johannesburg, South Africa	1–5 December	Dr L. Weber-Vintzel
Advanced Training on FMD Epidemiology Data Analysis	Tsukuba, Japan	1–19 December	Dr C. Buranathai
1st R&D dating for animal health and innovation, organised by the French association of animal health industry (SIMV)	Lille, France	2 December	Dr Y. Farhi
3rd Steering Group Meeting of the OIE Regional Platform on Animal Welfare for Europe	Brussels, Belgium	2–3 December	Dr M. Eloit, Dr R. Kolesar, Prof. Dr N.T. Belev, Prof. K. Lukauskas, Dr N. Leboucq & Dr S. Ralchev
The RICE project: Risk Communications Evaluation	Geneva, Switzerland	3–5 December	Dr C. Bertrand-Ferrandis
Regional Training Seminar for OIE National Focal Points for Veterinary Products (3rd cycle)	Tokyo, Japan	3–5 December	Dr E. Erlacher-Vindel, Dr F. Diaz, Dr B. Freischem, Dr H. Kugita, Dr C. Buranathai, Dr T. Wijayathilaka, Dr H. Thidar Myint, Dr Y. Oh, Dr L. Liu, Dr A. Poirier & Dr T. Ishibashi
Global Partnership Coordination Meeting	Geneva, Switzerland	4 December	Dr K. Hamilton
Preparatory mission for the organisation of the 29th Conference of the OIE Regional Commission for Asia, the Far East and Oceania	Ulan Bator, Mongolia	4 December	Dr F. Caya, Ms N. Monsalve & Dr Y. Aoyama
4th Steering Committee Meeting of the SMP-AH Project, organised by AU-IBAR	Naivasha, Kenya	4 December	Dr W. Masiga
Technical Forum on Antimicrobial Resistance for Latin America	Panama City, Panama	4 December	Dr M. Arroyo Kuribreña
GF-TADs Working Group Meeting on PPR	Rome, Italy	4–5 December	Dr J. Domenech, Dr S. Münstermann & Dr N. Leboucq

meetings and visits

December 2014 (contd)

Title of the event	Place	Date	Participants
FAO final workshop: 'Emergency assistance for surveillance of influenza A (H7N9) virus in poultry and other animal populations in low to moderate risk countries in Africa'	Yaounde, Cameroon	4–5 December	Dr J. Mérot
2nd Project Steering Committee Meeting for the Surveillance in Trade Sensitive Diseases (STSD), organised by AU-IBAR and IGAD	Naivasha, Kenya	5 December	Dr W. Masiga
4th OIE Sub-Regional Workshop for Veterinary Educational Establishments and Veterinary Statutory Bodies	Hanoi, Vietnam	8–10 December	Dr H. Kugita, Dr R. Abila, Dr M.J. Gordoncillo, Dr P. Matayompong, Ms P. Srithep & Dr G. Murray
3rd GFSP Annual Conference	Cape Town, South Africa	8–12 December	Dr B. Evans & Dr G. Mylrea
Meeting on Rabies	WHO Headquarters, Geneva, Switzerland	9 December	Dr A. Dehove
3rd General Assembly of the REEV-Med Network	Hammamet, Tunisia	9 December	Dr R. Bouguedour & Dr A. Ripani
Technical meeting on the progress of establishing an Equine Disease Free Zone (EDFZ) in Absheron Peninsula	Baku, Azerbaijan	9–10 December	Dr S. Münstermann & Dr S. Ralchev
OIE Improved Animal Welfare Programme (IAWP) Stakeholders' Workshop in Israel	Beit Dagan, Israel	9–10 December	Dr T. Grudnik
2nd Congress of the Technical Veterinary Group of Tunisia: 'Sanitary crisis and related management'	Hammamet, Tunisia	9–10 December	Dr R. Bouguedour & Dr A. Ripani
Training on improving and strengthening the sanitary and phytosanitary framework in non-EU member countries ('BTSF World'), under the BTSF initiative – Lot 4: Animal health and welfare in Africa and European Neighbourhood Policy (ENP) countries	Gaborone, Botswana	9–12 December	Dr M. Letshwenyo
26th GF-TADs Working Group Meeting on FMD	OIE Headquarters, Paris, France	10–11 December	Dr J. Domenech, Dr L. Weber-Vintzel & Dr N. Leboucq
5th Steering Committee Meeting of the VETGOV Project	Nairobi, Kenya	10–11 December	Dr P. Bastiaensen
Regional Workshop of the Eastern Livestock Trade Corridor (World Bank/West Africa Agricultural Productivity Program)	N'Djamena, Chad	10–12 December	Dr J. Mérot
FEI General Assembly 2014	Baku, Azerbaijan	11–12 December	Dr S. Münstermann & Dr G. Yehia



meetings and visits

December 2014 (contd)

Title of the event	Place	Date	Participants
Veterinary Public Health Workshop 2014	Hong Kong, Special Administrative Region of P.R. China	12 December	Dr H. Kugita
Meeting with the experts of ANSES, an OIE Collaborating Centre, to assist in the drafting of the planned new chapters in the OIE <i>Terrestrial Manual</i> on: 1.1.8. 'Minimum requirements for vaccine production facilities' (under study) and 1.1.9. 'Quality control of vaccines (under study)'	Lyons, France	15 December	Dr B. Freischem
18th IMHC Meeting	Hong Kong, Special Administrative Region of P.R. China	15–16 December	Dr S. Münstermann, Dr M. Dominguez & Dr G. Murray
Seminar on the role of the OIE Reference Centres in the control of vector-borne diseases	Palermo, Sicily, Italy	15–16 December	Dr G. Yehia
2nd Pan-African Codex Capacity Building Workshop	Kampala, Uganda	15–17 December	Dr P. Bastiaensen
Mission for influenza surveillance in live bird markets in Cambodia	Cambodia	15–19 December	Dr H. Thidar Myint
9th Meeting of the Advisory Committee of the OIE World Animal Health and Welfare Fund	OIE Headquarters, Paris, France	16 December	Dr B. Vallat, Dr M. Eloit, Dr B. Evans, Dr A. Dehove, Ms A. Reale-Bailly, Ms J. Macé, Ms E. Tagliaro, Ms V. Wong, Ms S. Rivière, Mr R. Lemesnager, Dr P. Cáceres Soto, Dr N. Mapitse, Dr M. Popovic, Ms N. Lambergeon & Dr L. Awada
Colloquium on emerging and re-emerging diseases	Paris, France	16 December	Dr D. Chaisemartin
63rd IVSA Winter Symposium	Edinburgh, United Kingdom	16 December	Dr S. Ralchev
Meeting with the authorities of the Eurasian Economic Commission and meeting with the Delegation of the European Union to Russia	Moscow, Russia	16–17 December	Prof. K. Lukauskas & Dr E. Panina
30th RPCA Annual Meeting	Brussels, Belgium	17 December	Dr M. Eloit
OIE Improved Animal Welfare Programme (IAWP) Stakeholders' Workshop in the Republic of Korea	Daejeon, Rep. of Korea	17–19 December	Dr M.E.J. Villareal & Dr Y. Oh
'A One Health Colloquium' at Chatham House	London, United Kingdom	18–19 December	Dr B. Vallat, Dr C. Bertrand-Ferrandis & Dr B. Evans
Conference of the Italian Semester of Presidency of the Council of the European Union: 'Fighting Antimicrobial Resistance: smart weapons against smart microorganisms'	Rome, Italy	22–23 December	Dr S. Corning

the OIE and its partners

epidemiology & animal disease control programmes

The sport horse industry: a source of economic growth that can expand worldwide through the facilitation of international competition horse movements

Over the past few decades, the sport horse industry (equestrian sports and racing) has seen significant growth, with associated job creation and socio-economic benefits for national economies, the horse industry, the agricultural sector and other stakeholders.

However, as industry statistics show, this growth in the number of equestrian events and the value of prize money for important races has been largely limited to the classical horse sport regions, such as Europe and North America, and well-established race-circuits. Other regions, e.g. Asia, South America, the Middle East and Africa, have shown growth at a reduced scale. When investigating the reasons for this, the difficulties involved in moving horses within these regions and to other regions are often quoted; more specifically, the absence of temporary import

regulations, different sanitary regulations for laboratory testing and vaccination, lengthy quarantine periods that prevent training, etc.

In 2013, in an attempt to address these constraints, the OIE joined with the International Equestrian Federation (FEI) and the International Federation for Horseracing Authority (IFHA) in a public-private partnership to establish standards and guidelines to make the international movement of horses easier, within the existing OIE standards, so that competition horses could more easily be temporarily imported.

An OIE *ad hoc* Group of experts on International Horse Movement for Equestrian Sport was established in 2013, to support this work. The *ad hoc* Group brings together

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stakeholders from the private sector, equine disease experts from the academic world and diagnostic and research laboratories, regulatory experts, and OIE Specialist Commissions.

Based on the established OIE principles of zoning and compartmentalisation, biosecurity, identification and traceability, and health certification described in the *Terrestrial Animal Health Code* (the *Terrestrial Code*), the concept of a 'high health equine subpopulation' and of individual 'high health, high performance' (HHP) horses selected from this subpopulation was developed and adopted in the *Terrestrial Code* in 2014 (Chapter 4.16., 'High health status horse subpopulation').

The general principles described in this chapter are now being transformed into guidelines for the management and biosecurity of this specific subpopulation of competition horses.

A key element for worldwide application of the HHP concept is a 'Model HHP Health Certificate'. Specific health regulations for this certificate are limited to the six diseases that were identified as essential concerns when defining the HHP subpopulation; namely, African horse sickness, Venezuelan equine encephalomyelitis, equine influenza, equine infectious anaemia, glanders and piroplasmiasis. All other important equine diseases should be notifiable in the

country of origin and country of destination of the HHP horse. The draft HHP Certificate is currently being evaluated by OIE Member Countries.

This article provides a brief update on the current status of the HHP framework.

1. The HHP framework for the facilitation of international competition horse movements

1.1. The horse

The HHP concept is built on the condition that competition horses are under continuous veterinary supervision and are of a generally high health status in order to be fit to compete, and therefore pose a very low risk of transmitting infectious diseases.

The steps of the procedure are summarised below:

- the subpopulation undergoes a specified qualification period in a compartment (e.g. the stable or the premises)
- the compartment is effectively separated from the surrounding horse population
- during this period, certain tests and vaccinations are carried out, depending on the equine health situation of the country where the compartment is located
- the stables/premises and horse are registered on an international database
- individual HHP horses are inspected at the end of the qualification period by an official veterinarian

- the Model HHP Certificate is issued
- the HHP horse can travel to multiple destinations using multiple issues of the HHP Certificate, for up to a maximum of 90 days, before return to the country of usual residence
- upon return to the country of usual residence, the horse can retain HHP status or leave the subpopulation, which would require a new qualification to regain the status.

1.2. Travel

During transportation between the stable in the country of usual residence and the venue in the country of destination, biosecurity must be constantly maintained, following documented standard operating procedures, so that the horse's health status is not compromised. Importantly, HHP horses may only be transported with horses of equivalent health status and lay-over points must be approved and comply with biosecurity criteria.

1.3. The event venue

To prevent and manage any risk to the health status of horses participating in an international sports event, the organisers, in collaboration with veterinarians, must develop a biosecurity plan for the event, which includes an assessment of biosecurity risks and procedures to effectively manage these risks, including provisions for

1 See: www.oie.int/fileadmin/Home/eng/Our_scientific_expertise/docs/pdf/Chevaux/HHP%20concept.pdf



Horse air transportation



Horse race

veterinary examination on arrival, stable management, continuous health supervision and contingency planning.

The management of an equestrian event under HHP conditions must ensure that visiting HHP horses come into direct contact only with horses of equivalent tested and certified health status during training and competition.

HHP horses need to be registered upon arrival and departure from the event venue, possibly in the same international database, to ensure traceability throughout the period of travel. Veterinary inspection and issuing of a new Model HHP Certificate for the next leg of the journey complete the activities in the country of competition.

2. The equine-disease-free-zone concept

Complementary to the HHP concept, the temporary establishment of a zone which is free from multiple specified equine diseases (an 'equine-disease-free zone' or EDFZ) can be considered by countries that wish to host an international equine sporting event but who cannot control and eradicate all equine diseases in their entire territory.

The establishment of an EDFZ is an extension of the concept of zoning as defined in the *Terrestrial Code* (Chapter 4.3.). Horses within an EDFZ are protected from diseases that may occur in other parts of the country. The subpopulation inside the EDFZ is separated from the general population (i.e. equines and other species outside the EDFZ) by the implementation of sound biosecurity management, certification standards and procedures, contingency planning and the identification of all horses resident in the EDFZ, along with the capacity to trace their movement.

The combination of the HHP and the EDFZ concepts can allow countries that have not been

recognised as an approved country for the free movement of horses to host an international sports event, and this further supports the worldwide expansion of the sport horse industry. This combined approach was successfully used during the 2014 Asian Games in Incheon, the Republic of Korea, to facilitate the international participation of horses from other Asian countries.

3. Outlook

The OIE, FEI and IFHA are continuing to develop and implement the HHP concept to facilitate the temporary movement of horses while ensuring very low health risks.

National Veterinary Authorities are encouraged to recognise the minimal disease risk posed by HHP horses and are urged to strengthen collaboration with the equine private sector (national equestrian

federations and national racing authorities) to ensure the safe and trustworthy management of HHP horses.

Many Veterinary Services are already applying most of the principles underlying the HHP and complementary EDFZ concepts. This should promote the adoption of both concepts by most countries as a way of overcoming the challenges of international horse movement.

Further reading

Facilitation of international competition horse movement, Dubai, United Arab Emirates, 29 September – 1 October 2014 [regional conference for the Middle East and North Africa]. *In OIE Bulletin*, 2014 (4), 45–47.

Self-declaration from the Republic of Korea of zonal freedom for equine diseases. *In OIE Bulletin*, 2014 (3), 84–86.

International Horse Movement for Equestrian Sport (IHMES) Experts' Sub-group meeting of the *Ad hoc* Group, Paris, 10–11 April 2014. *In OIE Bulletin*, 2014 (3), 22.

International Horse Movement for Equestrian Sport (IHMES) meeting of the *Ad hoc* Group, Paris, 2–4 June 2014. *In OIE Bulletin*, 2014 (3), 22.

Facilitation of international competition horse movement, Hong Kong, 18–21 February 2014 [regional workshop for Asia and the Pacific]. *In OIE Bulletin*, 2014 (2), 31–32.

International Horse Movement for Equestrian Sport (IHMES) meeting of the *Ad hoc* Group, Paris, 28–30 October 2013. *In OIE Bulletin*, 2014 (1), 28–29.

Agreement between the International Federation of Horseracing Authorities (IFHA) and the World Organisation for Animal Health (OIE). *In OIE Bulletin*, 2013 (4), 31.

Resolution No. 36 of the 81st OIE General Session: Benefits and challenges posed by the worldwide expansion of equestrian events – new standards for the population of competition horses and equine-disease-free zones in countries. *In OIE Bulletin*, 2013 (4), 51–52.

International Horse Movement for Equestrian Sport (IHMES) meeting of the *Ad hoc* Group, Paris, 24–26 April 2013. *In OIE Bulletin*, 2013 (3), 14.

Facilitation of international competition horse movement [regional workshop for the Americas], Panama, 11–13 December 2012. *In OIE Bulletin*, 2013 (1), 16.

FEI/OIE Meeting on International Horse Movements, Guadalajara, Mexico, 24 October 2011. *In OIE Bulletin*, 2012 (1), 70–72.

Improving coordination to control African swine fever in the Baltic and Eastern Europe region

A new initiative called **Standing Group of Experts on African Swine Fever (ASF) in the Baltic and Eastern Europe region** (hereafter referred to as 'SGE') was set up under the GF-TADs umbrella to build up closer cooperation between countries infected with African swine fever (Belarus, Estonia, Lithuania, Latvia, Poland, Russia, Ukraine) and thereby address the disease in a more collaborative and harmonised manner across the sub-region. The European Commission, the OIE and the FAO complete the SGE member list. The initiative's *modus operandi* was agreed during the launch meeting (Bern, September 2014) and the countries committed to demonstrate greater transparency, by fully respecting their notification obligations to the OIE as well as by sharing data and information on surveillance, prevention and control measures. The European Commission is the main contributor to the initiative; however, the OIE and the countries hosting the SGE meetings also support it financially to some extent.

The ASF situation in wild boar and related prevention and control measures were discussed in depth during the first meeting of the SGE, held in Minsk, Belarus, in December 2014. The recommendations of the OIE–CIC Joint International Meeting on African Swine Fever and other animal health issues at the wildlife–livestock–human interface (30 June – 1 July 2014)¹ served to frame the discussions, emphasising the indispensable collaboration of veterinarians, hunters and wildlife and game management organisation representatives.

See *Bulletin*, no. 2014-4, pp. 104–105



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Two well-known international experts on ASF in wild boar, Drs S. Khomenko (Ukraine) and V. Guberti (Italy), made detailed presentations on wild boar situation, ecology and population management options. The information they provided was most valuable to ensure that the discussions remained science-based. Countries were also invited to present their situation, fostering a straightforward and fruitful regional dialogue. A key recommendation of the meeting was that ASF control in wild boar needs to be based on a clear understanding of the wild boar population estimates, demography and dynamics based on census data. In the absence of such data, 'blind management' of ASF in wild boar is the only

option. Depopulation of importance – especially when the wild boar threshold density at which ASF fades out is not known or cannot be achieved – has been proved to increase the probability of ASF spreading and is strongly discouraged.

Biosecurity measures in different pig production systems is the topic of the second SGE meeting to be held in Tallinn, Estonia, in February 2015. Specific focus will be placed on smallholder (so called 'backyard') production systems, as these are where ASF mainly prevails, due to the absence of biosecurity and to swill feeding practices with possible ASF-contaminated food.

More information on the SGE initiative:

http://web.oie.int/RR-Europe/eng/Regprog/en_GF_TADS - Standing Group ASF.htm

The OIE has developed an e-depository on ASF available at:

http://web.oie.int/RR-Europe/eng/Regprog/en_ASF_depository.htm

The control of *Salmonella* in pigs and cattle

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Key words

Cattle – control programme – pig – *Salmonella* – zoonosis.

Salmonella is a major cause of gastroenteritis worldwide. It is estimated that *Salmonella* causes 93.8 million human infections and 155,000 deaths annually worldwide [24].

Human salmonellosis is usually characterised by acute onset of fever, abdominal pain, nausea, and sometimes vomiting, after an incubation period of 12–36 hours. Symptoms are often mild, and most infections are self-limiting, lasting a few days. However, in some patients, the infection may be more serious and the associated dehydration can be life-threatening. When *Salmonella* causes systemic infections, such as septicaemia, effective antimicrobials are essential for treatment. Salmonellosis has also been associated with long-term and sometimes chronic sequelae, e.g. reactive arthritis. Mortality is usually low, and less than 1% of reported *Salmonella* cases have been fatal [13].

