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# The Sixth Strategic Plan (2016–2020)



## EVER SINCE ITS CREATION IN 1924

the World Organisation for Animal Health (OIE) has strived to improve animal health, through greater transparency of animal disease information and better regulation of trade in animals and animal products. To this end, the Organisation has for the past 90 years been developing scientifically based standards for adoption by consensus by its Member Countries.

In addition to its traditional pillars of standard-setting and transparency, the Organisation's mandate has steadily expanded to include helping national Veterinary Services to deal with the many animal health and welfare challenges facing them every day.

Recurrent sanitary crises, risks associated with globalisation of trade as well as environmental issues make it all the more imperative to maintain this momentum. The OIE's involvement in global programmes and in supporting its Member Countries embarking on the various stages of the procedure to evaluate national Veterinary Services (the OIE

PVS Pathway) is now a crucial pillar of the OIE's mandate.

In recent decades, thanks to the confidence of its 180 Member Countries and donors, an efficient network of experts and Reference Centres and a highly committed staff team, the OIE has undergone unprecedented development, enabling it to acquire greater international recognition and gain legitimacy in the international institutional landscape. Thus, our shared commitment to better veterinary governance, helping to promote a sustainable economic and social development of the livestock farming sector, but also a better future for the world's rural and undernourished populations is now well established and supported by the international community.

However, there is now a need to adapt the way the Organisation and its bodies functions to reflect the changes of our times and societal expectations.

On 29 May 2015, the World Assembly of Delegates of the

OIE (the Assembly) unanimously adopted the OIE's Sixth Strategic Plan for the period 2016–2020. The implementation of this strategic plan, with the operational targets set for each of its strategic objectives, will therefore be the guiding theme for the OIE's activities during the coming five years, a period that corresponds to my term of office as Director General.

The multiannual work programme currently being drafted in readiness for presentation at the next General Session of the Assembly (May 2016) will build on the results achieved in recent years. Indeed, the Sixth Strategic Plan follows on from

*The OIE PVS Pathway is a global programme for the sustainable improvement of a country's Veterinary Services' compliance with OIE standards on the quality of Veterinary Services. This programme is central to the OIE's missions*  
[www.oie.int/en/support-to-oie-members/pvs-pathway/](http://www.oie.int/en/support-to-oie-members/pvs-pathway/)

previous strategic plans to ensure that the developments that have already benefitted OIE Member Countries will be maintained and consolidated.

However, the Delegates have also requested that the OIE's core missions, namely the development of sanitary standards governing movements of animals and animal products and the dissemination of animal disease information, remain central to the Organisation's commitments, with particular care being taken to ensure the excellence of expertise and the transparency of procedures. The operating procedures of the OIE's decision-making bodies will therefore be revised to take into account this request.

To put into effect the mandate I have been granted and to protect the credibility of the Organisation, the Work Programme 2016–2020 will therefore seek to promote excellence, transparency and solidarity as inherent components of modern animal health governance. To this end, the three strategic objectives of the Sixth Strategic Plan will underpin our activities in the coming months with regard to the pillars of the OIE's mandate.

### IMPROVING ANIMAL HEALTH AND WELFARE BY APPROPRIATE RISK MANAGEMENT

This objective addresses animal health and welfare, sanitary safety of animals, animal products and foods derived from animals, transboundary movement of diseases, and science-based risk management of disease at the human–animal–environment interface under the 'One Health' concept. To ensure its full implementation, and consequently the continuous and timely development of scientific standards, updated recommendations and guidelines, the OIE has already, during the first weeks of 2016, embarked on modernising its governance. This work programme aims to evolve towards more science and greater transparency in expertise:

- by ensuring the excellence of scientific expertise, the basis for OIE standards and recommendations, within the Specialist Commissions and Working Groups as well as in the global network of Reference Centres. Concrete proposals will be made with the aim of adapting the procedures for selecting experts, in compliance with the Basic Texts currently in force, and strengthening the internal capabilities of the Organisation's scientific secretariats;

- by making the appraisals that precede official recognition of Member Countries' animal disease status more robust;

- by formalising the work procedures involved and improving transparency and accountability towards Member Countries and partners.

*The World Animal Health Information System, better known as WAHIS, is an internet-based computer system that processes data on animal diseases in real-time and then informs the international community*  
[www.oie.int/en/animal-health-in-the-world/the-world-animal-health-information-system/the-oie-data-system/](http://www.oie.int/en/animal-health-in-the-world/the-world-animal-health-information-system/the-oie-data-system/)

Furthermore, the ambitious nature of the Sixth Strategic Plan means that the OIE must continue to look for synergies in the partnerships it has forged with numerous international organisations and at a regional level. Thus, the OIE–WHO–FAO Tripartite agreement<sup>1</sup> and the commitments stemming from it in the fight against rabies or antimicrobial resistance serve as a clear example of how valuable these partnerships can be when cooperation is actively encouraged.

1 See *Bulletin*, no. 2011-2, pp. 55-58 ([www.oie.int/doc/ged/D10853.PDF](http://www.oie.int/doc/ged/D10853.PDF))

A fresh impetus will be initiated to give these partnerships a new direction to help achieve the objectives referred to above. Furthermore, collaboration with national and regional scientific risk assessment agencies to identify potential areas for pooling work, and innovative collaborations with Reference Centres to exploit more effectively the work being done in this field and improve the OIE's visibility in leading scientific journals, are all avenues that will be explored.

### REINFORCING TRUST THROUGH TRANSPARENCY AND COMMUNICATION

Diverse are the activities of the OIE; ranging from collecting the animal disease information notified by its Member Countries, capitalising on and disseminating scientific and technical knowledge, providing technical expertise. We must continue to promote and fully exploit all the work carried out, and facilitate its use for the benefit of our Member Countries and partners:

- by making better use of the animal disease information available in WAHIS, notably by making epidemiological and cartographic analyses widely available;
- by revamping the external information and communication tools, notably by making the OIE website more attractive, including for those in the public health sector.

### ENSURING THE CAPACITY OF VETERINARY SERVICES AND THE SUSTAINABILITY OF THEIR ACTIVITIES

To achieve this key objective of the OIE's mandate, the momentum of support for Member Countries will need to be increased. On this point, I would like to reaffirm that the OIE speaks on behalf of its 180 Member Countries and supports them in many different ways:

- by contributing to global and regional discussions on improving sanitary governance;
- by strengthening the quality of the Veterinary Services, including training and support for sanitary policies, notably through the various stages of the PVS Pathway; both the successes and weaknesses identified by the beneficiary countries will be analysed to enable the constant adaptation of the PVS Pathway to the needs of the Veterinary Services requesting this support;
- by its involvement in the analysis of emergency situations arising during sanitary crises, alongside our traditional institutional partners, FAO and WHO.

In recent years, you will have seen the beneficial changes that the OIE has undergone under the leadership of Dr Vallat, Director General from 2001 to 2015. This is the platform on which all of the OIE's teams, at

*The operational implementation of the global control strategies for foot and mouth disease, peste des petits ruminants, avian influenza and rabies will provide many opportunities to defend the central role of Veterinary Services in animal disease control and their contribution to global public health*

Headquarters and in the Regional and Sub-Regional Representations, will continue to apply their competencies to modernising the OIE and increasing its influence.

More than ever before, the OIE's missions are making a crucial contribution to the social and economic development of populations and to protecting the health of living creatures and the environment. The OIE's Sixth Strategic Plan will be implemented in order to maintain our Organisation's commitment to supporting improvement of the quality of the Veterinary Services, the cornerstone of efficient global sanitary governance, which is crucial if we are to meet the future challenges facing our planet.

**Monique Éloit**  
**Director General**

doi:10.20506/bull.2016.1.2494

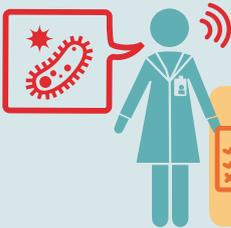
## Reinforcing trust through **TRANSPARENCY** and communication

we are

Spreading  
**scientific and technical**  
knowledge by:

Providing technical  
**Veterinary expertise**

Collecting and disseminating  
**disease data** notified by  
Member Countries



we will

Improve governance to  
**strengthen science**  
and expert roles

Share our expert  
**data analysis**  
through **WAHIS\***



Modernise our external  
**communication tools**



## Improving animal health **RISK**

we

Developing **science-based**  
and **standards** to address:



**Antimicrobials use**  
and alternatives

**Global disease**  
**control** and  
eradication

we

Incorporate **social,**  
**economic and**  
**environmental sciences**

Take into account  
**new technologies**



\* The OIE World Animal Health Information System

## Excellence

quality



SCIENCE



timeliness

objectivity

knowledge transfer

new technologies

Expert  
groups

Reference  
Centres

Specialist  
Commissions

# 6TH STRATEGIC PLAN 2016–2020

prosperity as well as social and environmental well-being of populations

## and welfare by appropriate **MANAGEMENT**

are

guidelines

**Biothreat reduction**

**Climate change and biodiversity**



will

Further implement the **One Health** concept

Enhance countries' **official disease status** recognition

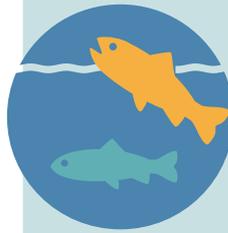


## Supporting and strengthening **VETERINARY SERVICES** at the front lines of public health

we are

Addressing human-animal **health emergencies** with partners

Enhancing **global governance** of animal health systems



**Improving capacities** of Veterinary Services in Member Countries

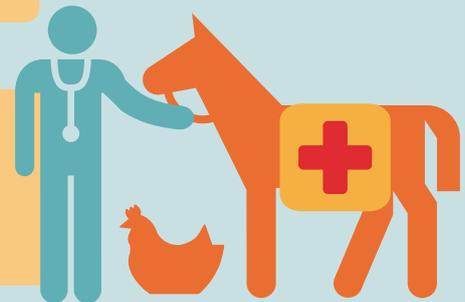


we will

**Highlight benefits** brought by sustainable Veterinary Services

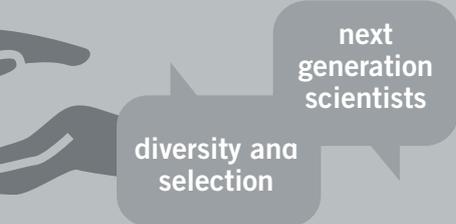
Adapt our capacity-building programmes to **fit local contexts**

Further improve the **quality of Veterinary Services** through the **PVS Pathway\*\***



\*\*OIE Programme to improve the performance of Veterinary Services

## Engagement



## Management



# Finding success along the PVS Pathway

Although the OIE has been setting intergovernmental standards to prevent the spread of animal diseases since its inception in 1924, the creation of the World Trade Organization (WTO) in 1995 and the recognition of the OIE, by this organisation, as the standard-setting body for safe trade in animals and animal products, marked the beginning of a new era for the OIE and its Member Countries. The establishment of free trade and open markets without tariff barriers for animals and animal products offered the promise of new export opportunities for countries with abundant livestock resources, many of which were low-income countries. Yet the promise of increased exports under WTO rules and OIE standards was a double-edged sword. In order to take advantage of this opportunity, exporting countries had to reliably demonstrate, consistent with intergovernmental standards, that their animals and animal products were free from disease or that appropriate measures were taken to avoid transmission of animal diseases through trade. This in turn required a strong, well-functioning and well-resourced national Veterinary Service which was in fact lacking in many low-income countries.

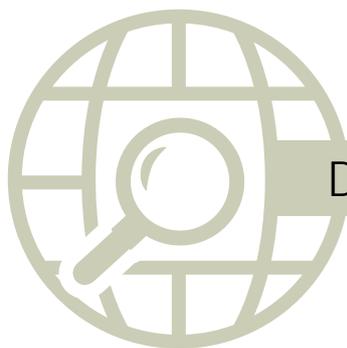
*Recognising the dilemma faced by many of its Members in this regard, the OIE developed and implemented the PERFORMANCE OF VETERINARY SERVICES (PVS) PATHWAY to provide support to Member Countries who wanted to be better able to comply with international standards through improvement of their national Veterinary Services and take advantage of new trade opportunities.*



## SUCCESS STORIES

The successes that were recorded can be broadly grouped into three categories, including advocacy, institutional reforms and legislative reform, with examples provided as follows.





# Initial PVS Evaluation

The first phase of the PVS Pathway, starting in 2006, was the **PVS EVALUATION**, in which a team of trained and certified OIE experts using a standardised methodology, the PVS Tool, carries out a two to three week in-country mission to systematically assess the structure, function and performance of the national Veterinary Services. This currently includes the **evaluation of 47 Critical Competencies** in four broad categories called Fundamental Components: human, physical and financial resources; technical authority and capability; interaction with interested parties; and access to markets.

**To date, OIE has carried out 128 PVS Evaluations for Member Countries.**



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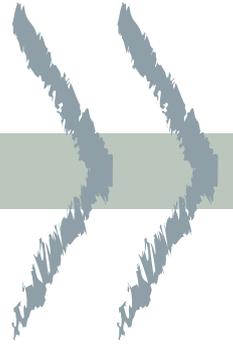
Using the findings from PVS Evaluation and Gap Analysis missions, Delegates have been able to successfully advocate for resources identified in the mission reports as lacking. For example:

**In a country of Asia, the Far East and Oceania, based on its PVS Evaluation regarding adequacy of human resources, 'the Government approved the recruitment plan to increase the number of new veterinarians to work at district level and rural areas. In 2013–2014, 32 Dairy Herd Health Units (DHHUs) have been established to deliver better animal health services to farmers in rural areas. The Veterinary Authority recruited 255 new veterinarians to work at district level.'**

**A country of Africa reported that 'two new veterinary schools have been established at local level in order to address the shortage of veterinarians' that was identified in its PVS Evaluation.**



## PRESCRIPTION



# PVS Gap Analysis

The PVS Evaluation proved very effective in identifying gaps and weaknesses in national Veterinary Services and as a result, OIE looked to develop additional services under the PVS Pathway to help Member Countries address the identified weaknesses. The first of these was the **PVS GAP ANALYSIS**, which is a quantitative assessment of a country's needs and priorities based on the gaps identified in the PVS Evaluation. During the PVS Gap Analysis mission, areas for improvement of the Veterinary Services

are prioritised, and a five-year work plan and cost for this improvement is identified for addressing those priorities. The OIE believed that the establishment of concrete goals, work plans and budgets would assist the Veterinary Services to effectively identify additional funding from their Ministries, governments and donors to achieve the desired objectives.

Analogous to a veterinarian examining a distressed animal, the PVS Evaluation provides an opportunity for OIE to diagnose the problems faced by the Veterinary Services of Member Countries and the Gap Analysis represents the prescription of what needs to be done to address the problems. Following that analogy, OIE has also developed a number of 'treatments' that also can be applied as needed through the PVS Pathway.

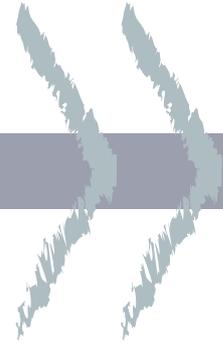
**In another country of Africa, based on the Gap Analysis, there was an 'increase of about 70% of the budget for the Veterinary Authority by the Secretary General of the Ministry of Livestock and Water who took part in the PVS Gap Analysis.'**

**In another country of Asia, the Far East and Oceania, 'an important programme funded by a donor was developed based on the needs identified in the PVS Gap Analysis.'**





## TREATMENT



# Twining Programmes

The first of these ‘treatments’ to be developed was the **VETERINARY LEGISLATION SUPPORT PROGRAMME (VLSP)** which provides follow-up missions to the PVS Evaluation specifically to assess the veterinary legislation of Member Countries to determine if a suitable legal framework is in place for the Veterinary Services to carry out their necessary activities. The VLSP can also assist in the development of new legislation as needed. **Other PVS Pathway treatments** include the laboratory mission, to determine the structure, suitability, and viability of the national veterinary laboratory network and the resources needed for effective operation, as well as three additional capacity-building treatments which are implemented through **twining programmes** – one for veterinary education establishments, one for development of veterinary statutory bodies, and one for development of specific laboratory technical proficiencies.

As the PVS Pathway has proven to be long-lived, there are now **PVS EVALUATION FOLLOW-UP MISSIONS** conducted at the request of Member Countries to determine and monitor the progress that has been made in the advancement of Veterinary Services. Follow-up missions are conducted five or more years after the initial PVS Evaluation mission.

# Assistance Tools

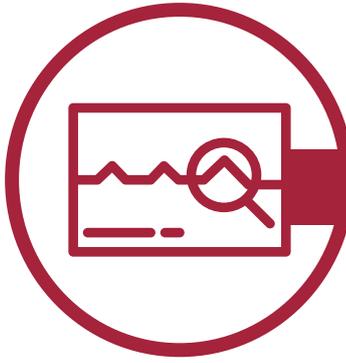


PVS Pathway reports have also supported initiatives for institutional reform:

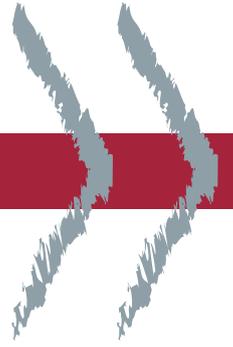
**In a country of the Americas, ‘the PVS Gap Analysis mission report strongly supported the development of a USD 38 million Investment Plan for the modernisation of the animal health, food safety, and plant health services.’**

**A country of Europe reported that ‘Veterinary Departments have been established by local Executive Authorities’ based on the findings of its PVS Evaluation with regard to cooperation between competent authorities.**

**A country of the Middle East reported ‘the creation of a Unit responsible for coordinating veterinary inspection activities between all relevant public institutions.’**



## FOLLOW-UP



# Survey



As 2015 marked a decade of experience with the PVS Pathway, the OIE conducted a **SURVEY** of Member Countries regarding their experiences with the PVS Evaluation, the PVS Gap Analysis and the VLSP. The goals were to determine levels of satisfaction, to identify problems, to seek suggestions for improvements and additional services and to identify PVS Pathway success stories. Member Countries were included in the survey if they had, at the minimum, a PVS Evaluation, but may also have had a Gap Analysis and/or a mission under the VLSP. The OIE Delegate from each of these countries was contacted and requested to complete the questionnaire. Of the qualifying 119 Member Countries contacted, 100 responded to the online survey questionnaire, for a response rate of 84%. While it is beyond the scope of this article to describe all the outcomes of the survey, it does provide an opportunity to share some of the success stories which were communicated by Member Countries. These stories serve to illustrate the genuine value that participation in the PVS Pathway provides.

And, the VLSP veterinary legislation identification missions have provided ammunition for Delegates to pursue legislative reforms to strengthen the legal authority of Veterinary Services:

**In a country of Africa, 'the Animal Diseases Act of 1925 has undergone a much awaited change. The new Animal Health Bill under preparation has reached an advanced stage thanks to the technical assistance of the OIE.'**

**In a country of Asia, the Far East and Oceania, 'the first law on animal health and production has been developed.'**

SUCCESS STORIES



Close to 140 comments relating to successful outcomes were received as part of the questionnaire responses. Generally speaking, the Delegates of Member Countries recognised that their participation in the PVS Pathway provided them with an objective and systematic assessment of their Veterinary Services, clearly identified where problems existed, and offered concrete and realistic suggestions for addressing those problems. At the same time, the Delegates appreciated that mission reports, coming from a highly respected intergovernmental organisation such as the OIE, carried significant weight and influence and were very useful for them to use in discussions with their own ministries, governments and donors to advocate for financial, material and political support to undertake the improvements proposed within the PVS Evaluations, Gap Analysis and VLSP mission reports.

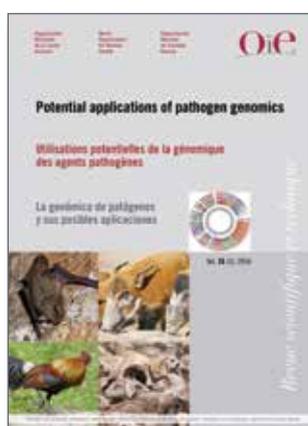


These documented successes have no doubt contributed to an interesting evolution of Member Country involvement with the PVS Pathway. While demand for missions initially came exclusively from low-income countries, there has been steadily growing interest among high-income countries in recent years. This reflects recognition of the fact that over time, the PVS Pathway has proven its value in providing credible, reliable, systematic and objective assessments of the performance of Veterinary Services and that application of the PVS Tool can offer benefits to high-income countries as well. Several of these countries have requested training in use of the PVS Tool so that they can use it internally to promote consistency of VS at federal, regional and state/provincial levels,

while other countries have requested an external PVS Evaluation conducted by an OIE team of experts. Even in high-income countries, Veterinary Services are not immune from budget cuts and inadequate funding and there is increasing recognition that PVS Evaluations and Gap Analysis can provide effective support for the Veterinary Services to advocate for more resources to improve capacity and performance. The net effect is that the PVS Pathway will continue to have a positive global impact in strengthening Veterinary Services for the public good and will remain a key programme to fulfil the objectives of the OIE's Sixth Strategic Plan.

doi:10.20506/bull.2016.1.2495

## new OIE publication



### Trilingual publication

April 2016

29.7 x 21 cm

Approx. 300 pages

ISBN 978-92-9044-996-6

Price: EUR 70

### Potential applications of pathogen genomics *Scientific and Technical Review*, Vol. 35 (1)

*Coordinators and editors:*

*P.R. Murcia, M. Palmarini & S. Belák*

This issue of the *Scientific and Technical Review* provides a collection of in-depth articles on potential applications of pathogen genomics.

The increasing power of high-throughput sequencing, bioinformatics and computational biology have revolutionised most aspects of biomedical and veterinary sciences. Such new technologies and tools have also had a big impact on the diagnosis, control and management of animal diseases.

This issue describes new high-throughput sequencing technologies and bioinformatic tools that are applied to pathogen genomics. In addition, applications of genomics to disease surveillance or during outbreaks of infectious diseases are also described. As sequencing data constitute a unique resource of information, there is also a section on databases and their possible applications to improving animal health worldwide.

## Staff movements

### Arrivals



### World Animal Health Information and Analysis Department

#### Mauro Meske

Chargé de mission

Dr Mauro Meske joined the OIE on 1 September 2015 as Chargé de Mission within the World Animal Health Information and Analysis Department, seconded to the OIE by the National Agrifood Health and Quality Service (SENASA) of Argentina.

Dr Meske has been working with SENASA since 2001. Among other activities he served as Regional Supervisor for Animal Health, coordinating the work of field veterinarians in charge of the Offices of Cordoba Regional Centre of SENASA. In July 2015 he obtained the degree of Master of Public Health on graduating from the *École des Hautes Études en Santé Publique* (EHESP) in France. During the course of his degree studies, Dr Meske conducted a five-month work internship at the headquarters of the OIE, while writing his final thesis. His expertise in the field of animal health will contribute to the work carried out by the World Animal Health Information and Analysis Department.



# news from headquarters



## Scientific and Technical Department

**Mária Szabó**  
Chargée de mission

The Scientific and Technical Department is pleased to welcome Dr Mária Szabó to the position of Chargée de mission for Veterinary Medicinal Products. Mária will be supporting the work of OIE Specialist Commissions on issues related to veterinary medicinal products, including vaccines, and OIE activities involving antimicrobial resistance. Her other main duties will involve the harmonisation of technical requirements for the registration of veterinary medicinal products through VICH<sup>1</sup>; acting as OIE liaison with the Codex Alimentarius Commission during meetings of the Codex Committee on Residues of Veterinary Drugs in Foods; and contributing to the design and delivery of the next cycle of the training programme for OIE National Focal Points for Veterinary Products.

Mária began her role with the OIE on 12 October 2015, bringing with her considerable experience in the field of veterinary product licensing and regulatory affairs in both the public and private sector.

She obtained her Doctorate of Veterinary Medicine from the University of Veterinary Sciences in Budapest, Hungary, in 1989, with subsequent studies in cellular neurophysiology in Geneva, Switzerland, and the registration of veterinary medicinal products in France.



**Delfy Marianella Góchez Alvarenga**  
Chargée de mission

Dr Delfy Marianella Góchez Alvarenga joined the OIE Scientific and Technical Department as Chargée de mission on 29 December 2015 for a six-month period, to work on the global database for monitoring the use of antimicrobial agents in animals.

Her primary focus will be supporting the analysis of responses to the questionnaire distributed to OIE Member Countries on the use of antimicrobial agents in animals and preparing the final report on the first phase of the project. In particular, Delfy will review and compile data from Member Countries, liaise with the OIE National Focal Points for Veterinary Products to validate this information, and assist them by providing guidance and expertise.

A veterinarian by training, Delfy graduated from the National University of El Salvador. Her work with the national Veterinary Services of El Salvador involves the registration and inspection of veterinary products in her country. She has also been designated as the OIE National Focal Point for Veterinary Products by the Delegate of El Salvador to the OIE.

<sup>1</sup> VICH: International Cooperation on Harmonisation of Technical Requirements for Registration of Veterinary Medicinal Products





## Activities of the Communication Unit

**‘One Health’:  
by protecting animals,  
we preserve our future**



This new infographic presents, through concrete examples, the key role of the veterinarian in protecting the health and welfare of animals, and thus also protecting the health of humans.

As illustrated by the ‘One Health’ concept, the human and animal components of global health are interdependent and linked to ecosystems in which they co-exist. Thus, more than 60% of human pathogens, causing diseases such as rabies or avian influenza, are of animal origin.

In order to mitigate these health threats, it is important for actors in the human and animal health sectors, among which veterinarians figure prominently, to collaborate closely.