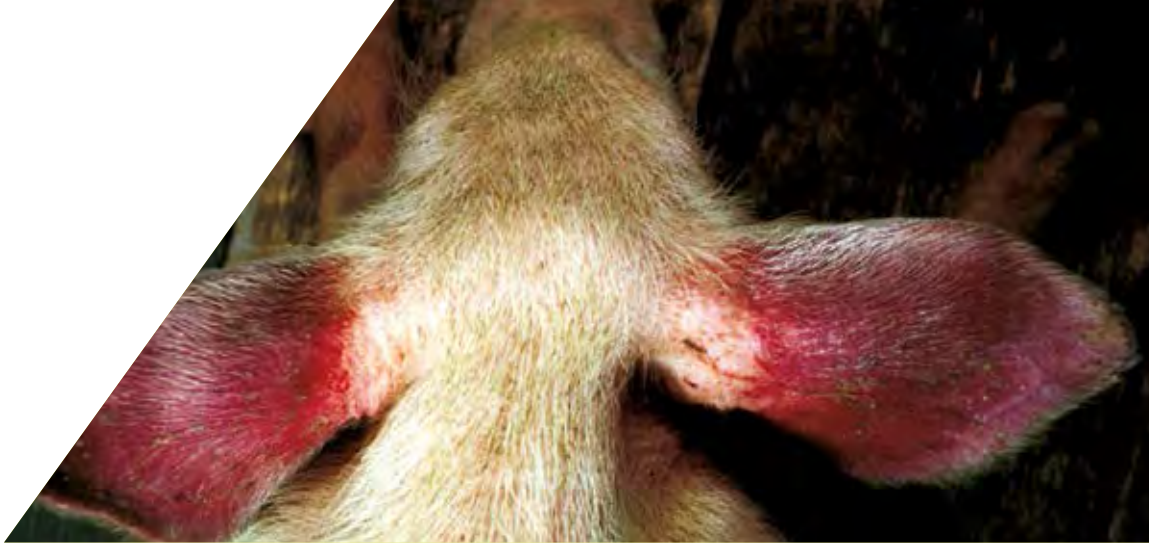
A wide variety of animals, particularly food animals, have been identified as reservoirs for non-typhoidal *Salmonella* [27] and consequently its presence is recognised in a

variety of foodstuffs especially eggs and meats becoming contaminated with faecal organisms either directly or indirectly.

Transmission often occurs when food preparation areas are contaminated with salmonellae that cross-contaminate and multiply in food as a result of inadequate chilling or cooking. The organism may also be transmitted through direct contact with infected animals or humans or faecally contaminated environments. Infected food handlers may also act as a source of contamination for foodstuffs.

The foodstuffs most commonly associated with *Salmonella* infection in humans are table eggs, closely followed by pig meat. The contamination rates in broiler and turkey meat are similar and approximately two-fold lower than for pig meat. In the European Union, *S. Enteritidis* and *S. Typhimurium* are the serovars most frequently associated with human illness. Human *S. Enteritidis* cases are most commonly associated with the consumption of contaminated eggs and poultry meat, while *S. Typhimurium* cases are mostly associated with





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Septicaemia due to *Salmonella Choleraesuis* in a fattening pig. Cyanosis of the ears

the consumption of contaminated pig meat or beef [18, 20, 28]. In animals, sub-clinical infections are common. The organism may easily spread between animals in a herd or flock without detection and animals may become intermittent or persistent carriers [13]. Infected cattle, sheep and horses may succumb to fever, diarrhoea and abortion. Also within veal or rearing calf herds, *Salmonella* may cause outbreaks of diarrhoea and septicaemia with high mortality. Clinical signs are less common in pigs and goats, and poultry usually show no obvious signs of infection with zoonotic serovars.

In many countries, and particularly in the European Union following the implementation of Regulation 2160/2003, harmonised control measures for zoonoses, and for *Salmonella* in particular, have been set up. Enhanced *Salmonella* programmes in poultry were implemented in all European Union Member States and targets were set for reducing the bacteria in poultry flocks (breeding chickens, laying hens, broilers and turkeys). All these efforts led to a drastic reduction of *Salmonella* prevalence in the poultry population and of the number of human cases related to these food sources. During this time, not much has been done to reduce the *Salmonella* burden in other animal sources, such as pigs or cattle, which consequently gained relatively more importance, especially in those countries where monophasic *Salmonella* Typhimurium has become prominent in pig breeding and production.

Focusing therefore on food-producing animals other than poultry, pigs are certainly the major

source of human salmonellosis cases in most European countries, and cattle are also an important source in some areas.

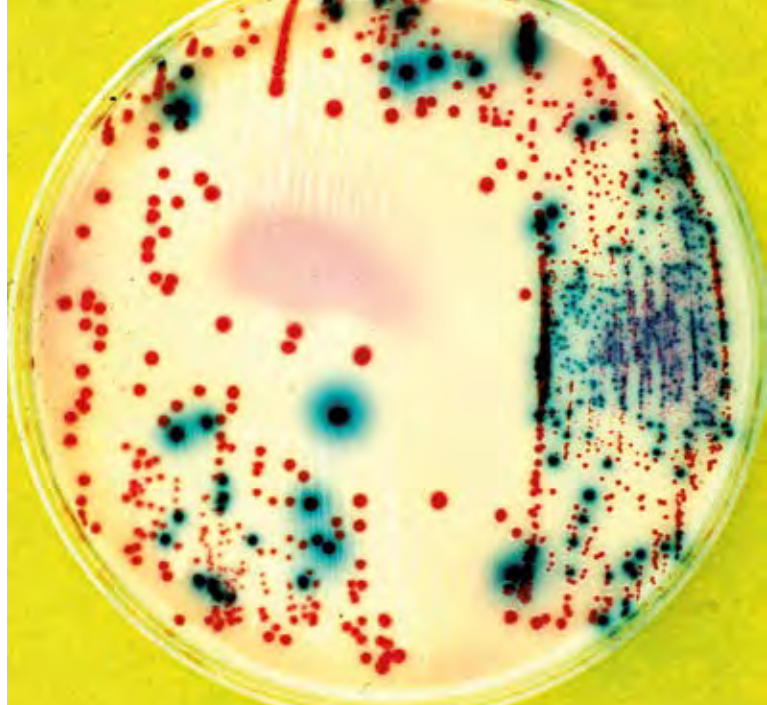
In order to be effective, the control of *Salmonella* has to take into consideration all the steps of the production chain, starting from the control of feedstuffs and the primary production stages through to hygienic measures during food processing, and preparation for consumption. *Salmonella*-reducing control measures early in the food chain alone do not always reduce the public health risks, because *Salmonella* can survive and multiply all along the food chain, behaving as an infectious agent in the pre-harvest stage and as a food contaminant in the harvest and post-harvest stages. Similarly, currently permitted post-harvest measures are not always sufficient to control the public health risk.

Salmonella control on farms has to be multimodal, owing to the characteristics of *Salmonella* infections and environmental *Salmonella* survival. Therefore the effectiveness of an individual control measure has to be considered in the context of an holistic *Salmonella* control programme. The most feasible control measures are those that do not require major changes to the structure or layout of livestock units, although control in some production systems may require significant restructuring of housing or management practices.

Measures to effectively eliminate *Salmonella* from animal production require concerted and potentially costly national or supra-national controls along the production system, from breeding animals and feedstuffs onwards. In many countries a substantial and long-term reduction in *Salmonella* infection in intensive pig production probably requires penalty regimes that would force radical industry-wide changes, even though farm hygiene improvements aimed at reducing *Salmonella* can also have a positive financial benefit in terms of improved control of other production-limiting diseases, including those that are clinically unapparent.

Cattle production differs from pig production in several epidemiologically-important respects. The dairy industry is a major segment of the cattle industry, producing both milk and meat, and cattle are often part of mixed-species farming enterprises. Many analyses have concluded that increasing dairy herd size is associated with increased risk of *Salmonella* excretion or environmental prevalence, persistence, sero-prevalence, or clinical salmonellosis [5, 6, 7, 9, 15, 16, 21, 26, 29, 31, 32]. However, herd size is a complex indicator, incorporating many influences external and internal to the herd and it is probably more important that the herd is closed and the feed source is free from contamination than limiting the size of the herd, although spontaneous clearance of infection is likely to occur more quickly in small herds. The balance of such influences can differ between systems as for example, in

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Salmonella culture in chromogenic medium (here Rambach medium): colonies appear in red

the context of feedlot cattle, increasing herd size appeared to be protective in one study, but this could be confounded by regional factors such as temperature and populations of biting flies [17].

Generally feasible and effective measures to be applied both in pigs and in cattle at primary production, include:

Biosecurity

The importation of *Salmonella*-excreting stock is an obvious risk to a zero- or low-*Salmonella* status pig unit. Recent extensive survey data from the European Union has confirmed that *Salmonella* infection within dedicated breeding facilities is of greater magnitude to that in production herds, with the highest prevalence of infection being found in nucleus herds in many countries [12], illustrating that the risk posed by imported stock is likely to be substantial at all levels of the

breeding pyramid. Even though closed breeding herds are becoming increasingly common, the *Salmonella* that is already present on the farm continues to re-circulate in the absence of other effective control measures.

There is also a risk to *Salmonella*-control associated with the introduction of other infectious diseases, as the presence of some concurrent subclinical infections has proven to be a significant risk factor for *Salmonella*-seroconversion [2, 3].

Exposure to wild pests and vectors, such as rodents, birds, foxes, etc., is another area that is often poorly-controlled in intensive pig and cattle production and may facilitate the importation of *Salmonella* onto premises. Significant improvements are generally feasible, although in some cases the design and fabric of buildings and local wildlife (including birds) can pose substantial challenges. However local dissemination of existing contamination is probably the more common effect associated with wildlife, especially rodents [25]. Outdoor pig production has a particular tendency for high seroprevalence at slaughter [33, 37] and a high frequency of environmental *Salmonella*-contamination [11], with evidence for a wide diversity of relatively short-lived serovars showing some overlap with local environmental and wildlife isolates [22] and differing from serovars typical of housed environments. This suggests that the inevitably less biosecure outdoor environment limits the effectiveness of control measures, but as the major problem is gradual accumulation of contamination of soil by pig-associated *Salmonella* strains, more regular moving of pig paddocks combined with trough or bird-proof hopper feeding can have a major impact.

Biosecurity is also a major theme in bovine *Salmonella* control, and imported animal risk management particularly important. For various reasons (including the long growing cycle of beef animals, the production of calves as a by-product of dairy farming, and consolidation of the dairy industry in many countries) the movement of adults, calves and fattening animals between herds and premises is common. Investigations in the United States of America and the United Kingdom dairy sectors have revealed that quarantining of incoming animals for at least four weeks until shedding of *Salmonella*-has subsided is highly protective, but is not commonly practised [10, 19, 34].

Hygiene

Hygiene is especially important in intensive pig production. Effective cleaning and disinfection for *Salmonella* control is technically exacting, and is often poorly-implemented, especially in the finishing stages and on-farm lairage which are most important for public health. Apart from optimising cleaning and application of disinfectants, the ease with which improvements can be made depends to some extent on housing design and materials, stocking densities and occupation levels. Good hygiene practice also involves physical segregation of animal groups and the prevention of infection transfer via aerosol, personnel and equipment. All-in all out production by house and effective rodent control is essential if farm hygiene measures are to be effective.

In common with pig production, reduction of the environmental *Salmonella*-load and the prevention of its transfer by workers and on fomites appear to be powerful tools for the control of bovine *Salmonella*-infections.

However, on heavily infected properties there will be animals in various states of transient and persistent infection, and a variety of environmental niches (buildings, feed and water troughs, manure and slurry handling facilities, pasture, etc.) in which *Salmonella* may persist despite the best efforts of cleaning and disinfection. Under these circumstances, and particularly in larger herds, simple hygiene measures alone may have little impact given the opportunities for reinfection. However it is important to focus on the hygiene of areas such as calving and calf rearing pens where the most susceptible animals are housed, and to segregate clinically ill animals that are likely to be shedding very high numbers of salmonellae [4, 30].

Feed

Changing the form and formulation of dry feed is a well-established *Salmonella* control measure in pig production, albeit with some costs to production efficiency. Changing to fermented acidic wet feed has further potential benefit, but at a much higher initial capital cost which can only be recouped through greater feed economy over a long period. Coarse grinding of feed and replacing most of the wheat content with less rapidly fermentable components such as barley, maize or a variety of industrial co-products is also protective but is difficult to achieve on farms where all feed has to be purchased from a commercial compounder. Feed interventions for *Salmonella*-control in ruminant production systems are largely untested. Home mixing of cattle feed can pose a particular risk of contamination of feed ingredients such as soya, which may be exacerbated by poor storage conditions.

There is evidence that feed stores can become contaminated by the excreta of *Salmonella*-positive farm wildlife or by effluent, and this

may lead to re-exposure of animals or further dissemination of infection on a site or group of farms [8, 14, 23]. When the farm grain store was within one kilometre of the livestock housing or manure storage areas, cross-contamination by wild birds, rodents and cats, which acquired infection from the livestock areas, was common [1].

Chemical treatments of feed or water to control *Salmonella*-multiplication are applicable both for calf and pig production systems. However the in vivo anti-*Salmonella* effects of organic acids that occur in the stomachs of monogastric animals are unlikely in animals with a functional rumen [35], and more work is required to define the most effective acidification regimens for feed and water under the variety of conditions that are found in pig production.

Conversely, use of routine feed or water medication with antibiotics or heavy metals provides intestinal conditions that are more receptive to colonization by *Salmonella*, particularly multi-drug resistant strains, so prudent use initiatives aimed at minimizing regular antibiotic use are also likely to be beneficial for *Salmonella* control.

Vaccination

Effective control of important serovars, such as *S. Typhimurium*, does appear to be a viable option for pigs with current vaccines. Administration regimes need to be carefully worked out to achieve useful protection and to avoid interference with serological monitoring schemes, where present. Protection by current vaccines against *Salmonella* carriage and shedding in other farmed species appears to be less useful.

Self-clearing of herd infections

Natural clearance of *Salmonella* infections is feasible and effective among cattle, provided that

the risk of re-introduction of infection is low. Other factors such as large herd size, intercurrent diseases and infection with the species-adapted *Salmonella* Dublin may lead to the development of chronic non-resolving herd infections.

In general, the fact that many control points are needed to reduce or eliminate endemic *Salmonella* infection means that the associated costs are substantial. *Salmonella* can be virtually eradicated but at considerable cost to the livestock and feed industries in those countries where the level is not already extremely low. Although there can be knock-on cost benefits to *Salmonella* control in terms of reduction in clinical and performance-limiting conditions this is not usually visible enough to stimulate voluntary uptake, and more studies are needed to quantify such benefits in different types of production. In an international free market where producers regularly struggle to make a profit, progress on *Salmonella* control will probably require regulators and consumers to impose financial penalties. It is recognized that control of *S. Typhimurium* should be the priority for pig farms and those farms that are free of this infection should value and protect this status and those farms that have it should focus primarily on reducing or eliminating this organism rather than all *Salmonella*. This requires an effective monitoring programme to be in place.

Strict penalties, in countries where they are applied, tip the financial balance in favour of taking action. If they were applied more widely, some farmers would probably go out of business but the new farms that would emerge could be designed and managed with more effective *Salmonella* control in mind. Such regimes might also help stimulate the instigation of *Salmonella*-free pig breeding herds and subsequent

Salmonella-free production chains in the way that has already been achieved in Sweden, Norway and Finland. Elimination of *Salmonella* at the farm level of meat production should lead to reasonable expectations of *Salmonella*-free meat products from such farms as long as post-harvest contamination is also controlled. However, as discussed previously several studies suggest that reductions in *Salmonella* excretion among pigs arriving at the slaughterhouse become increasingly costly to achieve as the prevalence decreases. Beyond a certain point the public health benefit, in terms of decreased contamination of meat leaving the slaughterhouse, may be more economically and feasibly addressed by directing resources to decontamination of carcasses, and prevention of cross-contamination within the slaughterhouse and meat processing operation. Such analyses may also hold for ruminant production and slaughter, but published material is lacking in this area and infection of superficial lymph node in feed-lot cattle undermines the effectiveness of carcass decontamination measures. For milk production, pasteurisation is an effective (and cost-efficient) *Salmonella* risk mitigation, but any control program that relies entirely on post-harvest measures, leaves environmental foci of *Salmonella* in place that can result in indirect infection of wildlife and other animal species such as poultry, dogs and horses, as well as contamination of products and direct infection of people who visit the rural environment.

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Review of rabies situation and control in the North African Region with a focus on Tunisia

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Summary

Rabies is a major zoonosis that affects the central nervous system of warm-blooded mammals. The disease is present worldwide, except for some islands. Africa and Asia record over 95% of fatal cases of rabies worldwide, and therefore the greatest risk to human life from rabies occurs in these regions. Mass vaccination of dogs is the most appropriate way to control and eradicate the disease at the animal source, in order to interrupt the infectious cycle of the disease from animals to humans. Rabies is endemic in the North African Region, and countries should be encouraged to develop programmes for eliminating human rabies through the implementation of sustained campaigns to immunize dogs and by providing post-exposure prophylaxis (PEP) to people who have been exposed to suspected rabid dogs. In Tunisia, the national strategy against rabies was started in 1981 and it has been upgraded since. Following the launch of the annual vaccination programme in 1993, there was a significant improvement in the health status for rabies in Tunisia, with a decrease in the number of cases in animals and humans. Since 2011, an increase in cases of rabies in dogs and humans has been observed, due to lower vaccination coverage, mismanagement of waste and an increase in the stray dog population. The political will at international, regional and national levels is the cornerstone of the strategy to eradicate the disease. In the framework of the regional approach in the Maghreb, additional efforts and political willingness are necessary at the national level to better control and eventually eradicate rabies.

Key words

Control programme – rabies – stray dog – vaccination – zoonosis.

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Introduction

Rabies is a major zoonosis that affects the central nervous system of warm-blooded mammals; it is caused by viruses belonging to the genus *Lyssavirus* within the family *Rhabdoviridae* [1, 2]. The disease is present worldwide, except for some islands. Although some countries have applied effective control programmes able to eliminate the disease in animals, rabies remains endemic in many animal species, including wildlife, in many countries [1, 3]. Rabies kills almost 70,000 people annually, mainly children in developing countries. It is estimated that more than 95% of human cases are caused by the bites of dogs infected with

rabies [4]. Currently, more than 80% of rabies deaths occur in rural areas where access to health services, including post-exposure prophylaxis (PEP), is limited or non-existent. Africa and Asia record over 95% of fatal cases of rabies worldwide, and therefore the greatest risk to human life from rabies occurs in these regions [5]. Mass vaccination of dogs is the most appropriate way to fight and eradicate the disease at the animal source, in order to interrupt the infectious cycle of the disease from other species to humans. It is estimated that the vaccination of at least 70% of the dogs in infected countries could eradicate rabies in dogs and, as a



consequence, the number of human cases could be rapidly reduced to zero [4].

The mass vaccination of dogs is also considered the most economical method to protect human beings from rabies. Each year, approximately 9 to 12 million people throughout the world are given prophylactic treatment following a bite from an animal potentially infected with rabies, at a total cost of about USD 2.1 billion [4].

The OIE, in collaboration with other international organisations, is heavily committed to the fight against rabies by emphasising that veterinarians and National Veterinary Services have a primary responsibility in applying their knowledge and skills to help control this zoonosis. To this end, rabies is also one of the topics identified as a priority by the OIE, WHO and FAO, in the framework of the joint 'One Health' approach that aims to address health risks at the human–animal–ecosystem interfaces [6].

The objective of this paper is to review the rabies situation and the control measures in place in the North African Region, with a major focus on Tunisia. This region represents a continued threat for introduction of the disease into Western European countries that are currently free of rabies. Rabies is endemic in North Africa and, in particular, the northern part is considered a high-risk zone where the disease represents a serious public health problem.

Overview of rabies in North Africa

The Maghreb Region, which includes Mauritania, Morocco, Algeria, Tunisia and Libya, covers about 4 million km². This territory is inhabited by nearly 90 million people, and 45% of the population lives in rural areas. About 70 million large animals are present in this zone – which is a significant resource for poor rural populations and also for the domestic economy – while the canine population is estimated to be around 4–5 million. The dynamics of the canine population shows a high turnover rate and is characterised by a young dog population (many are aged 2–3 years), with the percentage

of dogs less than 1 year of age ranging from 18 to 30%. The proportion of males is 60–70% and more than 90% of dogs are accessible for vaccination. The dog density (number of dogs per householder) is on average 1.3 in urban areas and 1.9 in rural areas [7, 8].

From 2005 to 2013, a total of 389 human cases of rabies were notified by Algeria, Morocco and Tunisia through the OIE World Animal Health Information System (WAHIS), confirming that this disease is a serious threat to the health of people. Figure 1 shows the fluctuation in human cases of rabies over recent years.

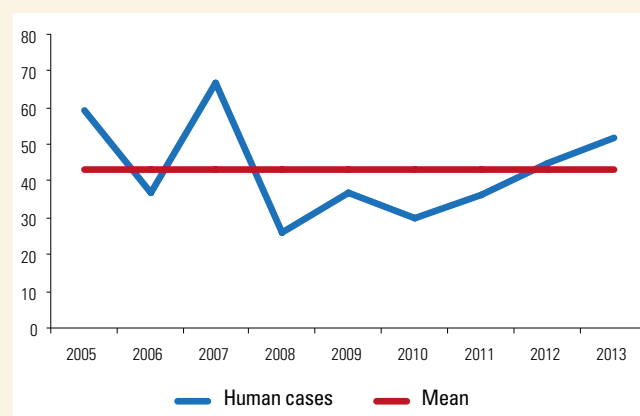


Fig. 1
Cumulative human cases of rabies in Algeria, Morocco and Tunisia between 2005 and 2013

Source: OIE WAHIS-WAHID

The graph illustrates that, in the area covered by the three countries, an average of around 40 cases is expected per year. One project (RABMEDCONTROL project 2007–2008) reported that about 90% of human cases in the North African Region were due to dog bites and that more than 85% occurred in unvaccinated people. The same project underlined that the majority of human cases in North Africa occur in young people aged between 0 and 19 years (>50%) [7, 8].

The information available from Libya is scarce because of the unstable political situation. However, in 2008 three human rabies cases caused by dog bites were reported, and

from 2009 to 2011 a total of 30 suspected human cases were registered [7].

Among animal species, ruminants and equids are the main victims of the disease, while dogs are the main reservoirs and transmitters of rabies in North Africa, and especially in the rural areas [9]. Figure 2 shows the percentage of rabies events in animals by species in the North African Region in 2012, based on the data submitted through WAHIS.

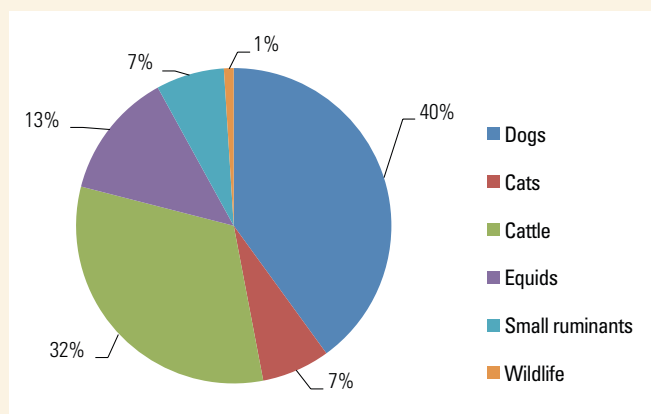


Fig. 2
Percentage of rabies cases in animals by species in the North African Region in 2012

Source : OIE WAHIS-WAHID

Some of the North African countries have developed programmes over the years for eliminating human rabies through the implementation of sustained mass vaccination campaigns to immunize dogs and, in parallel, by providing PEP to people who have been exposed to suspected rabid dogs. In addition to this, initiatives are also in place to control the stray dog population, to support surveillance and diagnostic testing in the laboratories and to organise interdepartmental commissions (among the units of different ministries involved in the fight against rabies) to facilitate the implementation and coordination of the necessary actions [7]. A phylogenetic analysis of rabies isolates published in 2010 revealed that there was no exchange of rabies virus between North Africa and the Sahel region, and that limited spread of the disease occurs among the countries in the North African Region [10].

Epidemiological review of rabies in Tunisia

Tunisia is the smallest country in the North African Region; it shares borders with Algeria to the west and Libya

to the southeast, and also abuts the Mediterranean Sea. The country covers an area of about 160,000 km² and has a Mediterranean coastline of 1,300 km. A total of 24 Governorates exist in Tunisia, and the population is estimated at around 11 million, with more than 65% living in urban areas [11].

Rabies is endemic in Tunisia, and the northern zones are the most severely affected. It is a notifiable disease in Tunisia in humans and other species, and surveillance systems for humans and animals are in place. It has been estimated that the dog population is about 1 million and the dog density is 1.3 dogs per dwelling in urban areas and 2.1 dogs per dwelling in the rural zones [7, 8].

A total of 8,747 cases of rabies in animals were reported in Tunisia from 1983 to 2013, of which 38% (3,350) occurred in dogs. Figure 3 displays the number of rabies cases in humans, dogs and other animals notified in Tunisia over three decades. In the context of the epidemiology of rabies, the graph illustrates that an increase in human cases followed a surge of rabies in animals. In 1992, a major increase in outbreaks of rabies was recorded, with 581 cases in animals and 25 human deaths. The chart also shows that the implementation (since 1993) of an annual mass vaccination programme for dogs has significantly improved the rabies status in Tunisia. A decrease in rabies cases has been registered annually, giving, on average, a total of 166 animal cases and 2.75 human cases. The situation has worsened since 2011, however, with an alarming increase in rabies cases in animals (360 cases) and in humans (7 cases). Figures as high as these had not been recorded for almost 20 years previously.

Since the start of the annual vaccination programme in 1993, approximately 420,000 dogs have been vaccinated yearly by official veterinarians and private veterinarians authorized by the Competent Authority; this represents about 45% of the dog population estimated to be present in Tunisia. Figure 4 indicates the percentage of dogs vaccinated and the number of rabies cases in dogs from 1983 to 2013 in Tunisia. The graph indicates that the level of vaccination coverage has decreased since 2011 (around 382,000 dogs have been vaccinated annually in 2011 and later years), and a significant and continuing increase in rabies cases in dogs has been observed in parallel. Additional factors have played a role in the recent increase in canine rabies cases in Tunisia, such as the mismanagement of waste in some areas and the increase in the stray dog population in recent years.

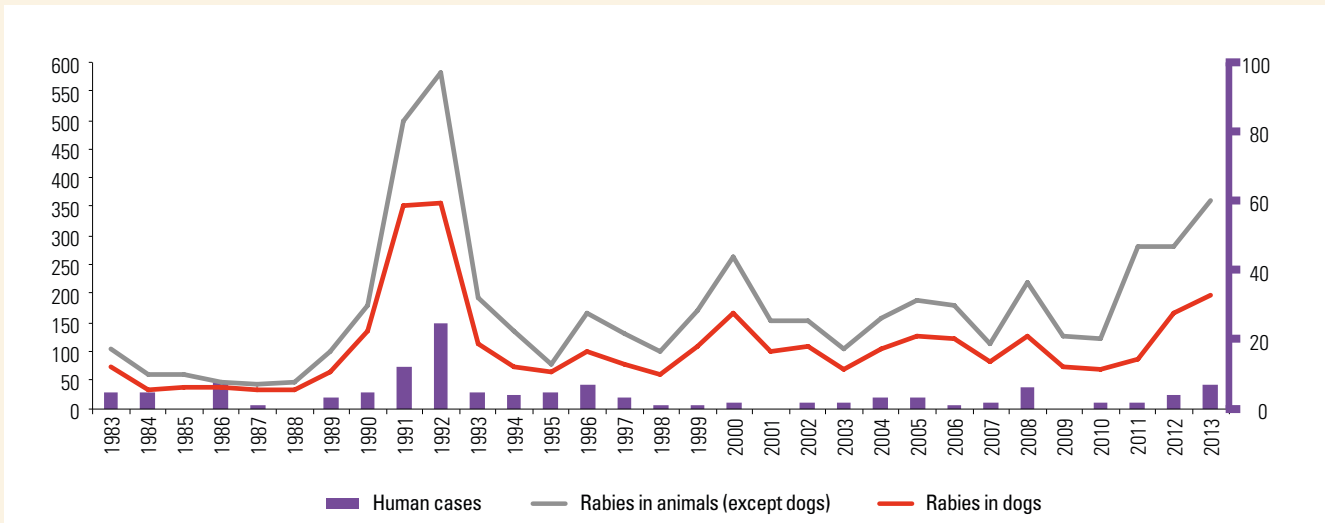


Fig. 3
Number of rabies cases reported in animals and humans between 1983 and 2013 in Tunisia

Source : General Directorate of Veterinary Services, Ministry of Agriculture, Tunisia

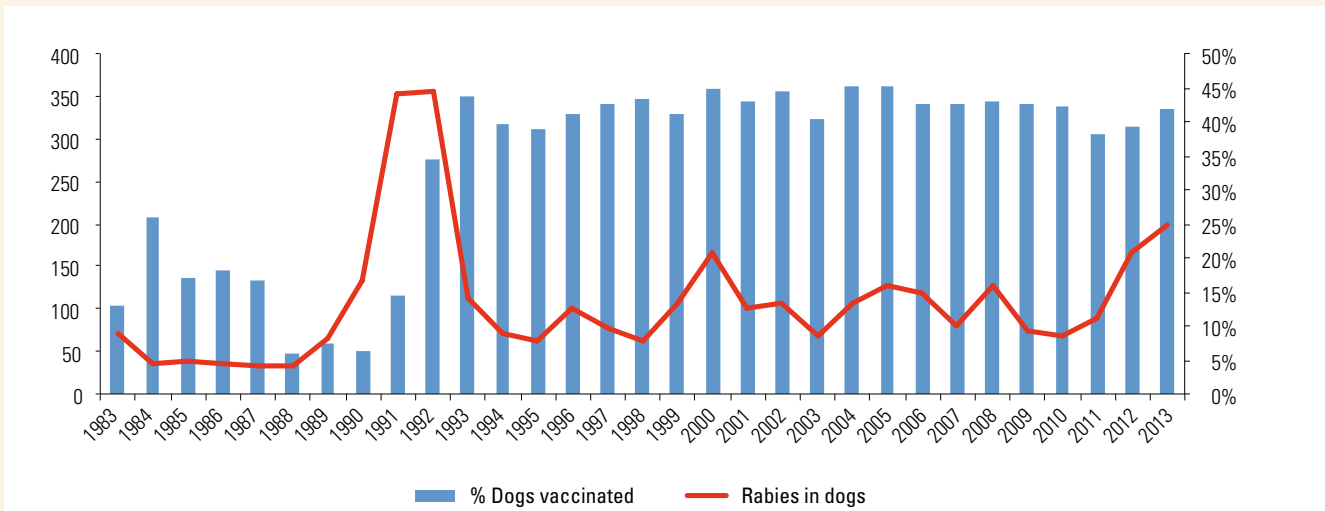


Fig. 4
Percentage of dogs vaccinated and number of rabies cases in dogs from 1983 to 2013 in Tunisia

Source : General Directorate of Veterinary Services, Ministry of Agriculture, Tunisia

Rabies control strategy implemented in Tunisia

The national control strategy for rabies in Tunisia was started in 1981, when the first national control programme was adopted by the Competent Authorities. Since then, the strategy has been improved, first by implementing peri-focal vaccination from 1987 to 1992 and second, starting in 1993, by conducting an annual vaccination campaign in dogs. In the beginning, the annual mass vaccination campaign was

carried out in a limited area in the north-east, but later it covered the whole country [12]. Three different ministries are involved in applying the control programme: the Departments of Agriculture, Health and the Interior. The pillars of the programme are the epidemiological surveillance, education and communication campaigns, as well as control of the stray dog population. In addition, the programme includes a free mass vaccination campaign and free medical care for people exposed to the disease. A recent investigation conducted in Tunisia, which used a questionnaire to evaluate the annual

vaccination campaign, analysed the reasons why the remaining population of dogs was not vaccinated. The results of this research are reported in Table I.

Table I
Reasons for not vaccinating dogs during the annual campaign

Reasons	Percentage
Purchased after the vaccination campaign	8
The owner ignore the period of vaccination	25
The owner was not informed of the date of the period of vaccination	22
Other: Refused vaccination/Dog not approachable/Zone is not reachable by the vaccination programme	45

Source : General Directorate of Veterinary Services, Ministry of Agriculture, Tunisia



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These results highlight the fact that more than 50% of dogs that are not usually vaccinated during the annual vaccination campaign can be vaccinated if adequate and appropriate communication and awareness campaigns are conducted.

In Tunisia, the overall cost for PEP is on average about USD 1.7 million, and in this context it is worth mentioning that in 2009 a total of 32,531 people received treatment after being bitten by suspected rabid dogs, while in 2012 about 36,000 people received treatment [7]. These data confirm that

the PEP is extremely expensive and is overused in relation to the number of confirmed cases of canine rabies. Therefore, mass vaccination of dogs is the best and most economical way to control and eradicate the disease.

Conclusion

Rabies is a disease that is fully preventable and the eradication of canine rabies is a realistic objective. The epidemiological cycle of rabies is well known, and dogs in the Maghreb region are the main reservoir and transmitter of the disease to humans in North Africa. In addition, the majority of dogs present in this territory are accessible to the vaccination programme. National control programmes in the North African area should play a predominant role, in coordination with regional programmes. They can be effective in controlling and ultimately eradicating the disease, because there is limited exchange of rabies viruses among countries in the Maghreb.

The political will at international, regional and national levels is the foundation of the strategy to eradicate the disease. In the framework of a regional strategic approach in the Maghreb, additional efforts and political willingness are necessary at the national level to better control and eventually eradicate rabies. Several shortcomings in the current national control programmes for rabies in the region may be highlighted, including:

- a shortage of financial and human resources
- insufficient communication and awareness campaigns
- inadequate coordination among the departments involved that belong to different Ministries
- insufficient vaccination coverage to break the infectious transmission cycle
- underreporting of cases or suspected cases
- insufficient participation by dog owners
- inadequate stray dog population management
- mismanagement of household waste.

The OIE Sub-Regional Representation for North Africa plays an important role in assisting countries in the Maghreb region to coordinate activities among their Chief Veterinary Officers by sharing experiences, information and data on rabies. In addition, the OIE Reference Centres should encourage the development of harmonised animal disease surveillance activities, in line with international standards. In this context, the REMESA network (*RÉseau Méditerranéen de Santé Animale*) is an essential platform for coordinating and managing actions against priority

diseases such as rabies in the region. In June 2014, the OIE Sub-Regional Representation for North Africa organised its first meeting on rabies, bringing together representatives of medical and veterinary authorities from the Maghreb countries to discuss the political will and community involvement, as well as the strategic mid-term objectives, to combat rabies in the region. In line with the results of the first meeting, a second seminar has been organised by

the OIE Sub-Regional Representation for North Africa to take place in 2015. This will be dedicated to awareness, communication and education campaigns. Countries in the region have been encouraged, in the meantime, to support awareness campaigns, to develop tools for education of the public (including young people) and to exchange experience and information on this subject.

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activities of Reference Laboratories & Collaborating Centres

OIE twinning: successful technical cooperation between Italy and Botswana

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Summary

In 2006, in an effort to assist laboratories in developing and in-transition countries to address weaknesses in their systems, the OIE introduced the concept of twinning. The main objective of the twinning programme is to assist these laboratories to develop their technical capacity and scientific expertise with the ultimate goal – for some – of becoming Reference Centres in their own right. This paper describes how the concept of twinning was applied to build diagnostic capacity for contagious bovine pleuropneumonia in Botswana.

Contagious bovine pleuropneumonia is an animal disease enzootic in sub-Saharan Africa. As a result of its highly infectious nature – with a high mortality rate in cattle – it causes significant production losses and represents one of the main impediments to the growth of the livestock industry on the African continent.

This paper illustrates how the relationship between the Istituto Zooprofilattico Sperimentale dell'Abruzzo e del Molise and Botswana National Veterinary Laboratory resulted in the establishment of an OIE Reference Laboratory for contagious bovine pleuropneumonia in Botswana. The laboratory serves mainly the Southern African Development Community to help in controlling the disease in areas where it is enzootic.

Keywords

Botswana – capacity-building – contagious bovine pleuropneumonia (CBPP) – *Mycoplasma mycoides* – OIE Reference Centre – twinning – twinning project.

Introduction

The Istituto Zooprofilattico Sperimentale dell'Abruzzo e del Molise 'G. Caporale' (IZSAM), Italy, is an OIE Collaborating Centre for Veterinary Training, Epidemiology, Food Safety and Animal Welfare and an OIE

Reference Laboratory for brucellosis, contagious bovine pleuropneumonia (CBPP), bluetongue and West Nile fever.

The OIE Reference Laboratories and Collaborating Centres are

designated to pursue scientific and technical problems relating to OIE-listed diseases or for a specific sphere of competence in managing general issues of animal health (e.g. epidemiology and risk analysis), respectively [1].

Since its creation in 1924, the OIE has encouraged international cooperation and coordination to prevent and control the spread of animal diseases all over the world. Today, Veterinary Services are recognised as a global public good and building Veterinary Service capacity is a key aspect of improving animal health at the global level. The ability and capacity of all OIE Members to meet the international standards of the OIE – which are recognised by the World Trade Organization – are essential for improving the good governance of Veterinary Services. Within this framework, the OIE network of Reference Centres plays an important role in providing authoritative scientific opinions and advice to the international community on key topics, such as animal health and welfare, diagnostic techniques, food safety and veterinary training [2].