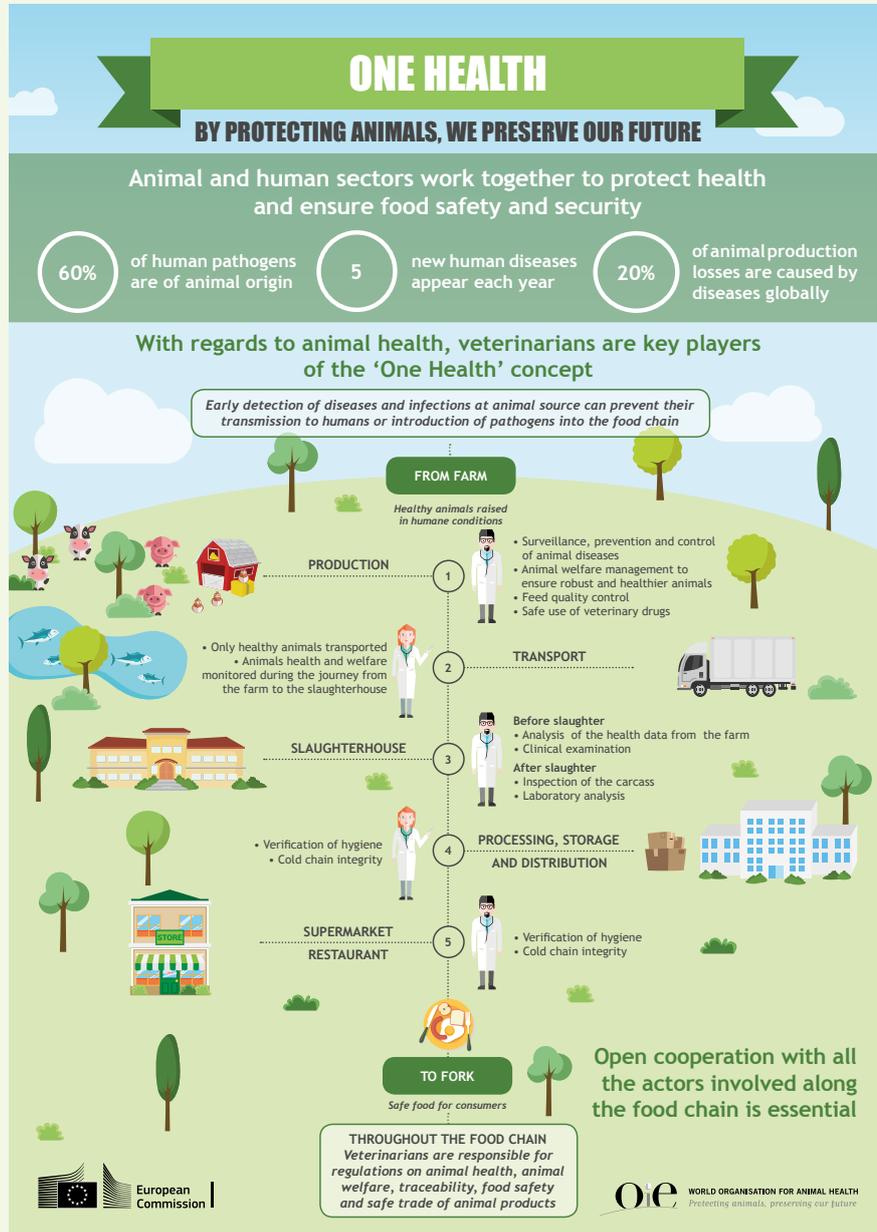
Veterinarians intervene at different levels to prevent and control animal diseases, supervise the prudent use of drugs in animals, and guarantee the animal production food safety.

new infographic





## Activities of the Communication Unit



This document, which was developed in collaboration with the European Commission, will soon be available on the OIE's new 'One Health' web portal: [www.oie.int/onehealth](http://www.oie.int/onehealth).

Further information on the activities of Veterinary Services:  
[www.oie.int/SV/EN](http://www.oie.int/SV/EN)





## Activities of the Communication Unit

# First World Antibiotic Awareness Week

Held from 16 to 22 November 2015, World Antibiotic Awareness Week set out to raise international awareness of best practice for the use of antibiotics to preserve their effectiveness and reduce the risk of the emergence of resistant bacteria. Ensuring the responsible and prudent use of antibiotics for animals is essential to protect their efficacy, not only for animal health and welfare, but also for human health.

### Protecting the effectiveness of antibiotics: we can all contribute

During this awareness week the OIE provided everyone, in particular animal health and production stakeholders, with a range of tools for better communication of best practice for the use of antibiotics in animals, via a new web portal dedicated to antimicrobial resistance. The site describes the OIE's activities in this field over the past ten years, as well as those of its partners.

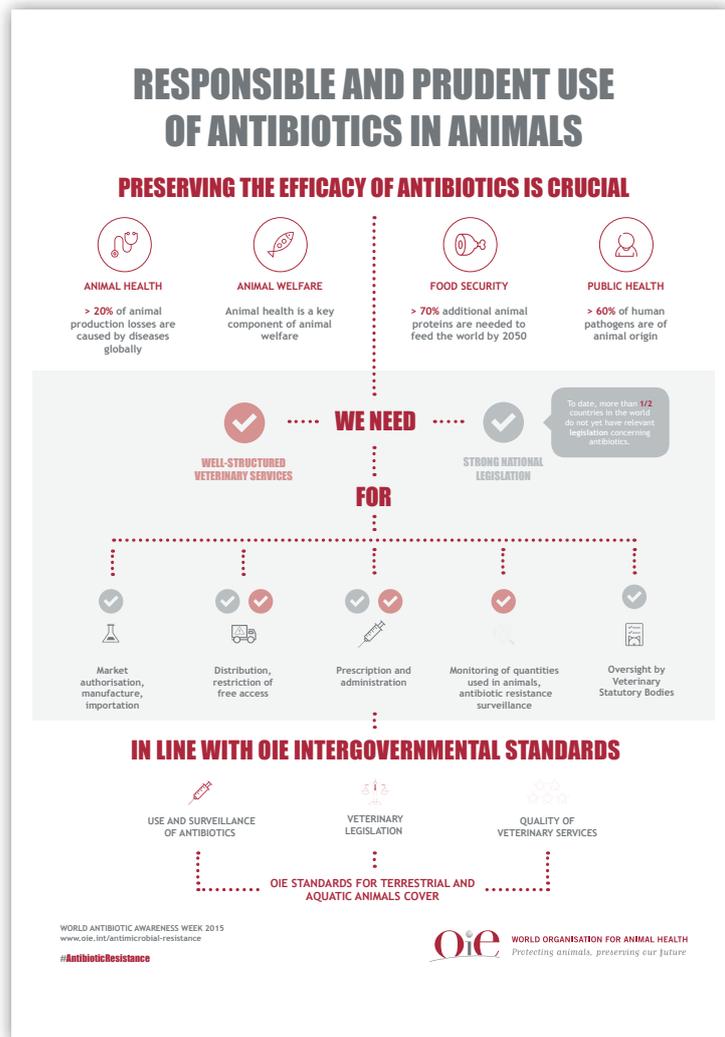
Productive collaboration between the human health and animal health sectors in this field is illustrated by some of the posters available on this portal, designed with the World Health Organization (WHO) and the United Nations Organization for Food and Agriculture (FAO) as part of the WHO campaign 'Antibiotics: handle with care'.



## Activities of the Communication Unit

Detailed infographics explain the essential elements required by each country to ensure the responsible and prudent use of antibiotics within its territory.

*'By adopting best practice when treating animals with antibiotics, principally through applying the intergovernmental standards of the OIE, we can, collectively, prolong their effectiveness and protect our future. This is why we need better controls on the production, registration, importation, distribution and use of antibiotics, as well as good legislation, qualified veterinarians and a well-organised veterinary profession to oversee their use in animals,'* said Dr Bernard Vallat, Director General of the OIE, during World Antibiotic Awareness Week.





# Activities of the Scientific and Technical Department

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

October to December 2015

## Working Groups

### Working Group on Wildlife

*OIE Headquarters, Paris, 29 September – 2 October 2015*

The Working Group on Wildlife was briefed on past, recent and future OIE activities of interest and provided advice on questions related to the list of wildlife diseases (non-OIE-listed diseases), the taxonomy of the pathogens on the specific list of wildlife diseases, and the use of the WAHIS-Wild interface.

The Group also reviewed health issues and emerging disease events in wildlife that occurred worldwide in 2015 and included a summary in its meeting report.

It addressed several requests from the OIE Scientific Commission for Animal Diseases, including an evaluation of buffalo demographics, movements and genetics in connection with the multiple foot and mouth disease (FMD) outbreaks in the vicinity of Kavango-Zambezi Transfrontier Conservation Area. The Group also provided an update on the 2015 Saiga antelope die-off in Kazakhstan.

With regard to the Collaborative Partnership on Sustainable Wildlife Management (CPW), the Group reiterated its support for representing the OIE in CPW meetings and contributing to the CPW's activities.

The Group was informed that a project plan had been developed between the OIE and the International Council for Game and Wildlife Conservation for a 'CIC/OIE Centre for Wildlife Diseases'. It confirmed its willingness to be involved in this initiative.

The Group was informed that the OIE might develop future standards applicable to reptiles. It strongly supported OIE involvement in reptile health, welfare and food safety and would contribute to the OIE's efforts, as requested.

The Group also strongly supported any effort that the OIE might be able to make in amending the current

Convention on the International Trade in Endangered Species (CITES) regulations to facilitate the rapid diagnosis of important disease outbreaks in endangered and threatened wildlife.

## *Ad hoc* Groups

### Evaluation of Foot and Mouth Disease Status of Member Countries

*OIE Headquarters, Paris, 6–8 October 2015  
and 30 November – 3 December 2015*

The *Ad hoc* Group met twice to assess applications for official recognition of five FMD-free zones (four zones with vaccination and one zone without vaccination), as well as for the endorsement of two OIE Member Countries' national control programmes for FMD.

In addition, the Group assessed the information provided by a Member Country regarding its official control programme for FMD, which has already been endorsed by the OIE.

As part of the Scientific Commission's work plan to revise all questionnaires related to official recognition of disease status, the Group also updated the FMD questionnaires in Articles 1.6.6. and 1.6.11. of the *Terrestrial Animal Health Code (Terrestrial Code)*.

Finally, and as agreed during the 83rd OIE General Session, the Group discussed in depth proposals received from Member Countries when the revised FMD chapter of the *Terrestrial Code* was last circulated for comments. However due to lack of time, the Group could not debate about different concepts to be further considered for possible inclusion in the *Terrestrial Code* chapter.





## Activities of the Scientific and Technical Department

### Evaluation of the Contagious Bovine Pleuropneumonia Status of Member Countries

**OIE Headquarters, Paris, 26–29 October 2015**

The *Ad hoc* Group evaluated the dossiers submitted by five OIE Member Countries for the official recognition of their freedom from contagious bovine pleuropneumonia (CBPP): four for country freedom status and one for zonal freedom status.

As part of the Scientific Commission's work plan to revise all questionnaires related to official recognition of disease status, the Group also updated the CBPP questionnaires in Articles 1.6.7. and 1.6.13. of the *Terrestrial Code*.

Finally the Group proposed revisions to Chapter 11.7. of the *Terrestrial Code* on CBPP.

### Evaluation of Classical Swine Fever Status of Member Countries

**OIE Headquarters, Paris, 3–5 November 2015**

The *Ad hoc* Group evaluated the dossiers submitted by nine Member Countries for the official recognition of their freedom status with regard to classical swine fever (CSF): seven for country freedom status, two for zonal freedom.

As part of the OIE Scientific Commission's work plan to revise all questionnaires related to official recognition of disease status, the Group also proposed modifications to the CSF questionnaire in Article 1.6.10. of the *Terrestrial Code* to clarify information requested from applicant Member Countries.

Finally, the Group identified possible future amendments of the *Terrestrial Code*, Chapter 15.2., on CSF.

### High Throughput Sequencing, Bioinformatics and Computational Genomics (HTS–BCG)

**OIE Headquarters, Paris, 7–9 November 2015**

The main task of this third meeting of the *Ad hoc* Group was to develop a clear and detailed plan on how to implement the OIE Platform Project – creation of an OIE platform for the collection and management of genomic sequences in animal health –, to complement the epidemiological database within the OIE World Animal Health Information System (WAHIS).

The Group took note of Recommendation 2 of Resolution No. 33, adopted by the OIE World Assembly in May 2015, which states that: ... *the OIE [should] establish a platform for*

*the collection and management of partial and complete genomic sequences (including genotype assignment) with the aim to integrate the reporting of genomic sequence data into the OIE World Animal Health Information System (WAHIS), with the collective support of OIE Reference Centres, and involving all OIE Member Countries.*

In accordance with this recommendation, the Group proposed that the initial model for the OIE platform be the creation of a centralised rather than a decentralised system.

Based on the Terms of Reference, the Group determined that the OIE platform project has two main goals:

- 1) to establish a pathogen genomic platform:
  - refine the vision for the platform
  - suggest the next steps for its implementation

- 2) to define the standards to be used for the sequence information to be uploaded to the platform.

The principal output of the meeting was a revision of the draft pilot project. This document (appended to the report) details the objectives, strategy and architecture of the OIE platform. The second output was the Group's consensus comments on the draft chapter for the *Manual of Diagnostic Tests and Vaccines for Terrestrial Animals (Terrestrial Manual)*. These included the necessity to clearly identify the purpose of the application of the technology, the appropriateness of the specimens for that purpose, the corresponding preparation of the samples for testing and the preparation and quality control of sequence data. A consolidated version of the chapter will be forwarded to the consultant editor of the *Terrestrial Manual* and the OIE Biological Standards Commission for consideration, along with Member Country comments.





## Activities of the Scientific and Technical Department

### Vaccination

**OIE Headquarters, Paris, 17–19 November 2015**

The *Ad hoc* Group was convened to draft a horizontal chapter on vaccination to be included in the *Terrestrial Code*. The Group was supported and guided in its task by representatives from the Scientific Commission, the Biological Standards Commission and the Terrestrial Animal Health Standards Commission.

The chapter is intended to provide guidance to Member Countries on successfully implementing vaccination in support of disease control programmes. The general recommendations of this chapter will be refined by the specific approaches described in the disease chapters of the *Terrestrial Code*. Where detailed disease or infection-specific information is not available, suitable approaches should be based on the recommendations in this chapter.

During the three-day meeting, the Group defined the outline of the chapter, provided appropriate definitions and identified the critical components that should be covered. The task could not be finalised during the meeting. The Group indicated to the OIE the need to convene another meeting to finalise the draft chapter.

### Bovine Spongiform Encephalopathy Risk Status Evaluation of Member Countries

**OIE Headquarters, Paris, 24–26 November 2015**

The *Ad hoc* Group evaluated the dossiers submitted by seven Member Countries, five already recognised as having a controlled risk status and two applying for the first time, all applying for a 'negligible risk' status with regard to bovine spongiform encephalopathy (BSE).

The Group finalised the evaluation of a Member Country which had applied in 2014 and provided updated information in 2015 for the Group's consideration, and considered the request from a Member Country for the reinstatement of its BSE risk status.

Finally, as part of the Scientific Commission's work plan to revise all questionnaires related to official recognition of disease status, the Group updated the questionnaire on BSE in Article 1.6.5. of the *Terrestrial Code*.

### Replacement of the International Standard for Bovine Tuberculin

**OIE Headquarters, Paris, 24–26 November 2015**

The *Ad hoc* Group met:

- to evaluate the current situation on the availability of standard bovine tuberculin
- to develop a protocol for the evaluation and adoption of a new international standard bovine tuberculin, and
- to provide guidance and explore options as to who could undertake the task and how this project could be funded.

### Peste des Petits Ruminants Status Evaluation of Member Countries

**OIE Headquarters, Paris, 15–16 December 2015**

The *Ad hoc* Group evaluated the dossiers submitted by two Member Countries requesting recognition of their Peste des Petits Ruminants (PPR) freedom status, based on historical grounds.

As part of the Scientific Commission's work plan to revise all questionnaires related to official recognition of disease status, the Group also amended the questionnaires on PPR of the *Terrestrial Code*, Chapter 1.6. (Articles 1.6.9. for a PPR-free country or zone and 1.6.12. for endorsement of an official control programme for PPR).

Finally, the Group was updated on the development of the PPR Global Control and Eradication Strategy endorsed at the International Conference in Abidjan, Cote d'Ivoire, in April 2015.





# Activities of the International Trade Department

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

October to December 2015

## Specialist Commissions

### Aquatic Animal Health Standards Commission ('Aquatic Animals Commission')

*OIE Headquarters, Paris, 5–9 October 2015*

The Aquatic Animals Commission met from 5 to 9 October 2015 to review comments received from OIE Member Countries on the report of its March 2015 meeting, including comments made at the 83rd OIE General Session in May 2015. The Commission also reviewed the report of the *Ad hoc* Group on Disinfection of Aquaculture Establishments and Equipment.

The Commission circulated the following revised texts to Member Countries:

- for the *Aquatic Animal Health Code* (the *Aquatic Code*):
  - the Glossary
  - revisions to Articles 1.5.2. and 4.2.3.
  - criteria for including diseases on the OIE List
  - diseases listed by the OIE
  - disinfection of aquaculture establishments and equipment
  - restructuring of Section 4 on disease prevention and control
  - general obligations related to certification
  - acute hepatopancreatic necrosis disease, and
  - infection with yellowhead virus

– and for the *Manual of Diagnostic Tests for Aquatic Animals* (the *Aquatic Manual*) on:

- infection with yellowhead virus.

The Commission also updated its work programme for 2015–2016.

## Working Groups

### Working Group on Animal Production Food Safety

*OIE Headquarters, Paris, 3–5 November 2015*

The Working Group on Animal Production Food Safety, which includes representatives from the Codex Alimentarius Commission, FAO and WHO, held its 15th meeting from 3 to 5 November 2015 to discuss the following issues:

- the recent and relevant activities of the OIE, Codex, FAO and WHO
- cooperation between the OIE and Codex, including parallel work on *Salmonella* control in pigs and cattle
  - a review of the *Terrestrial Animal Health Code* (*Terrestrial Code*) Chapters 6.1., 'The role of the Veterinary Services in food safety', and 6.2., 'Control of biological hazards of animal health and public health importance through ante- and post-mortem meat inspection'
  - a discussion paper on 'Approaches taken in improving meat hygiene programmes around the world'
  - control of Shiga-like-toxin-producing *Escherichia coli* (STEC) in food-producing animals
  - antimicrobial resistance, and
  - the 2016 work programme.





## Activities of the International Trade Department

### Ad hoc Groups

#### Susceptibility of Crustacean Species to Infection with OIE-Listed Diseases

**OIE Headquarters, Paris, 13–15 October 2015**

The *Ad hoc* Group on Susceptibility of Crustacean Species to Infection with OIE-Listed Diseases met from 13 to 15 October 2015. The Group convened to continue its work on reviewing the list of species susceptible to infection with OIE-listed crustacean diseases, in accordance with the recently adopted *Aquatic Code*, Chapter 1.5., 'Criteria for listing species as susceptible to infection with a specific pathogen'.

The Group reviewed the scientific literature concerning a number of diseases (crayfish plague, infectious hypodermal and haematopoietic necrosis, infectious myonecrosis, necrotising hepatopancreatitis, Taura syndrome, white tail disease, acute hepatopancreatic necrosis disease), and developed a list of species susceptible to these diseases, for inclusion in the relevant chapters of the *Aquatic Code* and *Aquatic Manual*.

#### Slaughter of Animals – Waterbath Stunning Method for Poultry

**OIE Headquarters, Paris, 29–30 October 2015**

The *Ad hoc* Group on Slaughter of Animals – Waterbath Stunning (WBS) Method for Poultry met at OIE Headquarters on 29 and 30 October 2015. The objective of the meeting was to develop new text for Article 7.5.7., point 3b) of Chapter 7.5. on 'Slaughter of animals' in the *Terrestrial Code*, taking into consideration the draft proposal presented during the 83rd OIE General Session, as well as the written comments sent by Member Countries before and since the General Session.

The report of the Group and the revised draft article will be considered by the Terrestrial Animal Health Standards Commission (the Code Commission) at its February 2016 meeting.

#### Salmonella in Pigs and Cattle

**OIE Headquarters, Paris, 8–10 December 2015**

The *Ad hoc* Group on *Salmonella* in Pigs and Cattle was convened from 8 to 10 December 2015 to consider Member Countries' comments on the new draft *Terrestrial Code* chapters on the 'Prevention and control of *Salmonella* in pig herds' and 'Prevention and control of *Salmonella* in commercial cattle production systems'.

The report of the Group will be provided to the February 2016 meeting of the Code Commission.





## Activities of the World Animal Health Information and Analysis Department

### WAHIS evaluation, ten years after its launch

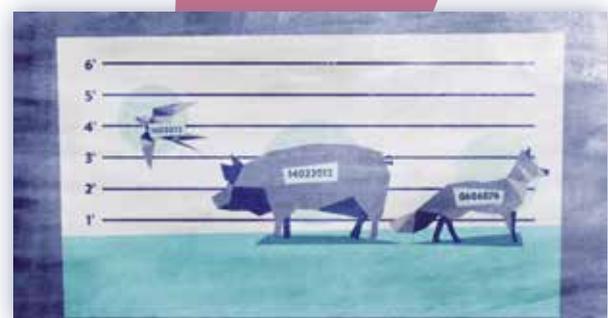
At the end of December 2015, ten years after the creation of the OIE World Animal Health Information System (WAHIS), the 'WAHIS evaluation, ten years after its launch' survey was conducted.

This survey was sent to the Delegates of all Member Countries to be completed by the OIE focal points for animal disease notification, OIE national focal points for aquatic animals and OIE national focal points for wildlife, as well as by Delegates that may sometimes use WAHIS.

The aim of the survey is to carry out a global evaluation of various aspects of WAHIS and its relations with users in order to gather more details on the notification process set up by the Veterinary Services of each Member Country. The parameters analysed include the feasibility and ease of entering field information into the System, the IT technical capacity of Veterinary Services and the level of use of the new WAHIS tools implemented in 2012, as well as the occupational profiles and experience of the persons performing data entry. The survey also seeks to assess the level of satisfaction among WAHIS users relating to support provided by the OIE team and the display and utilisation of the information provided by the WAHIS interface.

The World Animal Health Information and Analysis Department is currently in the process of analysing the results.

The survey results and analysis, together with the comments and suggestions received, will help to improve the service provided to all WAHIS users and to optimise the notification process. These results will also contribute to future WAHIS developments and upgrades.



# regional activities

## Staff movements

OIE Regional Representation for Africa

Africa

### Departure



#### The OIE pays tribute to Dr Yacouba Samaké

Dr Yacouba Samaké, OIE Regional Representative for Africa since 1 April 2011, retired on 1 January 2016 at the end of an illustrious professional career.

As he likes to point out, Yacouba Samaké was born in 1951 in Bougouni, southern Mali, among the Bambara people. With the support of his family, he was able to go to school and proved to be a gifted pupil who aspired to higher education. His rural background and interest in animals led him to choose a veterinary career. In 1977, he graduated as a veterinary surgeon from the Leipzig Faculty of Veterinary Medicine, Germany.

After his initial training, Dr Samaké took advanced courses in several countries, including active teaching methodologies in France, the economics of animal health and disease control in Ethiopia and the management of natural resources and the environment in the United States of America. In addition, he studied agricultural extension services at Wageningen in the Netherlands, the management and administration of Veterinary Services at Maisons-Alfort in France and livestock development in the People's Republic of China, and graduated from the integrated management programme for foreign executives at the National School of Public Administration in Quebec, Canada.

Thanks to his enquiring mind and a willingness to grasp the opportunities that came his way, Dr Samaké has enjoyed a richly varied professional career in the fields of rural development, the environment, public finance and initial and continuing training.

In Mali, he was a dedicated servant of the state, holding various posts in the Veterinary Administration, first as Head of the Livestock Sector at the local level before rapidly moving on to posts of greater responsibility: Director of the Veterinary Nursing School, Deputy National Director for Livestock, Head of the Support for Peri-Urban Livestock Producers Project, President and Chief Executive Officer of the ESG School of Management, Technical Adviser at the Ministry of Food Security and Permanent Secretary of the Ministry of Livestock and Fisheries.

The international phase of his career was also outstanding. Dr Yacouba Samaké served as training expert and manager for the Canadian International Development Agency (CIDA)'s regional training and development programme in Mali, as a private consultant for the Canadian Cooperation Office in Mali and as a training specialist for the Domestic Revenue Mobilisation Support Project, funded by CIDA.

Dr Samaké contributed to the implementation of a policy of liberalising the veterinary profession in Mali in 1984. He coordinated avian influenza control activities in his capacity as President of the Technical Coordination Committee in 2005. He also oversaw the organisation of the Fourth International Conference on Avian Influenza, combined with a donor round table, held in Bamako in December 2006.

He led the Delegation of Mali to the 75th General Session of the OIE in Paris in May 2007 to deliver his country's message at the Opening Session and, at the meeting of the Regional Commission for Africa, he presented the main conclusions from the Fourth International Conference on Avian Influenza. On the sidelines of that same General Session, he chaired a working session on the economic analysis of the livestock policy of Mali with representatives of the Organisation for Economic Co-operation and Development (OECD), the OIE, the European Union and the World Bank.



On numerous occasions, Dr Yacouba Samaké led other official delegations of Mali: to Austria (June 2006), the United States of America (June 2005), Morocco (March 2005, April 2006), Nigeria (June 2006), Kenya (September 2006), Ethiopia (November 2004, November 2006), Tunisia (September 2004, October 2004, December 2005, March 2007), Burkina Faso (May 2005 and June 2007) and Niger (September 2005 and October 2007).

Given his experience, he was an obvious choice when the OIE recruited him in 2008 for a position in Africa, first as OIE Deputy Regional Representative for Africa and subsequently as the Regional Representative. At the OIE, Dr Samaké helped to support the implementation of the OIE's missions in Africa within the framework of the Organisation's Fourth and Fifth Strategic Plans and in line with the strategic directions of the African Union's Comprehensive Africa Agriculture Development Programme (CAADP).

Dr Samaké has been awarded the *Chevalier de l'Ordre National du Mali* and is a member of numerous civil society associations in Mali.

His fellow professionals and former colleagues know him as a man of great integrity, hardworking and always available. He is universally recognised as a man of principle and the OIE is deeply indebted to him.

We wish him the best of health in his retirement so that he may enjoy many more long and happy years.

### Ceremony in Bamako to mark the departure of Dr Samaké

On Tuesday 12 January 2016, the OIE Regional Representation for Africa organised a lunch in the name of the OIE Director General, Dr Monique Éloit, to mark the departure of Dr Yacouba Samaké from the OIE.

The invitation was taken up by officials of the government of the Republic of Mali: Dr Ouayara Koné, technical advisor representing the Minister for Rural Development of the Republic of Mali, Ms Diané Mariam Koné, former Minister and special advisor to the Ministry for Rural Development, Dr Traoré Halimatou Koné, Delegate of Mali at the OIE, Dr Boubacar Diallo, Director

General of the Central Veterinary Laboratory of Mali, Dr Doumbia Hawa Dolo, General Inspector of Veterinary Services of Mali, representatives of FAO, FAO-ECTAD, AU-IBAR, and the OIE President of Honour, Dr Amadou Samba Sidibé. The lunch was also attended by many friends and former staff of Dr Samaké. The Samaké family, honorary guests at the lunch, was represented by Dr Yacouba Samaké, his wife, his two children and their respective spouses.

Several speakers took the floor:

- Dr Karim Tounkara, to outline the professional career of Dr Samaké and to thank him for his contribution to the implementation of OIE activities, as well as to pay homage to his wife, Ms Fatoumata Samaké,
- Dr Ouayara Koné, in the name of His Excellency the Minister for Rural Development, to confirm the future decoration of Dr Samaké by the government of Mali and to share his personal experiences,
- Dr Yousouf Kaboré, of FAO-ECTAD, to award the USDA certificate in recognition of the contribution of Dr Samaké to the implementation of networks of diagnostic laboratories for animal diseases in Africa,
- Ms Diané Mariam Koné and Mr Modibo Touré, of FAO, to share their personal testimonies,
- Mr Souleymane Koné, duty officer, to thank Dr Samaké on behalf of the staff of the Regional Representation.

In response to the various speeches, Dr Yacouba Samaké thanked everyone present and acknowledged all those who had contributed to his professional success.

During the lunch, which took place in a very friendly atmosphere, the staff of the Regional Representation presented gifts to Dr Yacouba Samaké and his wife.



## Handover ceremony between Dr Samaké and Dr Tounkara

On Monday 21 December 2015 at 14:00, in the conference room of the OIE Regional Representation for Africa in Bamako, Dr Yacouba Samaké, the outgoing OIE Regional Representative for Africa, handed over the reins to Dr Karim Tounkara, the incoming OIE Regional Representative for Africa (see *Bulletin*, no. 2015–2, p. 18).