At present, the current worldwide distribution of OIE Reference Centres is unbalanced. A high concentration of these centres are located in Europe and North America while, in the Southern Hemisphere, there are significant gaps. These gaps involve regions where expertise is urgently needed to detect and control enzootic infections and frequent outbreaks of animal disease. With the mid- to long-term objective of creating a more equitable and even distribution of OIE Reference Centres, the OIE launched a laboratory twinning programme in 2006 [3]. The programme links OIE Reference Centres (parent institutes) with institutes in developing or in-transition countries (candidate institutes)

and facilitates knowledge transfer between the two. The main objective of the programme is to enable some of the candidate laboratories to reach a level of technical capacity at which they themselves are able to apply to become OIE Reference Centres.

This paper describes a specific twinning project between IZSAM and the Botswana National Veterinary Laboratory (BNVL) for CBPP. This disease is a contagious, respiratory disease of cattle caused by *Mycoplasma mycoides* subsp. *mycoides*. Contagious bovine pleuropneumonia is enzootic in sub-Saharan Africa and, due to its highly infectious nature, with a mortality rate of up to 50% in cattle, it causes significant production losses and is a major impediment to the growth of the livestock industry on the African continent. This means that the livestock industry does not achieve its full economic potential.

Botswana was officially recognised as being free from CBPP by the OIE in 1998, but only after USD 97.5 million had been spent on controlling and eliminating the disease after an outbreak in 1995. At the time, Botswana did not have the necessary diagnostic and technical expertise to control the outbreak and needed to seek support from outside the country – this meant that the outbreak took longer to control, leading to greater control costs and increased production losses during the prolonged outbreak. The BNVL – a division of the Department of Veterinary Services of the Ministry of Agriculture – was established in 1948 and is responsible for the diagnosis of diseases of livestock and wildlife and for conducting

epidemiological surveys of transboundary diseases. IZSAM played a role during the 1995 CBPP outbreak, by assisting the BNVL to perform laboratory testing and transferring knowledge to improve the BNVLs diagnostic capacity, to aid in controlling and eradicating the disease [4]. This experience led to a long-term collaboration over the years by building transparency between the two laboratories and a productive relationship among the staff involved in these activities. The presence of an appropriate infrastructure in Botswana, and the establishment of this collaborative partnership and trust between IZSAM and the BNVL, represent the core requirements for putting a successful OIE twinning project in place.

Veterinary public health, food safety and the safeguarding of livestock health are at the heart of the policy of national and international cooperation adopted by IZSAM, which has been exporting its innovations and technology to the world over the past two decades [5].

This paper shows how the interaction between IZSAM and the BNVL in an OIE twinning project resulted in the establishment of an OIE Reference Laboratory for CBPP in Botswana to serve mainly the Southern African Development Community (SADC).

The objectives of the twinning project were to train laboratory staff in the production of reagents for serological testing, in the isolation and identification of *Mycoplasma mycoides* subsp. *mycoides*, in disease pathology, differential diagnosis and in epidemiological surveillance.

Methodology

1. Preparatory and starting phases

Under the auspices of their respective Chief Veterinary Officers, experts from the two institutes held preliminary meetings to decide on their priorities for the project, to draft the project itself and to assess the technical, infrastructural and financial resources of the BNVL. The official project was then submitted to the OIE by the Chief Veterinary Officers, including signed letters of support from the Directors of each of the two institutes. The support of Chief Veterinary Officers is crucial, since becoming an international laboratory that is recognised throughout the world requires substantial political will and solid funding commitments. Without such resources, the effort is unlikely to succeed.

The initial meeting and a related workshop were held at IZSAM and involved the participation of five experts from the BNVL and ten from IZSAM. Although the project stemmed from a long-standing relationship, one of the main aims of the initial meeting was to bring together the staff involved to share their objectives and to discuss the steps involved to ensure that the project was a success. The final aim was to create a solid working group, in which personnel from both organisations could become familiar with one another and develop a common decision-making process. Over the course of the workshop, the IZSAM experts explained their institute's main activities and achievements, and the BNVL experts were introduced to IZSAM's scientific facilities. Particular attention was paid to the proposed methodology and strategy for implementing the

project to ensure that its objectives would be realised in accordance with the relevant OIE Standards.

2. Operational phases

A twinning project may be realised through a variable number of 'working packages' (WPs), which last for as long as necessary. For this project, three WPs were prepared and agreed upon.

The first WP was dedicated to bringing the trainees from the BNVL 'up to speed' on the diagnostic tests for serology, bacteriology and epidemiology employed at IZSAM. The laboratory plays a significant role in animal disease surveillance; testing samples as well as analysing and disseminating animal-health-related data in a timely manner. To this end, it is crucial to have staff within the laboratory who have been trained in epidemiology. As a general rule, it is particularly important to forge a strong link between the epidemiological unit of the laboratory and the Veterinary Services of the country, to define strategies and specific objectives when fighting any animal disease. It was also important, during and after the training period, to ensure regular interaction among the trainees, in order to build a single strong team within the laboratory which could effectively respond to any task assigned to it. The final objective of the first training session at IZSAM was to enable the staff from the BNVL to acquire the necessary expertise in laboratory procedures so that they would be able to take them back to the BNVL and repeat them in Botswana, while maintaining strict quality control for all the processes employed.

The second WP also focused on enabling the BNVL to adopt the

procedures acquired at IZSAM and to address any critical issues involved in the implementation of these new activities in the laboratory. This WP, however, was principally dedicated to transferring the diagnostic techniques and protocols from the first WP within the framework of the quality assurance principles learned at IZSAM. In other words, it focused on building the capacity of the institution. In addition to this, it was imperative for the BNVL to begin the task of obtaining sustainable funding to support these activities. Funding is also required for travel to neighbouring countries, which is why the support and involvement of Chief Veterinary Officers and the Laboratory Directors is so important.

The third WP was dedicated to verifying the competencies acquired by the relevant staff at the BNVL, through a collaborative assessment, so that corrective action could be taken if needed. One of the major steps assessed in this WP was the implementation of the quality assurance system. Diagnostic procedures were examined, including sample shipment, disease surveillance and operational autonomy – since these are the foundation stones of any veterinary diagnostic laboratory and have a considerable impact upon the quality of their products (test results and testing reagents).

3. Final phases

A final meeting between the experts from the two laboratories was held in Gaborone, Botswana, with the participation of representatives from the neighbouring countries of Angola, Namibia, South Africa and Zambia. The aim of this wider meeting was to share the expertise acquired over the project so as to strengthen relationships and scientific collaboration with these bordering

countries, in some of which CBPP is enzootic. The meeting was also intended to consolidate the results of the activities conducted during the WPs and to agree on a way forward now that the project was nearly completed. Thus, the participants agreed upon technical priorities for the SADC region in relation to CBPP and committed themselves to continuing and expanding their collaborations on this disease. One principal achievement was an agreement between the laboratories to take a collective approach towards research, which would also involve other international partners, by taking part in proficiency testing, ring trials and inter-laboratory comparisons. All of these are vital in ensuring consistent and reliable results for an international laboratory.

In addition, a laboratory audit was carried out at the BNVL to assess the final results of the twinning project on CBPP, in accordance with the OIE guidelines for applicants for OIE Reference Laboratory status. The conclusion of the audit was so satisfactory that the BNVL was recommended to apply to the OIE to become an OIE Reference Laboratory for CBPP in its own right. Thus the objective of this twinning project was met.

Results

Over the course of the twinning project, significant results were obtained. A total of 1,199 samples (serum, tissue and nasal/lung swabs), mainly from Botswana, were tested for CBPP by the BNVL between 2011 and 2013, using a variety of diagnostic techniques, such as the complement fixation test (CFT), competitive enzyme-linked immunosorbent assay (c-ELISA), polymerase chain reaction

(PCR) and culture and isolation.

Demonstrating the ability to provide technical support to other countries is a prerequisite for applying to become an OIE Reference Centre [1]. In 2013, for the first time, the BNVL also began testing samples from two countries beyond its national boundaries: Namibia and Zambia, who also have national policies for controlling and eliminating CBPP. At the BNVL, the quality management system ISO 17025 is being used for its diagnostic techniques, in order to ensure valid and robust laboratory results, which are essential for effective diagnosis and surveillance.

Additional results were obtained by the twinning project. In 2011, the BNVL started supplying neighbouring countries with diagnostic reagents (i.e. CBPP antigen to Zambia and Namibia). It also provided other countries in the region (Zambia in 2012 and Angola in 2013) with expert advice on laboratory diagnosis. The BNVL organised its own proficiency testing (a ring trial) for four laboratories in the area in 2011, 2012 and 2013. In 2012, the BNVL carried out a 'back-stop' (support) mission to the Zambian Central Veterinary Research Institute to assist with quality assurance for CBPP diagnostic tests.

These results were recognised at the 80th OIE General Session with the adoption of a Resolution recognising the BNVL as an OIE Reference Laboratory for CBPP (see *Bulletin*, no. 2012-4, pp. 40 and 77).

Discussion and conclusion

The Second Global Conference of OIE Reference Laboratories and Collaborating Centres, held at the OIE Headquarters in Paris from 21 to

23 June 2010, identified the need to strengthen cooperation and the exchange of information between national, regional and international laboratory networks. One of the points reiterated during the conference was that the completion of the project should not mean the end of the relationship between the two laboratories. Twinning aims to activate long-term and continuous scientific collaboration to reinforce the expertise gained during the project. Laboratory capacity-building should always be seen as a mid- to long-term sustainable objective.

One of the indicators demonstrating the success of a twinning project is the capacity of the newly adopted Reference Laboratory to develop a network with its neighbouring countries, to support them in controlling enzootic infections. In this case, the newly recognised Reference Laboratory for CBPP in Botswana has started a fruitful collaboration with its neighbours, including Namibia and Zambia, that will have a significant positive impact on the control and eradication of CBPP within the region.

As an OIE Reference Laboratory for CBPP, the BNVL is mandated to carry out diagnostic testing for animal diseases, research and epidemiological surveillance on an international level, in compliance with the requirements of the OIE *Manual of Diagnostic Tests and Vaccines for Terrestrial Animals*. In line with this, the BNVL maintains its capability for performing CFTs, c-ELISAs, the isolation of *Mycoplasma mycoides* subsp. *mycoides* and identification by PCR for the diagnosis and surveillance of CBPP. The institute is also able to provide diagnostic testing services for CBPP,

and technical training for personnel from other OIE Member Countries. Moreover, it organises annual inter-laboratory proficiency testing with other national laboratories in the region for the CBPP tests (CFT and PCR) to ensure equivalency of results. As an OIE Reference Laboratory for CBPP, the BNVL is also committed to storing and distributing biological reference products (serum) and antigen for the CBPP CFT to national laboratories.

As indicated above, one of the objectives of the OIE twinning project is to create collaborative research opportunities by reinforcing networking and sharing advances in science. In this case, over the period of twinning in 2008 and 2009, IZSAM and the BNVL also collaborated on matters related

to dourine and tick identification, funded by other bodies. Certainly, these additional collaborations outside the scope of the original project have strengthened the relationship between the laboratories and their respective countries.

One of the key factors in achieving these goals was the development of a culture of inclusiveness, knowledge-sharing, and human and institutional interconnectivity. Generating information and knowledge based on high scientific standards and wide consensus has also been crucial in fulfilling the objectives of the twinning programme. Developing and validating diagnostic tests and control tools that are fit for purpose, taking into consideration both technical and economic issues, have also been important.

The establishment of long-lasting relationships between laboratories must be the rationale behind the OIE twinning programme if it is to guarantee valuable outcomes.

Finally, the BNVL, in its role of Reference Laboratory, has also provided expertise and deployed experts to Zambia and Angola – where CBPP is enzootic – to discuss CBPP diagnosis, further contributing to the control of this disease.

We must also highlight the role of IZSAM, which continues to collaborate with the BNVL by encouraging networking in the Southern African region – a crucial step in fighting the spread of disease on this continent. It seems clear that the twinning project has achieved success well beyond its original intent.

Manual of Diagnostic Tests and Vaccines for Terrestrial Animals:

www.oie.int/en/international-standard-setting/terrestrial-manual/access-online/

Laboratory twinning:

www.oie.int/en/support-to-oie-members/laboratory-twinning/

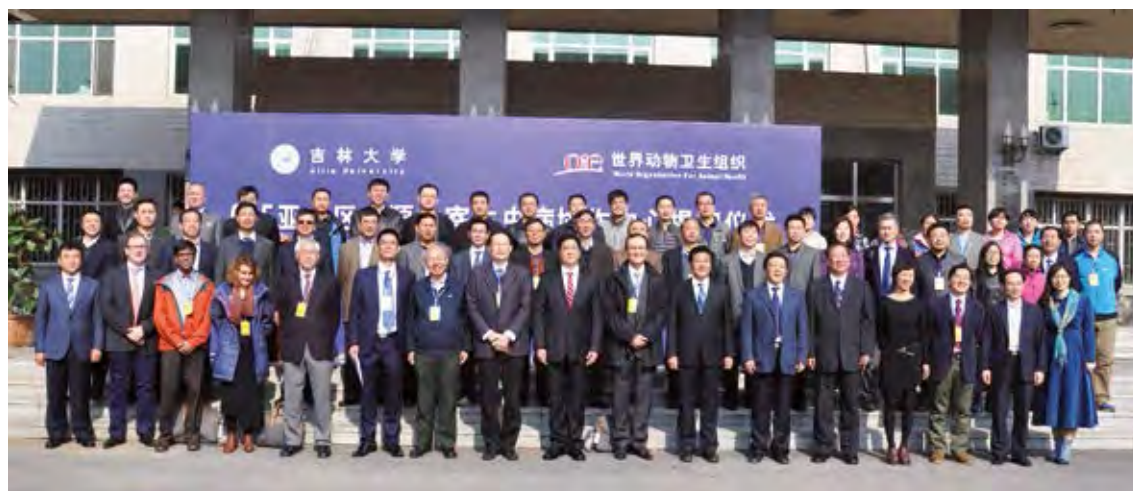
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Opening ceremony of the OIE Collaborating Centre for Food-Borne Parasites from the Asia-Pacific Region and first network meeting of the OIE Collaborating Centres for Food-Borne Parasites

Changchun, People's Republic of China, 18 October 2014



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Participants at the opening ceremony and meeting

The opening ceremony of the newly designated OIE Collaborating Centre for Food-Borne Parasites from the Asia-Pacific Region and the first network meeting of the OIE Collaborating Centres for Food-Borne Parasites were organised and hosted by the Institute of Zoonoses, Jilin University in Changchun, People's Republic of China, on 18 October 2014. The OIE was represented by Dr Hirofumi Kugita, OIE Regional Representative for Asia and the Pacific, on behalf of Dr Bernard Vallat, Director General of the OIE.

The designation of the OIE Collaborating Centre was acknowledged by Dr Zhang Zhongqiu, Delegate of the People's Republic of China to the OIE and Director General of the Veterinary Bureau at the Ministry of Agriculture of P.R. China, as well as by Dr Li Yuanyuan, President of the Jilin University. They announced that the Government of the People's Republic of China and Jilin University would provide all available support for the Centre's future scientific development work in food-borne parasites in P.R. China and the Asia-Pacific region.

Dr Liu Mingyuan, Head of the Centre, stated in his introductory remarks that the Institute and a number of the

top experts in food-borne parasites in the country had already built strong international research links, including with the existing two OIE Collaborating Centres for Food-Borne Parasites, ANSES Maisons-Alfort, France (Europe region) and the Centre for Food-Borne and Animal Parasitology, Canadian Food Inspection Agency (Americas region).

The first network meeting of the OIE Collaborating Centres for Food-Borne Parasites was held after the opening ceremony, with guests Dr Pascal Boireau and Dr Isabelle Vallée, from the Collaborating Centre in France, and Dr Alvin Gajadhar from the Collaborating Centre in Canada. The Centres have already set up a collaborative project to prepare an anti-*Trichinella* swine reference serum.

A network website will be launched to disseminate information on standards for detection of food-borne zoonotic parasites, validated tests, and educational videos on the life cycle of parasites, among others. The website will be constructed and shared by the three Centres. The next meeting is expected to be held in Berlin, Germany, in September 2015 during the 14th International Conference on Trichinellosis (ICT-14).

List of OIE Collaborating Centres:

www.oie.int/en/our-scientific-expertise/collaborating-centres/list-of-centres/

3rd Global Conference of OIE Reference Centres: 'Challenges and expectations for the future'

Incheon–Seoul, Republic of Korea, 14–16 October 2014



From left to right: Minister Dong-Phil Lee, Ministry of Agriculture, Food and Rural Affairs (MAFRA); Commissioner Yi-Seok Joo, Animal and Plant Quarantine Agency (QIA); Dr Peter Daniels, OIE Biological Standards Commission; Dr Min Kyung Park, OIE Scientific and Technical Department; Dr Vincenzo Caporale, OIE Biological Standards Commission; and Dr Bernard Vallat, Director General of the OIE



Over 300 participants representing the OIE network of Reference Laboratories and Collaborating Centres attended this unique international forum, along with participants from the OIE Laboratory Twinning Programme and from the Regional and Sub-Regional Representations.

The network of Reference Laboratories and Collaborating Centres is at the heart of the OIE's scientific core of excellence and forms the basis for good governance in animal health and veterinary activities worldwide. The conference presented a valuable opportunity to build for the future, taking the network into a new era of evolving diagnostic technologies and global databases.

Abstracts and presentations given during the Conference:
www.oie.int/eng/refcentre2014/presentations.htm

Final recommendations of the Conference:
www.oie.int/eng/refcentre2014/A_Final_Recommendations_Korea_2014.pdf

Activities of the OIE Collaborating Centres on Food Safety and Food-Borne Parasites

Food Safety

This Collaborating Centre is a multi-national consortium formed by:

- **Veterinary Public Health Centre (VPHC), Agri-Food and Veterinary Authority (AVA)**
10 Perahu Road, Singapore 718837, Singapore
- **Division of Health and Environment Sciences (DHES), School of Veterinary Medicine, Rakuno Gakuen University**
582 Bunkyo-dai-Midorimachi, Ebetsu, Hokkaido 069-8501, Japan
- **Research Center for Food Safety (RCFS), Graduate School of Agricultural and Life Sciences, the University of Tokyo**
Yayoi 1-1-1, Bunkyo-ku, Tokyo, 113-8657, Japan

Its aim is to promote food safety; in particular, food safety at the animal production phase in Asia. It provides services to OIE Member Countries in food safety risk assessment; food-borne zoonoses; antimicrobial resistance; the analysis of chemical, biological and physical hazards in food; and other food safety issues, through collaborative research, technical cooperation and workshops.



From left to right: Dr Chua Tze Hoong (VPHC, AVA, Singapore), Dr Kohei Makita (DHES, Japan), Dr Paul Chiew King Tiong (VPHC, AVA, Singapore) and Prof. Katsuaki Sugiura (RCFS, Japan)

Food Safety, Diagnosis and Control of Animal Diseases in Eastern Europe, Central Asia and Transcaucasia

All-Russian State Centre for the Quality and Standardisation of Veterinary Drugs and Feed (FGBU VGNKI), Ministry of Agriculture and Food
5 Zvenigorodskoye Shosse, 123022 Moscow, Russia

In 2014, the FGBU VGNKI carried out epizootic analyses in the territories of Russia, Uzbekistan, Kyrgyzstan, Belarus, Armenia, Moldavia and Tajikistan and provided diagnostic services and master seed strains of microorganisms. The institution also took part in the development of an international programme to control poultry salmonellosis (in Russia, Kazakhstan, Belarus, Kyrgyzstan, Armenia and other countries) under the framework of the Eurasian Economic Commission. Two seminars were delivered: 'Specific requirements for the registration of veterinary products in European Union countries and the USA', and 'Modern requirements for testing laboratories'. The institution also implemented a qualification programme on the 'Legal aspects of pharmaceutical activity in regard to veterinary products in circulation'. Prof. Alexander N. Panin, Director General of the Centre, prepared and provided reports of OIE activities in the region (Russia, Tajikistan and Turkmenistan). Representatives of the majority of Eastern European, Central Asian and Transcaucasian countries took part in veterinary congresses (Moscow, Kazan) and in the Baltic Forum Veterinary Medicine and Food Security (St. Petersburg).



Food-Borne Parasites from the European Region

ANSES Maisons-Alfort

14 rue Pierre et Marie Curie, 94701 Maisons-Alfort cedex, France



This Collaborating Centre specialises in the detection and characterisation of parasites found in terrestrial and aquatic animals; major food-borne zoonotic agents (in meat-based products, fish, etc).

Among the principal parasites covered by the Collaborating Centre's field of expertise are *Trichinella* spp., *Toxoplasma gondii*, *Cryptosporidium* spp., *Giardia duodenalis*, *Anisakidae* and certain species of Digenea.

The objective of the Centre is to provide scientific and technical expertise in the identification and characterisation of parasites found in animals or in animal-based food products.

Its activities focus on methods of detection and their international standardisation, the organisation of inter-laboratory testing and the implementation of quality assurance (ISO 17025), as well as the organisation of training courses in Europe or in those OIE Member Countries which request it.

This Collaborating Centre for the European region was designated in May 2014, at the same time as its counterpart Collaborating Centre in China for Asia and the Pacific. There are now three OIE Collaborating Centres specialising in this field as a Centre already exists in Canada for the region of the Americas. These three centres work in close liaison, notably through shared research projects and an annual meeting.

Food-Borne Parasites from the Asia-Pacific Region

Institute of Zoonosis, Jilin University

5333 Xian Road, 130062 Changchun, People's Republic of China



The new Centre will focus its activities on training and implementing international standards in the Asia-Pacific region, and will work collaboratively to develop new diagnostic methods, produce reference reagents, and provide scientific and technical support to specialist laboratories in China and in the Asia-Pacific region (see p. 83).

Food-Borne Zoonotic Parasites

Centre for Foodborne and Animal Parasitology, Canadian Food Inspection Agency

116 Veterinary Road, Saskatoon, Saskatchewan S7N 2R3, Canada



The laboratory actively addresses various issues related to parasites which are important for food safety and/or animal health, including *Toxoplasma gondii*, *Sarcocystis* spp., *Cryptosporidium* spp., *Cyclospora cayatanensis*, *Giardia* spp., *Taenia saginata* (*Cysticercus bovis*), etc.

Examples of activities carried out by the Collaborating Centre for OIE Member Countries include: research to develop and validate diagnostic test methods and proficiency testing; the provision of training and proficiency samples to build and maintain lab-testing capacity; expert consultation and laboratory testing to support disease investigations; and expert participation in various *ad hoc* or focus groups led by the OIE, FAO, WHO, International Standardization Organization (ISO) and International Commission on Trichinellosis (ICT) to draft international regulatory guidelines and other supporting documents. The Collaborating Centre is currently directing the compilation of a book by several authors (*Foodborne Parasites in the Food Supply Web: Occurrence and Control*), the establishment of a professional association (the International Association for Food and Waterborne Parasitology) and an international scientific journal (*Food and Waterborne Parasitology*), all of which are expected to be accessible by summer 2015.

Veterinary Training, Epidemiology, Food Safety and Animal Welfare

Istituto Zooprofilattico Sperimentale dell'Abruzzo e del Molise 'G. Caporale'

Via Campo Boario, 64100 Teramo, Italy

The OIE Collaborating Centre for Veterinary Training, Epidemiology, Food Safety and Animal Welfare of the Istituto Zooprofilattico Sperimentale dell'Abruzzo e del Molise (IZSAM) in Teramo, Italy, provides scientific and technical support to Veterinary Services and laboratories in several OIE Member Countries in Europe, Africa and the Middle East, to improve the safety of food products of animal origin and to facilitate national and international trade, according to the OIE terms of reference.

Ongoing collaborations and OIE twinning projects with institutes and laboratories around the world are aimed at – among other things – upgrading veterinary legislation on food safety, organising and managing monitoring plans for chemical and microbiological contaminants, and implementing animal identification systems. Activities targeted at improving the quality management system in laboratories in accordance with the requirements of

ISO 17025 have also been put into place. Under this framework, IZSAM has provided a useful tool (the Laboratory Information Management System) to several National Veterinary Laboratories in Africa, for the management of samples, along with related test results and epidemiological information. To help achieve these goals, IZSAM usually provides intensive and continued training for all those taking part in these activities.

Also among the Collaborating Centre's activities are the development of new diagnostic methods for food safety, and analytical support for official samples from OIE Member Countries. Since genetic sequencing information is playing an increasing role in the diagnosis and management of microbial infections, as recommended in the Third OIE Global Conference of OIE Reference Centres, held in the Republic of Korea in October 2014, the IZSAM OIE Collaborating Centre has begun collaboration on the whole genome sequencing of foodborne pathogens with other OIE Reference Laboratories around the world.



BSL3 laboratory – Studying spoilage caused by pathogenic and technological microorganisms in artificially and naturally contaminated food



A training session in the chemical laboratory

news from Member Countries

Self-declaration

Other than for African horse sickness, bovine spongiform encephalopathy, classical swine fever, contagious bovine pleuropneumonia, foot and mouth disease and peste des petits ruminants, for which the OIE currently has a procedure of official recognition of status, the self-declaration of freedom of a country or a territory from a given OIE-listed disease is under the responsibility of the Member concerned. The OIE is not responsible for inaccuracies in the publication of self-declarations concerning the status of a country or zone with regard to a disease.

Self-declaration by Latvia of freedom from rabies

submitted to the OIE on 8 December 2014 by Dr Maris Balodis, Delegate of Latvia to the OIE, Director General, Chief Veterinary Officer, Food and Veterinary Service, Ministry of Agriculture, Riga

Notification of rabies

Rabies has been a notifiable disease in Latvia since 1929. According to the Veterinary Medicine Law, animal owners must immediately notify a veterinarian of any animal death, abortion, simultaneous disease in several animals, and any case that arouses suspicion that an animal may be affected by infectious disease.

Epidemiological evaluation

The first written evidence of rabies cases in Latvia dates back to 1822. Rabies has been endemic in Latvia since the 19th century. Before 1951, most rabies cases in Latvia were recorded in dogs, but after that more cases in wildlife, mainly red foxes (*Vulpes vulpes*) and wolves (*Canis lupus*), were confirmed annually. The first case in a raccoon dog (*Nyctereutes procyonoides*) was reported in 1958. Since 1963 the disease has become mainly sylvatic, and rabies mediated by foxes and raccoon dogs is now the main problem.

The number of rabies cases varied between 71 and 144 in red foxes and between 20 and 39 in raccoon dogs in the years from 1993 until 1999. These numbers increased in the year 2000, and they peaked in 2003 (471 cases in red foxes, 285 cases in raccoon dogs).

The last human rabies case in Latvia was reported in 2003.

As a result of the oral vaccination of wild animals (foxes and raccoon dogs) the number of rabies cases approximately halved: in 2007, 95 cases in red foxes and 33 cases in raccoon dogs were diagnosed. In 2008 and 2009, the number of rabies cases continued to decrease: 44 and 24 cases in red foxes and 41 and 24 cases in raccoon dogs were confirmed, respectively. In 2010, only 16 cases of rabies were detected, among which 11 cases occurred in red foxes and 1 in a raccoon dog.

The last case of rabies in wild animals in Latvia was detected in October 2010.

In 2011, there were no rabies cases detected in Latvia, but in 2012 three cases of rabies were confirmed: on 5 January in a horse, on 27 January in a dog and on 27 February in cattle – this was the last rabies case reported in Latvia.

The number of animals suspected of rabies and tested in the framework of a passive surveillance programme for rabies in Latvia in the period from 2000 to 2014 is shown in Figure 2.



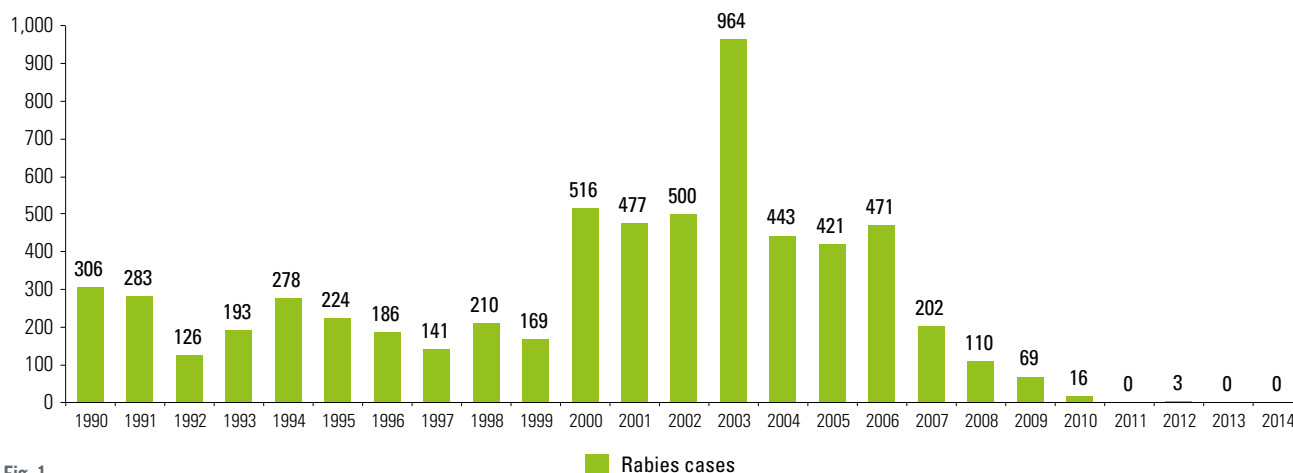


Fig. 1
Rabies cases in Latvia (January 1990 to September 2014)

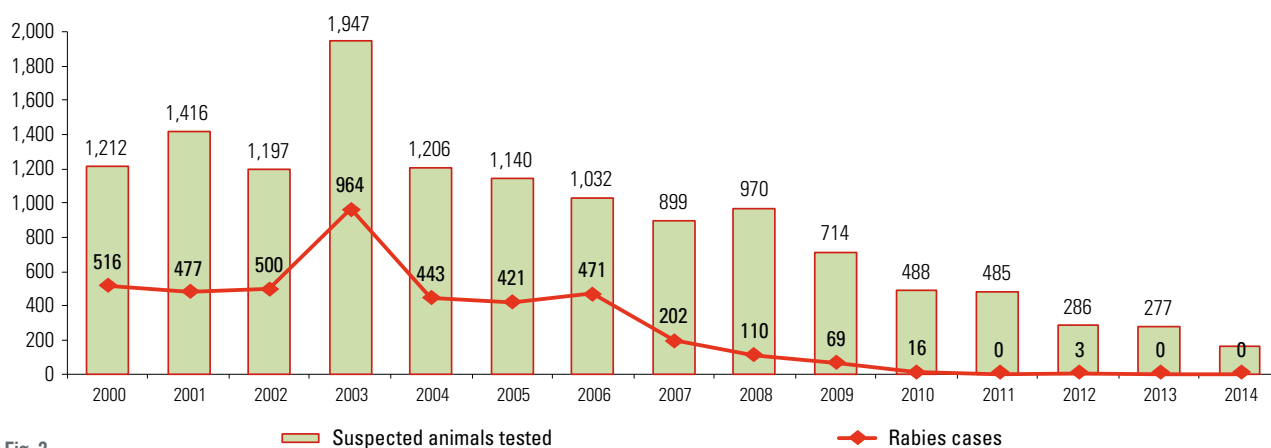


Fig. 2
Number of rabies tests and rabies cases confirmed (January 2000 to October 2014)

Eradication measures

Domestic animals

Compulsory annual vaccination of dogs, cats and domestic ferrets, as well as vaccination of agricultural animals in outbreak sites, was an appropriate method used to reduce the spread of the infection among domestic animals.

Wild animals

The first field trials of the vaccination of wildlife against rabies started in 1991. In certain territories oral vaccination was performed with a parenteral vaccine produced in Russia. Veterinarians injected the vaccine into appropriate baits (for instance, fish or chicken heads) and distributed them in the forests.

The second strategy for rabies eradication – oral vaccination using a manufactured rabies vaccine – was started in 1998. From that year, vaccine baits were manually distributed twice a year in parts of Latvia, in collaboration with hunters. From 2001 to

2003 the entire territory of Latvia was covered with vaccine baits. However, the surveillance results showed that manual distribution of vaccine baits was not efficient. During 2004, oral vaccination campaigns were not carried out because the new oral vaccination strategy was being elaborated.

The third strategy – oral vaccination against rabies using aerial distribution of vaccine baits – was initiated in 2005, when the vaccination campaigns were carried out in spring and autumn, covering the western part of the country. From 2006 to 2013, aerial distribution of vaccine baits was implemented over the whole territory of Latvia twice a year. An average of 1.6 million vaccine baits were distributed during each campaign, giving 3.2 million per year, and providing at least 23–25 baits per km². The Latvian rabies elimination programme has been co-financed by the European Commission since 2005.

Since 2012 the Latvian rabies control programme has also included oral vaccination of wildlife in the Belarus territory (a 70-km-wide buffer zone near the Latvian border covering

an area of 10,850 km²). The programme is co-financed by the European Commission; it is implemented by the Food and Veterinary Service of Belarus and supervised by the Food and Veterinary Service of Latvia. Activities are performed on the basis of bilateral agreement between the governments of the two countries.

In 2014, an oral vaccination campaign was carried out in the autumn in the buffer zones (70–100-km wide) with both Russia and Belarus. National budget is foreseen to be available for an emergency reaction in the case of deterioration of the epidemiological situation.

Surveillance and monitoring

The Food and Veterinary Service of Latvia performs rabies surveillance in Latvia, where rabies is a notifiable disease. Animal owners must immediately notify a veterinarian of animal death, abortion, simultaneous disease in several animals, and any case that arouses suspicion that animals are affected by an infectious disease (Veterinary Medicine Law).

All measures are carried out on the basis of the following documents:

- Regulation of Cabinet of Ministers No. 178 (23 February 2010): ‘Order of rabies eradication and control’;
- Food and Veterinary Service Instruction Order No. 51 (28 March 2011): ‘Programme on prophylaxis and eradication of rabies’.

Both documents describe measures to be taken in situations where a rabies case is suspected or confirmed.

Regarding oral vaccination of wildlife, an Animal Infectious Disease State Surveillance Programme, in which a chapter on oral rabies vaccination is included, is approved annually by the Chief Veterinary Officer. The programme defines the area in which vaccination should be carried out, the number of vaccine baits and the number of campaigns per year, as well as an evaluation of the efficiency of the vaccination campaigns.

All laboratory diagnostic tests for rabies are performed in an accredited laboratory at the Food Safety, Animal Health and Environment Research Institute ‘BIOR’, which is also a national reference laboratory for rabies in Latvia.

In order to evaluate the efficiency of the oral vaccination programme annually, four target animals (foxes and raccoon dogs) per 100 km² of the vaccinated territory are tested for the presence of the biomarker tetracycline (bait uptake) and the antibody level is measured (seroconversion).

Importation procedures

As a Member State of the European Union, Latvia follows importation procedures in line with the European Union legislation. The importation procedures are enacted by Regulation (EC) No. 998/2003 of the European Parliament and of the Council of 26 May 2003 on the animal health requirements applicable to the non-commercial movement of pet animals, and amending Council Directive 92/65/EEC. Importation of susceptible pet animals is allowed if they have been vaccinated against rabies, and animals originating from defined countries with an unfavourable rabies situation additionally undergo laboratory testing to demonstrate the existence of a sufficient immune response.

Latvia complies with the requirement mentioned under point 5 of Article 8.12.3. of the OIE *Terrestrial Animal Health Code*, i.e. that no imported case in the Orders Carnivora or Chiroptera has been confirmed in the country for the past six months.

Conclusion

Rabies is a notifiable disease in Latvia. A surveillance and eradication programme in wildlife and domestic animals is in place.

Preventive measures – compulsory vaccination of domestic animals, oral vaccination of wildlife and information campaigns – are in place.

During the past two years rabies cases have not been reported in Latvia.

Latvia complies with the conditions to be considered a rabies-free country in accordance with Article 8.12.3. of the *Terrestrial Animal Health Code* (2014).

Therefore, considering

- the aforementioned information,
 - the fact that more than two years have elapsed since the last case of rabies, which was detected on 27 February and closed in June 2012,
 - and in accordance with Article 8.12.3. of Chapter 8.12. of the *Terrestrial Animal Health Code* (2014),
- the Delegate of Latvia to the OIE declares on 8 December 2014 that his country is free from rabies.



Self-declaration from Italy of a zone free from swine vesicular disease

submitted to the OIE on 13 January 2015, by Prof. Romano Marabelli, Delegate of Italy to the OIE, Head of Department, Veterinary Public Health, Food Safety and Collegial Bodies for Health Protection, Ministry of Health, Rome

Background information

Swine vesicular disease (SVD) was first observed in Italy in 1966.

During the last 20 years, due to the constant presence of the disease in certain regions of the southern part of the country, the Competent Authority has notified the detection of outbreak(s) on a six-monthly basis to the OIE.

Surveillance programme and contents

A national surveillance and monitoring plan was put in place in 1995, with the objective of eradicating the disease through sanitary accreditation of the swine holdings and, consequently, the affected areas. Over time, surveillance activities have been modified and adapted to the epidemiological changes observed in the territory.

The northern regions of Italy, according to the European Commission Decision 2005/779/EC, achieved accreditation in 1997 as being free from SVD, in contrast to the central and southern regions of the country where (with a few exceptions) the disease has been constantly present.

The surveillance and monitoring plan has involved carrying out continuous serological and virological testing throughout the entire country. Active surveillance has been reinforced since 1998; in particular, in fattening establishments and dealers' premises, considered critical points for the transmission of the disease. Table I shows the number of antibody- and virus-detection tests performed in Italy during the period 2010–2014.

These provisions, including basic biosecurity measures, were laid down in a National Order by the Ministry of Health in July 2006, to manage the epidemiological situation and to fulfil the recommendations of the European Commission to achieve eradication of the disease.