The ceremony was presided by Dr Ouayar Koné, technical advisor representing the Ministry of Rural Development of the Republic of Mali, in the presence of Dr Halimatou Koné Traoré, the Delegate of Mali at the OIE, together with all staff of the OIE Regional Representation for Africa.

Dr Daniel Bourzat, advisor to the OIE Regional Representative for Africa, began by recalling the activities carried out by the Representation under the leadership of Dr Yacouba Samaké, the challenges and difficulties faced and the successes achieved. Following this, Dr Ouayara Koné, on behalf of His Excellency the Minister for Rural Development, congratulated Dr Yacouba Samaké on his brilliant career at the service of Mali. Then the Delegate of Mali to the OIE, Dr Halimatou Koné Traoré, thanked him for his constant support since she had entered public service.

Dr Yacouba Samaké then took the floor and expressed his thanks to the staff of the Representation for their support throughout his term of office. The outgoing Representative applauded the appointment of Dr Karim Tounkara to succeed him. Looking back over the highlights of his years working for the OIE, he offered advice and also apologised to his staff for any imperfections that had arisen during his term of office.

Finally, Dr Karim Tounkara paid homage to his predecessors in the role of Regional Representative, and thanked Dr Bernard Vallat, outgoing Director General of the OIE, as well as the incoming Director General, Dr Monique Éloit, for his appointment. He urged the Regional Representation to serve the OIE as a cohesive team, with loyalty, integrity, responsibility and efficacy, and wished good health, happiness, prosperity and success to Dr Yacouba Samaké and his family.

The official ceremony took place in a very cordial atmosphere, culminating in the signature, by Drs Yacouba Samaké, Karim Tounkara and Ouayara Koné, of the protocol handing over to the new incumbent. The moving ceremony concluded with a friendly cocktail.



From left to right: Dr Karim Tounkara, Ms Aissata Bagayoko, Dr Ouayara Koné and Dr Yacouba Samaké

## Africa

## Arrival



**Cyrus Nersy**  
Chargé de mission

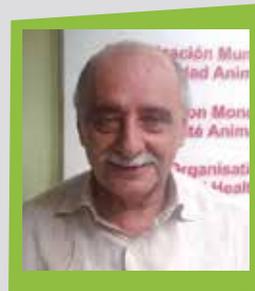
On secondment from the French Ministry of Agriculture, Agrifood, and Forestry, Dr Cyrus Nersy, a General Inspector of Veterinary Health (France), has joined the OIE after spending three years in Chad with the cooperation and cultural action network of the French Ministry of Foreign Affairs and International Development.

During his 30-year career, working mainly in the international arena, Dr Nersy has developed considerable expertise in implementing development projects, programmes and policies in a wide variety of fields (livestock production and agriculture, health, HIV control, regional integration, education, public finance, the environment, etc.). His time in Rwanda, Burkina Faso and Burundi also gave him the opportunity to work on issues as diverse as emergency humanitarian aid, post-crisis reconstruction and reform of the security services.

At the OIE, Dr Nersy will work on the implementation of the regional component of the animal health chapter of the Regional Sahel Pastoralism Support Project, – one of the pillars of an important six-year World Bank project that has just begun. The project's main aims are to improve the living conditions and economic situation of pastoralists in the six countries of the Sahelian belt (Burkina Faso, Chad, Mali, Mauritania, Niger and Senegal). Management of the first component of the project, which focuses on strengthening Veterinary Services and improving control of transboundary diseases, including peste des petits ruminants, has been entrusted to the OIE.

After spending several months at OIE Headquarters, Dr Nersy has joined the OIE Regional Representation for Africa as an International Technical Assistant.

## Americas

OIE Sub-Regional  
Representation for Central America

## Emerio Serrano Ramírez

Dr Emerio Serrano Ramírez is a Doctor of Veterinary Medicine who graduated from the University of La Havana. He also obtained an Epizootiology Specialist degree from the Central University of Las Villas, Cuba. He temporarily joined the OIE on 16 November 2015 as Acting OIE Sub-Regional Representative for Central America in Panama until the end of the recruitment procedure for the new Representative.

Dr Serrano worked in the Institute of Veterinary Medicine of Cuba, initially at provincial level, then as the Director General for 20 years. He was the Delegate of Cuba to the OIE for 25 years, a position he held until April 2011. Dr Serrano has also participated as speaker and assistant in several scientific and technical conferences, seminars, training workshops and field missions in various OIE Member Countries.

## Departures



### Montserrat Arroyo Kuribreña

Dr Montserrat Arroyo Kuribreña successfully completed her assignment as the OIE Sub-Regional Representative for Central America on 15 November 2015.

She dedicated her 16-month tenure to developing and implementing OIE activities in Central America. Her tasks included strengthening OIE relations with the countries of the Region and encouraging the Central American countries to participate in the development of OIE standards, as well as in all OIE projects.

In November 2015, she returned to Mexico to the National Laboratory for the Production of Veterinary Biological Products (PRONABIVE) to continue her career. We wish Dr Montserrat Arroyo Kuribreña every success in her new duties.



### Baldomero Molina Flores

Dr Baldomero Molina Flores completed his assignment as a Project Officer at the OIE Sub-Regional Representation for Central America on 1 October 2015.

Dr Molina Flores accomplished his duties thanks to the generous support of the Government of Spain, and dedicated his nine-month tenure to developing and implementing OIE activities in the sub-region, especially supporting Central American and Caribbean countries with the animal health aspects required to achieve and maintain free status for classical swine fever, in line with OIE standards.

In October 2015, he began his new duties at the Pan American Foot and Mouth Disease Center (PANAFTOSA), a scientific unit of the Pan American Health Organization (PAHO) in Rio de Janeiro, Brazil. We wish Dr Baldomero Molina Flores every success in his new duties.



## OIE Sub-Regional Representation for South-East Asia

### Arrival



**Yu Qiu**

Dr Yu Qiu joined the OIE Sub-Regional Representation for South-East Asia in Bangkok in October 2015 as a Project Officer under the Stop Transboundary Animal Diseases and Zoonoses (STANDZ) Initiative. She will provide project management and technical support to OIE Member Countries for the surveillance, prevention and control of foot and mouth disease and other transboundary animal diseases. She will also assist in communications and editorial operations at the Sub-Regional Representation.

Dr Yu Qiu graduated in 2008 from Yangzhou University, the People's Republic of China, with a Doctorate of Veterinary Medicine (with Honours). Later that year, she joined the Key Laboratory of Jiangsu Preventive Veterinary Medicine (Yangzhou University), and started her research on epidemiology and the development of diagnostic techniques for avian leukosis viruses (ALVs), as part of China's National Poultry ALVs Eradication Programme. In December 2010, she gained a Master of Science degree in Agriculture and joined the Laboratory of Virology, at the Faculty of Veterinary Medicine of Ghent University, Belgium, where she began her PhD research.

Dr Yu Qiu's research focused on the zoonotic potential of swine influenza viruses and influenza virus surveillance methods in the European swine population. Her contribution to influenza research was recognised by the European Scientific Working Group on Influenza in 2014 with the award of a 'Young Scientist Travel and Accommodation Grant'. Dr Yu Qiu also worked on research project management and served as a volunteer advisor for various veterinary medicine and animal-related activities. She will pursue her interest in veterinary public health, animal health, and animal welfare through the work of the OIE Sub-Regional Representation for South-East Asia.

### Departure



**Melada Ruengjumroonath**

Ms Melada Ruengjumroonath, who worked as a Finance Officer at the OIE Sub-Regional Representation for South-East Asia, left the OIE at the end of December 2015, after having been with the Organisation for three years and five months.

Ms Ruengjumroonath first joined the OIE in August 2012. She worked as an administrative assistant before being promoted to Finance Officer, in charge of bookkeeping, accounting tasks, and assisting technical staff to organise meetings, workshops and training.

Ms Ruengjumroonath is leaving us to become a member of Singapore Airlines' cabin crew.

## Meetings

Africa

### African veterinary para-professionals call for renewed framework to engage with the veterinary profession and for enhanced involvement in veterinary matters across the African continent

OIE/AVTA/GALVmed Conference on the Role of Veterinary Para-Professionals in Africa

Pretoria, South Africa, 13–15 October 2015



The inaugural continental Conference for Veterinary Para-Professionals took place in Pretoria, from 13 to 15 October 2015. It was organised by the OIE and the African Veterinary Technicians Association (AVTA), with the financial and technical support of the Global Alliance for Livestock Veterinary Medicines (GALVmed) and the South African Department of Agriculture, Forestry and Fisheries (DAFF), in a bid to improve the quality of field work in Africa by strengthening the links and cooperation between veterinarians and veterinary para-professionals.

Veterinary para-professionals are particularly important in Africa, due to the relative shortage of veterinary surgeons on the continent, the sheer size of its rural areas, the nomadic production systems which are customary in so many countries, and the consequent lack of supervision by qualified veterinarians. The existence of Community-based Animal Health Workers (CAHWs), in addition to veterinary para-professionals, is not exclusive to Africa, but there has been widespread experimentation with the use of CAHWs on the continent, both in peacetime and during times of conflict.

According to the *Terrestrial Animal Health Code* glossary, a **veterinary para-professional** means a person who, for the purposes of the *Terrestrial Code*, is authorised by the veterinary statutory body to carry out certain designated tasks (dependent upon the category of veterinary para-professional) in a territory, and delegated to them under the responsibility and direction of a veterinarian. The tasks for each category of veterinary para-professional should be defined by the veterinary statutory body depending on qualifications and training, and according to need.



The national definition varies from country to country but may include animal health technologists, laboratory animal technologists, horse farriers, equine dental technicians, animal production officers, animal scientists, livestock officers, vaccinators, extension officers, veterinary nurses, artificial inseminators, meat inspectors, food inspectors, veterinary laboratory technicians and animal health technicians – who may or may not be registered by the national Veterinary Council or Veterinary Board.

This conference brought together some 100 participants, including a selection of African representatives from National Associations/Federations of Veterinary Para-Professionals. (Many countries have these associations for different categories of veterinary para-professionals: e.g. nurses, meat inspectors, laboratory technicians, field technicians, inseminators, etc.). Also in attendance were representatives of the Veterinary Authority (the Director of Veterinary Services) and the Veterinary Statutory Body (Veterinary Council or Board).

After three days of intense debate, participants resolved:

- to support veterinary para-professionals to establish independent national, regional and/or sector-wide associations, which are competent to represent the profession(s) in the Veterinary Statutory Body or Bodies; and
- to convince National Veterinary Statutory Bodies to include veterinary para-professionals in their decision-making bodies beyond the mere registration or listing of para-professionals. Moreover, to ask National Veterinary Statutory Bodies to define the conditions and admission criteria for continuing education and postgraduate education for veterinary para-professionals, and to take the necessary steps to achieve enforceable legislation to that effect.

In turn, the OIE is tasked:

- with developing minimum day-one competences and minimum core training curricula for the various categories of para-professionals, in scope and in level of qualification; and
- with encouraging representatives of national, regional and continental associations of veterinary para-professionals to take part in the Fourth OIE Global Conference on Veterinary Education, to be held in Thailand in June 2016.

## RECOMSA seminar dedicated to the communication strategy, awareness and training on rabies for Maghreb countries

*Tunis, Tunisia, 4–5 November 2015*

Rabies is endemic in the canine population of many North African countries, in which the great majority of human rabies cases are caused by dog bites from infected dogs, and where the number of human cases has been steadily increasing over recent years.

The OIE plays its part in the global fight against rabies by organising training seminars for its National Focal Points in the relevant fields (animal disease notification, wildlife, communication) to improve their knowledge of this disease and epidemiological rabies monitoring and communication in their own countries.

Under the framework of the Mediterranean Animal Health Network (REMESA), representatives of five North African countries (Algeria, Libya, Mauritania, Morocco and Tunisia) gathered in Tunis for a seminar dedicated to rabies communication.



Opening session (from left to right): Dr Rachid Bouguedour, OIE Sub-Regional Representative for North Africa; Dr Malek Zrelli, Chief Veterinary Officer and Delegate of Tunisia to the OIE; Dr Mohammed Bengoumi, FAO–Tunis



Besides the Focal Points of REMESA's Animal Health Communication Network (RECOMSA), several Tunisian Ministries were represented: the Ministry of Agriculture, the Ministry of Health, the Ministry of Home Affairs (which deals with stray dog control), and the Ministry of Education, since children are the first victims of dog bites and therefore rabies. Several representatives of the Pasteur Institute also took part in the event.

Around 30 representatives of the various organisations involved in the fight against rabies attended, to gain a common understanding of the disease and to share their knowledge.

After a review of the situation on rabies presented by French (ANSES, the French Agency for Food, Environmental and Occupational Health and Safety) and Tunisian (DGSV, the Directorate General of Veterinary Services) experts highlighting the epidemiological and economic aspects of the disease, each country presented examples of communication campaigns at national level. Students from Sidi Thabet National School of Veterinary Medicine (Tunisia), who had collaborated in the organisation of the seminar, also shared with participants actions they have undertaken on this issue (for instance, a video<sup>1</sup>).



**Group photo**

Communications experts from the OIE, WHO and a communications agency, as well as a sociologist, explained the basic principles of communication needed to send consistent messages and create an effective national awareness campaign. Lively and constructive working-group sessions contributed to an exchange of views and improvement in the cohesion between the various players in the fight against rabies.

This seminar demonstrated the very active collaboration on risk communication between the OIE and WHO. Moreover, it provided participants with a wide range of methodological tools that they can use to design risk communication strategies for their own countries, such as the *Communication Handbook for Veterinary Services*, jointly developed by the OIE and WHO.



**A representative from Mauritania and a WHO Communications expert in a role playing session**



**Dr Catherine Bertrand-Ferrandis, Head of the OIE Communication Unit**

<sup>1</sup> Vaccinate your dog! Protect yourself!: [www.youtube.com/watch?v=Bv\\_txfa4fLo](http://www.youtube.com/watch?v=Bv_txfa4fLo)



## SEACFMD Animal Movement Meeting

*Qingdao, People's Republic of China, 25 August 2015*

A high-level meeting of the South–East Asia and China Foot and Mouth Disease Campaign (SEACFMD) was held on 25 August 2015 in Qingdao, the People's Republic of China (P.R. China). Its purpose was to present and discuss the results of an animal movement study, jointly funded by the Chinese government and the Australian Stop Transboundary Animal Diseases and Zoonoses (STANDZ) Programme. Participants included Deputy Directors General from seven SEACFMD Member Countries, Australia, P.R. China, New Zealand, observers, OIE staff, and the Animal Movement Study Consultant, Dr Polly Smith.

Dr Gardner Murray, President of the OIE Sub-Commission for FMD Control in South–East Asia and P.R. China, explained that, given the high risk of disease spread through legal and illegal livestock movements, senior animal health officials, particularly those from the Greater Mekong Sub-Region (GMS), had asked the OIE Sub-Regional Representation for South-East Asia (Bangkok) to coordinate research and advise the Directors General and the OIE on this crucial issue. Dr Wang Gongmin, Deputy Director General of the Veterinary Bureau in P.R. China, emphasised the risks of transboundary disease spread from illegal livestock movements and encouraged participants to work together to help control this problem.

To bring participants up to date on the background to this topic, presentations and discussions were held on a range of relevant issues, including the recent FMD situation; enhanced disease reporting linked to animal movement data; the OIE standards; SEACFMD Member Countries' policies and regulations on animal movements; and the complexities of having many border agencies. It was good to note that there are multilateral agreements in place which can be used to underpin safe livestock movements if necessary: for example, the Agreement between the Association of Southeast Asian Nations (ASEAN) and P.R. China on trade facilitation and biosecurity protection, and the GMS Agreement on trade facilitation.

Dr Polly Smith presented a report on her study, which sought to identify major movement pathways and supply chains of large ruminants in the GMS. She described the dynamic nature of livestock movement routes both into and within the region and the importance of developing regional disease control initiatives. Her recommendations included developing protocols to support livestock movement according to health

status; the use of regionally accepted vaccination certificates; the movement of animal products, rather than live animals, wherever possible; and the creation of control zones. The study will be used as a benchmark document to support further studies and action in the livestock movement area.

The meeting also discussed the magnitude and scale of illegal animal movements both within and from outside the region and the need to enhance inter-agency cooperation and work closely with traders, in particular, so that realistic but safe approaches to animal movements can be developed and implemented. The ASEAN Economic Agreement, which came into force in 2015, has implications for trade and transport infrastructure in the near-to-medium term, and future work will need to take new developments into account.

The meeting produced a number of key recommendations for consideration by the Directors General. They included:

- supporting the applicability of the GMS 'Single-Window Inspection' system to livestock movements
- assessing the risks associated with disease spread outside the region
- re-examining and updating the 2009 Statement on Procedures to Harmonise Movements between Cambodia, P.R. China, Laos, Cambodia, Malaysia, Thailand and Vietnam – for signature by the Directors General by May 2016
- supporting a proposal from P.R. China to establish a number of control zones on its borders with key South-East Asian countries, and working with neighbouring countries to establish equivalent control zones to facilitate safe trade.

These recommendations will be followed up with countries and considered at the OIE SEACFMD Sub-Commission Meeting in March 2016 in Chiang Mai, Thailand. It is anticipated that further discussions on future action will be held with the Directors General at the OIE World Assembly Meeting in May 2016.

## 18th SEACFMD National Coordinators' Meeting

*Qingdao, People's Republic of China, 26–28 August 2015*

The SEACFMD<sup>1</sup> National Coordinators' Meeting was held in Qingdao from 26 to 28 August 2015. A total of 48 participants attended, including the SEACFMD National Coordinators from 11 Member Countries, as well as donors, partners and observers.

The meeting's objectives were to:

- review progress of the SEACFMD Sub-Commission Meeting held in Manila in March 2015 (see *Bulletin*, no. 2015–3, pp. 29–30)
- finalise the 2020 SEACFMD Roadmap and agree how best it should be managed
- draft a Regional Implementation Plan
- consider Progressive Control Pathway (PCP) self-evaluations
- recommend FMD vaccine strains for the OIE Vaccine Bank
- discuss vaccine and post-vaccination monitoring strategies, and
- review the findings and recommendations of the Animal Movement Meeting held on 25 August.

Given the range and complexity of many of these issues, facilitated workshops were used to aid discussion and analysis.

In his opening remarks, Dr Gardner Murray, President of the OIE Sub-Commission for FMD Control in South-East Asia and China, emphasised the importance of this meeting in assessing progress since the Sub-Commission Meeting in March 2015 and working on strategies for the future, including finalisation of the SEACFMD 2020 Roadmap. Welcoming participants to the meeting, Dr Wang Gongmin, Deputy Director General of the Veterinary Bureau of the People's Republic of China, spoke of the strong performance of SEACFMD over recent years and his expectation that SEACFMD cooperation and success would continue.

It was agreed that significant and substantial progress had been made in implementing the recommendations of previous Sub-Commission meetings. To provide context, presentations were given on the global, regional and national FMD situation. One major point of discussion was the change in FMD trends

in the region, with a decreased incidence of FMDV type A outbreaks and an increased incidence and spread of FMD type O/SEA/Mya-98. Countries were asked to submit more samples to the Regional Reference Laboratory in Thailand for characterisation. Increased efforts to improve vaccine matching were also encouraged.

Participants agreed on refinements to the SEACFMD 2020 Roadmap, such as the inclusion of country annexes that will describe national targets for FMD control. It was expected that the Roadmap would be published in October 2015 and provide strategic direction for Phase 5 (2016–2020) of the SEACFMD Programme. The Roadmap will be supported by a number of operational documents that are reviewed on an annual basis, so that the programme can be modified, if this is thought necessary.

A mapping and resources database, developed by the OIE Sub-Regional Representation for South-East Asia to support FMD control and capacity-building in the region, was described. This will require regular updating and help in determining resource allocations and needs. A Regional Implementation Plan describing key targets and indicators was drafted at the meeting, based on discussions and presentations of Member Countries' National Implementation Plans. This plan will be tabled for endorsement at the SEACFMD Sub-Commission Meeting in Thailand, in March 2016.

Given the vital importance of vaccination, a facilitated workshop was held to consider vaccination strategies and post-vaccination monitoring. FMD vaccine strains considered important to the region were discussed for possible inclusion in the OIE FMD Vaccine Bank. Recommended strains were: O<sub>1</sub> Manisa, O Cathay, O PanAsia-2, A<sub>22</sub> Iraq, A Malaysia 97, A Iran 05 and Asia 1 Shamir. It was suggested that FMD vaccine producers be asked to recommend additional virus strains for consideration, given their knowledge of FMD in the region.

The meeting supported the recommendations of the Animal Movement Meeting held on 25 August and concluded with a field trip to the China Animal Health and Epidemiology Centre, where participants were introduced to the research and related activities being carried out.

**The SEACFMD Campaign, including the latest edition of the SEACFMD 2020 Roadmap:**  
[www.rr-asia.oie.int/activities/sub-regional-programme/stanz/seacfmd/](http://www.rr-asia.oie.int/activities/sub-regional-programme/stanz/seacfmd/)

<sup>1</sup> SEACFMD: South-East Asia and China Foot and Mouth Disease Campaign



## 6th Asia–Pacific Workshop on Multi-Sectoral Collaboration for the Prevention and Control of Zoonoses

Sapporo, Japan, 28–30 October 2015

The FAO<sup>1</sup>, OIE and WHO<sup>2</sup> are working together to aid countries in the surveillance, prevention and control of zoonoses and emerging diseases at the human, animal and ecosystem interface. As part of this task, they have established a mechanism to coordinate their policies and activities (the Tripartite coordination mechanism). In the Asia–Pacific region, annual regional workshops have been organised to review progress in the prevention and control of zoonoses and to define way to further strengthen the multi-sectoral coordination and collaboration that began in 2010. This workshop was the sixth meeting to reflect on the progress achieved in zoonosis prevention and control at the national and regional levels. In addition, it addressed other multi-sectoral threats to public health, such as antimicrobial resistance.

The Workshop on Multi-Sectoral Collaboration for the Prevention and Control of Zoonoses was held from 28 to 30 October 2015 at the Research Center for Zoonoses Control at Hokkaido University in Sapporo, Japan. There were 89 participants from 22 countries,

including representatives from both the animal health and public health sectors, two Sub-Regional Representatives (ASEAN Secretariat-PH<sup>3</sup> and SAARC<sup>4</sup> Secretariat-AH<sup>5</sup>), ten development partners (CDC<sup>6</sup>, CIRAD<sup>7</sup>, DTRA/CBEP<sup>8</sup>, JICA<sup>9</sup>, MBDS<sup>10</sup>, NIID<sup>11</sup>, NVAL<sup>12</sup>, CSIRO<sup>13</sup>, USDA–APHIS<sup>14</sup> and WAP<sup>15</sup>) and the Tripartite (FAO, OIE and WHO). The workshop was organised by the Regional Tripartite (FAO–RAP<sup>16</sup>, OIE RRAP<sup>17</sup>, OIE SRR–SEA<sup>18</sup>, WHO–SEARO<sup>19</sup> and WHO–WPRO<sup>20</sup>), with the main Secretariat this year being OIE RRAP. Opening remarks were made by: Dr Kazuo Ito, Director of the Japanese Ministry of Agriculture, Forestry and Fisheries; Dr Shoji Miyagawa, Director of the Japanese Ministry of Health, Labour, and Welfare; Prof. Hiroshi Kida from Hokkaido University Research Center for Zoonoses Control; Dr Peter Black, FAO Deputy Regional Manager; Dr Frank Konings, WHO Technical Officer; and Dr Hirofumi Kugita, OIE Regional Representative for Asia and the Pacific.

### The objectives of these workshops are:

- a) to brief participants on the latest scientific information and to update the situation in regard to emerging and re-emerging zoonotic diseases and other public health threats, at the national, regional and worldwide level
- b) to review progress achieved and challenges encountered in regional and national multi-sectoral collaborations over recent years; in particular, since these regional zoonoses workshops began, in 2010
- c) to map out a way forwards
- d) to discuss how multi-sectoral collaboration can contribute to public health emergencies, and
- e) to make recommendations on how to improve coordination and collaboration between the human health, animal health and other relevant sectors for zoonoses prevention and control.

1 FAO: Food and Agriculture Organization of the United Nations

2 WHO: World Health Organization

3 ASEAN: Association of Southeast Asian Nations; PH: Public Health

4 SAARC: South Asian Association for Regional Co-Operation

5 AH: Animal Health

6 CDC: Centers for Disease Control and Prevention

7 CIRAD: Centre de coopération internationale en recherche agronomique pour le développement

8 DTRA/CBEP: the Defense Threat Reduction Agency's (DTRA) Cooperative Biological Engagement Program (CBEP)

9 JICA: Japan International Cooperation Agency

10 MBDS: Mekong Basin Disease Surveillance

11 NIID: National Institute of Infectious Diseases

12 NVAL: National Veterinary Assay Laboratory

13 CSIRO: Commonwealth Scientific and Industrial Research Organisation

14 USDA–APHIS: Animal and Plant Health Inspection Service (APHIS), agency of the United States Department of Agriculture (USDA)

15 WAP: West African Economic and Monetary Union (WAEMU) Agricultural Policy

16 FAO–RAP: FAO, Regional Office for Asia and the Pacific

17 OIE RRAP: OIE Regional Representation for Asia and the Pacific

18 OIE SRR–SEA: OIE Sub-Regional Representation for South-East Asia

19 WHO–SEARO: WHO South-East Asia Regional Office

20 WHO–WPRO: WHO Western Pacific Regional Office



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Participants came from a variety of organisations and possessed a wide range of skills. During the workshop, they had many opportunities to share their knowledge and experience on topics that included: zoonoses of regional significance, such as rabies and influenza; antimicrobial resistance initiatives; the use of the OIE PVS Pathway and WHO International Health Regulation (IHR) framework to support good governance; and emergency response lessons learned from the 2015 Nepal earthquake. From these reports, it was clear that ‘One Health’ progress in the region has advanced considerably over the past six years, and its countries are in a better position to prevent and control zoonoses and respond to public health emergencies. Considering that 75% of newly emerging diseases come from animals and affect a wide range of sectors, the participants agreed that it is important to reinforce this multi-disciplinary approach, by including professionals such as physicians, veterinarians, environmentalists, wildlife experts, sociologists and economists.



**The Regional Tripartite**

Participants felt that, on the whole, it had been an informative, participatory, and successful meeting.

The Workshop Report recommended that the next Asia–Pacific Workshop on Multi-Sectoral Collaboration for the Prevention and Control of Zoonoses should take place in two years (2017), to allow time to make meaningful progress, to adequately coordinate and prepare the workshop itself, and to make more efficient use of limited financial resources.



## 5th OIE Sub-Regional Workshop for Veterinary Statutory Bodies

Pattaya, Thailand, 9–10 November 2015



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changing landscape of the veterinary profession and reminded participants of the importance of veterinary education and VSBs in ensuring competent and ethically sound Veterinary Services. Dr Wimolporn Thitisak noted that supporting VSBs will also strengthen Veterinary Services in the South-East Asian region and so promote both animal and public health in the process.