Table I
Laboratory tests performed in Italy during the period 2010–2014 for antibody and virus detection

Year	Number of antibody-detection tests performed					Number of virus-detection tests performed
	Competitive ELISA (screening test)	Virus neutralisation (confirmatory test)	Isotyping ELISA IgG	Isotyping ELISA IgM	PCR	Virus isolation
2010	341,713	563	513	513	2,420	8
2011	379,216	1,157	1,118	1,118	2,527	99
2012	425,819	895	917	917	2,563	11
2013	434,164	370	356	356	2,398	12
1 Jan. 2014 – 30 June 2014	211,489	409	848	848	1,233	5

ELISA: enzyme-linked immunosorbent assay

IgG: immunoglobulin G

IgM: immunoglobulin M

PCR: polymerase chain reaction

Epidemiological situation

In 2014, 5 outbreaks were detected in Italy: 2 in the Basilicata region (one primary and one secondary); 1 in the Campania region (a primary outbreak), and 2 in the Calabria region (one primary and one secondary). The outbreaks involved regions that were not free from SVD (Calabria and Campania) or regions that bordered with them (Basilicata), and herds with a small number of pigs (842 animals in total). To date (January 2015), according to European Commission Decision 2005/779/EC, Campania and Calabria are the only non-accredited regions (not free of SVD).

In 2013, only 1 outbreak was detected and confirmed, on 12 April, on a backyard farm with 4 fattening pigs, located in Calabria in southern Italy. This event was resolved on 20 June 2013 when all control measures were removed, after the stamping out of all swine and after cleaning and disinfection procedures had been completed.

In 2012, a total of 7 outbreaks were detected, most of them epidemiologically linked. They were all recorded during the first semester of the year in Molise (6) and Campania (1), on small and backyard farms.

Excellent cooperation among all the stakeholders, the Ministry, regional Veterinary Services, the pig sector, and local and national reference laboratories has allowed the health status of the north-central regions – which have been free of

SVD since the late 1990s – to be safeguarded over recent years, with rapid and effective management of the severe epidemic wave of 2006–2007 which occurred in Lombardy, as well as the attainment of SVD-free status in Sicily in late 2008 and in the Abruzzo region in July 2009. All the relevant pig-farming regions of Italy are therefore free of SVD and the domestic production of swine products with high health standards is ensured.

Description and demarcation of the free zone

Since 2009, no SVD virus has been detected in the northern regions of Italy; namely, Emilia-Romagna, Friuli-Venezia Giulia, Liguria, Lombardy, Marche, Piedmont, Aosta Valley and Veneto, and the Autonomous Provinces of Trento and Bolzano, which is the area of the country most densely populated with pigs. The Competent Veterinary Authorities have put national control measures into place to regulate trading from southern Italy into northern Italy to avoid any introduction of the virus into the disease-free northern part of the country.

Italy has defined an SVD-free zone, including all the above-mentioned regions, known as a 'macro-region', as shown in Figure 1. All the surveillance activities conducted in this macro-region (Table II) have provided negative results, thus demonstrating the absence of SVD.

Table II
Laboratory tests performed in the disease-free zone during the period 2010–2014 for antibody and virus detection

Year	Number of antibody-detection tests performed					Number of virus-detection tests performed
	Competitive ELISA (screening test)	Virus neutralisation (confirmatory test)	Isotyping ELISA IgG	Isotyping ELISA IgM	PCR	Virus isolation
2010	156,076	90	63	63	495	0
2011	168,902	237	233	233	403	3
2012	170,110	148	169	169	409	0
2013	174,301	135	130	130	359	0
1 Jan. 2014 – 30 June 2014	168,902	148	169	169	409	0

ELISA: enzyme-linked immunosorbent assay
IgG: immunoglobulin G
IgM: immunoglobulin M
PCR: polymerase chain reaction





Fig. 1
Swine vesicular disease status of regions in Italy

Official control and eradication measures

The control and protection measures applied are in line with the provisions of the European Union laid down in Council Directive 92/119/EEC introducing general Community measures for the control of certain animal diseases and specific measures relating to swine vesicular disease, and in the European Commission Decision 2005/779/EC concerning animal health protection measures against swine vesicular disease in Italy.

Therefore, considering:

- the above information,
- the fact that no case or outbreak of swine vesicular disease has been detected in the SVD-free zone since 2009,

- that Italy applies the stamping-out policy in the event of confirmation of any case of swine vesicular disease,
- that the surveillance programme has shown no evidence of swine vesicular virus circulation in the disease-free zone,
- the compliance of the zone with the provisions of Chapter 1.1., 3.1. and 3.2. of the *Terrestrial Animal Health Code*,
- and in accordance with Article 1.6.1. of Chapter 1.6. of the OIE *Terrestrial Animal Health Code*,

the Delegate of Italy to the OIE declares freedom from swine vesicular disease, as of 13 January 2015, of a zone consisting of the northern regions of Italy; namely, Emilia-Romagna, Friuli-Venezia Giulia, Liguria, Lombardy, Marche, Piedmont, Aosta Valley and Veneto, and the Autonomous Provinces of Trento and Bolzano.

Self-declaration by Colombia of a zone free from white spot disease and yellow head disease in farmed crustaceans

submitted to the OIE on 16 January 2015 by Dr Luis Humberto Martínez Lacouture, Delegate of Colombia to the OIE, Chief Executive Officer, Colombian Agriculture and Livestock Institute (ICA), Ministry of Agriculture and Rural Development, Bogotá

This is Colombia's self-declaration that its Caribbean region is a zone free from white spot disease and yellow head disease in farmed crustaceans, in accordance with the requirements of the 2014 editions of the OIE *Aquatic Animal Health Code (Aquatic Code)* and the *Manual of Diagnostic Tests for Aquatic Animals (Aquatic Manual)*.

In Colombia, white spot disease and yellow head disease are notifiable diseases in farmed crustaceans.

Shrimp has been farmed on a large scale in Colombia since 1983, with Cartagena, Bolívar Department, as the industry's key hub. The main departments with shrimp facilities in Colombia's Caribbean region are: Bolívar, Córdoba, Atlántico, Sucre and, to a lesser extent, Magdalena.

Colombia has a total of 4,538 hectares of shrimp-farming facilities distributed across the Caribbean and Pacific coastal regions. In Tumaco, in the Pacific region, only 245 hectares of the 1,545 hectares of facilities are now operational, due to the emergence of two viral diseases: Taura syndrome in 1992 and

infection with white spot syndrome virus in 1999, both of which cause severe losses to the industry from mortality in production units. The last outbreaks of Taura syndrome were recorded in February 2014 and of white spot disease in February 2013, both in Colombia's Pacific region.

In contrast, in Colombia's Caribbean region, no cases of white spot disease have been observed since 2004 and shrimp farming is extremely successful.

Table I shows the distribution of shrimp farms in Colombia's Caribbean region, the subject of this study, based on information from surveys by the Colombian Agriculture and Livestock Institute (ICA).

A point of note is that the shrimp industry in Colombia's Caribbean region has imported no genetic material for its farms since 1994 and is self-sufficient in its production of the Pacific white shrimp (*Penaeus vannamei*).

In accordance with the functions assigned to the ICA, its Technical Department for Animal Health coordinates activities and actions relating to the

Table I
Distribution of shrimp farms in Colombia's Caribbean region, 2009–2011

Department	Number of farms					
	Hatchery		Nursery		Grow-out	
	2009	2011	2009	2011	2009	2011
Atlántico	0	0	0	0	9	6
Bolívar	1	1	3	1	6	2
Córdoba	0	0	1	0	1	0
Sucre	2	2	5	4	1	1
Total	3	3	9	5	17	9



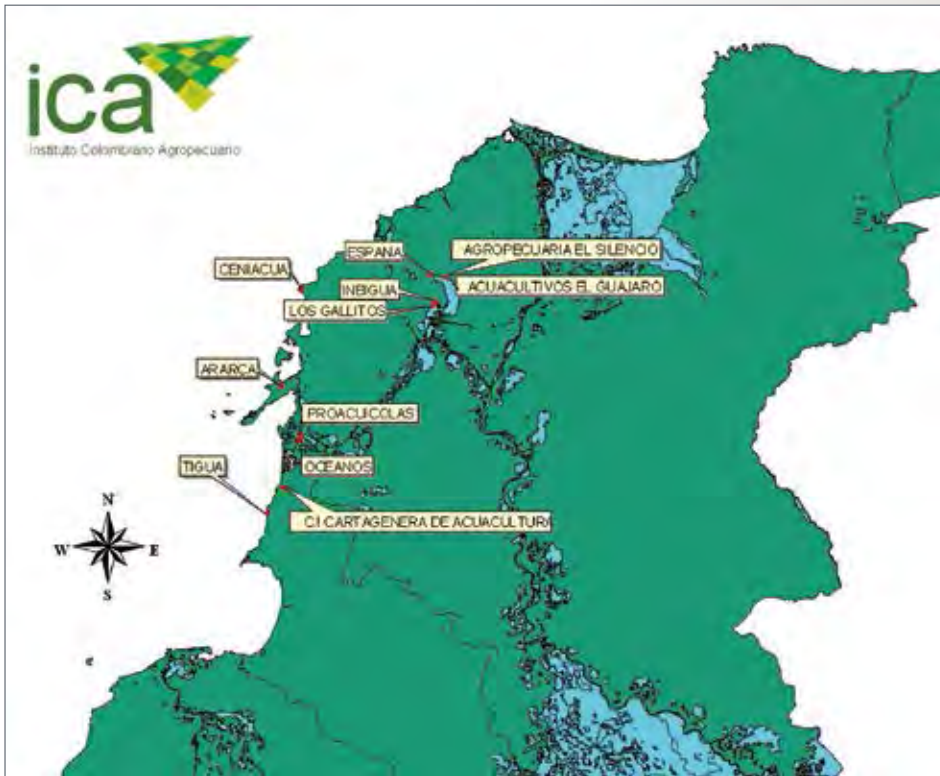


Fig. 1
 Location of shrimp farms in Colombia's Caribbean region, 2009–2011
 Source: Colombian Agriculture and Livestock Institute

health of Colombia's aquatic animals. Under this programme, a national manager and 20 branch managers undertake health activities, supported by professionals from the other ICA groups.

The prevention activities established as part of the quarantine system to prevent the introduction of crustacean diseases begin with the **control of imports**, which covers: risk analysis to authorise the importation of live crustaceans or their products; registration of establishments of origin and the import permit (with an obligation for imports to be accompanied by the respective animal health certificate of origin required by Colombia for imports of crustaceans, taking into account the requirements agreed by the Competent Authorities of the importing country and exporting country, in line with the recommendations in the OIE *Aquatic Code* for issuing the certificate). A physical and document inspection and quarantine follow-up are carried out at the point of entry into the country.

During quarantine, in accordance with official procedures, monitoring and control is implemented through four official inspection visits for the purposes of diagnostic surveillance and the detection of any health problems. The quarantine period is 30 days, upon completion of which authorisation is issued for shipment to the aquaculture establishment of final destination, **provided that the**



diagnostic test by polymerase chain reaction (PCR) for the diseases of interest has yielded negative results.

A sectoral biosafety protocol has been in place since 2003 to prevent the entry and/or spread of pathogens in Colombia's Atlantic and Pacific regions. To this end, health monitoring is carried out at shrimp farms throughout the production process, by means of: representative field sampling of symptomatic and asymptomatic broodstock prior to reaching the hatchery, and of subpopulations at the most susceptible stages (post-larvae, juveniles and adults), paying close attention to and testing ponds with symptomatic or moribund animals or the presence of predatory birds. Molecular analysis (PCR) is performed to rule out white spot syndrome virus, Taura syndrome virus and yellow head virus.

In addition, PCR is performed to test fresh feed (polychaetes and *Artemia*) and imported feed (from countries free from the diseases of interest), and the quality of the water used in hatchery tanks is ensured by filtering it and treating it with ultraviolet light. A check is made to ensure that the procedures used to process imported feed for crustaceans are those recommended for such products by the *Aquatic Code*. A check is also made of the certificates issued by the Competent Authority as to the absence of the pathogen of interest, confirmed by laboratory tests, or regarding pathogen inactivation by heat treatment, in accordance with the recommendations in the *Aquatic Code*, in order to ensure the safety of aquatic animal commodities.

Colombia's veterinary information and epidemiological surveillance system has been established as part of a strategy to ensure the early detection of diseases, which is useful not only in defining the necessary design strategies for programmes to prevent, control or eradicate disease, but also in documenting applications for freedom from disease or infection, and in providing data to support the risk analysis process for animal health and/or public health purposes and to justify the implementation of sanitary measures.

The veterinary information and epidemiological surveillance system consists of 13 regional epidemiological coordination offices, 166 local offices

and 26 laboratories, supported by an early warning system of epidemiological informants (non-ICA personnel who have been trained in and sensitised to the subject, in order to improve and expedite the detection of animal diseases that have been prioritised in the national interest, of unusual disease occurrences, or of suspected exotic diseases). Should a suspicion be reported of a priority disease of national interest, or of an unusual or exotic disease, the system requires prevention and control activities to be initiated, pending final diagnosis.

In accordance with the provisions of the sectoral biosafety protocol, all shrimp producers in Colombia's Caribbean region perform animal health diagnostics to prevent the entry and spread of various pathogens affecting farmed *P. vannamei* shrimp. The Colombian Aquaculture Research Centre (CENIACUA), an ICA-approved diagnostic laboratory, reports monthly to the veterinary information and epidemiological surveillance system on the results of any diagnoses, mainly of **notifiable diseases on the OIE list**. Should lesions compatible with white spot disease or yellow head disease be found, a report is immediately drawn up for the OIE.

Colombia's veterinary diagnostic system is the responsibility of the ICA through its Technical Department for Veterinary Analysis and Diagnosis of the Deputy Manager of Analysis and Diagnosis, which comprises 25 regional veterinary diagnostic centres and the National Veterinary Diagnostic Laboratory (LNDV) in Bogotá, which is the National Reference Laboratory for Veterinary Diagnosis.

The LNDV has built its diagnostic capacity in crustacean diseases by implementing PCR-type molecular testing for all **notifiable diseases** affecting crustaceans, particularly real-time PCR, a test that provides quick results for white spot disease.

To ascertain the animal health status of shrimp farms in Colombia's Caribbean region, an evaluation was made to determine the presence or absence of white spot disease and yellow head disease in the region, by means of an **active surveillance** survey, with a **sampling design** in accordance with the

recommendations in Chapters 9.2. and 9.7. of the *Aquatic Code* and Chapters 2.2.6. and 2.2.8. of the *Aquatic Manual*.

The survey conducted for the surveillance of white spot syndrome virus and yellow head virus, to demonstrate the absence of these viruses in the shrimp industry of Costa Norte (Colombia's Caribbean region) with scientific rigour, began in 2009. A second structured survey was conducted in late 2011 to confirm the absence of these two diseases and to meet the OIE requirement of maintaining biosecurity conditions and implementing epidemiological surveillance over a two-year period.

To this end, an initial stratified epidemiological survey and multi-stage random sampling of the shrimp population at the grow-out stage and of the broodstock were designed (with the sample being allocated proportionally by production system and department) and carried out in the season most conducive to the virus. Table II shows the final distribution adjusted to the existing population at the time of sampling.

In the second year (2011), a two-stage structured epidemiological survey of the shrimp population at the grow-out stage and of broodstock was designed (with the sample allocated proportionally by production system and department) and carried out in the season most conducive to the virus.

Table III (next page) shows the shrimp population by department on the date of sampling and the estimated sample size, adjusted to the existing population at the time of sampling, for the two proposed stages.

In view of the negative results obtained from the structured survey conducted in the two years of sampling, and the fact that epidemiological surveillance for these two diseases has been implemented for many years in the shrimp industry of Colombia's Caribbean region, the statistical hypothesis and the parameters used in the survey design are the same for both diseases.

In the shrimp population at the grow-out/ juvenile stage, the laboratory results obtained by

Table II
Three-stage structured survey, 2009

Final distribution of samples of ponds and shrimp (grow-out stage and broodstock) in Colombia's Caribbean region to investigate the status of white spot disease and yellow head disease

Dept.	Population			Samples of grow-out stage				Results	Samples of broodstock stage				Results
	Municipalities	Establishments	Stocked ponds	Samples from production establishments Stage 1	Samples from ponds Stage 2	Samples of shrimp Stage 3	Pooled samples *	Diagnosis	Ponds with broodstock	Sampled ponds	Pooled samples **	Total no. of broodstock samples	Diagnosis
Atlántico	3	5	30	5	25	3,960	198	Neg. WSDV Neg. YHDV	0	0	0	0	–
Bolívar	2	3	66	3	54	8,340	417	Neg. WSDV Neg. YHDV	11	11	21	105	Neg. WSDV Neg. YHDV
Sucre	1	1	81	1	45	6,920	346	Neg. WSDV Neg. YHDV	6	6	35	175	Neg. WSDV Neg. YHDV
Total	6	9	177	9	124	1,220	961		17	17	56	280	

* 8 samples per pond and 20 shrimp per sample

** 7 samples per pond and 5 shrimp per sample

Neg. WSDV: negative for white spot disease virus

Neg. YHDV: negative for yellow head disease virus

Table III
Two-stage structured survey, 2011

Final distribution of the samples of ponds and shrimp (grow-out stage and broodstock) in Colombia's Caribbean region to investigate the status of white spot disease and yellow head disease

Dept.	Population		Pooled samples of juveniles				Results	Pooled samples of broodstock				Results
	Municipalities	Establishments	Stocked ponds	Ponds sampled	Pooled sample *	Total no. of juvenile samples	Diagnosis	Stocked ponds	Ponds sampled	Pooled sample **	Total no. of broodstock samples	Diagnosis
Atlántico	3	6	26	26	364	1 820	Neg. WSDV Neg. YHDV	0	0	0	0	–
Bolívar	2	2	73	43	602	3 010	Neg. WSDV Neg. YHDV	15	10	70	350	Neg. WSDV Neg. YHDV
Sucre	1	1	64	42	588	2 940	Neg. WSDV Neg. YHDV	0	0	0	0	
Total	6	9	163	111	1 554	7 770		15	10	70	350	

* 14 samples per pond and 5 shrimp per sample

** 7 samples per pond and 5 shrimp per sample

Neg. WSDV: negative for white spot disease virus

Neg. YHDV: negative for yellow head disease virus

PCR in 2009 from the 961 pooled samples per disease (20 shrimp per sample), collected from 124 ponds belonging to 9 shrimp farms in the departments of Bolívar, Atlántico and Sucre, as well as the results obtained in 2011 from the 1,554 pooled samples per disease (5 shrimp per sample) in 111 stocked ponds in 9 shrimp farms in the departments of Bolívar, Atlántico and Sucre, were all negative for both white spot syndrome virus and yellow head virus (with a 95% confidence level, 95% sensitivity of the diagnostic system and 100% specificity).