Dr Ronello Abila, OIE SRR–SEA Representative, presented the OIE international standards on VSBs from the *Terrestrial Animal Health Code*, Chapter 3.2.12., and provided the results from a survey of VSBs in the sub-region. Other OIE SRR–SEA staff gave an overview of

The OIE Sub-Regional Representation for South-East Asia (OIE SRR–SEA) organised the Fifth Sub-Regional Workshop for Veterinary Statutory Bodies (VSBs) in Pattaya, Thailand, from 9 to 10 November 2015. The workshop brought together 28 representatives of VSBs (e.g. presidents, registrars, etc.), Veterinary Associations and Veterinary Authorities from nine ASEAN<sup>1</sup> Member States. In addition, there were ten speakers and participants from ASEAN, Australia and New Zealand, the European Union, North America and the OIE.

the state of VSBs in ASEAN, an analysis of findings from seven OIE PVS Evaluation reports related to VSBs in South-East Asia from 2006 to 2012, and a thorough overview of the OIE Veterinary Statutory Body Twinning Programme, including its objectives and application process.

Dr Pennapa Matayompong, OIE STRIVES<sup>2</sup> Programme Coordinator, gave a comprehensive presentation on VSBs in ASEAN by describing the outcomes of previous VSB and MRA meetings. She also explained the OIE Veterinary Statutory Body Twinning Programme and strongly encouraged participants to take advantage of it.

Dr Scott Zaari analysed the findings from the seven OIE PVS Evaluation reports on VSBs in South-East Asia from 2006 to 2012. Findings from the critical competency (CC) III-5 A and B VSB Authority and Capacity were summarised anonymously from a sub-regional perspective.

Guest speakers Dr Jan Vaarten, Executive Director of the Federation of Veterinarians of Europe (FVE); Dr Julie Strous, Executive Director of the Australasian Veterinary Boards Council (AVBC); Dr Nichole Gallant, President of the Canadian Veterinary Medical Association (CVMA); and Ms Nurul Imlati, Representative of the ASEAN Secretariat, discussed regional models for the cross-border recognition of veterinarians in the context of a potential veterinary MRA between ASEAN Member States.

### The workshop's objectives were to:

- a) illustrate the role and current progress of VSBs in the sub-region
- b) discuss and exchange various approaches for strengthening VSB authority and capacity in compliance with OIE intergovernmental standards
- c) discuss the establishment of a VSB Network in ASEAN Member States, and
- d) discuss the recognition of transboundary mobility of veterinarians through a **Mutual Recognition Agreement (MRA)**.

The workshop began with opening remarks from Dr Gardner Murray, OIE Special Advisor, and Dr Wimolporn Thitisak, Deputy Director General of the Department of Livestock Development (DLD), Thailand. Dr Murray referred to the

<sup>1</sup> ASEAN: Association of South-East Asian Nations

<sup>2</sup> STRIVES: Programme on Strengthening Initiative for Veterinary Services

From discussions and presentations by VSB representatives, it is clear that the majority of countries in South-East Asia have a functioning VSB with a significant capacity to fulfil its core functions. Although there are still some countries without a functioning VSB, all of them have made significant steps towards amending or creating new legislation that, if all goes as planned, will pave the way for the establishment of a functioning VSB in every ASEAN Member State by 2017. Participants agreed that the OIE PVS Pathway reports and the information now available on the VSB situation will provide a useful baseline to measure future progress. Moreover, OIE PVS Evaluation Follow-Up missions may shed some light on gaps that were highlighted during the workshop, such as the lack of regulation of veterinary para-professionals. Participants agreed that the OIE Veterinary Statutory Body Twinning Programme could also support VSBs by addressing these issues. In addition to this, they recommended that the OIE consider reviewing the nature, scope and role of veterinary para-professionals, as well as the merits of expanding on this issue through OIE guidelines.

The workshop set the foundations necessary for a veterinary MRA. Participants agreed to establish an ASEAN VSB information-sharing network in accordance with the revised Term of Reference proposed during the meeting, and to advise the ASEAN Sectoral Working Group on Livestock (ASWGL) of this initiative. This new network, to be chaired by an ASEAN country, will share information, assist those countries that do not at this stage have VSBs, and contribute in due course to MRA developments.

With regard to legislation, six out of ten ASEAN Member States have a VSB with a legal basis: Brunei, Indonesia, Malaysia, Myanmar, the Philippines and Thailand. All Member States with a VSB (six) or related body (one) have some role in regulating the delivery and quality of veterinary education in their countries. For example, all VSBs with a Veterinary Educational Establishment in their own country take a role in setting the minimum standards of veterinary education and/or accrediting these institutes.



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To date, eight professional bodies, excluding the veterinary sector, have signed a multi-stage MRA that could eventually give individuals a greater ability to work in their respective fields across the sub-region. Nonetheless, each profession is at a different stage of constructing the framework for their signed MRA.

In terms of licensing/registration of veterinarians and veterinary para-professionals, all the current VSBs or related bodies demonstrated the ability to license domestic and foreign veterinarians in their respective countries, based on defined professional qualifications (e.g. graduation from an accredited school).



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## 13th Conference of the OIE Regional Commission for the Middle East

*Kaslik, Lebanon, 10–14 November 2015*

The 13th Conference of the OIE Regional Commission for the Middle East was held at the Holy Spirit University of Kaslik (USEK), Lebanon, from 10 to 14 November 2015 and attended by a total of 105 participants, including OIE Delegates and/or nominees of 17 Member Countries and one Observer Country, as well as senior officers from four international organisations.

The Conference was opened by Eng. Louis Lahoud, Director General of the Ministry of Agriculture of Lebanon, and Dr Bernard Vallat, Director General of the OIE. Dr Vallat expressed his deepest gratitude to the Lebanese authorities and to the USEK University for all the support provided to the OIE for the organisation of the Conference. He commented that over the past decade, the OIE had expanded its mandate to advocating the importance of Veterinary Services activities, food safety of animal products, animal welfare and assisting Members in complying with international standards on governance. He underlined that, notwithstanding the advances made to date, there were still many challenges ahead, such as inappropriate veterinary legislation, scarce public funding of Veterinary Services, environmental controversies around livestock and antimicrobial resistance. The Director General of the Ministry of Agriculture of Lebanon pointed out that holding the conference in Lebanon represented additional support for the country in facing the great animal health challenges of the past four years due to the growing pressure of the Syrian crisis raging on the northern

and eastern borders, accompanied by the arrival of many cattle herds on Lebanese territory. Dr Lara Hanna Wakim, Dean of the Faculty of Agricultural and Food Sciences of USEK, Dr Kassem Nasser Al-Qahtani, President of the OIE Regional Commission for the Middle East and Delegate of Qatar, and Dr Ghazi Yehia, OIE Regional Representative for the Middle East, also addressed welcome messages to the Conference.

Participants received details of the Sixth Strategic Plan and its regional perspectives. Dr Vallat informed them that it was a consolidated statement of the OIE's strategic vision and its global goals, based on the success of activities undertaken during the implementation of the Fifth Strategic Plan. He also noted that the OIE's global vision was clearly expressed in the Plan as 'Protecting animals; preserving our future', leading to economic prosperity and social and environmental well-being.

Two Technical Items of interest for the region were presented: Technical Item I regarding the **'Control of rabies in the Middle East region, with emphasis on stray dog control'**; and Technical Item II concerning **'The use of non-structural proteins to differentiate between vaccinated and infected animals'**. After lively and stimulating discussions, participants came forward with relevant recommendations that will be submitted for endorsement by the World Assembly of Delegates in the next General Session in May 2016 in Paris.

On the second day of the Conference, Dr François Caya, Head of

the OIE Regional Activities Department, provided participants with an overview of the preliminary analysis of the answers to the questionnaire on OIE Member Countries' experience with the PVS Pathway. He informed the Regional Commission that the results of this survey would be used to improve the PVS Pathway to ensure that this important OIE programme continues to fulfil the expectations of OIE Member Countries.

Other relevant topics presented and discussed during the Conference included Camel Disease Control, the OIE/FAO global strategy for the control and eradication of PPR, the 'One Health' concept, and an analysis of the Animal health situation of Member Countries in the region during 2015.

Within the framework of the OIE Capacity Building programme for National Veterinary Services, and taking advantage of having the Delegates of the Region together, the OIE also organised a one-day back-to-back Seminar for National Delegates on the 'Development of public-private partnerships to support Veterinary Services'. The seminar was financed by the Bill & Melinda Gates Foundation and facilitated by OIE experts. The seminar provided a forum for the participants to discuss the importance of relations between the official Veterinary Services and veterinarians in the private sector, veterinary technicians and community animal health workers in the Middle East.

During the closing session of the Conference, participants expressed their gratitude to the Government of Lebanon for the warm welcome, the excellent organisation and for all the facilities made available to them during their stay in Kaslik.

## Appointment of permanent Delegates

18 August 2015

### Malaysia

*Dr Bin Md Isa Kamarudin*

Deputy Director General, Department of Veterinary Services, Ministry of Agriculture and Agro-based Industry



13 November 2015

### Vanuatu

*Dr Roger Phillips*

Acting Principal Veterinary Officer, Biosecurity Vanuatu, Ministry of Agriculture, Livestock, Forestry, Fisheries & Biosecurity

16 December 2015

### Belarus

*Dr Aliaksandr Subotsin*

Deputy Minister, Chief State Veterinary Officer, Department of Veterinary and Food Surveillance, Ministry of Agriculture and Food



18 December 2015

### Argentina

*Dr Jorge Horacio Dillon*

Presidente del Servicio Nacional de Sanidad y Calidad Agroalimentaria (SENASA), organismo descentralizado del Ministerio de Agroindustria de la Nación

29 December 2015

### Honduras

*Dr Rafael Enrique Rodriguez A.*

Jefe Departamento Epidemiología Salud Animal, Subdirección Técnica de Salud Animal del Servicio Nacional de Sanidad Agropecuaria (SENASA)



5 January 2016

### Ghana

*Dr Kenneth M. K. Gbeddy*

Chief Veterinary Officer, Veterinary Services Directorate, Ministry of Food and Agriculture



19 January 2016

### Malta

*Dr Roberto Andrea Balbo*

Chief Veterinary Officer, Director (Veterinary Regulation), Veterinary and Phytosanitary Regulation Department, Ministry for Sustainable Development, the Environment and Climate Change

21 January 2016

### Estonia

*Dr Olev Kalda*

Chief Veterinary Officer, Veterinary and Food Board, Ministry of Agriculture



25 January 2016

### Sri Lanka

*Dr Tiskumarage Aruna Chithrangani Tiskumara*

Director General, Department of Animal Production and Health, Ministry of Livestock & Rural Community Development

1 February 2016

### Spain

*Dr Valentín Almansa*

Director General de Sanidad de la Producción Agraria, Ministerio de Agricultura, Alimentación y Medio Ambiente



2 February 2016

### Bangladesh

*Dr H.B.M Golam Mahmud*

Director, Livestock Research Institute (LRI), Ministry of Fisheries and Livestock

8 February 2016

### Czech Republic

*Dr Zbyněk Semerád*

Director General, State Veterinary Administration



22 February 2016

### Nigeria

*Dr Gideon Mbursa Mshelbwala*

Director, Veterinary Services, Department of Veterinary & Pest Control Services, Federal Ministry of Agriculture and Rural Development



3 March 2016

### Gabon

*Dr Guy Anicet Reramyath*

Directeur général adjoint 1 de l'élevage, Direction générale de l'élevage, Ministère de l'agriculture, de l'élevage, de la pêche et de la sécurité alimentaire

# strengthening of Veterinary Services

## OIE PVS Pathway for efficient Veterinary Services

### PVS Evaluation missions

*State of Play – as at 1 March 2016*

OIE Region	OIE Members	Requests received	Missions completed	Reports available for distribution to donors and partners
Africa	54	53	51	43
Americas	29	25	24	19
Asia and the Pacific	32	25	24	12
Europe	53	19	19	11
Middle East	12	13	11	6
<b>Total</b>	<b>180</b>	<b>135</b>	<b>129</b>	<b>91</b>

### 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 (25)**

Australia, Bangladesh, Bhutan, Brunei, Cambodia, Fiji, Indonesia, Iran, Japan, 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 (19)**

Albania, Armenia, Azerbaijan, Belarus, 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 2016

OIE Region	OIE Members	Requests received	Missions completed
Africa	54	41	28
Americas	29	8	6
Asia and the Pacific	32	7	6
Europe	53	5	4
Middle East	12	5	4
<b>Total</b>	<b>180</b>	<b>66</b>	<b>48</b>

### Legislation mission requests

• **Africa (41)**

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

• **Americas (8)**

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

• **Asia/Pacific (7)**

Bhutan, Cambodia, Fiji, Laos, Mongolia, Papua New Guinea, Vietnam.

• **Europe (5)**

Armenia, Georgia, Israel, Kazakhstan, Kyrgyzstan.

• **Middle East (5)**

Afghanistan, Kuwait, Lebanon, Saudi Arabia, United Arab Emirates.

In red: completed missions

## PVS Gap Analysis missions

State of Play – as at 1 March 2016

OIE Region	OIE Members	Requests received	Missions completed	Reports available for distribution to donors and partners
Africa	54	51	47	29
Americas	29	18	13	9
Asia and the Pacific	32	20	15	7
Europe	53	9	8	4
Middle East	12	10	4	0
<b>Total</b>	<b>180</b>	<b>108</b>	<b>87</b>	<b>49</b>

### PVS Gap Analysis mission requests

• **Africa (51)**

Algeria, Angola, Benin\*, Botswana, Burkina Faso, Burundi, Cameroon, Central African (Rep.), Chad, Comoros, 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\*, Mali, Mauritania, Mauritius, Morocco, Mozambique, Namibia, Niger, Nigeria, Rwanda, Senegal, Seychelles, Sierra Leone, South Africa, Sudan, Swaziland, Tanzania, Togo, Tunisia, Uganda, Zambia, Zimbabwe.

• **Americas (18)**

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

• **Asia-Pacific (19)**

Bangladesh, Bhutan, Brunei, Cambodia, Fiji, Indonesia, Iran, Dem. People's Rep. of Korea, Laos, Maldives, 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 (10)**

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

In red: completed missions

\*Including second Gap Analysis missions and Aquatic Gap Analysis mission

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



## Workshop on the World Animal Health Information System (WAHIS) for Focal Points for Animal Disease Notification to the OIE

*OIE Headquarters, Paris, 6–8 October 2015*

A workshop on the OIE World Animal Health Information System (WAHIS) and its public interface was held at the OIE Headquarters in Paris from 6 to 8 October 2015. The training sessions were organised by the OIE World Animal Health Information and Analysis Department, in collaboration with the Regional Activities Department, and intended for recently appointed Focal Points for Animal Disease Notification to the OIE or those who had not taken part in a WAHIS workshop before.

The staff of the World Animal Health Information and Analysis Department provided training to familiarise the Focal Points with the use of WAHIS and its public interface through presentations and real-life practical exercises. Participants took part in an interactive online demonstration of how to enter immediate notifications and six-monthly reports. Identifying the most common errors made during these steps gave participants a better grasp of all the various aspects of the process of notifying animal health information to the OIE. Conducting information searches on the public interface of WAHIS also highlighted to the Focal Points their vital role in transmitting data to ensure the transparency of the animal health situation throughout the world. For the first time, the workshop also included a presentation on the exchange of information between national public health bodies and Veterinary Services. This was given by Dr Clara Marcé, from the Ministry of Agriculture, Food and Forestry of France, the former Focal Point of France for Animal Disease Notification to the OIE.

Twenty-eight participants took part in the training course, from 26 countries and territories, namely: Albania, the Bahamas, Bahrain, Burundi, Cabo Verde, Colombia, Côte d'Ivoire, Egypt, Finland, France, Gabon, Guyana, Japan, Liberia, Malaysia, Malta, the Palestinian Autonomous Territories, Panama, San Marino, Somalia, Tanzania, Timor-Leste, Tunisia, Turkmenistan, the United Arab Emirates and the United Kingdom. A staff member from the OIE Sub-Regional Representation for Eastern and the Horn of Africa and an observer from the European Union were also present, while, for the benefit of



participants, a team of interpreters relayed the training sessions in three languages, English, French and Spanish.

At the end of the workshop, participants were asked to complete an evaluation questionnaire. Questions were scored on a scale of 1 to 4 (1: dissatisfied; 4: completely satisfied). The overall mean score for the WAHIS training workshop was 3.6. When participants were asked if the workshop had met their expectations in terms of knowledge of WAHIS, they gave it a mean score of 3.8. Furthermore, all felt that the training would have a positive impact on their work as Focal Points. Lastly, the participants unanimously agreed that, after this course, they considered themselves capable of submitting the various types of notification reports to the OIE.

The Focal Points enjoyed the chance to meet and discuss their responsibilities with other participants and with the workshop facilitators. The fact that this training had taken place in Paris was particularly appreciated. They did, however, regret not having had more time for the training itself and for strengthening links with their colleagues. Some participants felt that the workshop was too short, given the density of the content, and asked that it be increased in length in future.

## Regional Seminar for OIE National Focal Points for Veterinary Products

*Entebbe, Uganda, 1–3 December 2015*

The OIE has just completed the fourth training cycle for OIE Focal Points for Veterinary Products. The seminar was held in the East African town of Entebbe, Uganda, and was attended by national OIE Delegates and OIE Focal Points for Veterinary Products from 30 countries in English-speaking Africa and the Middle-East, i.e. Afghanistan, Angola, Bahrain, Botswana, Egypt, Eritrea, Ethiopia, Gambia, Ghana, Iran, Iraq, Kenya, Lebanon, Lesotho, Liberia, Malawi, Mauritius, Mozambique, Namibia, Nigeria, Seychelles, Sierra Leone, Somalia, South Sudan, Sudan, Swaziland, Tanzania, Zambia, Zimbabwe and the host country: Uganda.

Contributions were made by OIE regional staff (from Beirut, Gaborone, Nairobi) and OIE Headquarters staff (from the Scientific and Technical Department), four OIE Reference Centres on Veterinary Products (ANSES<sup>1</sup> France, AU-PANVAC<sup>2</sup> Ethiopia, EISMV<sup>3</sup> Senegal and the FDA<sup>4</sup>, United States), as well as invited regional and international experts from Jordan, Kenya, Uganda and the United Kingdom.

The seminar started with a morning session, mainly directed at newly appointed Focal Points but open to all, providing a rapid overview of the OIE and its activities related to veterinary



products, a subject covered in previous training sessions. This enabled newly appointed Focal Points to be adequately informed on the OIE and its main standards and guidelines, terms of reference and issues pertaining to veterinary products.

The opening ceremony was held at the end of this first session and was led by the State Minister for Animal Industries, the Hon. Bright Rwamirama, who delivered an opening address. He was accompanied by Dr Ali El-Romeh, Attaché de Mission at the OIE Regional Representation for the Middle East; Dr Walter Masiga, OIE Sub-Regional Representative for Eastern and the Horn of Africa; Dr Elisabeth Erlacher-Vindel,

Deputy Head of the OIE Scientific and Technical Department; and Dr Nicholas Kauta, Delegate of Uganda to the OIE and Member of the OIE Council.

Subsequent sessions covered:

- antimicrobial resistance, including the WHO Global Action Plan, Tripartite activities, and respective resolutions.

The host country, Uganda, reported on the joint WHO–Uganda AGISAR project, initiated in early 2015. Copies of the Global Action Plan were provided to all participants, as well as posters of the recently held World Antibiotic Awareness Week;

- the OIE database for the collection of data on antimicrobials for use in animals, with a particular focus

1 ANSES: French Agency for Food, Environmental and Occupational Health & Safety

2 AU-PANVAC: African Union–Pan African Veterinary Vaccine Centre

3 EISMV: *Ecole Inter Etats des Sciences et Médecine Vétérinaires* (Inter-State School of Veterinary Science and Medicine)

4 FDA: Food and Drug Administration

5 AGISAR: Advisory Group on Integrated Surveillance of Antimicrobial Resistance

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

on completion of the questionnaire that was sent to all Focal Points a few weeks ago. This session included a working-group session in three small groups to raise awareness and provide Focal Points with a good understanding of the project and the requirements of the questionnaire;

- anti-parasitic drugs (mainly against helminths and protozoa) were identified as items of specific regional interest and were discussed in view of the development of resistance and the need for prudent use. Appeals were made to the OIE to take this category

of veterinary products into account, along with acaricides, against which resistance appears to be rampant across much of Africa and the Middle East;

- the quality of veterinary products and action against counterfeit products, including an update on the *International Cooperation on Harmonisation of Technical Requirements for Registration of Veterinary Medicinal Products* (VICH), good governance principles and legislation.

The afternoon of the second day was dedicated to field visits to the capital, Kampala, with a trip to a veterinary

pharmaceutical wholesaler, Eram Uganda Ltd, and the pharmaceutical quality control laboratory of the Ugandan National Drug Authority (NDA).

The training course was funded by the OIE World Animal Health and Welfare Fund – through grants from the European Union (VET GOV programme) and the Republic of Italy –, as well as financial support from the hosting country. A seminar for National Focal Points for Veterinary Products from French-speaking African countries, was held in Dakar, Senegal, from 21 to 23 March 2016.

## Asia – Pacific

## 4th OIE Sub-Regional Workshop on Animal Health Communication

*Siem Reap, Cambodia, 16–17 November 2015*



The OIE Sub-Regional Representation for South-East Asia (OIE SRR–SEA) organised the Fourth OIE Sub-Regional Workshop on Animal Health Communication in Siem Reap, Cambodia, on 16–17 November 2015.

The workshop reviewed the key aspects of the South-East Asian Strategy for Animal Health Communication, taking into account new disease trends and research findings on animal diseases, as well as the changing economic and political landscape since the strategy was developed in 2009.

Workshop participants recommended:

a) that the South-East Asian Strategy for Animal Health Communication be revised, to align it with OIE intergovernmental standards on communication and to take developments since 2009 into account; in particular, the ASEAN<sup>1</sup> Economic Community (2015) and productive links with ASEAN, the Food and Agriculture Organization (FAO), the World Health Organization (WHO) and the World Trade Organisation (WTO);

b) the development of a platform for the exchange of communication materials among Veterinary Services in the sub-region, through the OIE Focal Points for Communication;

c) the inclusion of a communications module in training courses for new OIE Delegates, focusing on the implementation of OIE communication standards;

d) the organisation of training sessions on risk communication for Veterinary Services in the South-East Asian sub-region – either general training or focused on a specific disease – and the development of ‘tool boxes’ based on this training;

e) that Veterinary Services in South-East Asia be encouraged to establish a communications unit with an adequate budget, staffed by communications specialists, to develop and implement a national communication action plan that promotes the Animal Health Communication Strategy in South-East Asia. Using the results from OIE PVS Pathway reports, OIE Member Countries in South-East Asia have been asked to continue to strengthen communication in animal health and veterinary public health.

Eleven participants attended from seven OIE Member Countries. In addition, there were two observers from the OIE Regional Representation for Asia and the Pacific (Tokyo) and the OIE Bangkok–New Zealand project on foot and mouth disease, as well as eight presenters/facilitators from the OIE and WHO.

In their opening remarks, Dr Gardner Murray, OIE Special Adviser, and Dr Sen Sovann, OIE Delegate of Cambodia and Deputy Secretary-General of the Cambodian

Ministry of Agriculture, Forestry and Fisheries, recounted the many achievements that have taken place since the Communication Strategy was developed in 2009 at the same venue in Siem Reap. These include: the development of the OIE Strategic Framework, focusing on zoonoses, food safety, antimicrobial resistance and the ‘One Health’ approach; the improved links between the OIE and WHO through the OIE Performance of Veterinary Services (PVS) Pathway and WHO International Health Regulations (IHR); and the evolution of ideas into actual programmes of activity. Also discussed were the socio-economic and political developments in ASEAN Member Countries and the establishment of a new communications team at the OIE.

The workshop, which received funding from Australia and the People’s Republic of China, also discussed the problems encountered in organising awareness campaigns. Dr Ronello Abila, OIE Sub-Regional Representative for South-East Asia, gave an overview of the regional disease situation. Other speakers discussed regional developments that should be considered when reviewing the Communication Strategy. These include the work being done by OIE SRR–SEA STANDZ<sup>2</sup> and the STRIVES<sup>3</sup> Programme, which helps Member Countries strengthen their Veterinary Services through the OIE PVS Pathway. The chapter of the *Terrestrial Animal Health Code* (the *Terrestrial Code*) focusing on communication and the role of OIE Focal Points for Communication were also comprehensively discussed.

As recommended in the PVS Evaluation and Gap Analysis reports, the workshop emphasised the importance of having a full-time communications officer, as well as a long-term communications strategy and action plan on animal health and veterinary public health. While there are no overarching strategies for animal health communication in those countries represented in the workshop, there are disease-based communication strategies being implemented, mostly in collaboration with their Ministries of Health.

1 ASEAN: Association of Southeast Asian Nations

2 Stop Transboundary Animal Diseases and Zoonoses (STANDZ) regional initiative: [www.rr-asia.oie.int/activities/sub-regional-programme/standz/](http://www.rr-asia.oie.int/activities/sub-regional-programme/standz/)

3 Programme on Strengthening Initiative for Veterinary Services (STRIVES): [www.rr-asia.oie.int/activities/sub-regional-programme/stanz/strives/](http://www.rr-asia.oie.int/activities/sub-regional-programme/stanz/strives/)

Various speakers explored aspects of:

- the risk communication;
- the importance of understanding and involving the target audience in the development of a communication strategy;
- how to engage the media; and
- developing key messages and talking points.

Dr Catherine Bertrand-Ferrandis, Head of the OIE Communication Unit, introduced the *Communication Handbook for Veterinary Services*, which has been adapted from the WHO's *Effective Communications Participant Handbook*. It provides tips on how to improve communication on animal health and welfare issues.

Cambodia's OIE Focal Point for Communication shared the results of Cambodia's pre-testing of posters

and leaflets which aim to provide guidance to farmers during outbreaks of foot and mouth disease, and explained why it is important to pre-test communication materials before mass production. Thailand's OIE Focal Point for Communication shared Thailand's experience of developing an action plan before a crisis strikes, to help the Thai Department of Livestock Development manage the avian influenza crisis as well as other disease outbreaks. Participants agreed that being a credible partner who listens to and respects the opinions of different target audiences, considers their concerns, and involves them as equal partners in disease management activities is among the key lessons that have been learned and should be considered in the revision and implementation of communication strategic plans.

Europe

## Regional Seminar for OIE National Focal Points for Aquatic Animals

*Bergen, Norway, 1–3 July 2015*

Whether Focal Points were newly appointed or well experienced, this third-cycle Seminar for OIE National Focal Points for Aquatic Animals from Europe was designed to present a range of topics with a 'hands-on' approach, and included key lectures by a range of aquatic animal health experts, including staff from the OIE Collaborating Centres and Reference Laboratories of France, the United Kingdom and Norway.

The seminar focused on topics of major importance for the prevention, detection and control of aquatic



animal diseases, such as surveillance, biosecurity and compartmentalisation, as well as the importance of private–public partnerships. It also covered developments in the OIE *Aquatic Animal Health Code* and the *Diagnostic Manual for Aquatic Animals* since the previous seminar (held in Lisbon, Portugal, September 2013), and encouraged all OIE National Focal Points and Delegates to take a more active role in the OIE standard-setting process. As of 2015, there were 27 OIE-listed diseases that concerned fish, molluscs, crustaceans or amphibians. OIE Member Countries are required to take all necessary measures to ensure the safe and transparent international trade of aquatic animals and their products, by implementing the recommendations of the OIE *Aquatic Code* and *Manual*.

To address the many challenges of the aquatic sector – such as aquatic animal health and welfare and environmental issues – the OIE takes several approaches, one of which is to organise global conferences. Those taking part in the seminar were asked to think about action they could undertake in their own country that would support recommendations from the latest Global Conference on ‘Aquatic Animal Health: Riding the Wave to the Future’, held in Vietnam in January 2015. All 34 participating countries considered the establishment or use of a national network of aquatic experts (from both the public and private sectors) as the top priority.

A half-day field visit to a Norwegian salmon farm provided an excellent opportunity to see this kind of venture in

action and to learn about good salmon-farming practices, from the perspectives of both aquatic animal health and welfare.

Given the importance of aquaculture in Norway, Bergen was an ideal location for this seminar. The OIE wishes to express its sincere thanks to the Norwegian Food Safety Authority – in particular, Dr Kristina Landsverk, Chief Veterinary Officer and Delegate of Norway to the OIE – for its generous hospitality and contribution towards the organisation of this seminar. In addition, the OIE wishes to thank the European Commission for its continuing financial support for this and other OIE regional Focal Point seminars in Europe.

## Regional Seminar for OIE National Focal Points for Animal Welfare

*Kakheti region, Georgia, 13–15 October 2015*

The three main objectives of this OIE regional seminar were to encourage Member Countries to play a more active part in the OIE’s standard-setting process, to inform them of the OIE’s new areas of work in the field of animal welfare and to give them the keys to ensuring better implementation of current animal welfare standards. All three objectives were duly met.

In terms of new areas of work, there were detailed presentations on the new chapter on working horses and the guidelines on the role of the Veterinary Services in the management of natural, man-made and technological disasters, when animal welfare conditions may be severely affected. OIE *Ad hoc* Groups are currently working on these two topics.

To facilitate the application of standards at national level, a visit to a poultry abattoir was arranged for the 38 national representatives present and examples from various countries were presented, along with numerous animal welfare indicators for measuring animal welfare conditions during animal transport or slaughter. This is in line with the objective of the OIE’s new animal welfare standards, which are increasingly oriented towards obligations based on results rather than means. The role of the private sector and non-governmental organisations in the implementation of OIE standards was presented by representatives of each sector.

A detailed presentation was given on the OIE Platform on Animal Welfare for Europe and its programme of activities on animal transport and slaughter and stray



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dog population control. This Platform, which has been in operation since the end of 2013, has already helped to increase the visibility of animal welfare issues in the region and played a part in strengthening the capacity of the Veterinary Services.

The next Global Conference on Animal Welfare, to be held in Mexico in December 2016, was announced and all the Focal Points present were invited to participate.

The OIE is grateful to the European Commission for financing the seminar and to the Government of Georgia, in particular Dr Zaza Dolidze, Head of the National Food Agency, and Dr Mikheil Sokhadze, Chief Veterinary Officer and Delegate of Georgia to the OIE, for having hosted the seminar under such excellent conditions.

All the presentations made at the seminar, the agenda and a gallery of photos will be posted on the OIE Regional website for Europe: [web.oie.int/RR-Europe/eng/events/en\\_events.htm](http://web.oie.int/RR-Europe/eng/events/en_events.htm)

## Regional Seminar for OIE National Focal Points for Veterinary Laboratories

*Cluj Napoca, Romania, 27–29 October 2015*

As part of the worldwide programme of capacity-building for OIE Delegates and OIE National Focal Points (NFPs), a Regional Seminar was held in Cluj Napoca, in Romania, for OIE National Focal Points for Veterinary Laboratories for Europe, from 27 to 29 October 2015.

This was the first seminar in the first cycle of such seminars, and it

was organised by the OIE Regional Representation for Eastern Europe (RREE), under the overall responsibility and technical guidance of the OIE Scientific and Technical Department. (Particular thanks go to Dr E. Erlacher-Vindel, Deputy Head of the Department; Ms Jennifer Lasley, Project Coordinator; and Dr Francois Diaz, Chargé de mission). The seminar was funded by

the European Union, with generous support from the National Sanitary Veterinary and Food Safety Authority of Romania (NSVFSA).

The National Focal Points on Veterinary Laboratories from all 53 Member Countries of the OIE Regional Commission for Europe were invited to attend. Of these, 36 countries (22 EU and 14 non-EU) took part,

including eight Russian-speaking countries.

Welcoming addresses were given by Prof. N. Belev, Honorary President of the OIE Regional Commission for Europe and OIE Regional Representative for Eastern Europe in Sofia; Dr Dumitru Baiculescu, President of the NSVFSA; and Dr Marius Grigore, Chief Veterinary Officer and Delegate of Romania to the OIE. The various sessions of the seminar were chaired by Prof. Dr Nikola Belev, Dr Elisabeth Erlacher-Vindel, Dr Marius Grigore and Dr Anthony Fooks, newly elected member of the Biological Standards Commission and OIE Expert on Rabies.

The agenda was organised into theoretical and practical, working-group sessions so that participants could discuss their experiences of the OIE Network of Expertise and capacity-building efforts, and exchange views.

A field visit to two laboratories was also included on the agenda: Romania's National Reference Laboratory on Residues and Regional Laboratory for Animal Health and Residues.

The overall objectives of the seminar were to fully brief participants on:

- an overview of the OIE and its activities and strategy in relation to veterinary laboratories
- the duties and responsibilities of OIE Delegates and Focal Points
- more specifically, the terms of reference for OIE National Focal Points for Veterinary Laboratories, including laboratory networking, assessing capacity-building needs, and preparing comments for the Delegate about the revision of OIE standards.

The OIE PVS Pathway was highlighted, with special emphasis on the management of Veterinary Diagnostic Laboratories, recent PVS



Pathway Laboratory Missions, and various observations made and lessons learned.

The participants were also provided with information about OIE Reference Centres and the Network of Expertise, with special focus on their role, rights and commitments.

The recommendations of the Third Global Conference of OIE Reference Centres were presented in detail and, as a result, participants gained a much deeper understanding of the support given by the OIE to its Reference Centres and National Focal Points, in terms of strengthening National Veterinary Laboratory capacities and supporting the veterinary scientific community. Participants also gained knowledge about the context, objectives, role and coordination of the European Union Reference Laboratory Network.

The working-group discussions enabled participants to share information, interact, network and discuss options related to:

- a) laboratory networking in their own country, between countries, and with regional laboratory networks and the OIE Reference Centres
- b) completing and regularly updating the information on National Reference Laboratories on the WAHIS Interface, within the framework of the WAHIS Annual Report, and

c) preparing comments for the Delegate on the revision of OIE draft standards in their role as an OIE National Focal Point on Veterinary Laboratories.

The seminar proved a success. Participants seemed satisfied with the relevance of the topics, the usefulness of the interactive sessions, and the excellent organisation of the event as a whole.

Those who attended agreed that they now considered themselves more familiar with OIE activities, its approach to National Veterinary Laboratory networks and laboratory management, and felt better equipped to perform their tasks as their country's Focal Point for Veterinary Laboratories. All in all, feedback was positive for further implementation of the OIE capacity-building programme for OIE Delegates and Focal Points.

# the OIE and its partners

## epidemiology & animal disease control programmes



### Transboundary competition horse movement: the HHP concept as an option to improve global access to equestrian sport

The development of the **High-Health, High-Performance Horse (HHP) concept** by the OIE in partnership with the *Fédération Équestre Internationale* (FEI) and the International Federation of Horse Racing Authorities (IFHA) over the past three years has not only resulted in a framework, now accepted by OIE Member countries and laid down in Chapter 4.16 of the *Terrestrial Animal Health Code* (the *Terrestrial Code*), but has also inspired a greater interest in horses and the industries that represent equestrian sports among OIE Members.

Motivated by the growth in equestrian events and the demand by emerging regions and countries to host such international events, the OIE *Ad hoc* Group on International Horse Movement for Equestrian Sport

set out to develop a global framework that would encompass already well-established OIE principles such as **compartmentalisation** and **zoning** (see *Terrestrial Code* Chapters 4.3 and 4.4), **certification** (see *Terrestrial Code* Chapters 5.1 and 5.2), **traceability** and **identification** (see *Terrestrial Code* Chapters 4.1 and 4.2), and **biosecurity**. Over a period of three years (2013–2015), the Group developed the concept and a first comprehensive outline of the elements of this concept was published in the OIE *Bulletin* no. 2015-1, pp. 58–61.

In an attempt to enable Member Countries to follow the evolution of the concept, the team decided to merge all elements, previously existing as separate documents, into one comprehensive document





containing all elements. The final product of this effort is the *Handbook for the management of high health, high performance horses*.

The HHP Handbook contains the following elements:

a) A summary of the concept detailing the different steps to establish a compartment ('HHP stable') and to qualify a horse ('HHP horse') to travel to several destinations for temporary import for a maximum period of 90 days.

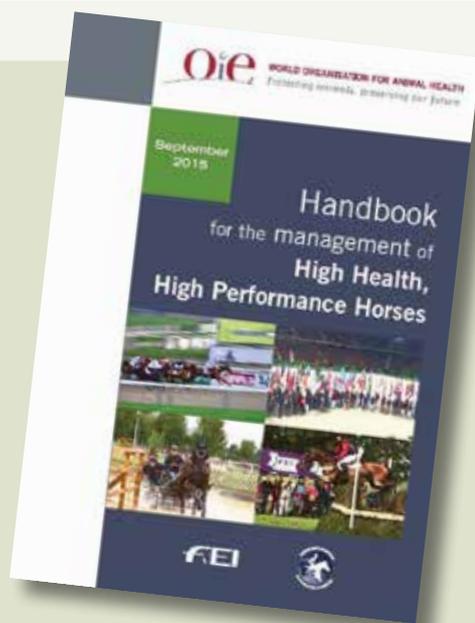
b) Biosecurity guidelines on the necessary conditions to establish and maintain the high health status of horses in the subpopulation at the home stable, during transport and at the venue. The guidelines also describe how to establish contingency plans.

c) General guidance on international horse travel and certification and specific guidance on the health measures that need to be undertaken during the preparation period, as well as for certification, in order to travel as an HHP horse. This includes a summary of the risk-based analysis of the six diseases to be regulated for HHP horses<sup>1</sup>.

d) The Model HHP Veterinary Certificate.

It is worth mentioning that while the Model HHP Veterinary Certificate had been designed by the *Ad hoc* Group to be presented to OIE Member Countries as a *Terrestrial Code* Chapter, it was decided by the Code Commission to integrate it into the Handbook. This would allow for the equestrian industry and Veterinary Departments to take the concept, including the Certificate, test it and share their experiences with the OIE and partners with a view to improving the details while maintaining the concept.

A full description of the risk-based analysis of diseases, summarised in Chapter 3 of the Handbook, will soon be published [1] to facilitate understanding of the underlying scientific approach used to establish the concept.



[www.oie.int/fileadmin/Home/eng/Our\\_scientific\\_expertise/docs/pdf/Chevaux/HHP\\_Handbook.pdf](http://www.oie.int/fileadmin/Home/eng/Our_scientific_expertise/docs/pdf/Chevaux/HHP_Handbook.pdf)

The six diseases selected as minimum requirements for health regulation are not only essential for the certification of high health horses, but also have recently gained in importance because several Member Countries have declared occurrences.

African horse sickness (AHS), a severe infectious, non-contagious, vector-borne disease, endemic in sub-Saharan Africa, is a great obstacle to the international movement of horses from the African continent and de facto prevents their participation in international equestrian events.

The HHP concept encourages endemic countries to establish zones free from AHS in line with the *Terrestrial Code* Chapter 12.1 and make a declaration to the OIE for official recognition of freedom, and then to use the provisions of article 7.3/c, i.e. 14 days in vector-proof quarantine and at least two PCR tests. The quality of these tests is of the highest importance and for this reason the OIE recommends using validated tests only. Recently the RT-PCR protocol of Agüero *et al.* was approved in line with the OIE validation pathway [2] (see article pp. 87–91).

<sup>1</sup> Specific health regulations in the Model HHP Veterinary Certificate are limited to six diseases, namely African horse sickness, equine influenza, equine infectious anemia, glanders, piroplasmiasis and Venezuelan equine encephalomyelitis.



In the long term however, surveillance and protection of individual animals could be improved if new vaccines with DIVA (Differentiating Infected from Vaccinated Animals) properties were to become available. As further explained in article pp. 72–75, this would not only allow surveillance with the clear purpose of detecting virus circulation and not mistaking positive antibody titres for vaccine-induced antibodies, but also it could protect horses from countries free from the disease, allowing international events to take place in endemic countries.

While the six diseases represent the minimum requirements, importing countries should also consider their specific disease status. In the case of vector-borne diseases that present a risk for transmission to HHP horses, measures such as vector screening of stables and vector protection of horses need to be added. In this context, this *Bulletin* also carries an article on the recent re-emergence of West Nile Fever in France and the lessons learnt from it (see article pp. 80–86).

In addition to the provisions of the HHP concept, particularly for countries that have not established bilateral or regional importation agreements, the HHP concept should be combined with the EDFZ concept. As detailed in article pp. 55–59, equestrian venues can be declared as free from multiple equine diseases

for the duration of the event by applying a framework developed by the OIE [3].

During development of the HHP concept, the existing European Union (EU) regulations for free movement of registered horses within the EU and between the EU and approved third countries have been used a reference point. As explained in article pp. 68–71, the launch of the new EU Animal Health Law later in 2016 will provide an excellent opportunity to entrench the principles of HHP, particularly its four pillars of identification/traceability, biosecurity, continuous veterinary supervision and harmonised health measures, into the secondary legislation, yet to be developed.

An additional element underpinning the scientific basis of the HHP concept became available during the course of 2015. Research topics were identified for diseases that had been prioritised as very important for the sport by the FEI and IFHA, namely equine influenza, AHS and glanders. A total of eight projects were included in a call for proposals, launched by the OIE using well established tender procedures. The selection process was concluded in July and a total of six projects were retained and two other projects were approved but held in abeyance until additional funding becomes available. Contracts with the institutions that were awarded the research grants have been issued



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in the meantime and research work has started with results expected within the next 18 to 24 months. The selected topics are listed below:

- a) validation study on real time RT-PCR diagnostic assay(s) for equine influenza in horses;
- b) evaluation of current equine influenza vaccination protocols prior to shipment, guided by the OIE standard;
- c) evaluation of the availability and efficacy of AHS vaccines and vaccine candidates;
- d) estimation of the impact of a new AHS DIVA vaccine on the equine sector – a rapid economic assessment;
- e) validation study of a serological diagnostic assay for African horse sickness;
- f) validation of a serological diagnostic assay with high specificity and sensitivity for glanders in equids.

The research element is yet another expression of the public–private partnership approach of the HHP project as it corresponds directly to a need expressed by the industry, using the funding provided in a transparent manner in anticipation of results that support the progression and refinement of the concept.

The FEI and IFHA created an International Horse Sport Confederation in 2013 in order to facilitate international horse movements under a single banner and to foster closer collaboration on matters of common interest, such as collaboration with the OIE. As expressed in article pp. 104–107, collaboration is gaining momentum and the Confederation is fully embracing the HHP concept as a means of bringing on board countries that have not yet established protocols and of assisting other countries to harmonize their protocols at regional level. The industry will now embark on the development of an international database, an element not yet fully developed but essential for traceability of the horses and critical to the operationalisation of the concept.

In conclusion, much has been achieved during the past three years and a solid foundation established for the HHP concept. Refinements will be made over time to certain elements based on the practical experience gained from application of the concept for selected equestrian sport events.

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## References

1. Dominguez M., Münstermann S., Murray G. & Timoney P. (2015). – ‘High-health, high-performance’ horses: risk mitigation strategies for OIE-listed diseases. *Rev. Sci. Tech. Off. Int. Epiz.*, **34** (3), 837–848.  
doi:10.20506/rst.34.3.2399
2. World Organisation for Animal Health (OIE). – *Manual of Diagnostic Tests and Vaccines for Terrestrial Animals*, Chapter 1.1.5 (Principles and methods of validation of diagnostic assays for infectious diseases) and Guidelines 3.6, 3.6.1, 3.6.5 and 3.6.6.
3. World Organisation for Animal Health (OIE). – Web page on equine disease free zones (EDFZ). [www.oie.int/en/our-scientific-expertise/specific-information-and-recommendations/international-competition-horse-movement/equine-disease-free-zones/](http://www.oie.int/en/our-scientific-expertise/specific-information-and-recommendations/international-competition-horse-movement/equine-disease-free-zones/)





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## Equine-Disease-Free Zones (EDFZ)

Governments, equine industries and the owners of horses engaging in high-level international equestrian events must feel safe in the knowledge that systems are in place to protect horses from disease and thus enable their safe return to their countries of origin or to other destinations.

At the same time, countries which host these events must be confident that the temporary importation of competition horses will not pose a disease threat to their domestic animal populations.

Over the years, good biosecurity practices have enabled equestrian events to be held safely and successfully in a number of countries. However, given the worldwide expansion of equestrian events and the economic and other benefits that can be gained from such activities, more codified approaches have been developed to enhance international horse competition biosecurity and safety.

One such approach has been the development of the equine-disease-free zone (EDFZ) concept, which identifies a zone as being free from several specified diseases for the duration of that particular equestrian event or, if the conditions relating to the EDFZ can be maintained, for a longer period.

The EDFZ concept was developed in part through experiences learned from previous Asian Games and Olympics and Paralympics events, OIE missions, and relevant OIE standards.

### OIE standards

OIE standards that support the EDFZ framework include:

- OIE's official recognition of freedom from certain diseases in a particular country or zone;
- country's self-declaration of freedom from certain diseases or infections in the country, a zone or a compartment; and
- general requirements for the establishment of such zones or compartments.

The OIE also lists diseases of relevance to equines in the *Terrestrial Animal Health Code* (Table I).

**Table I**

#### OIE-listed diseases of relevance to equines

African horse sickness*	Equine herpesvirus 1-related diseases
Anthrax	Glanders**
Contagious equine metritis	Japanese encephalitis
Dourine**	Rabies**
Eastern equine encephalomyelitis	West Nile fever**
Equine infectious anaemia	Western equine encephalomyelitis
Equine influenza**	Venezuelan equine encephalomyelitis**
Equine viral arteritis	
Equine piroplasmiasis	

\*Official disease status; \*\*Self-declaration





Only one equine disease can be officially recognised with regard to health status by the OIE at this point in time; namely, **African horse sickness**.

Zones or compartments within a country are tools that can be used to define and manage animal sub-populations of distinct health status.

Generally speaking, a zone is defined on a geographic basis, whereas compartmentalisation applies to a specific animal sub-population in which the management and husbandry practices employed ensure that sound and effective biosecurity practices are in place<sup>1</sup>. In practice, there are elements of zoning and compartmentalisation that apply to both categories.

EDFZs represent an extension of zoning and compartmentalisation standards by providing for a zone free of multiple equine diseases rather than a single disease or by applying the principles of compartmentalisation (which can cater for a number of diseases) – or by using a combination of both approaches.

### Establishing an EDFZ – Case study, Conghua City, Guangzhou

In late 2008, at the request of the Government of the People's Republic of China (P.R. China), an OIE mission visited to provide advice on conditions that could apply to the Asian Games events scheduled for November 2010. This was to ensure that a minimal disease risk would be posed to both competing and local horses, and that horses would be accepted and could return to other parts of China and overseas countries after the Games.

The pre-visit approach adopted by the mission was to:

- examine relevant equestrian events; and in particular learn from the experiences of the 2008 Beijing Olympic equestrian and Paralympics equestrian events held in Hong Kong;
- circulate a detailed questionnaire to the P.R. China Authorities, covering a range of issues, such as legislation, disease status, laboratory and details of the proposed site.

This preparatory desktop work was followed up by visits to the proposed site and surrounding areas, laboratories, transportation corridors and the like.

Importantly, comprehensive meetings were held with a range of national, provincial, and local authorities as well as the private sector and key experts.

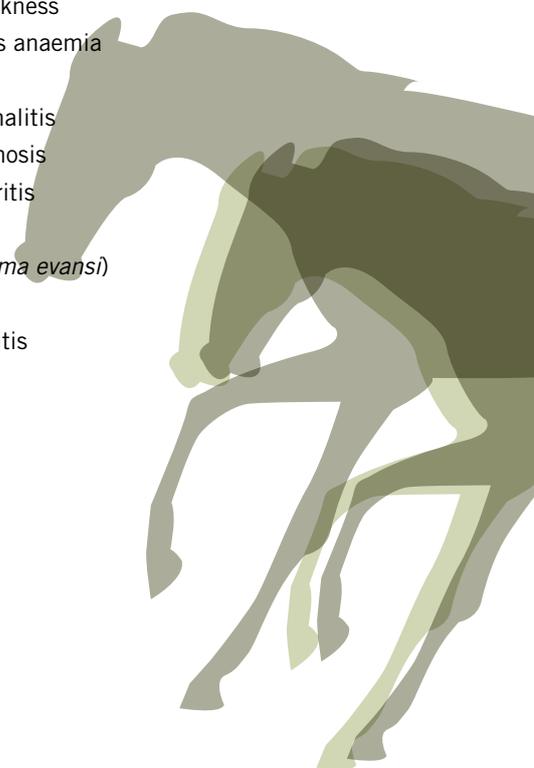
At the conclusion of the mission, open hearings were held to share the preliminary findings with officials and the equine industry and any feedback was taken into account when finalising a report for the OIE and the P.R. China.

The report from this OIE mission and the successful hosting of the Asian Games formed the basis for the subsequent development of the EDFZ concept.

### Key elements

It was considered important to define equine diseases, including those that apply to multiple species. The diseases listed were:

- African horse sickness
- equine infectious anaemia
- glanders
- Japanese encephalitis
- equine piroplasmiasis
- equine viral arteritis
- dourine
- surra (*Trypanosoma evansi*)
- equine influenza
- vesicular stomatitis
- Nipah virus
- West Nile virus
- Hendra virus



<sup>1</sup> See *Terrestrial Animal Health Code* Chapter 4.3. 'Zoning and compartmentalisation'



A zoning model was developed. This included a fully fenced core zone with a 5-km radius, a surveillance zone and a protection zone (Fig. 1). No horses were allowed in the core zone until the Asian Games, and no equines were allowed in the surveillance zone. Local Veterinary Authorities registered properties that held the small numbers of swine and ruminants in the surveillance zone. Horses in the protection zone were registered.

Understanding and controlling livestock and product movements were seen as essential to effective biosecurity. Movements into the EDFZ were only allowed by permit and were subject to quarantine, including three quarantine checkpoints and random monitoring to prevent unauthorised entries into the EDFZ. International horses were transferred directly from the point of arrival to the equestrian site by a highway biosafety passage system connecting the main airports at Guangzhou, Shenzhen and Hong Kong via an equine exclusion zone corridor of 1 km on either side of the road (Fig.1).

Ongoing disease surveillance in the EDFZ was seen as vital, since it provided a solid information baseline, with scope to vary the nature and timing of future surveillance based on current findings. Studies on wildlife populations and vectors were also seen as important. The ongoing analysis of results enabled the implementation of improved risk management systems and earned the confidence of the exporting countries in the integrity of the EDFZ.

Demonstrating the competence of laboratories and ensuring their credibility were key to providing confidence in the accuracy of their test results. Where several laboratories were involved, their roles and responsibilities were clearly defined. To the greatest extent possible, the test methods used were as prescribed by the OIE and standardised reagents were obtained if necessary from OIE Reference Laboratories or other recognised international laboratories.

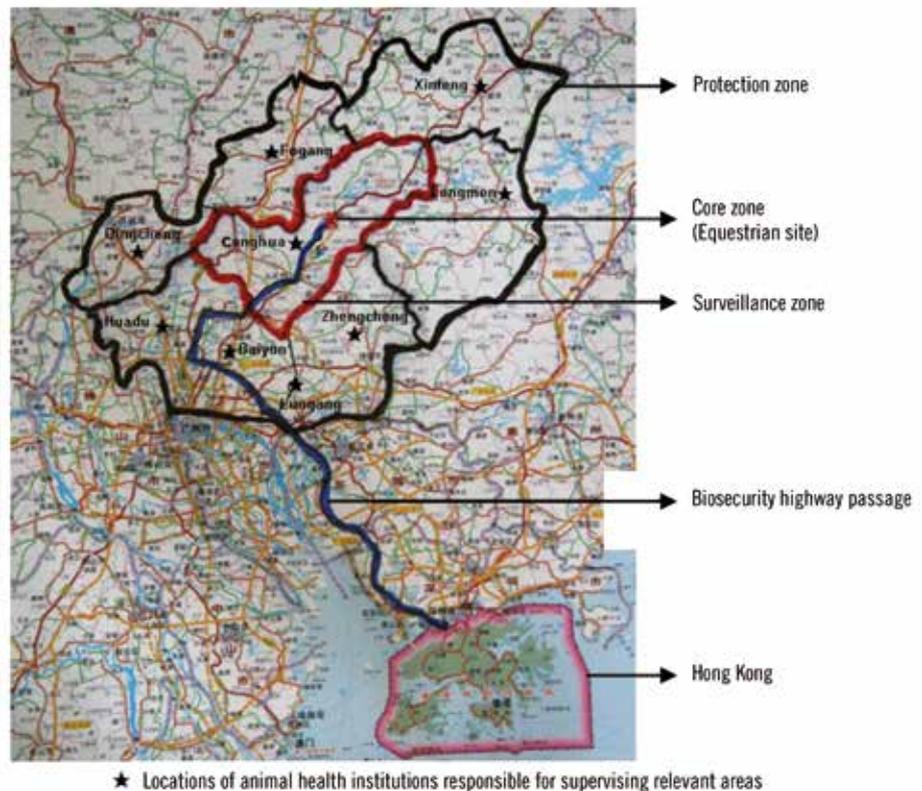


Fig. 1  
Case study's zoning model



Import and re-export protocols were agreed between the P.R. China and officials from the countries of origin. In this regard, it was suggested that tests for importation could be performed overseas if this was acceptable to the P.R. China Authorities, but only at laboratories with recognised quality assurance and accreditation systems in place.

Effective Veterinary Services including competent and well-trained veterinarians, para-professionals, scientists, animal handlers as well as equestrian industry staff were seen as essential to the establishment and management of the EDFZ. However, legislation and related support systems also needed to be in place to ensure that official controls worked. Planning included the development of documented quality assurance and contingency disease plans supported by detailed standard operating procedures.

Above all, government and industry support, including the provision of adequate resources, were key factors in what turned out to be extremely successful equestrian events in the 16th Asian Games. Ninety-five horses from 16 countries and regions with equivalent health status took part. Biosecurity arrangements were successful in ensuring the safe arrival and return of all competing horses with no disease outbreaks occurring.

### Evolution of the EDFZ concept

Since the 2010 Asian Games, the OIE has led missions to the Republic of Korea, to advise on the establishment of an EDFZ for the 2014 Asian Games, and to Azerbaijan, to advise on the feasibility of establishing an EDFZ on the Absheron Peninsula. The OIE also led a mission to Brazil, to advise the government on equine competition events for the Rio16 Olympic Games, and has also answered a range of queries from other countries on EDFZs.

A number of additional lessons have been learned from these activities, including the fact that – provided the general principles of EDFZs are followed and supported by strong legislation, effective Veterinary Services, adequate resources and the implementation of strong operational procedures – a level of flexibility can be applied to the establishment of EDFZs customised to suit local needs.