Similarly, in shrimp broodstock, negative results were obtained from tests performed in 2009 by the laboratories of CENIACUA (Bolívar) and Tigua (Sucre) on a total of 56 pooled samples, collected from 17 ponds (5 broodstock per sample), as well as from tests performed in 2011 in the shrimp broodstock facilities of CENIACUA and the public company C.I. Océanos Ltd, in the department of Bolívar, on a total of 70 pooled samples collected from 10 ponds (5 broodstock per sample).

From the beginning of the study until the present date, as part of the programme's epidemiological

surveillance activities, several periodic visits have been made to shrimp farms in Colombia's Caribbean region to detect any signs compatible with disease. In addition, monthly sampling by histopathological diagnosis and PCR is also performed in some establishments and the results are sent to the ICA's epidemiological surveillance system.

Therefore,

- in view of the above information,
- given that more than two years have elapsed since the last confirmed case of white spot disease or yellow head disease, and
- in accordance with Article 9.7.5., Point 3, and with Article 9.2.5., Point 3, of the OIE *Aquatic Animal Health Code* (2014 edition),

the Delegate of Colombia to the OIE declares farmed crustaceans in Colombia's Caribbean region to be free from white spot disease and yellow head disease as of 16 January 2015.



Compartmentalisation

Compartmentalisation, a tool that could prevent or reduce significant trade barriers, is still not widely implemented despite its long established existence in the OIE *Terrestrial and Aquatic Animal Health Codes*. Compartmentalisation is an application of the principle of regionalisation or zoning, developed by the OIE for the purpose of establishing and preserving the high-health status of isolated animal subpopulations. Unfortunately, few countries are applying or recognising the application of this tool. A significant number of current trade barriers, particularly to trade in poultry and pig products, could be prevented if more countries were to implement and recognise compartments.

Effective compartmentalisation requires significant investment in infrastructure and discipline to establish and maintain these selected populations of animals under conditions of strict biosecurity. Nevertheless, some industries have already demonstrated the efficacy of such approaches when constructing high-security containment facilities to maintain valuable genetic lines of poultry and pigs. However, a problem is encountered when disease outbreaks occur in the country or zone where these high-security facilities exist and international trade from them is immediately suspended, despite the facilities themselves remaining disease free. Importing countries do not recognise the status of these privately managed establishments without official recognition being given by the national Veterinary Authority. The establishment of an effective compartment and its recognition by importing countries requires the application of the biosecurity measures outlined in the OIE *Codes*, but, most importantly, it also requires a credible Veterinary Service and a strong private–public partnership.

The concept

During the late 1990s, when revising the *Terrestrial Animal Health Code* chapter on avian influenza, the OIE Terrestrial Animal Health Standards Commission (the Code Commission), began to consider a mechanism whereby poultry subpopulations could be separated and their health protected in situations where zoning was not applicable. Zoning has been a well-accepted concept for the management of diseases such as foot and mouth disease (FMD), bovine tuberculosis and brucellosis. However, in the case of avian influenza, zoning is unable to provide such separation and health guarantees because of the risks posed by migratory birds. For this reason, it became evident that high biosecurity measures, already applied in industrial poultry and pig productions, had to be added to the measures applied in zones, and this concept, known today as a compartment, was defined and introduced into the avian influenza chapter of the *Terrestrial Animal Health Code*.

Once the concept was adopted as an essential component of the disease chapter on avian influenza, the Code Commission expanded it and incorporated it into the horizontal chapter on 'Zoning and Compartmentalisation' (Chapter 4.3.) and a new chapter on the 'Application of Compartmentalisation' (Chapter 4.4.). In the current *Codes*, reference is made to compartmentalisation in several additional disease-specific chapters, such as those on Newcastle disease, African swine fever, classical swine fever, equine influenza, FMD, bovine spongiform encephalopathy, peste des petits ruminants, contagious pleuropneumonia, scrapie,

bovine tuberculosis and enzootic bovine leukosis. However, the application of compartmentalisation is not limited to these diseases and can be applied more widely, as long as it can be demonstrated that a compartment can prevent the introduction of a specific pathogen.

The definition

In the *Terrestrial Animal Health Code*, the OIE defines a compartment as an animal subpopulation in one or more establishments under a common biosecurity management system with a distinct health status with respect to a specific disease or specific diseases, for which required surveillance, control and biosecurity measures have been applied for the purpose of international trade.

The *Aquatic Animal Health Code* defines a compartment as one or more aquaculture establishments under a common biosecurity management system containing an aquatic animal population with a distinct health status with respect to a specific disease or specific diseases, for which required surveillance and control measures are applied and basic biosecurity conditions are met for the purpose of international trade. Such compartments must be clearly documented by the Competent Authority.

There is a difference between the concept of compartmentalisation and that of zoning. Both are aimed at defining and maintaining disease-free animal subpopulations. However, zoning is based mostly on geographical separation, while compartmentalisation is based especially on biosecurity management practices. However, in practice, geography and biosecurity are important for both zones and compartments. Furthermore, they can be applied jointly, when adding risk mitigation measures to a compartment located within a disease-free zone.

In addition to the need for efficient and credible Veterinary Services, compartmentalisation requires a higher level of commitment by the private sector. A compartment will only be recognised if operating under a strong and transparent private–public partnership. The private sector must assume greater responsibilities, especially for the implementation of biosecurity measures, disease surveillance and transparent reporting. On the other hand, the Veterinary Services must undergo a paradigm shift from being strict inspectors to auditors. The ultimate responsibility of international certification will continue to remain the sole responsibility of the Veterinary Authority.

In order to achieve acceptance of compartments in international trade, a trusting trading relationship between

importing and exporting countries is essential. While the compartment's biosecurity plan is developed and implemented by the private sector, it can only be certified by the Veterinary Authority. Exporting countries are encouraged to share biosecurity plans and invite comments from their trading partners during 'peace time' in order to permit uninterrupted trade from the compartment, even if a disease incursion were to occur in the exporting country.

The development and implementation of a biosecurity plan is the responsibility of the private sector. However, the basis for authorisation of a compartment and its certification must be provided to the Veterinary Authority through a legal framework. While this can be in the form of a simple memorandum of understanding, in many countries it will require specific legislation.

In addition to the added responsibilities of managing a compartment, the private sector bears most of the cost of maintaining a compartment. However, it is also the private sector that stands to gain the greatest benefit from the disease-free guarantees of a compartment. Compartmentalisation quickly proves to be the safest approach to protect the large investments required for industrialised poultry or pig production.

Several countries have already invested in the establishment of compartmentalisation projects. However, due to the complexity of the concept, as well as the fundamental changes in management and philosophy needed, only a few countries have succeeded in having compartments recognised by trading partners.



Recognition

While the OIE has a programme for official recognition of disease-free countries or zones for a limited number of diseases, it does not officially recognise compartments. However, it provides assistance to countries wishing to establish compartments by publicising the country's efforts, after relevant documentation has been submitted, attesting that the compartment was established and implemented in accordance with the relevant provisions in the *Code*.

National efforts for establishing compartments

Several countries have initiated compartmentalisation projects and have approached the OIE for advice.

In 2008, Brazilian and Thai Veterinary Authorities were the first to contact the OIE and ask for guidance and support. Brazil applied for funding from the WTO's Standards and Trade Development Facility (STDF). Although no funding was provided, as Brazil was not considered eligible as a developing country, the STDF encouraged Brazil to proceed with the OIE and submit the outcome for recognition by the STDF.

In **Brazil**, the Brazilian Poultry Federation formed a private–public partnership with the Ministry of Agriculture and began to establish poultry compartments for broilers and poultry genetic material. Three companies, two broiler producers and one producer of poultry genetics, were selected as pilots for the project. Brazilian legislators enacted a legal framework in October 2014, providing the legal basis for the Ministry to recognise and officially certify compartments

(see p. 103). Detailed biosecurity plans are being developed and implemented.

The compartmentalisation project in **Thailand** was initiated in 2008 with the aim of developing poultry compartments free from avian influenza and Newcastle disease. Through a memorandum of understanding, the Thai Department of Livestock Development established an agreement with various private broiler farms. To date, the Thai project encompasses 61 broiler compartments, made up of 297 farms, with a yearly production of 78.3 million broilers. However, at the moment, many slaughterhouses are not yet incorporated into the compartment, as they are not fully dedicated to broilers originating in farms belonging to compartments.

In **Chile**, the Veterinary Authority approached the OIE for assistance with a project to establish a pig production compartment free from FMD, classical swine fever, African swine fever and Aujeszky's disease. The general requirements for the establishment of compartments were enacted by the Servicio Agrícola y Ganadero (SAG) through Resolution 8309/2011. In 2012, Resolution 393/2012 approved a pig production compartment with a maximum capacity of 200,000 sows. The goal of this compartment was to secure safe trade, even in the event of incursion of one of these diseases into the national territory. The project has been temporarily suspended, but for reasons unrelated to animal health.

In **Colombia**, the Colombian Agriculture and Livestock Institute (ICA) has approved the importation of disease-free poultry from countries, zones or compartments under Circular 18/2012, and under Resolution 219/2012 has stipulated the requirements for certification of compartments free from highly pathogenic Newcastle disease. In 2013, the ICA authorised two compartments for the production of high-quality poultry breeding material. These compartments have been recognised by Ecuador. The specific requirements established by the ICA are available for consultation on line.

In 2010, in the **United Kingdom**, the Veterinary Authority approved a compartment for the production of high-quality poultry breeders, free from highly pathogenic avian influenza and Newcastle disease, under the Great Britain Enhanced Standard Scheme. To date, 57 farms have been approved under this scheme, and have also been recognised by South Africa and New Zealand. The legal basis for this scheme has been provided under European Commission Regulation (EC) 616/2009. The requirements

for this programme are available on the website of the Department for Environment, Food and Rural Affairs of the United Kingdom¹.

In **Zimbabwe**, during the 1990s, the Ministry of Agriculture approved establishments which, at that time, were not called compartments, containing 2,500 sows for African swine fever-free breeding pigs and disease-free pork production, under a regulation signed in 1994. This compartment was recognised by Namibia for the export of fresh pork and by South Africa for the export of processed pork. This compartment was closed in 2000 for reasons unrelated to animal health.

Recently, in **South Africa**, the South African Poultry Association (Pluimvee Poultry) took the initiative to approach the Department of Agriculture, Forestry and Fisheries (DAFF) in jointly developing poultry compartments for export purposes. The first step was to establish a Poultry Disease Management Agency (PDMA), which serves as an independent agency, separate from the poultry industry and the government, to advise producers and liaise with DAFF. This very innovative approach is aimed at strengthening the relationship between producers and government. In 2012 DAFF developed a veterinary procedural notice (VPN), which has already been implemented by the large poultry producers. This notice is being shared with trading partners. The PDMA has also been working with DAFF in establishing a National Residue and Microbial Monitoring Programme, which will be used by DAFF to endorse control programmes set up by producers. This creative PDMA approach is also being considered by other livestock sectors in South Africa.

Most recently, in **Uruguay**, the Ministry of Livestock, Agriculture and Fisheries approved a unique compartment for FMD-free sheep production in May 2014 under Resolution DGSG/No. 82/014. The relevant information is available on line². Uruguay has been officially recognised as being free from FMD with vaccination since 2003 and the national sheep population has not been vaccinated since 1988. Nevertheless, the compartment was established to give further guarantees to markets, such as the EU and the USA, which do not allow the importation of bone-in lamb.

In order to maximise Uruguay's investment, and to take advantage of the excellent genetic, health and nutritional conditions of lamb in this compartment, it is likely that this concept will be expanded to be labelled and marketed as high-health, high-quality Uruguayan lamb.

In the area of aquatic animals, the Competent Authorities in **Chile** have established, through Resolution 1012/2015, general requirements for the sanitary management of compartments that are free from high-risk diseases. One such disease is infection by salmon infectious anaemia variants. At present, the first submissions on compartments in the IX Region are being officially evaluated.

Conclusions

The current impasse in achieving better international recognition for compartments is not related to costly investments, as the investments to protect valuable animal germ plasm have already been made by the private sector, demonstrating the benefits of a well-implemented and biosecure production system. What is most difficult to achieve, but crucial, is a paradigm shift in the attitudes of the private sector and the Veterinary Authorities. The private sector must assume full responsibility for the establishment and implementation of the biosecurity plan, and full transparency in reporting any suspicions and irregularities to the Veterinary Authority. The Veterinary Authority and its personnel must be willing to change from an inspector mentality to one of auditors able to certify these privately implemented compartments.

However, the essential element, even prior to considering a compartment, is the existence of a well-established and trusting private–public partnership. A private sector that cannot demonstrate a history of responsibly operating an efficient biosecure production system and transparently reporting suspicions and disease incursions should not consider compartments. If compartments were to be proposed by a private sector without such a history, they should not be endorsed by the Veterinary Authority and will certainly not be recognised by international trade partners.

¹ www.defra.gov.uk/animal-trade/exports-non-eu/compartimentalisation/

² www.mgap.gub.uy/dgsg/Resoluciones/RESOLUCIONES.htm



Compartmentalisation

In this section of the *Bulletin* on compartments, the OIE may, upon official request of an OIE Member Country, publish information on the establishment of one or several compartments for a disease or diseases in that country. The country must indicate in its official request that the compartment has been established in accordance with the OIE standards, notably the *Terrestrial Animal Health Code* Chapters 4.3. and 4.4. and the *Aquatic Animal Health Code* Chapters 4.1. and 4.2. for terrestrial and aquatic animals, respectively.

Implementation and evaluation must be conducted in accordance with the principles defined in the *Codes*. The Member Country must demonstrate that the compartmentalisation is supported by a robust and clear biosecurity plan, and that it was developed in close partnership between the Veterinary Authority and the relevant private sector. The self-declaration of a compartment is the full responsibility of the Member Country concerned.

Brazil proposes a model for the compartmentalisation of avian influenza and Newcastle disease

As a result of several OIE expert missions, Brazil has proposed a model for the compartmentalisation of avian influenza and Newcastle disease in the Brazilian poultry production chain.

To support the implementation of this project, a Ministerial Ordinance was published on 21 October 2014, which establishes technical standards for the health certification of compartmentalisation in Brazil's chain of poultry production. The Ordinance covers breeding and broiler establishments and hatcheries, for both chickens and turkeys, in regard to infection by avian influenza or Newcastle disease virus.



Full text of Instrução Normativa no. 21 published in the *Diário Oficial da União* dated 22 October 2014, no. 204, Section 1, p. 4 (in Portuguese):

<http://pesquisa.in.gov.br/imprensa/jsp/visualiza/index.jsp?jornal=1&pagina=4&data=22/10/2014>

OIE and Codex cooperation in standard setting

The OIE and the Codex Alimentarius Commission ('Codex') are two of the three intergovernmental standard-setting organisations recognised under the WTO Agreement on the Application of Sanitary and Phytosanitary Measures (SPS Agreement). In this context, the OIE is responsible for setting animal health standards (including zoonotic diseases) and Codex for food safety standards. With regard to food products of animal origin, hazards to human health may arise at the farm or at any subsequent stage in the food production chain. Since 2001, the OIE mandate has included setting standards for animal production food safety, i.e. the management of risks arising from the level of the farm to primary processing, at the request of its Member Countries.

In 2002, the OIE established a Working Group on Animal Production Food Safety with a view to improving the coordination and harmonisation of standard-setting activities of the OIE and Codex. Experts and representatives from FAO, WHO, the Secretary of Codex and the Chair-in-Office of Codex attend the annual meeting of the Working Group. Through this mechanism and by participating in each other's standard-setting procedures, the OIE and Codex work together closely to ensure there is a high level of integration and complementarity between the relevant food safety standards of both organisations. Since the creation of the Working Group, OIE and Codex have worked very well together on developing respective standards that have resulted in streamlined standards covering the whole farm-to-consumption continuum. A recent example is Salmonella in poultry and poultry meat where the OIE developed a standard focused on

surveillance and detection on farms and Codex focused on processing, with relevant cross references in both standards.

The OIE's Sixth Strategic Plan (2016–2020), which will be presented for adoption by our Member Countries in May 2015, continues to consider the field of animal production food safety as an important element of the OIE's work for the next five years. It also aims to reduce food-borne risks to human health due to hazards arising from animal production.

The OIE also actively encourages its national Delegates to collaborate with their counterparts at Codex to promote dialogue between relevant national experts in the animal health, public health and trade sectors, and to ensure better co-ordination in relevant standard setting activities of the OIE and Codex.

The OIE will continue to address food-safety-related issues as a high priority in its standard-setting work and will work closely with Codex and its Committees, and with other international bodies in promoting safe international trade in animals and animal products.



Collaboration with the Network of Aquaculture Centres in Asia–Pacific

Aquaculture has become a rapidly expanding industry over recent years (Fig. 1), especially in Asia and the Pacific. In 2012, Asia accounted for 89% of the world's aquaculture production (by volume). The largest volume, 61.47%, came from the People's Republic of China, while other major aquaculture nations in Asia (India, Vietnam, Indonesia, Bangladesh, Thailand, Myanmar, the Philippines, Japan and the Republic of Korea) are among the world's top producers (Fig. 2).

Network of Aquaculture Centres in Asia–Pacific (NACA)

The Network of Aquaculture Centres in Asia–Pacific (NACA) is an intergovernmental organisation that promotes rural development through sustainable aquaculture. The core activities of NACA, which focuses mainly on farmers and rural communities, are:

- a) capacity-building through education and training
- b) collaborative research and development by networking among people and institutions
- c) the development of information and communications networks
- d) developing policy guidelines and providing support for such policies
- e) promoting aquatic animal health and disease management
- f) researching genetics and preserving biodiversity.

The current members of NACA are Australia, Bangladesh,

Cambodia, the People's Republic of China, Hong Kong SAR, India, Indonesia, Iran, the Democratic People's Republic of Korea, Laos, Malaysia, the Maldives, Myanmar, Nepal, Pakistan, the Philippines, Sri Lanka, Thailand and Vietnam.

NACA Advisory Group

The NACA Advisory Group was established in 2001 by the Governing Council of NACA to provide advice to members on aquatic animal health management. Members of the Advisory Group include aquatic animal disease experts, the OIE, FAO and collaborating regional organisations. The Advisory Group's annual meetings address key aquatic animal health issues in Asia, including receiving updates from the OIE Aquatic Animal Health Standards

Commission (AAHSC), reviewing and evaluating the Quarterly Aquatic Animal Disease Reporting System with its accompanying list of diseases of regional concern, examining progress on the implementation of the Asian Regional Technical Guidelines and developing ways of further strengthening regional and international cooperation.