For example, the 2014 Asian Games equestrian events demonstrated that EDFZs could be established successfully at both the competition site (in Incheon) and at sites sending horses to compete in the Games. Although the Absheron Peninsula EDFZ has not been fully established at the time of writing, it is feasible,

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subject to controls, to have an EDFZ in a zone where other horses are resident and in an arena where horses compete. In the case of the Rio16 Olympics, the OIE mission team has put several options in front of the Brazilian Government, including the establishment of an EDFZ.

The experience acquired in establishing an EDFZ can bring other benefits. For example, the Hong Kong Jockey Club is investing in Conghua City, with the goal of establishing a new racehorse training centre, to host racehorses that travel frequently between Hong Kong and the EDFZ. The first phase of the project is scheduled to commence in 2018–2019. This will create a valuable post-Games legacy and strengthen Pan-Pearl River Delta cooperation<sup>2</sup>.

### Principles for the establishment of EDFZs

Experience dictates that a number of key principles are required for EDFZs. If they are implemented correctly, the OIE Delegate can make a self-declaration to the OIE that an EDFZ has been established and countries sourcing horses from that zone or sending them to equestrian competitions can make decisions on the acceptability of the EDFZ in question.

The key principles that apply are:

- strong government, industry and resource support
- high-level business planning, logistical coordination and effective communication
- the development of a high-quality, overarching biosecurity plan, supported by detailed documented standard operational procedures
- well-trained staff, highly effective and professional technical services, and strong partnership arrangements between the public and private health sectors
- sound governance processes and effective underpinning national legislation

- confidence in the Veterinary Services concerned and credible health certification
- the definition of diseases of concern, using the OIE List of Diseases as a reference
- obtaining a baseline knowledge of the health status of equines and other animals in the local population
- an understanding of local wildlife population ecology, vectors and risk
- prescribing the boundaries and operational arrangements for the EDFZ
- developing a contingency plan for confirmed or suspected outbreaks of infectious disease
- ongoing risk evaluation through a monitoring and evaluation process, with a view to enhancing risk management procedures.

### Conclusions

The establishment of an EDFZ for an international equestrian event can be a complex and, at times, costly undertaking. However, it can bring substantial cost-benefit and enhance the reputation of countries and industries seeking to host such events.

It is strongly recommended that countries proposing to develop an EDFZ should participate in the OIE programme for strengthening the Performance of Veterinary Services (the PVS Pathway). This helps trading partners gain confidence in the competence and credibility of national Veterinary Services, an essential component in the acceptance of an EDFZ.

The OIE is very happy to answer queries on EDFZs and to send advisory missions at the request of countries.

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#### Equine disease free zones (EDFZs):

[www.oie.int/en/our-scientific-expertise/specific-information-and-recommendations/international-competition-horse-movement/equine-disease-free-zones/](http://www.oie.int/en/our-scientific-expertise/specific-information-and-recommendations/international-competition-horse-movement/equine-disease-free-zones/)

<sup>2</sup> The Pan-PRD region comprises nine provinces in the Pearl River Delta region in southern China, plus the two special administrative regions (SARs) of Hong Kong and Macao





## Transboundary movement of horses: Korea's experience with the equine-disease-free zone concept at the 17th Asian Games, 2014

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### Keywords

Asian Games – equine-disease-free zone (EDFZ) concept – high-health, high-performance (HHP) horse – Republic of Korea.

When the Republic of Korea hosted the 17th Asian Games in Incheon, 2014, the equestrian events were held at the Dream Park equestrian venue, located in Incheon Metropolitan City, where an 'equine-disease-free zone' (EDFZ) was established.

The Games took place from 19 September to 4 October 2014, and the equestrian events were held over

ten days, from 20 to 30 September. Five Korean horses were among the 103 competition horses from 15 countries which took part, with no biosecurity or animal health problems. It was the first time that the concept of 'high-health, high-performance' (HHP) horses had been used at an international equine event since the OIE initiated the project. The aim of this report is to share the Korean experience of the temporary establishment of an EDFZ, the biosecurity measures taken and the contingency plans in force

### Temporary establishment of the EDFZ

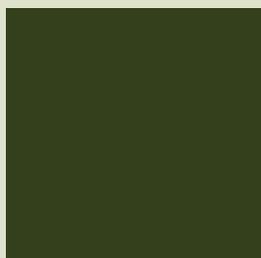
The Dream Park equestrian venue (core zone) and the surrounding area within a 10-km radius of the venue (surveillance zone) were designated as the EDFZ for the Incheon Asian Games. This was done for two reasons:

- The first was to follow the OIE's lead in promoting the temporary transboundary movement of horses for international equine events.

- The second was to use these Games to trial more efficient quarantine measures for healthy horses from countries or EDFZs



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which met Korea's animal health requirements for the temporary importation of horses.

In addition, participating horses arriving from overseas were transported through a biosecure 'safe passage route', extending approximately 35 km (Table I).

**Biosecurity measures for animal entry into the EDFZ**

Every horse that entered the EDFZ from overseas had to go through individual verification and clinical examination at Incheon International Airport. If the animal health certificate was verified as being consistent with the health

requirements for imported animals being temporarily applied during the Incheon Asian Games, the horse was immediately transported to the Dream Park EDFZ. Additional quarantine and close examination were omitted. If, however, on arrival, any of the import requirements were not met or any contagious infectious disease was found, the Korean Veterinary Authority could order the horse to be deported. Any horse which tested positive in the equine piroplasmis antibody test conducted in their country of dispatch before shipment had to be transported separately, after verification of the relevant

indications on their animal health certificate, and then kept in a secluded stable within the equestrian venue. Horses were transported via the safe passage route only. Moreover, measures were taken to prevent pests during transportation, including spraying insect repellent on the horses.

The same health requirements applied to overseas horses were also applied to domestic horses transported to the equestrian venue. They were isolated for seven days in the quarantine location (Seoul Racecourse isolation stable) and admitted into the equestrian venue with biosecurity precautions.

**Table I**  
**Temporary equine-disease-free zone establishment**

Zone/Path		Range
EDFZ	Core zone	Dream Park equestrian venue
	Surveillance zone	10-km radius around the equestrian venue
Safe passage route		Incheon International Airport Cheongna Interchange Dream Park equestrian venue (approx. 35 km)





After arrival at Dream Park, each horse was housed in the stables assigned to their specific country or region, so as to prevent any direct or indirect contact with horses from other regions. The Incheon Asian Games Organising Committee notified entrants of the stable assignment plan for 12 stable buildings. In particular, horses that tested positive for equine piroplasmosis were isolated in a separate space from the main isolation stables. The interior of each

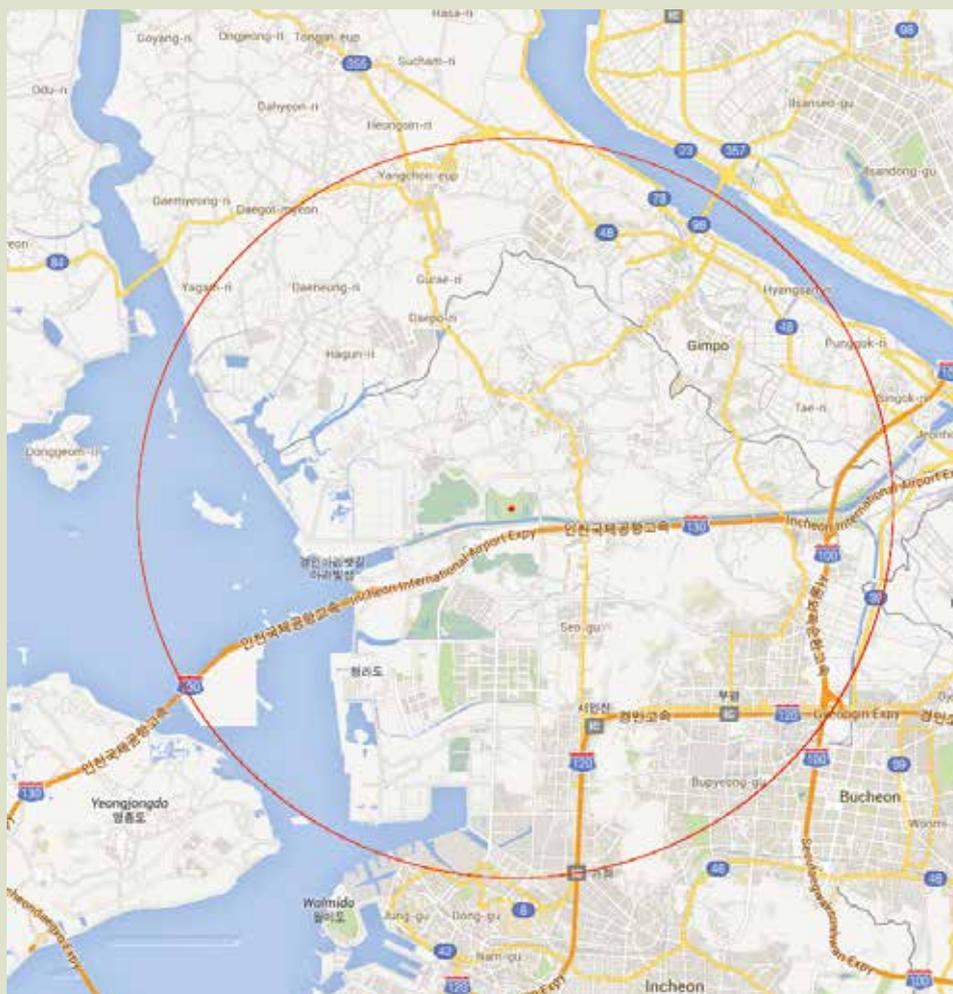
stable was checked for ticks once a day, and regularly treated with tick repellent. In addition, the isolation rooms where infected individual animals were kept and the equipment used within those rooms were thoroughly disinfected.

**Biosecurity measures for maintaining the EDFZ**

The equestrian venue was isolated from the outside environment, including humans and wildlife, by water-filled canals

or moats, as shown in Figure 1. Fences were set up around the stable to regulate the entry of humans, animals and equipment, and only veterinarians and staff approved by the quarantine officers were allowed to enter the stables.

Before the horses arrived, all facilities within the biosecurity zone were kept empty and frequently disinfected and controlled for pests. This regime began one month before the Asian Games to prevent the entry of disease-mediating



**Fig. 1**  
Biosecurity zone for the equine-disease-free zone



insects, including mosquitoes; such measures were also implemented every day during the Games. Disinfection mats were installed on the ground at each stable entrance for disinfection during movement within the stables. Insect traps were installed within the stables to collect insects that entered the site. Authorised veterinarians performed clinical inspections of all horses on site on a regular basis. The rectal temperature of each horse was checked twice a day for early detection of any sign of disease. The training of the horses was scheduled at different times in different areas and separated according to region, so as to minimise contact with horses from other regions. Hay and straw that came with the horses was destroyed upon their arrival in Korea. Hay, straw and stable equipment were arranged by the Organising Committee, and provided to each participating country after the horses entered the equestrian venue. Horse movement into or out of the EDFZ was prohibited. In cases where such movement was unavoidable, horses could be moved into or out of the EDFZ only after prior report and certification by the animal quarantine officer that the horse in question was eligible for such movement.

### Contingency plan

In the case of minor injuries, such as abrasions, the surgical/internal treatment for the injured horse was conducted at the clinic within the equestrian venue. A cooperation system was established for cases requiring surgery, so that the horse could be transported to the fully equipped equine clinic within the Seoul Racecourse. Veterinarians determined whether to treat the horses within the equestrian venue or through emergency transportation, depending on the severity of the injury, under the supervision of the quarantine officer. In the case of an outbreak of equine disease, or any other animal disease to which horses were susceptible, biosecurity measures were prepared, which included immediate reporting and distribution of information through the Korea Animal Health Integration System (KAHIS) of the Animal and Plant Quarantine Agency.

### Conclusion

The 17th Incheon Asian Games featured 103 competition horses from 15 nations, compared with 80 horses from ten nations the last time that the Games were held in Korea, in Busan in 2002. This expansion was facilitated, at least in part, by the HHP and EDFZ concepts proposed by the OIE. The Dream Park equestrian venue was designed with biosecurity measures in place and in such a way as to prevent contact with the outside environment. The movement of horses within the venue and also within the 10-km radius surveillance zone was restricted. Biosecure routes between the airport and venue were used to transport the horses to and from the Games and, in case of an emergency, contingency plans were in place.



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The Asian Games 2014 marked a successful first international equine event under the HHP concept, and the Games were problem-free. The HHP concept is therefore a potential model for host nations of future events, such as other regional games, to maximise participation from other countries and to ensure ideal conditions to facilitate the highest standards of elite international competition.

Figure 1 shows the biosecurity zone established in the 10-km radius around the equestrian venue (red dot). The biosecurity zone is located around the border between the Incheon and Gimpo-si administrative districts. Natural borders also exist on both sides of the zone: with the West Sea to its left, and the Han River to its right.

Figure 2 is a satellite photo of the area around the equestrian venue. The road marked in light purple was designated as the safe passage route into the equine-disease-free zone (EDFZ). It is a short ground route that directly connects the equestrian venue and Incheon International Airport. All horses participating in the events (except for domestic horses) could only enter the EDFZ through this route.

Figure 3 shows an overview of Dream Park equestrian venue. The venue, which constitutes the core zone, is surrounded by canals on all four sides, geographically separating the zone from outer areas.



**Fig. 2**  
Location of Dream Park equestrian venue (satellite photo)



**Fig. 3**  
Overview of Dream Park equestrian venue



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## Towards the implementation of the HHP concept in the Americas

### Regional Conferences for the Development of the HHP Concept

Regional Conferences on the Facilitation of International Competition Horse Movement have been instrumental in the development of the **High-Health, High-Performance Horse (HHP) concept**. These conferences, organised by the OIE in collaboration with the *Fédération Équestre Internationale* (FEI) and the International Federation of Horseracing Authorities (IFHA), have gathered together representatives of the equine industry and from the public sector on various continents to discuss constraints on the international movement of competition horses and to form the basis of the HHP concept. The first regional conference for the Americas was organised in Panama, in December 2012. In February 2014, a regional conference for Asia, the Far East and Oceania was held in Hong Kong SAR, and a regional conference for the Middle East and North Africa was hosted by Dubai (the United Arab Emirates) in September 2014 [1] [2].

These conferences, combined with the work of the OIE *Ad hoc* Group on International Horse Movement for Equestrian Sport and the OIE Expert Group on Biosecurity, have resulted in the development of the HHP concept

as defined in the OIE *Terrestrial Animal Health Code*, Chapter 4.16., adopted in 2014, and further detailed in the OIE *Handbook for the Management of High Health, High Performance Horses*, released in September 2015 (HHP handbook) [3] [4]. This handbook provides guidance on the implementation of the HHP concept through detailed guidelines for the management of HHP horses, especially concerning: biosecurity; the definition of roles and responsibilities for the step-by-step implementation of the HHP concept; and provisions for the temporary importation of HHP horses through a model HHP veterinary certificate.

### Horse movements in the Americas

At present, this region has a substantial horse industry, and yet faces a number of challenges that impede the free, safe, temporary international movement of competition horses as well as the expansion of the equine industry.

The most important elements needed to facilitate the safe international movement of competition horses are:

- reliable certification of horses in accordance with the OIE standards for the control of equine diseases





- validated and mutually recognised diagnostic tests
- confidence in the high quality of national Veterinary Services responsible for certification integrity.

The American region has a strong interest in the HHP concept. A pre-conference survey indicated that 95% of countries in the region were interested in implementing the HHP concept.

### **Second Regional Conference for the Americas on the Facilitation of International Competition Horse Movement**

*Medellín, Colombia, 1–3 December 2015*

Upon the request of Member Countries in the Americas, a Second Regional Conference on the Facilitation of International Competition Horse Movement was held in Medellín, Colombia, from 1 to 3 December 2015, to present and discuss the HHP concept with reference to the HHP handbook and to identify the way forwards for its future implementation in the region.

The conference was organised by the OIE Regional Representation for the Americas, in collaboration with the FEI, IFHA and the Colombian Agricultural Institute (ICA), and with the support of the Colombian government.

The conference was attended by 75 participants: 48 representatives from the Veterinary Services of 21 countries in the region; 14 participants from 10 National Equestrian Federations or National Horseracing Authorities, three participants from international organisations, six speakers and four representatives of the OIE. The overall objective was for stakeholders to discuss the HHP concept and explore how they could collaborate most effectively to implement it in the Americas.

During the conference, the OIE, FEI and IFHA reiterated their commitment to working together to facilitate international competition horse movement, while those taking part confirmed their willingness to implement the HHP concept in their region in the near future.

Over all, the participants agreed to overcome current challenges by:

- strengthening the collaboration between Veterinary Services and the horse industry
- revising the legal framework in the sub-regions, as necessary, according to OIE guidelines for the implementation of the HHP concept





- strengthening laboratory capacities for the diagnosis of priority diseases for the HHP concept
- supporting training activities and raising the awareness of all relevant stakeholders in the region.

These discussions led to the unanimous adoption of recommendations for the future implementation of the HHP concept in the Americas.

To speed up progress towards implementing the HHP concept in the Americas, the participants asked for a pilot event to be held, to field-test this new concept. Several countries volunteered to host such an event in 2017. The organisation of this event would mark a significant milestone in the facilitation of international competition horse movement within the HHP framework.

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## References

1. World Organisation for Animal Health (OIE) (2014). – Regional Workshop for Asia, the Far East and Oceania; Facilitation of International Competition Horse Movement, Hong Kong SAR, 18–20 February 2014. OIE, Paris. Available at: [www.rr-asia.oie.int/activities/regional-programme/other-activities/international-horse-movement/](http://www.rr-asia.oie.int/activities/regional-programme/other-activities/international-horse-movement/) (accessed on 16 December 2015).
2. World Organisation for Animal Health (OIE) (2014). – Regional Conference for the Middle East and North Africa – Facilitation of international Competition Horse Movement, Dubai (United Arab Emirates), Meydan Hotel, 29 September – 1 October 2014. OIE, Paris. Available at: [www.rr-middleeast.oie.int/viewpage.asp?ID=791](http://www.rr-middleeast.oie.int/viewpage.asp?ID=791) (accessed on 16 December 2015).
3. World Organisation for Animal Health (OIE) (2015). – Chapter 4.16. High health status horse subpopulation. *In* Terrestrial Animal Health Code. OIE, Paris. Available at: [www.oie.int/index.php?id=169&L=0&htmfile=chapitre\\_high\\_level.htm](http://www.oie.int/index.php?id=169&L=0&htmfile=chapitre_high_level.htm) (accessed on 16 December 2015).
4. World Organisation for Animal Health (OIE) (2015). – Handbook for the management of high health, high performance horses. OIE, Paris. Available at: [www.oie.int/fileadmin/Home/eng/Our\\_scientific\\_expertise/docs/pdf/Chevaux/HHP\\_Handbook.pdf](http://www.oie.int/fileadmin/Home/eng/Our_scientific_expertise/docs/pdf/Chevaux/HHP_Handbook.pdf) (accessed on 16 December 2015).

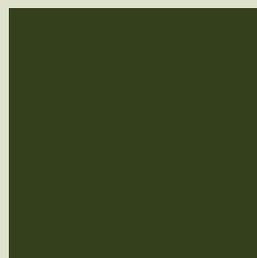
Updated information on the progress of this HHP test event in the Americas will be posted on the OIE HHP web portal:  
[www.oie.int/en/international-competition-horse-movement/](http://www.oie.int/en/international-competition-horse-movement/)



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## The EU perspective on the implementation of the HHP concept

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### Keywords

European Union – high-health, high-performance (HHP) horse.

In the light of the experience with African horse sickness on the Iberian Peninsula at the end of the 1980s, and with a view to completing the single market, the then nine Member States of the European Economic Community harmonised the rules for the movement, trade in and imports from non-member countries of equidae by adopting Council Directive 90/426/EEC. Following several amendments, this Directive was later codified as Council Directive 2009/156/EC<sup>1</sup> to which this paper refers.

<sup>1</sup> Council Directive 2009/156/EC of 30 November 2009 on animal health conditions governing the movement and importation from third countries of equidae (OJ L 192, 23.7.2010, p. 1)





## A. Registered horses in European Union legislation

'Registered equidae' are one of the categories of equidae defined in Article 2 of Directive 2009/156/EC. The status of 'registered equid' is documented in its identification document.

Most of the registered equidae in the European Union (EU) have been identified and furnished with an identification document by breeding organisations or breeders' associations approved by the competent authorities in accordance with EU legislation on zootechnics<sup>2</sup>. While their status is defined by their genetics, non-pedigree horses may be upgraded to a 'registered horse' through performance. Commission Regulation (EC) no. 504/2008<sup>3</sup> clarifies, in this respect, that the *Fédération Équestre Internationale* (FEI) with its national federations is the relevant 'international association or organisation which manages horses for competition' for the purpose of issuing identification documents to 'registered horses', irrespective of their studbook registration. This paper will therefore focus on 'registered horses' only.

The 'registered horse' represents a concept which links the assumed high material and immaterial value of the animals with intensive professional and veterinary care to ensure compliance with high animal health and welfare standards. Twenty-five years after its introduction, the beneficial consequences of the concept for the global development of equestrian sport and the exchange of genetic material should not be underestimated.

EU animal health and welfare legislation provides specific conditions for the movement of 'registered horses' that encourage owners and keepers to have their horses identified, thus contributing to better traceability. The main preferential conditions for the movement of 'registered horses' are the following:

- a) when accompanied by their identification document, registered horses may be moved within a Member State without additional veterinary certification;
- b) registered horses may be moved for up to ten days to any place in other Member States

accompanied by an individual official health attestation, thus allowing their participation in competitions, races and trail rides across borders during that time;

- c) registered horses are exempted from certain animal welfare rules during transportation in accordance with Council Regulation (EC) no. 1/2005<sup>4</sup>, for example watering and feeding intervals, journey times and resting periods;

- d) registered horses may be temporarily exported for 30 days to participate in competitions and races, or in the case of specific events for up to 90 days, and return under the conditions laid down in Decision 93/195/EEC<sup>5</sup> that do not foresee quarantine or testing prior to return because the health status of the horses has been maintained by keeping them isolated from local equidae in the country of temporary residence;

- e) temporary admission of registered horses in accordance with Commission Decision 92/260/EEC<sup>6</sup> is a specific case, where such horses may be introduced into the EU for a period of less than 90 days under specific customs procedures

<sup>2</sup> Council Directive 90/427/EEC of 26 June 1990 on the zootechnical and genealogical conditions governing intra-Community trade in equidae (OJ L 224, 18.8.1990, p. 55)

<sup>3</sup> Commission Regulation (EC) no. 504/2008 of 6 June 2008 implementing Council Directives 90/426/EEC and 90/427/EEC as regards methods for the identification of equidae (OJ L 149, 7.6.2008, p. 3)

<sup>4</sup> Council Regulation (EC) no. 1/2005 of 22 December 2004 on the protection of animals during transport and related operations and amending Directives 64/432/EEC and 93/119/EC and Regulation (EC) no. 1255/97 (OJ L 3, 5.1.2005, p. 1)

<sup>5</sup> Commission Decision 93/195/EEC of 2 February 1993 on animal health conditions and veterinary certification for the re-entry of registered horses for racing, competition and cultural events after temporary export (OJ L 86, 6.4.1993, p. 1)

<sup>6</sup> Commission Decision 92/260/EEC of 10 April 1992 on animal health conditions and veterinary certification for temporary admission of registered horses (OJ L 130, 15.5.1992, p. 67)



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and which may be certified to other Member States from the Member State of first destination;

f) there are more non-EU countries listed in Commission Decision 2004/211/EC<sup>7</sup> from which Member States authorise temporary admission, re-entry and imports of 'registered horses' as compared to imports of 'equidae for breeding and production';

g) in certain cases registration in a particular studbook is important for participation in competitions restricted to particular breeds, as foreseen in Council Directive 90/428/EEC<sup>8</sup>.

However, the application of these specific and favourable movement conditions to 'registered horses' is not in all cases adequate, given the animal health risks they might represent under certain circumstances, including those described hereinafter:

a) By definition all registered horses are identified by an identification document. However, this is no longer a unique feature for registered horses. Since 2000 all equidae in the EU must be identified by an identification document when they are moved and since July 2009 all equidae born in a Member

State or imported into the EU are to be identified by means of an identification document.

b) Once a horse is identified as a 'registered horse' it retains this status until the end of its days. However it is not automatically ensured that it will continue to enjoy the same intensive care and permanent attention after it is retired from high level sports or breeding.

c) The health status of a 'registered horse', as with any other category of equid in the EU, is primarily defined by the absence of reports on notifiable diseases concerning the holding. The list

7 Commission Decision 2004/211/EC of 6 January 2004 establishing the list of third countries and parts of territory thereof from which Member States authorise imports of live equidae and semen, ova and embryos of the equine species, and amending Decisions 93/195/EEC and 94/63/EC (OJ L 73, 11.3.2004, p. 1)

8 Council Directive 90/428/EEC of 26 June 1990 on trade in equidae intended for competitions and laying down the conditions for participation therein (OJ L 224, 18.8.1990, p. 60)



of notifiable diseases includes African horse sickness, any type of equine encephalomyelitis (including Venezuelan equine encephalomyelitis), glanders, dourine infectious anaemia, vesicular stomatitis, rabies and anthrax. In addition, there are numerous occasions where in particular registered horses undergo health testing, where Member States carry out specific surveillance programmes and follow up disease suspicions. The ante- and post-mortem inspection at slaughter of thousands of equidae per year further contribute to the necessary surveillance of the equid population in the EU. However, the distinct health status of 'registered horses' is not systematically supported by statutory health testing, mandatory vaccinations and specific biosafety measures.

d) Breeding is explicitly part of the concept of 'registered horses', since they are entered in a studbook; therefore, sexually transmitted diseases must be considered when describing their health status.

## **B. High-Health, High-Performance horses in OIE standards**

While the category of 'registered horse' has many animal health conditions in common with the High-Health, High-Performance horse (HHP-horse) as outlined in Chapter 4.16 of the *Terrestrial Animal Health Code*, there are noticeable differences between the two concepts, in particular concerning the following:

a) The status of an HHP-horse is time-limited and directly linked to the individual performance qualifying

the horse to participate in high level international competitions and races. The performance of the HHP-horse is an expression of its fitness and therefore an indicator for the absence of major infectious diseases.

b) The HHP-horse is registered in a dedicated database to monitor its pre-movement residence and its temporary international movements.

c) The absence of a limited number of equine diseases on the holding of usual residence is not only based on the notifiability of relevant diseases, but also on targeted biosafety and biosecurity measures implemented according to agreed protocols by the professionals, regular visits by specialised equine practitioners and specific surveillance for transmissible diseases carried out by the official veterinary services.

d) The HHP-horse is required to undergo regular, frequent and fully documented veterinary checks, prescribed health testing and mandatory prophylactic vaccinations.

e) The HHP horse is excluded from breeding prior to and during its HHP period, therefore diseases which are only sexually transmitted are of no concern.

## **C. Perspective on the implementation of the HHP concept in EU legislation**

A new EU Regulation on transmissible animal diseases (the Animal Health Law) should come into force early in 2016 and will be directly applicable in all Member States five years after its publication.

In the meantime, secondary legislation is being prepared for the detailed implementation of that law. The Animal Health Law will provide a solid legal base for mandatory registration of identified animals, including equidae, and their holdings of usual residence and for their recording in central databases. It will also provide for measures to ensure that all, or at least the vast majority, of equine holdings meet high health standards to minimise the need for specific quarantine measures before the HHP health status can be reached.

At the same time, the Animal Health Law intends to adapt and, where possible, to simplify the animal health requirements for movements within, between and into EU Member States where the animals have a particular and verifiably higher health status determined by routine testing or vaccinations, biosafety and biosecurity measures on the holding and surveillance in the area.

During the consultations with EU Member States and various stakeholders, including trade partners in non-EU countries, in preparation of this secondary legislation and based on the requirements laid down in the Animal Health Law, the specific conditions for the movement of horses of a higher health status will be discussed and decided upon.

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## Advances in African horse sickness vaccine research

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### Keywords

African horse sickness (AHS) virus – differentiating infected from vaccinated animals (DIVA) – DIVA vaccine – recombinant vaccine.

African horse sickness (AHS) is a vector-borne disease of Equidae transmitted by biting midges of the genus *Culicoides*. The causative agent is African horse sickness virus (AHSV), an orbivirus from the family *Reoviridae* closely related to those that cause equine encephalosis and bluetongue. AHS can spread quickly amongst immune-naïve populations of horses, commonly causing a high number of deaths (mortality rates can exceed 90%) and huge economic losses. Nine different serotypes of AHSV

have so far been identified and immunity is serotype-specific [9].

African horse sickness occurs in most countries of Central and sub-Saharan Africa, although it periodically extends northwards beyond these endemic regions. Several North African countries, the Arabian Peninsula, the Middle East, India and Pakistan have experienced devastating AHS outbreaks over the past century, including the extensive epizootic of AHSV-9 in 1959, which caused more than 300,000 deaths [5]. Western Mediterranean countries were also hit by AHS during the second half of the 20th Century. Indeed, Spain experienced an outbreak of AHS serotype 9 in 1966, which was controlled by a vigorous campaign that



included the slaughter of infected horses. Spain suffered another AHS outbreak in 1987, which later extended to Portugal and Morocco before the disease was eradicated in 1993 [13]. Currently, AHS circulates as far north in Africa as Ethiopia, Sudan and the Gambia, and multiple AHSV serotypes have been involved in these outbreaks [2, 10]. Given that bluetongue, which is transmitted by the same insect vectors as AHS, is considered an endemic disease in Europe because of repeated outbreaks over the past two decades, there is a justifiable concern that AHSV may follow the same trend. However, not only is AHSV far more lethal to horses than bluetongue virus is to ruminants but also AHSV vaccines are less affordable than those used to control bluetongue.

Only live attenuated AHSV vaccines are currently licensed for the control of AHS in horses and they are manufactured by a very small number of companies, with Onderstepoort Biological Products in South Africa the main producer [16]. However, global AHS vaccine production capacity is limited, as evidenced by occasional supply shortages of this vaccine. Furthermore, such vaccines raise a series of concerns associated with the capacity of the vaccine virus to revert to virulence and further transmit in the field, and the capacity for vaccine viral genome segments to re-assort with field viruses, which in turn could result in the emergence of novel viral strains with unpredictable biological characteristics. Killed AHSV vaccines are inherently safer than live vaccines but large-scale manufacturing requires highly expensive bio-containment facilities. There is much less data on the efficacy of killed AHSV vaccines because they were last used on a limited scale during the final year of the Spanish outbreak, in 1992 [13]. Some research groups and vaccine manufacturers are currently exploring the potential application of this type of vaccine should an outbreak of AHS occur in a non-endemic country [8]. In addition to the above drawbacks, both live attenuated and inactivated AHSV vaccines are largely incompatible with DIVA strategies (differentiation of infected from vaccinated animals), which would be greatly preferred for use in non-endemic countries and for facilitating international trade of horses.

Horses (and competition animals in particular) travel frequently across international borders to attend high-level events. This activity is vital for the equine industry, which has experienced exponential growth over the last

few decades. However, expansion of the equine industry worldwide is hampered by the potential risk of spreading infectious diseases by increasing the movement of horses across the globe. Several countries have demanded changes that would facilitate the international travel of horses, which would in turn unlock the potential growth of their equine sector.

An initiative to respond to this demand was proposed by the OIE in conjunction with the *Fédération Équestre Internationale* (FEI) and International Federation of Horseracing Authorities (IFHA); this resulted in development of the concept of the 'High Health High Performance (HHP) horse' [6]. This strategy aims to harmonise the provisions for the safe temporary importation of high-level competition horses and is based on consideration of these high health status animals as a sub-population that can be functionally separated from the rest of the equine population during international travel. This scheme applies the OIE principles of zoning (or regionalisation), compartmentalisation, biosecurity, health certification and traceability. Health certification for the HHP sub-population is limited to six critical diseases: equine influenza, equine piroplasmiasis, glanders, equine infectious anaemia, Venezuelan equine encephalitis and AHS. Of these, AHS is the only one for which the OIE officially recognises a disease-free health



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status. This is of great importance for the safe international trade of horses and adds a global dimension to AHS control. Under these circumstances, harmonisation of diagnostic procedures for import/export testing and the use of vaccination strategies that do not confound the AHS infection status of individual horses, zones or countries, are of paramount importance. The use of AHS DIVA vaccines would facilitate all these control procedures significantly.

For decades, researchers have explored diverse recombinant DNA technologies in order to develop AHSV vaccines with improved safety, efficacy and differential diagnostic capability. The AHSV viral proteins expressed via recombinant baculoviruses [12, 14], plasmid DNA [11] or recombinant viruses [3, 4, 7] have been used successfully over the years in experiments, and this has demonstrated that alternatives to the live attenuated vaccines can be developed. Most of these vaccines are based on the main virus neutralising antigen, VP 2, which can be used in the vaccine as a single immunogen or in combination with the other outer viral capsid protein (VP5), or even with the outer core protein (VP7) and the inner core antigen (VP3). Furthermore, the use of reverse genetics has been explored recently as a means to manipulate the AHSV genome in order to generate biosafe vaccine viruses with DIVA capability [15].

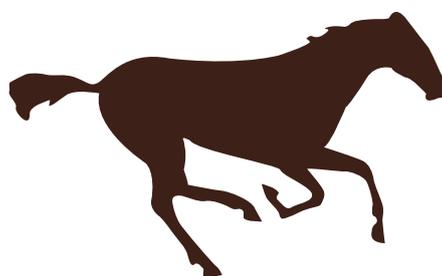
Most of these recombinant AHS vaccine candidates have DIVA capacity because they are based on selected proteins from the whole AHSV antigen spectrum, enabling the development of diagnostic assays based on antigens not included in the vaccine. Development of improved diagnostic tests for AHS (ELISA and RT-PCR in particular) has progressed steadily over the past two decades, and rapid and accurate ELISA and RT-PCR tests are currently in routine use by AHS diagnostic laboratories. These tests were designed to detect the most conserved genome segments or antigens of AHSV strains: genome segment 7 and the antigen it encodes, VP7, are the most commonly used diagnostic targets. Indeed, VP7 competition ELISA has become an OIE prescribed test for international trade and an RT PCR test targeting segment 7 is routinely used in most laboratories [1] and has been validated according to OIE standards. This presents an advantage for the development and application of DIVA vaccine strategies that use protective antigens other than VP7, as is the case for some recombinant vaccines based on VP2 and/or VP5. However, other combinations of AHSV antigens for vaccination and

diagnostics are possible and should not be disregarded as valid alternative DIVA strategies.

The scientific progress made in AHSV vaccinology in the last 30 years makes it possible to envisage the use of DIVA vaccination strategies to improve AHS control. DIVA vaccines against AHS may protect horses against AHS without affecting disease surveillance, making them ideal for use in non-endemic countries should an outbreak occur. In AHS-endemic regions, DIVA vaccines would enable protection of equine populations and also facilitate the application of regionalisation eradication of AHS from specific geographical locations and establishment of AHS-free zones – crucial for facilitating exportation of horses. In addition, safe, efficacious DIVA vaccines would enable vaccination of horses in non-endemic areas before they travel to AHS-endemic countries, allowing the AHS infection status of the animal to be monitored at any time during transport using differential diagnostic tests.

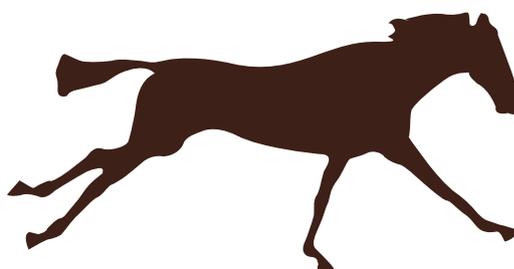
However, none of these potential benefits can be achieved without the engagement of vaccine manufacturers, which are the only entities that can take the development of these promising DIVA vaccine candidates beyond proof of concept. For this to occur, a business case for the development of AHS DIVA vaccines needs to be made and therefore it is vital that international organisations, government agencies, the equine industry and vaccine manufacturers act synergistically to exploit the potential benefits that DIVA vaccines can bring to the global control of AHS.

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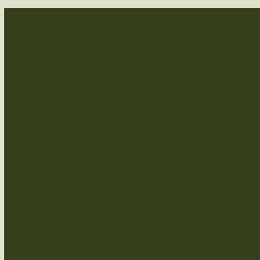
## References

1. Agüero M., Gómez-Tejedor C., Angeles Cubillo M., Rubio C., Romero E. & Jiménez-Clavero A. (2008). – Real-time fluorogenic reverse transcription polymerase chain reaction assay for detection of African horse sickness virus. *J. Vet. Diagn. Invest.*, **20** (3), 325–328. doi:10.1177/104063870802000310.
2. Aklilu N., Batten C., Gelaye E., Jenberie S., Ayelet G., Wilson A., Belay A., Asfaw Y., Oura C., Maan S., Bachanek-Bankowska K. & Mertens P.P. (2014). – African horse sickness outbreaks caused by multiple virus types in Ethiopia. *Transbound. Emerg. Dis.*, **61** (2), 185–192. doi:10.1111/tbed.12024.
3. Alberca B., Bachanek-Bankowska K., Cabana M., Calvo-Pinilla E., Viaplana E., Frost L., Gubbins S., Urniza A., Mertens P. & Castillo-Olivares J. (2014). – Vaccination of horses with a recombinant modified vaccinia Ankara virus (MVA) expressing African horse sickness (AHS) virus major capsid protein VP2 provides complete clinical protection against challenge. *Vaccine*, **32**, 3670–3674. doi:10.1016/j.vaccine.2014.04.036.
4. Castillo-Olivares J., Calvo-Pinilla E., Casanova I., Bachanek-Bankowska K., Chiam R., Maan S., Nieto J.M., Ortego J. & Mertens P.P. (2011). – A modified vaccinia Ankara virus (MVA) vaccine expressing African horse sickness virus (AHSV) VP2 protects against AHSV challenge in an IFNAR  $-/-$  mouse model. *PLoS ONE*, **6**, e16503. doi:10.1371/journal.pone.0016503.
5. Coetzer J.A.W. & Guthrie A.J. (2004). – African horse sickness Infectious diseases of livestock, (J.A.W. Coetzer & R.C. Tustin, eds). 2nd Ed., Oxford University Press Southern Africa, Cape Town, 1231–1246.
6. Dominguez M., Münstermann S., de Guindos I. & Timoney P. (2015). – Equine disease events resulting from international horse movements: systematic review and lessons learned. *Equine Vet. J.*, doi:10.1111/evj.12523.
7. Guthrie A.J., Quan M., Lourens C.W., Audonnet J.C., Minke J.M., Yao J., He L., Nordgren R., Gardner I.A. & Maclachlan N.J. (2009). – Protective immunization of horses with a recombinant canarypox virus vectored vaccine co-expressing genes encoding the outer capsid proteins of African horse sickness virus. *Vaccine*, **27** (33), 4434–4438. doi:10.1016/j.vaccine.2009.05.044.
8. Lelli R., Molini U., Ronchi G.F., Rossi E., Franchi P., Ulisse S, Armillotta G., Capista S., Khaiseb S., Di Ventura M. & Pini A. (2013). – Inactivated and adjuvanted vaccine for the control of the African horse sickness virus serotype 9 infection: evaluation of efficacy in horses and guinea-pig model. *Vet. Ital.*, **49**, 89–98.
9. Mellor P.S. & Hamblin C. (2004). – African horse sickness. *Vet. Res.*, **35** (4), 445–466. doi:10.1051/vetres:2004021.
10. Oura C.A., Ivens P.A., Bachanek-Bankowska K., Bin-Tarif A., Jallow D.B., Sailleau C., Maan S., Mertens P.C. & Batten C.A. (2012). – African horse sickness in The Gambia: circulation of a live-attenuated vaccine-derived strain. *Epidemiol. Infect.*, **140** (3), 462–465. doi:10.1017/S095026881100080X.
11. Romito M., Du Plessis D.H. & Viljoen G.J. (1999). – Immune responses in a horse inoculated with the VP2 gene of African horsesickness virus. *Onderstepoort J. Vet. Res.*, **66**, 139–144.
12. Roy P. & Sutton G. (1998). – New generation of African horse sickness virus vaccines based on structural and molecular studies of the virus particles. *Arch. Virol. Suppl.*, **14**, 177–202. doi:10.1007/978-3-7091-6823-3\_17.
13. Sanchez-Vizcaino J.M. (2004). – Control and eradication of African horse sickness with vaccine. *Dev. Biol. (Basel)*, **119**, 255–258.
14. Scanlen M., Paweska J.T., Verschoor J.A. & van Dijk A.A. (2002). – The protective efficacy of a recombinant VP2-based African horsesickness subunit vaccine candidate is determined by adjuvant. *Vaccine*, **20**, 1079–1088. doi:10.1016/S0264-410X(01)00445-5.
15. van de Water S.G., van Gennip R.G., Potgieter C.A., Wright I.M. & van Rijn P.A. (2015). – VP2 Exchange and NS3/NS3a Deletion in African Horse Sickness Virus (AHSV) in Development of Disabled Infectious Single Animal Vaccine Candidates for AHSV. *J. Virol.*, **89**, 8764–8772. doi:10.1128/JVI.01052-15.
16. von Teichman B.F., Dungu B. & Smit T.K. (2010). – In vivo cross-protection to African horse sickness Serotypes 5 and 9 after vaccination with Serotypes 8 and 6. *Vaccine*, **28**, 6505–6517. doi:10.1016/j.vaccine.2010.06.105.

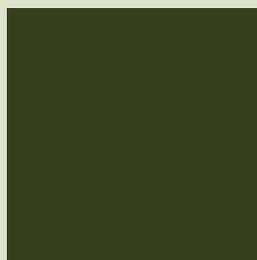




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## Re-appearance of glanders into Western Europe: clinical, laboratory and pathological findings in a German horse

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### Summary

After 60 years of disease freedom, glanders, a zoonotic and fatal disease of equids caused by *Burkholderia mallei*, was notified in a horse in Germany. We describe the clinical, laboratory and pathological findings of this non-typical case, for which the source of contamination is not fully understood.

### Keywords

*Burkholderia mallei* – glanders – importation – infectious disease – zoonosis.



## Introduction

Glanders is a zoonotic soliped-associated disease caused by the Gram-negative bacterium *Burkholderia mallei*. Typical clinical signs in horses occur after an incubation period of 3–5 days, or longer, with transient fever, and later with ulcerations in the respiratory tract and nodules predominantly found in the lungs [1]. The cutaneous form of glanders ('farcy') is characterised by tumours and solid or ruptured granulomas in the skin, and abscess formation along lymphatic vessels. Unilateral purulent nasal discharge is frequently seen. Clinical signs of both forms are often mixed but only in the respiratory form of glanders do lung lesions occur regularly [1].

Glanders is considered to be a re-emerging disease, and is endemic in various countries of Central and South America, the Middle East, Asia, and a few countries in Africa. During the last five years, cases have been reported from Afghanistan, Bahrain, Kuwait, Lebanon, Brazil, Mongolia, Myanmar, Eritrea, India, Iran, Pakistan and Russia [2]. Western European countries have been free from glanders since the 1960s. However, in 2015, glanders was diagnosed in a German horse, which resulted in restrictions to the international trade of equids and their products for at least six months and substantial economic losses.

## Approach

The Holsteiner gelding was born in 2008 in Schleswig-Holstein, Germany. It was initially trained in a

stud in Lower Saxony (2012–2013) and then in Schleswig-Holstein (November 2013 to October 2014). Subsequently, it was transferred to a stud in Lower Saxony to be trained as jumper. During preparation for importation of the horse into the USA, the complement fixation test (CFT) for glanders was positive. The gelding was quarantined immediately after the first positive CFT result. Blood collected 10, 15 and 20 days after the initial sampling had consistently positive CFT results (1:80) using a well validated CFT antigen [3, 4]. The highly specific immunoblot for glanders [5] was also positive in all samples. Physical examination revealed that the horse was in good general condition, and had no obvious clinical signs such as fever, nasal discharge or other respiratory signs. Hence, the veterinary authorities ordered euthanasia, post-mortem examination and microbiological and pathological investigation of the horse to confirm the serological results.

Post-mortem examination confirmed that the horse was in good general and nutritional condition. Examination of the nasal cavity after sagittal splitting of the head and of the upper respiratory tract revealed no visible lesions. The lung, liver and spleen were severely hyperaemic owing to the technique used for euthanasia. These organs were sliced (0.5 cm

thick slices), but only one white nodule (1 mm<sup>3</sup>) was detected in the liver. Chronic proliferative serositis of the diaphragm and liver were interpreted as sequelae of endoparasitosis.

Multiple circumscribed (2–10 mm) areas of skin with attached crusts were found on the legs (Fig. 1A), neck (Fig. 1B) and head. Histology showed areas of hyperkeratosis, epidermal hyperplasia, crusts, intra-epidermal pustules, neutrophilic exocytosis and mild superficial perivascular dermatitis (Fig. 1C–E). Diffuse labelling, but no distinct bacteria, was observed in skin crusts when immunohistochemistry (IHC) was performed on paraffin-embedded sections using a polyclonal rabbit anti-*B. mallei* immune serum.

Samples were collected from the liver, including the small white nodule, lung, spleen, nasal conchae, sinuses, diaphragm, various lymph nodes, tonsils and the tongue, and bacterial culture and molecular investigation by real-time PCR were performed [3]. Suspicious colonies were subcultured and tested with flagellin P (*fljP*) gene-based *B. mallei*-specific real-time PCR [6] using the MX3000P™ real-time PCR system (Agilent Technologies, Santa Clara, USA). However, no *B. mallei* was isolated and no *B. mallei*-specific DNA was detected.

Given that native material from the skin lesions had not been collected, crusts were pooled from formalin-fixed skin samples and prepared for real-time PCR as described previously [6]. The material was washed twice

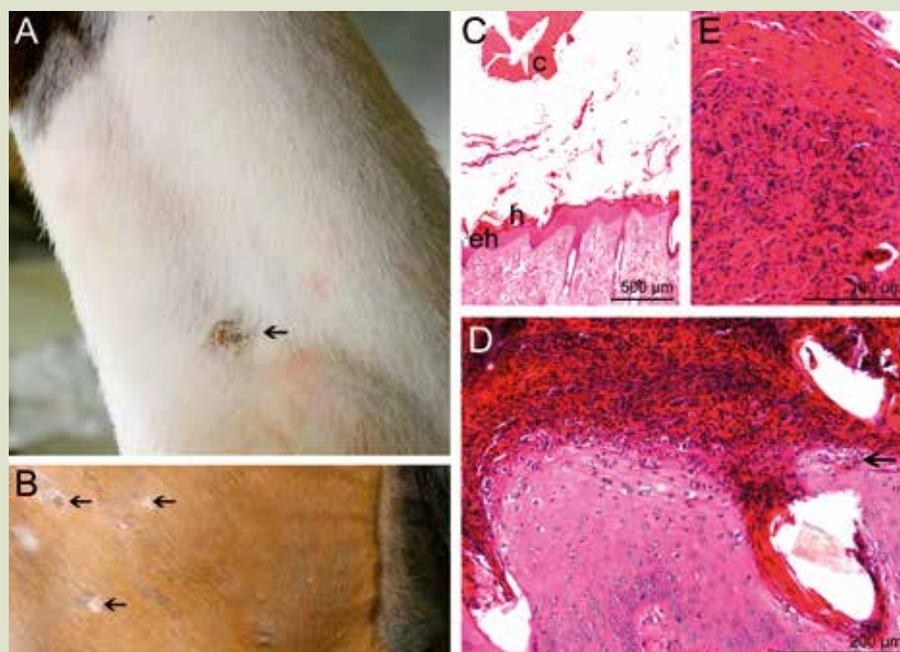


Fig. 1

**A, B:** Circumscribed lesions with crusts (arrows) in the skin of the left foreleg (A) and the neck (B)

**C:** Transverse section through the lesion at the left foreleg with crusts (c) and underlying skin with hyperkeratosis (h), epidermal hyperplasia (eh) and mild superficial perivascular dermatitis. Paraffin section, haematoxylin and eosin (H&E) stain

**D:** Circumscribed lesion on the right foreleg with severe exocytosis of neutrophils and intraepidermal pustules (arrow). Paraffin section, H&E stain

**E:** Higher magnification of a crust from the left foreleg containing degenerated neutrophils. Paraffin section, H&E stain

with and incubated overnight in deionised water to remove formalin. Following this, 50 mg of material was minced and DNA prepared using the High Pure PCR Template Preparation Kit™ (Roche, Mannheim, Germany). Two microlitres of template was subjected to the *fliP*-based PCR. Positive amplification was seen at a Ct-value of 38, demonstrating the low load of *B. mallei*-specific DNA in the sample.

The case was consequently declared as a *B. mallei* infection and was notified to OIE.

### Significance of findings

The case presented here is a good example of the obstacles encountered in making a diagnosis of glanders in a horse kept under excellent conditions in a disease-free region. Only the combined use of CFT and the immunoblot technique in a two-cascade testing approach was able to overcome the shortcomings of CFT [5, 7]. The lack of any obvious and distinct clinical signs is not unusual in such horses. The severity of the clinical signs depends

on individual susceptibility, but disease is likely to erupt under conditions of poor husbandry or stress, or circumstances causing immunosuppression [1]. In the present case, small areas of crusted skin that had not been mentioned by the clinician were the only visible findings at necropsy. They were neither striking nor specific. Initially, they were considered to be result of other bacterial infections or trauma and therefore no native material was collected. When the marked inflammatory reactions were noted histologically, specific



molecular testing for *B. mallei* was initiated. For this, DNA was prepared from formaldehyde-fixed material. The highly sensitive real-time PCR finally confirmed the two-cascade serological diagnosis of glanders [6, 7]. It is noteworthy that, based on our experiences, the western blot technique is the most specific serological assay for glanders at present [5, 7].

Signs of farcy are expected in approximately 40% of *B. mallei*-infected horses and are regularly accompanied by nodules in the lung [1]. However, single cases with only cutaneous lesions and no enlargement of the regional lymphatics have been described [1]. In the present case, no lung lesions were found. Hunting (1908), who analysed 1,000 cases of glanders, also described the difficulties in identifying lesions in

parenchymal tissues if they appear as haemorrhagic centres only [1]. Thus, we cannot exclude the possibility that such lesions were missed despite extensive searching. Another possible, and also more likely, explanation is that there was indeed a primary cutaneous infection resulting from inoculation caused by use of contaminated tack or cleaning devices. In this case, dissemination to the lung would typically require one month after the appearance of skin lesions and therefore might not have developed at the time of investigation. Some animals presumably never develop other clinical signs [1]. National regulations for glanders investigations in Germany demand use of the OIE-prescribed CFT and immunoblot technique [5]. Positive routine CFT results have to be verified immediately and are analysed

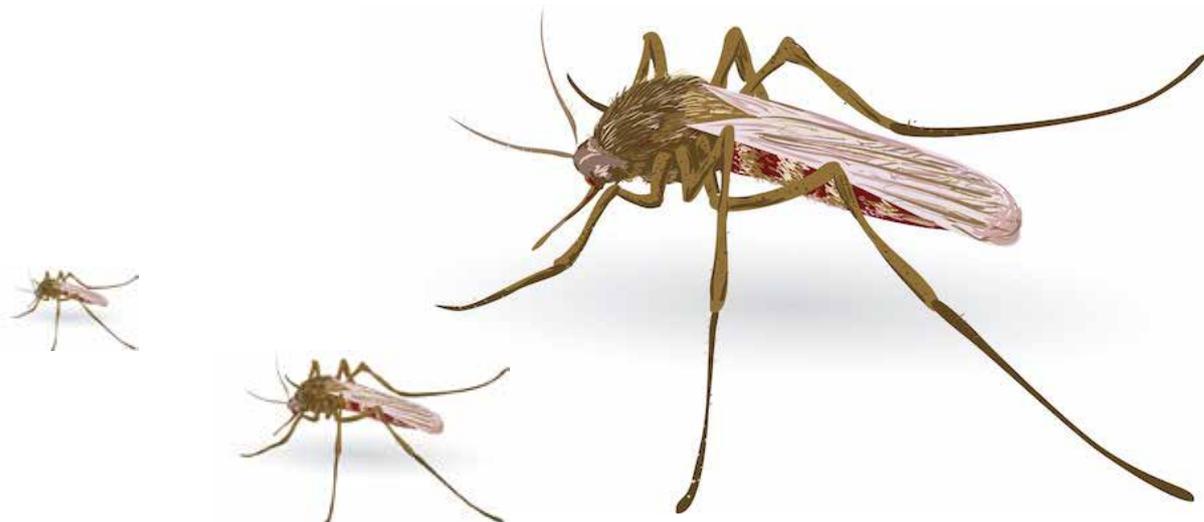
by the immunoblot technique. Even in the case of a negative immunoblot result, the equids must be re-tested three times at intervals of 2–3 weeks. For suspicious and outbreak populations re-testing has to be done at least three times at 2–3-week intervals with negative CFT results before the restrictions on these populations can be lifted. Positive CFT results confirmed by positive immunoblot are considered to be proof for *B. mallei* infection. Isolation and/or molecular identification of the agent in a sample demonstrates *B. mallei* infection unambiguously.

Although the source of infection may not have been identified for this case, the re-appearance of glanders in Western Europe should increase awareness of this serious transboundary disease in non-endemic areas.