Quarterly Aquatic Animal Disease Reporting System

The Quarterly Aquatic Animal Disease (QAAD) Reporting System was jointly developed by the OIE, FAO and NACA in 1998 to collect aquatic animal disease information from Member Countries/Territories in the region, four times a year (Fig. 3). The list of diseases in QAAD reports comprises not only OIE-

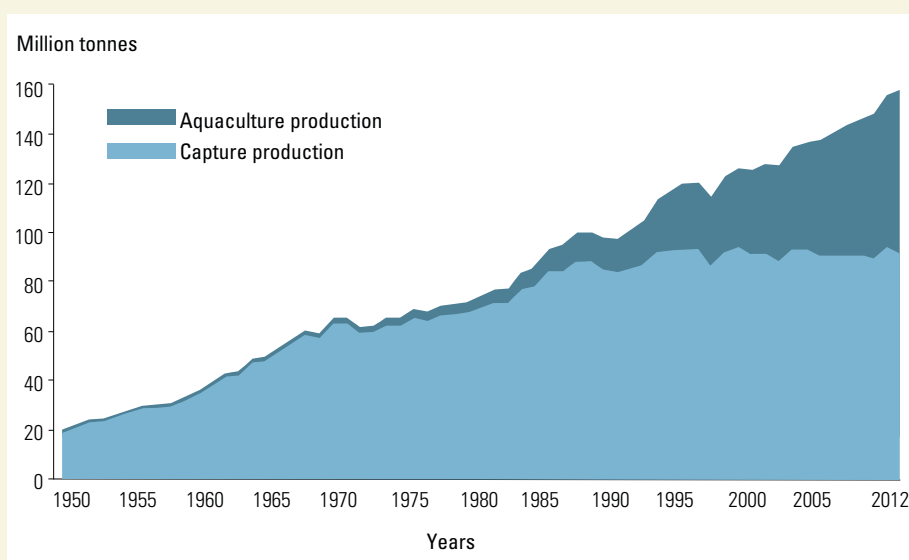


Fig. 1
World capture fisheries and aquaculture production

Source: *The State of World Fisheries and Aquaculture*, FAO, 2014, www.fao.org/3/a-i3720e/index.html

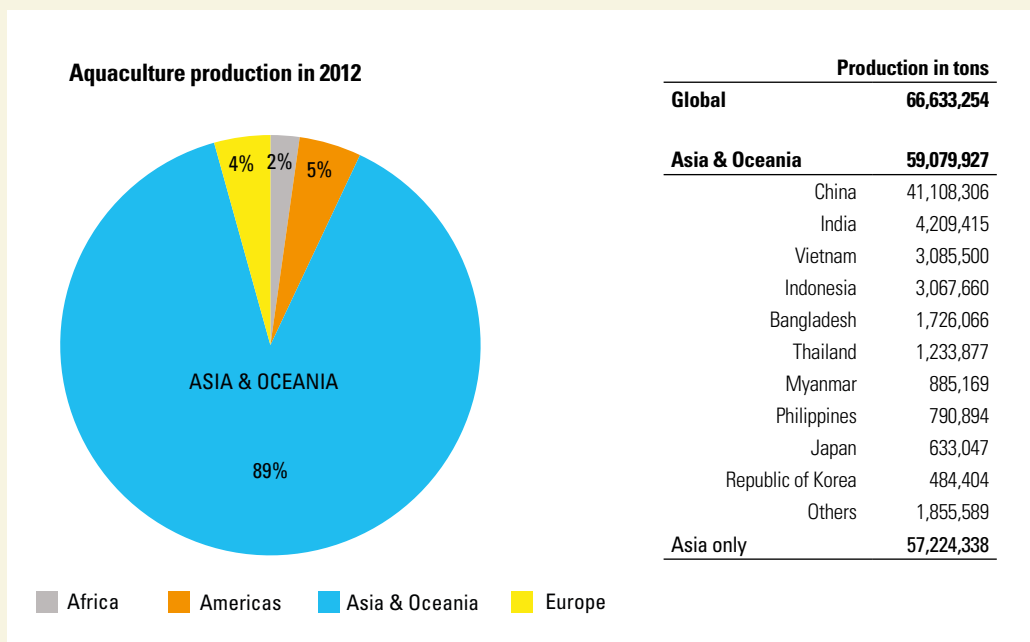


Fig. 2

Aquaculture production by volume in 2012

Note: Data excluded aquatic plants and non-food products. Data for 2012 for some countries are provisional and subject to revisions.

Source of data: The State of World Fisheries and Aquaculture, FAO, 2014, www.fao.org/3/a-i3720e/index.html

listed diseases, but also diseases of regional importance, and this list is reviewed and revised annually by the Advisory Group. In 2014, the QAAD reports covered 28 diseases, including 20 OIE-listed diseases and eight diseases of regional importance. The OIE is now working on the establishment of an OIE/NACA ‘regional core’ database on aquatic animal diseases, with the aim of increasing the speed and accuracy of aquatic animal disease notification and of providing a valuable resource for the formulation of international trade and quarantine policy. Once the Regional Core database is in operation, Member Countries will be able to submit disease reports through WAHIS via a web-based interface, and gain access to both

current and historical records on the aquatic animal health status of all Member Countries through both the NACA and OIE Regional Representation for Asia-Pacific websites.

Moreover, a Regional Workshop on Emergency Aquatic Animal Disease Response was jointly organised in Bali, Indonesia, from 6 to 8 November 2013, by the OIE Regional Representation and NACA. The objectives of the workshop included:

- identifying the factors that constrain regional Members’ ability to apply appropriate animal health measures
- increasing awareness of the OIE international standards and guidelines, including standard-setting procedures, the OIE PVS tool: Aquatic

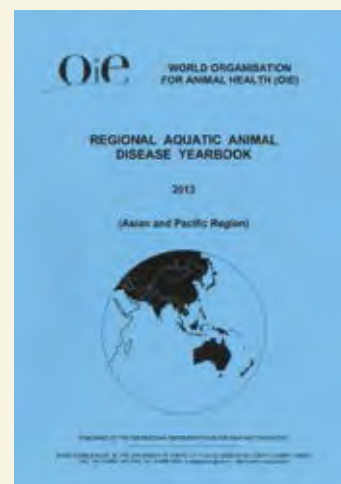


Fig. 3
OIE/NACA Regional Aquatic Animal Disease Yearbook, 2013





and the FAO/NACA Asian Regional Technical Guidelines. Participants were reminded of the importance of risk analysis and implementing effective national aquatic animal health systems for emergency preparedness and response to emerging diseases, such as acute hepatopancreatic necrosis disease in shrimp in Asia and the Pacific.

In this context of collaboration, the OIE National Focal Point for Aquatic Animals is a key player in maintaining two-way communication with the Competent Authority for aquatic animal health in his or her own country, as well as promoting the collection and submission of aquatic animal disease information to the OIE through WAHIS, under the authority of the OIE Delegate. The OIE encourages Delegates to designate NACA Coordinators as OIE Focal Points, in order to establish a network of aquatic animal health

experts within their country and to liaise with the existing network in the region. These NACA experts are invited to the Regional Seminar for OIE National Focal Points for Aquatic Animals as valuable resource persons, and the OIE experts provide technical support to the workshops and seminars organised by NACA.

The OIE Regional Representation for Asia–Pacific is committed to maintaining and strengthening this close collaboration with NACA, through its National Focal Points, to improve aquatic animal health throughout the region and to encourage the participation of regional Members in the OIE’s standard-setting procedures for safe trade.

Regional tripartite collaboration on One Health

Health threats at the human–animal–ecosystem interface have increased significantly over recent decades, as pathogens continue to evolve and adapt to new hosts and environments, imposing a burden on both the human and animal health systems. The increasing global threat caused by the presence and re-emergence of zoonoses must be answered with a multi-sectoral and multidisciplinary approach

at more than one level. In Asia and the Pacific, the specific characteristics of this region, such as a high human population density and rich biodiversity, have created a ‘hotspot’ for emerging and re-emerging infectious diseases. Just as the OIE, FAO and WHO have banded together on a global scale to promote the One Health movement, One Health in the Asia–Pacific region is fostered by the Regional Offices of FAO, the OIE and WHO. The precise make-up of the Regional Tripartite group is as follows: the FAO Regional Office for Asia and the Pacific (FAO–RAP); the OIE Regional Representation for Asia and the Pacific (OIE RR–AP); the Sub-Regional Representation for South-East Asia (OIE SRR–SEA); the WHO South-East Asia Regional Office (WHO–SEARO), and the WHO Western Pacific Region (WHO–WPRO), in cooperation with regional bodies such as the Association of Southeast Asian Nations (ASEAN), the South Asian Association for Regional Cooperation (SAARC) and the Secretariat of the Pacific Community (SPC).

The Regional Tripartite group regularly discusses relevant issues via teleconference or during ‘side meetings’, organised alongside



other major meetings in the region. The emergency discussions held during the avian influenza A (H7N9) outbreak in China in early 2013 are an example of such cooperation.

In that context, the Tripartite launched the first Regional Workshop on Collaboration between Human and Animal Health Sectors on Zoonoses Prevention and Control in 2010. These workshops encourage cooperation between the animal and human health sectors in the region, reinforcing the One Health approach, particularly at the national level. Five Regional Tripartite Offices took turns to organise the workshops:



Asia-Pacific Workshop on Multisectoral Collaboration for the Prevention and Control of Zoonoses, Kathmandu, Nepal, 27–29 November 2013

	Time	Place	Lead organisation
1st meeting	17–19 December 2010	Sapporo (Japan)	WHO–WPRO
2nd meeting	16–18 January 2012	Chiang-Mai (Thailand)	FAO–RAP
3rd meeting	26–29 November 2012	Bali (Indonesia)	OIE SRR–SEA
4th meeting	27–29 November 2013	Kathmandu (Nepal)	WHO–SEARO
5th meeting	24–26 November 2014	Bangkok (Thailand)	FAO–RAP

It goes without saying that the participation of those in both the human and animal health sectors of the Member Countries in the region is crucial, and in 2013, this was extended to include the wildlife and environmental sectors as well. Although the main emphasis of the workshops is on the three Tripartite flagship issues, rabies, zoonotic influenza and antimicrobial resistance, the workshop also covered other priority human–animal health issues unique to this region. Discussions on Japanese encephalitis, Nipah virus and influenza A H1N1 in 2012; Middle East respiratory syndrome coronavirus (MERS-CoV) and Ebola in 2014, and parallel sessions and discussions on the role of live bird markets in avian influenza, held during the 2013 and 2014 workshops, are only some examples.

Over the past five years, the Regional Tripartite group has continued to make progress on bringing together Member Countries to ensure a cross-sectoral, multidisciplinary approach to address the threat of zoonoses. These annual meetings review the zoonosis situation in

the region and update progress on coordinating and collaborative mechanisms between the various sectors at the national, regional and international level. The meetings also take stock of progress on activities designed to deal with any gaps and weaknesses in these collaborative efforts, while participants share their experiences of the cross-sectoral approach. The annual reports summarising these workshops are also useful in documenting progress on One Health throughout the region.

Since the first workshop in 2010, a majority of Member Countries have started to develop national strategies and zoonosis control plans through multidisciplinary consultation. However, some weaknesses still exist that require further intervention, and so the Tripartite recognises the importance of reviewing the various mechanisms adopted by different countries by enabling Member Countries to share widely their experiences, now and in the future. It is hoped that the recently developed *WHO-OIE Operational Framework for Good Governance at the Human–Animal Interface* will become a valuable tool for promoting and improving intersectoral approaches at the national level. The Regional Tripartite is fully aware of the importance of extending further support to its Member Countries and will continue to lead the way on One Health in the Asia-Pacific Region, to realise its global vision of multiple sectors working together, collaboratively and cohesively, to prevent and control zoonoses and other animal and public health issues of concern.



'One Health' portal on the OIE website:
www.oie.int/en/for-the-media/onehealth/

WHO-OIE Operational Framework for Good Governance
 at the Human–Animal Interface:
www.oie.int/fileadmin/Home/fr/Media_Center/docs/pdf/WHO_OIE_Operational_Framework_Final2.pdf

2015

April

Inter-agency Liaison Group on Invasive Alien Species

1-2 April
London, United Kingdom
www.cbd.int/invasive/lg/

Natural disasters and 'One Health' concept. Are we ready to take action?

16-17 April
Brussels, Belgium

Advisory Committee on live animals and perishable goods of the International Air Transport Association (IATA)

21-22 April
Frankfurt, Germany

May

40th World Small Animal Veterinary Association Congress (WSAVA)

15–18 May
Bangkok, Thailand
www.wsava2015.com

Regional Information Seminar for Newly Appointed OIE Delegates

23 May
Paris, France

83rd General Session of the World Assembly of Delegates of the OIE

24–29 May
Paris, France

agenda

tribute

June

4th Conference of the International Society of Camelid Research and Development (ISOCARD). Silk Road Camel: the Camelids, main stakes for sustainable development
8–12 June
Almaty, Kazakhstan
www.isocard2015.kz

OIE Regional Seminar on Facilitation of International Competition Horse Movement
8–12 June
Turkmenistan

17th International Symposium of the World Association of Veterinary Laboratory Diagnosticians (WAVLD)
15–18 June
Saskatoon, Saskatchewan, Canada
www.wavld.org

OIE Global Conference on Biological Threat Reduction
30 June – 2 July
Paris, France
www.oie.int/eng/BIOTHREAT2015/introduction.htm

August

Regional Seminar for OIE National Focal Points on Animal Welfare
4–8 August
Bolivia

September

29th Conference of the OIE Regional Commission for Asia, the Far East and Oceania
14–18 September
Ulaanbaatar, Mongolia

October

Global Training Seminar on the OIE World Animal Health Information System (WAHIS)
5–9 October
OIE Headquarters, Paris, France

Annual meeting of OIE Regional and Subregional Representatives
20–23 October
OIE Headquarters, Paris, France

November

13th Conference of the OIE Regional Commission for the Middle East
Beirut, Lebanon
(Dates to be confirmed)

Regional Seminar for OIE National Focal Points on Veterinary Laboratories
23–27 November

December

WHO/OIE/FAO Conference on rabies
10–11 December
Geneva, Switzerland



Mahmoud El Ghaddaf

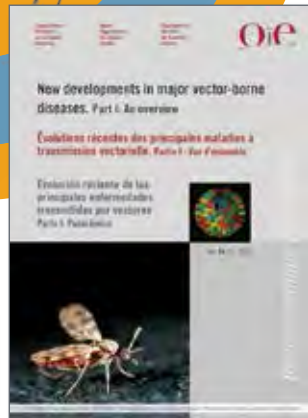
Mahmoud El Ghaddaf, assistant at the OIE Regional Representation for the Middle East, passed away on 10 January 2015, at the age of 78, following a long illness. A founding staff member of the regional office when it opened in Beirut in 1998, Mahmoud was a quiet and dedicated man, who provided an atmosphere of serenity and peace. We join in the grief of his family, to whom we pledge our support and offer our deepest sympathy.



OiE members (180)

AFGHANISTAN	CYPRUS	KYRGYZSTAN	RUSSIA
ALBANIA	CZECH REPUBLIC	LAOS	RWANDA
ALGERIA	DENMARK	LATVIA	SAN MARINO
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ANGOLA	DOMINICAN REP.	LESOTHO	SAUDI ARABIA
ARGENTINA	ECUADOR	LIBERIA	SENEGAL
ARMENIA	EGYPT	LIBYA	SERBIA
AUSTRALIA	EL SALVADOR	LIECHTENSTEIN	SEYCHELLES
AUSTRIA	EQUATORIAL GUINEA	LITHUANIA	SIERRA LEONE
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BARBADOS	FINLAND	MALDIVES	SOUTH AFRICA
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BELGIUM	FRANCE	MALTA	SPAIN
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BENIN	GAMBIA	MAURITIUS	SUDAN
BHUTAN	GEORGIA	MEXICO	SURINAME
BOLIVIA	GERMANY	MICRONESIA (FEDERATED STATES OF)	SWAZILAND
BOSNIA AND HERZEGOVINA	GHANA	MOLDOVA	SWEDEN
BOTSWANA	GREECE	MONGOLIA	SWITZERLAND
BRAZIL	GUATEMALA	MONTENEGRO	SYRIA
BRUNEI	GUINEA	MOROCCO	TAJIKISTAN
BULGARIA	GUINEA BISSAU	MOZAMBIQUE	TANZANIA
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BURUNDI	HAITI	NAMIBIA	TIMOR-LESTE
CABO VERDE	HONDURAS	NEPAL	TOGO
CAMBODIA	HUNGARY	NETHERLANDS	TRINIDAD AND TOBAGO
CAMEROON	ICELAND	NEW CALEDONIA	TUNISIA
CANADA	INDIA	NEW ZEALAND	TURKEY
CENTRAL AFRICAN REP.	INDONESIA	NICARAGUA	TURKMENISTAN
CHAD	IRAN	NIGER	UGANDA
CHILE	IRAQ	NIGERIA	UKRAINE
CHINA (PEOPLE'S REP. OF)	IRELAND	NORWAY	UNITED ARAB EMIRATES
CHINESE TAIPEI	ISRAEL	OMAN	UNITED KINGDOM
COLOMBIA	ITALY	PAKISTAN	UNITED STATES OF AMERICA
COMOROS	JAMAICA	PANAMA	URUGUAY
CONGO (REP. OF THE)	JAPAN	PAPUA NEW GUINEA	UZBEKISTAN
CONGO (DEM. REP. OF THE)	JORDAN	PARAGUAY	VANUATU
COSTA RICA	KAZAKHSTAN	PERU	VENEZUELA
CÔTE D'IVOIRE	KENYA	PHILIPPINES	VIETNAM
CROATIA	KOREA (DEM. PEOPLE'S REP. OF)	POLAND	YEMEN
CUBA	KOREA (REP. OF)	PORTUGAL	ZAMBIA
	KUWAIT	QATAR	ZIMBABWE
		ROMANIA	

NEW
& COMING SOON



New developments in major vector-borne diseases

Part One: An overview

Scientific and Technical Review, Vol. 34 (1)

Coordination and edition: S. Zientara, D. Verwoerd & P.-P. Pastoret

The first part of volume 34 of the *Scientific and Technical Review* focuses on the most important arthropod vectors (insects and ticks) and describes their taxonomy, biology, competence and development. It begins by defining 'vector', 'vector-borne disease' and 'emerging disease' and provides explanations that are in line with OIE standards. The zoonotic risks of infections transmitted by arthropod vectors are also discussed, as is the genetic resistance of certain vertebrate hosts to infection. In addition, this issue considers the influence of climatic and anthropogenic changes on the distribution of vectors and the infections they transmit. The last part of this issue focuses on surveillance and control methods for these infections.

Part Two: Important diseases for veterinarians

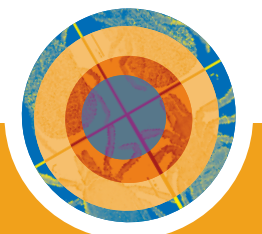
Scientific and Technical Review, Vol. 34 (2)

Coordination and edition: S. Zientara, D. Verwoerd & P.-P. Pastoret

The second part of Volume 34 of the *Scientific and Technical Review* principally looks at viral diseases, but also considers bacterial diseases and, finally, parasitic diseases. The description of each disease has been updated in accordance with the most recent scientific research, focusing on epidemiology and control. Particular emphasis is placed on emerging diseases (such as infection with the Schmallenberg virus) and diseases that have a zoonotic component (such as West Nile fever). Diseases that have experienced a recent geographic expansion (bluetongue, fever due to the Chikungunya virus) are also discussed. In total, twenty-nine diseases are covered.

Scheduled for publication in August 2015

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