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## References

1. Hunting W. (1908). – Glanders – a clinical treatise. H & W Brown, London.
2. World Organisation for Animal Health (OIE) (2015). – World Animal Health Information Database (WAHID). OIE, Paris. Available at: [www.oie.int/wahis\\_2/public/wahid.php/](http://www.oie.int/wahis_2/public/wahid.php/) (accessed in March 2015).
3. World Organisation for Animal Health (OIE) (2014). – Glanders, Chapter 2.5.11. Manual of Diagnostic Tests and Vaccines for Terrestrial Animals. OIE, Paris.
4. Khan I., Wieler L.H., Melzer F., Gwida M., Santana V.L., De Souza M.M., Saqib M., Elschner M.C. & Neubauer H. (2011). – Comparative evaluation of three commercially available complement fixation test antigens for the diagnosis of glanders. *Vet. Rec.*, **169** (19), 495. doi:10.1136/vr.d5410.
5. Elschner M.C., Scholz H.C., Melzer F., Saqib M., Marten P., Rassbach A., Dietzsch M., Schmoock G., De Assis Santana V.L., De Souza M.M., Wernery R., Werner Y.U. & Neubauer H. (2011). – Use of a Western blot technique for the serodiagnosis of glanders. *BMC Vet. Res.*, **7**, 4. doi:10.1186/1746-6148-7-4.
6. Tomaso H., Scholz H.C., Al Dahouk S., Eickhoff M., Treu T.M., Wernery R., Wernery U. & Neubauer H. (2006). – Development of a 5'-nuclease real-time PCR assay targeting *fljP* for the rapid identification of *Burkholderia mallei* in clinical samples. *Clin. Chem.*, **52** (2), 307–310. doi:10.1373/clinchem.2005.059196.
7. Khan I., Elschner M.C., Melzer F., Gwida M., Wieler L.H., Ali R., Muhammad S. & Neubauer H. (2012). – Performance of complement fixation test and confirmatory immunoblot as two-cascade testing approach for serodiagnosis of glanders in an endemic region of South East Asia. *Berl. Münch. Tierärztl. Wochenschr.*, **125** (3–4), 117–121.



## West Nile virus epizootics in Camargue, France, in 2015, and reinforcement of West Nile virus surveillance and control networks

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## Keywords

Camargue – epizootics – horse – Réseau d'épidémiologie-surveillance en pathologie équine (RESPE) – surveillance – West Nile virus.

## Introduction

West Nile virus (WNV) infection is a non-contagious disease mainly transmitted by the bites of infected mosquitoes from the *Culex* genus. WNV is maintained in a mosquito–bird–mosquito cycle, and can accidentally be transmitted to mammalian hosts. Among these hosts, equines and humans are the most sensitive to WNV infection and can develop severe meningoencephalitides.

West Nile virus introduction and circulation have been demonstrated on multiple occasions in southern Europe and the Mediterranean basin since the 1960s, with WNV activity having dramatically increased over the last five years and spread to eastern territories without previous WNV records [1]. In 2015, 106 neuroinvasive cases were reported in humans in European Union (EU) countries<sup>1</sup>, a situation similar to that observed in 2014. Nevertheless, WNV activity was primarily reported in Western Mediterranean countries (in Italy, France and Portugal in humans and equines, as well as in Spain in equines).

In France, the first reported WNV outbreak occurred in 1962 in the Camargue region, a natural wetland located south of the city of Arles within a triangle defined by the two arms of the Rhône River and the Mediterranean Sea [2]. More recently, WNV epizootics in France were reported in this same region in 2000 and 2004, as well as in Var and Eastern Pyrenees, two counties bordering the Mediterranean Sea, in 2003 and 2006 respectively [3].

After a silent period lasting more than ten years, WNV re-emerged at the periphery of the Camargue area during the summer of 2015, underlining the fact that the Camargue area creates favourable conditions for WNV amplification.

The 2015 French WNV epizootics will be presented in this report. The effectiveness of the French epidemiosurveillance network in horses (RESPE)<sup>2</sup> for the early detection of WNV cases in horses, as well as the importance of integrated and coordinated monitoring in humans, other animals and vectors and concerted WNV control measures will be emphasised.

## Materials and methods

### Reporting of West Nile virus suspect cases in equines through the French epidemiosurveillance network in horses and local Veterinary Services

West Nile virus surveillance in equines in France is based on clinical surveillance of neurological syndromes, with veterinary practitioners expected to report clinically suspect cases of West Nile fever to local Veterinary Services (VS).

French veterinary practitioners are supported by the RESPE network in the identification of the causative agent of disease. RESPE is a passive surveillance system based on the declarations of 594 sentinel and voluntary veterinarians (SVs) distributed across France in 92 counties. More specifically, the RESPE Neurologic Syndrome sub-network is involved in the surveillance of West Nile neuroinvasive disease and the neurological form of equine herpesvirus infection (EHV-1).

1 European Centre for Disease Prevention and Control (ECDC): [ecdc.europa.eu/en/healthtopics/west\\_nile\\_fever/West-Nile-fever-maps/pages/index.aspx](http://ecdc.europa.eu/en/healthtopics/west_nile_fever/West-Nile-fever-maps/pages/index.aspx) (consulted on 11 December 2015)

2 RESPE: Réseau d'épidémiologie-surveillance en pathologie équine





### Reporting of West Nile virus human suspect cases

The surveillance of WNV infections in humans at countrywide level relies on the human National Reference Laboratory for arboviruses (hNRL, IRBA – ‘Institut de recherche biomédicale des armées’, Marseille). In areas at risk for WNV (i.e. counties in the Mediterranean area), enhanced seasonal surveillance is implemented every year between 1 June and 31 October and aims at detecting West Nile neuroinvasive disease in humans. Suspect cases, defined as patients over 15 years old presenting with clinical signs of viral meningitis or encephalitis, should be reported to local health authorities and screened for WNV.

In addition, active surveillance, both retrospective and prospective, is triggered as soon as WNV infection is detected in humans or animals (equines or birds). In 2015, once the first two equine WNV cases had been notified, a retrospective survey was conducted in hospitals from the Bouches-du-Rhône and Gard *departments* with the aim of identifying suspect cases that had not been tested for WNV.

### West Nile virus surveillance in wild birds

Mortality in wild birds that have been described as the most sensitive to WNV infection in Europe or the New World [4] is monitored in Mediterranean counties at risk for WNV circulation from May to October through the SAGIR network (a network for the epidemiological surveillance of wildlife diseases and intoxications, French National Hunting and Wildlife Agency – ONCFS/Hunting federations – FNC) [5].

### Vector surveillance

Mosquitoes were captured in CO<sub>2</sub> traps for identification and monitoring of abundance from mid-April to mid-October 2015 by EID Méditerranée, in the frame of regular French vector surveillance programmes. Thirty-three CO<sub>2</sub>-baited traps [6] were used for specimen collection along the Mediterranean coast.

### West Nile virus diagnostic methods

Sera from equine suspect cases were first screened for anti-WNV antibodies by competition enzyme-linked immunosorbent assay (ELISA) (IDScreen® West Nile

Competition Multi-species, IDvet, Montpellier, France) and by IgM Antibody Capture (MAC) ELISA (IDScreen® West Nile IgM capture, IDvet) in local veterinary laboratories and ANSES [7]. WNV infection was finally confirmed at ANSES by virus neutralisation tests (VNTs), as prescribed by the OIE *Manual of Diagnostic Tests and Vaccines for Terrestrial Animals* [8]. A confirmed case was defined as a clinically suspect horse with a positive WNV IgM ELISA test and, at the beginning of a WNV epizootic, a positive WNV VNT.

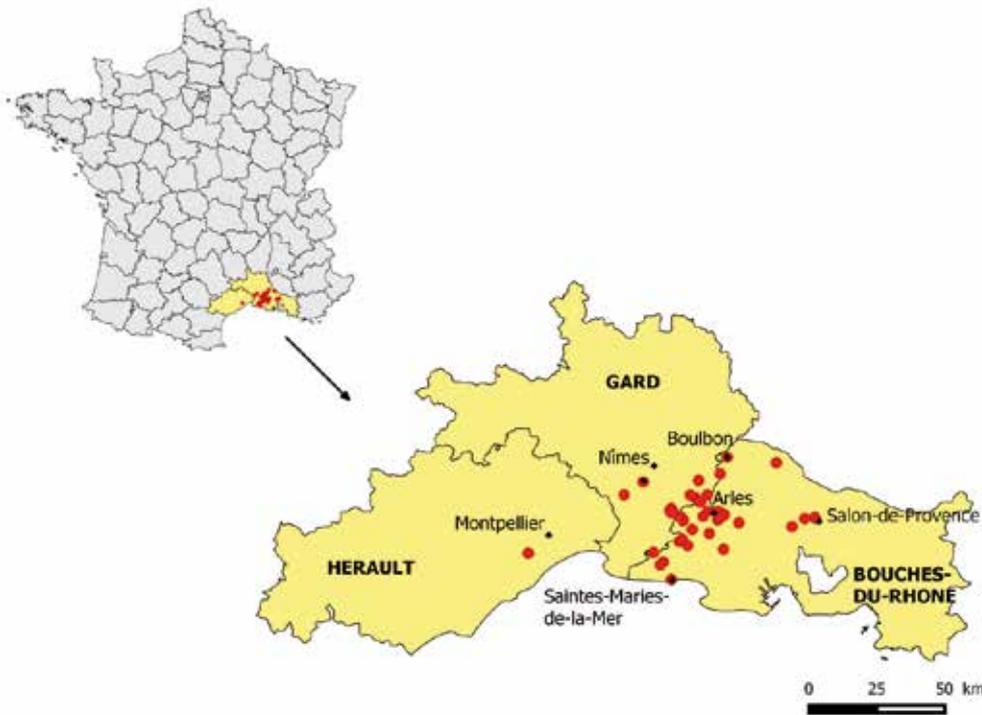
Samples of RNA extracted from organs of wild birds suspected of having WNV disease were screened at ANSES for the presence of WNV genomic RNA by real-time reverse transcription polymerase chain reaction (RT-PCR) [9]. Diagnostic tests performed at IRBA on human samples consist of an identical real-time RT-PCR protocol for the detection of the WNV genome [9] and in-house ELISAs (indirect IgG and MAC-ELISAs). Mosquito samples were analysed at IRBA for WNV genome detection.

## Results

### West Nile virus epizootics in 2015

On 17 November 2015, 39 equine outbreaks had been confirmed in three counties surrounding the Camargue area: Bouches-du-Rhône, Gard and Hérault *departments* (Fig. 1).

In these counties, 65 animals exhibited meningoencephalitis. Serological tests ruled out WNV as the aetiology of disease in 24 equines (four animals with WNV IgG only and 20 animals with no WNV antibody response). In total, 49 equines were found to be infected (positive in WNV competition and MAC-ELISAs); among them, 41 exhibited neuroinvasive forms and three showed febrile forms. Five asymptomatic infections were identified through systematic screening of all the equines from three recognised outbreaks and through retrospective analysis of horse sera collected in the vicinity of the outbreaks. Neuroinvasive forms of WNV in equines were observed between 11 August and 30 October. Six equines died or were euthanised as a consequence of severe WNV neuroinvasive disease and prolonged recumbency, which corresponds to a fatality rate of 14.6% (6/41).



**Fig. 1**  
Distribution map of equine West Nile virus outbreaks in South-Eastern France, 2015, as of 30 October

### Early detection of West Nile virus cases in horses

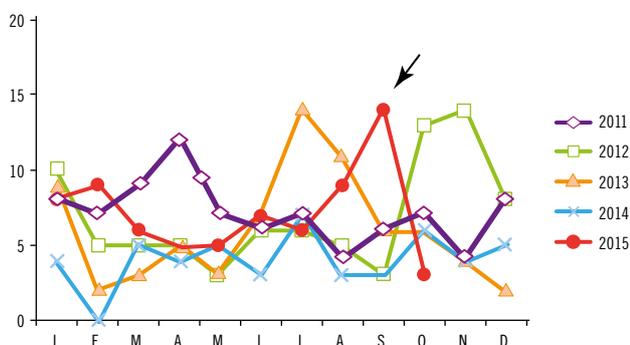
In 2015, WNV infections were rapidly detected by the RESPE. After confirmation of the first two WNV cases, the RESPE network immediately informed every sentinel veterinarian about the circulation of WNV in France, encouraging veterinary practitioners to be more vigilant of neurological conditions in horses and to report suspect cases to VS. An increase in the number of reports in September 2015 probably reflects this enhanced vigilance by equine veterinary practitioners (Fig. 2, arrow).

### Coordination and reinforcement of West Nile virus surveillance activities in France

As soon as the first equine WNV cases had been confirmed, the French national VS (Directorate General for Food, DGAI) informed the numerous actors involved

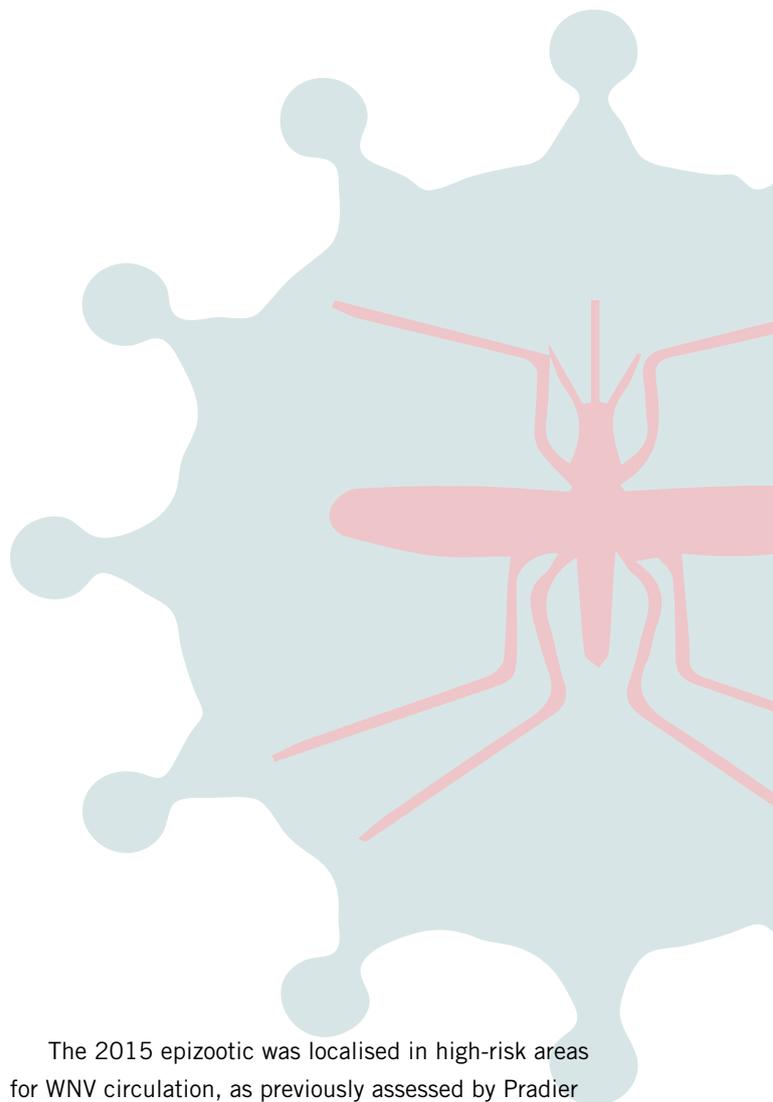
in WNV surveillance in equines, humans, wild avifauna and vectors. Animal surveillance was reinforced, with DGAI, SNGTV (French National Society of Veterinary Technical Groups) and ONCFS/FNC prompting veterinarians and the SAGIR network to increase vigilance for WNV-induced disease or mortality in horses and wild birds respectively.

Updated information on equine WNV outbreaks was shared with WNV surveillance actors on a weekly or biweekly basis on the ESA platform (a French platform for animal epidemiological surveillance: [www.platforme-esa.fr](http://www.platforme-esa.fr)) and the RESPE internet site ([www.respe.net](http://www.respe.net)). The WNV surveillance was also rapidly strengthened in humans and mosquito vectors, under the guidance of the Ministry of Health (Directorate General for Health, DGS).



**Fig. 2**  
**Number of equine animals showing signs of a neurological condition, as reported to the Neurological Syndromes Sub-Network of the RESPE (French Network for the Epidemiological Surveillance of Equine Diseases), 2011 to 2015**

An unusually high number of reports of neurological cases were reported in September 2015 (arrow)



## Discussion

The 2015 WNV transmission season in France was characterised by intense and localised WNV amplification cycles associated with equine WNV neuroinvasive cases. In total, 49 WNV infections were confirmed in equines (positive IgM response), including 41 animals with meningoencephalitis; this corresponds to the third most important WNV epizootic reported in France. The case fatality rate of 14.6% during the 2015 WNV epizootic was found to be much lower than usually reported (20–57%) [10]. This finding could be attributed to the low pathogenicity of the circulating WNV strain(s) (analysis in progress). It is noteworthy that no abnormal fatalities in wild birds were observed in Camargue in 2015, a situation similar to that reported in the most recent French WNV outbreaks and in other European outbreaks due to lineage 1 WNV strains [11]. Moreover, no severe neuroinvasive forms were described in humans.

The 2015 epizootic was localised in high-risk areas for WNV circulation, as previously assessed by Pradier and co-workers on the basis of landscape structural features [12]. The regular WNV outbreaks in the Camargue area suggest either endemic virus circulation – leading, in some exceptional years, to the emergence of the virus in equids and humans – or irregular virus introductions that would more systematically lead to WNV outbreaks. Interestingly, maintenance of WNV in the absence of equine or human cases of WNV disease has been demonstrated in two serosurveys of birds in the Camargue area, conducted in 2007 and in 2009–2010 [13, 14], thus supporting the first hypothesis.

Equine surveillance for WNV allowed the early detection of the WNV infections in 2015, as already described during the previous French outbreaks. In Europe, modelling of WNV circulation indicated that clinical surveillance in horses was a cost-effective and sensitive system [15]. Description of the





first clinical cases, upon reporting of every suspect horse, should precede the identification of WNV in mosquitoes or of seroconversion in birds or horses by a few days and at a maximum two weeks. However, in countries endemic for WNV such as Italy or Greece, early detection is practically achieved by surveillance of vectors or sentinel birds [16, 17].

The RESPE network played a major role in the detection of the first two equine WNV cases in 2015, while most of the clinically suspect cases reported by field surveillance veterinarians were recorded directly by the local Veterinary Services rather than by the RESPE network. The two reporting systems appeared to be complementary during the 2015 epizootics. RESPE has proved useful in maintaining a minimum level of vigilance in the Camargue area. The RESPE neurological syndrome sub-network should also enable more effective and rapid monitoring for encephalitis-associated endemic or emerging pathogens through syndromic surveillance [18].

Re-emergence of WNV could have been expected in France, because many European countries have reported increased WNV outbreaks since 2010 [19]. Such a rise in WNV outbreaks has been generally associated with WNV endemisation in Southern European countries such as Italy or Greece [20, 21]. It can therefore be anticipated that further WNV outbreaks will be reported in France in the next few years, and the French WNV surveillance system will have to be adjusted accordingly and collaboratively.

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## References

1. Bahuon C. & Lecollinet S. (2015). – Des saisons de transmission du virus West Nile contrastées en Europe – situation épidémiologique fin 2014. *Bull. Épidémiol. Santé Animale-Alimentation*, **67**, 19–22.
2. Joubert L., Oudar J., Hannoun C., Beytout D., Corniou B., Guillon J.C. & Panthier R. (1970). – Epidemiology of the West Nile virus: study of a focus in Camargue. IV. Meningo-encephalomyelitis of the horse. *Ann. Inst. Pasteur*, **118**, 239–247.
3. Lecollinet S.H.J., Armengaud A., Capek I., Leblond A., Schaffner F. & Zientara S. (2013). – Le Virus du Nil Occidental. Chapitre 7: La surveillance du virus en France. Quae Ed.
4. Perez-Ramirez E., Llorente F. & Jimenez-Clavero M.A. (2014). – Experimental infections of wild birds with West Nile virus. *Viruses*, **6**, 752–781. doi:10.3390/v6020752.
5. Decors A., Hars J., Faure E., Quintaine T., Chollet J.Y. & Rossi S. (2014). – Le réseau Sagir : un outil de vigilance vis-à-vis des agents pathogènes exotiques. *Bull. Épidémiol. Santé Animale-Alimentation*, **66**, 35–39.
6. L'Ambert G., Ferré J.B., Schaffner F. & Fontenille D. (2012). – Comparison of different trapping methods for surveillance of mosquito vectors of West Nile virus in Rhone Delta, France. *J. Vect. Ecol.*, **37**, 269–275. doi:10.1111/j.1948-7134.2012.00227.x.
7. Beck C., Desprès P., Paulous S., Vanhomwegen J., Lowenski S., Nowotny N., Durand B., Garnier A., Blaise-Boisseau S., Guitton E., Yamanaka T., Zientara S. & Lecollinet S. (2015). – A High-Performance Multiplex Immunoassay for Serodiagnosis of Flavivirus-Associated Neurological Diseases in Horses. *Biomed. Res. Int.*, 13 pp. doi:10.1155/2015/678084.
8. World Organisation for Animal Health (OIE) (2015). – Chapter 2.1.20. West Nile fever (NB: Version adopted in May 2013). Manual of Diagnostic Tests and Vaccines for Terrestrial Animals. Paris, OIE.
9. Linke S., Ellerbrok H., Niedrig M., Nitsche A. & Pauli G. (2007). – Detection of West Nile virus lineages 1 and 2 by real-time PCR. *J. Virol. Meth.*, **146**, 355–358. doi:10.1016/j.jviromet.2007.05.021.



10. Pradier S., Lecollinet S. & Leblond A. (2012). – West Nile virus epidemiology and factors triggering change in its distribution in Europe. *Rev. Sci. Tech. Off. Int. Epiz.*, **31**, 829–844.
11. Jourdain E., Schuffenecker I., Korimbocus J., Reynard S., Murri S., Kayser Y., Gauthier-Clerc M., Sabatier P. & Zeller H.G. (2007). – West Nile virus in wild resident birds, Southern France, 2004. *Vector Borne Zoonotic Dis.*, **7**, 448–452. doi:10.1089/vbz.2006.0592.
12. Pradier S., Leblond A. & Durand B. (2008). – Land cover, landscape structure, and West Nile virus circulation in southern France. *Vector Borne Zoonotic Dis.*, **8**, 253–263. doi:10.1089/vbz.2007.0178.
13. Balanca G., Gaidet N., Savini G., Vollot B., Foucart A., Reiter P., Boutonnier A., Lelli R. & Monicat F. (2009). – Low West Nile virus circulation in wild birds in an area of recurring outbreaks in Southern France. *Vector Borne Zoonotic Dis.*, **9**, 737–741. doi:10.1089/vbz.2008.0147.
14. Vittecoq M., Lecollinet S., Jourdain E., Thomas F., Blanchon T., Arnal A., Lowenski S. & Gauthier-Clerc M. (2013). – Recent circulation of West Nile virus and potentially other closely related flaviviruses in Southern France. *Vector Borne Zoonotic Dis.*, **13**, 610–613. doi:10.1089/vbz.2012.1166.
15. Chevalier V., Lecollinet S. & Durand B. (2011). – West Nile virus in Europe: a comparison of surveillance system designs in a changing epidemiological context. *Vector Borne Zoonotic Dis.*, **11**, 1085–1091. doi:10.1089/vbz.2010.0234.
16. Bellini R., Calzolari M., Mattivi A., Tamba M., Angelini P., Bonilauri P., Albieri A., Cagarelli R., Carrieri M., Dottori M., Finarelli A.C., Gaibani P., Landini M.P., Natalini S., Pascarelli N., Rossini G., Velati C., Vocale C. & Bedeschi E. (2014). – The experience of West Nile virus integrated surveillance system in the Emilia-Romagna region: five years of implementation, Italy, 2009 to 2013. *Eurosurveillance*, **19**. doi:10.2807/1560-7917.ES2014.19.44.20953.
17. Chaskopoulou A., Dovas C.I., Chaintoutis S.C., Kashefi J., Koehler P. & Papanastassopoulou M. (2013). – Detection and early warning of West Nile Virus circulation in Central Macedonia, Greece, using sentinel chickens and mosquitoes. *Vector Borne Zoonotic Dis.*, **13**, 723–732. doi:10.1089/vbz.2012.1176.
18. Henning K. (2004). – What is syndromic surveillance?, *Morb. Mort. Weekly Rep.*, **53** (Suppl), 7–11.
19. Beck C., Jimenez-Clavero M.A., Leblond A., Durand B., Nowotny N., Leparc-Goffart I., Zientara S., Jourdain E. & Lecollinet S. (2013). – Flaviviruses in Europe: complex circulation patterns and their consequences for the diagnosis and control of West Nile disease. *Int. J. Environ. Res. Public Health*, **10**, 6049–6083. doi:10.3390/ijerph10116049.
20. Barzon L., Pacenti M., Franchin E., Squarzon L., Lavezzo E., Cattai M., Cusinato R. & Palu G. (2013). – The complex epidemiological scenario of West Nile virus in Italy. *Int. J. Environ. Res. Public Health*, **10**, 4669–4689. doi:10.3390/ijerph10104669.
21. Hernández-Triana L.M., Jeffries C.L., Mansfield K.L., Carnell G., Fooks A.R. & Johnson N. (2014). – Emergence of West Nile virus lineage 2 in Europe: a review on the introduction and spread of a mosquito-borne disease. *Front. Public Health*, **2**:271. doi: 10.3389/fpubh.2014.00271.



# activities of Reference Laboratories & Collaborating Centres



## Validation of a real-time RT-PCR for the detection of African horse sickness virus genome

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### Keywords

African horse sickness virus – Agüero – real-time reverse transcriptase polymerase chain reaction (RRT-PCR).

### Introduction

African horse sickness (AHS) is the most devastating of all equine diseases, with a mortality rate of up to 90% in naïve horses. The disease has a profound and negative economic impact on the equine industries of

countries where it is endemic and currently inhibits exports from sub-Saharan African countries. In view of the global applicability of the 'high health, high performance' (HHP) concept, AHS was included in the group of six diseases for which health requirements have been defined for HHP horses and included into the Model HHP Veterinary Certificate.

Since 2012, OIE Member Countries have been able to apply to

the OIE to be officially recognised as free from AHS (entire territory or parts thereof). While sub-Saharan African countries have not so far been able to comply with the requirements for AHS-free status, the *Terrestrial Animal Health Code* (the *Terrestrial Code*) offers the possibility of importing equines from countries considered to be infected with the AHS virus (AHSV), provided certain



conditions as laid down in article 12.1.7 are met.

To meet these conditions, agent identification tests, particularly nucleic acid methods, are of crucial importance. The OIE *Manual of Diagnostic Tests and Vaccines for Terrestrial Animals* describes reverse transcriptase polymerase chain reaction (RT-PCR) protocols in Chapter 2.5.1. However, although the protocols described have been very well tested, they have not yet been fully validated according to the OIE validation pathway [1].

The health measures recommended for AHS in the HHP concept to facilitate international movement of horses are based on the use of vector-protected quarantine facilities and a validated AHS RT-PCR test. Horses to be exported need to test negative for AHS on two consecutive samples, taken before and after entering the quarantine station.

To assure countries of this risk mitigation measure, and with the aim of developing a prescribed agent identification test in addition to the existing serological tests (complement fixation and ELISA tests), the four OIE Reference Laboratories, in collaboration with three other laboratories, embarked on a proficiency test for evaluation of available RT-PCR assays.

### The proficiency test

The comparative test was based on the creation of two panels of samples. Panel 1 consisted of AHSV field blood samples from the 2013–2014 outbreak season in South Africa and panel 2 comprised a set of negative equine blood samples spiked with an inactivated AHSV. For panel 2, 18 AHSV isolates from different years and geographical origins, representative of all serotypes of AHSV, were used. Two of them were included in serial tenfold dilution

( $10^{-2}$ – $10^{-7}$ ) in duplicates in order to study analytical sensitivity and repeatability between participating laboratories.

The samples were aliquoted, blindly coded and distributed for testing to:

- a) all four OIE Reference Laboratories for AHS (Table III)
- b) the European Union (EU) Reference Centre for equine infectious diseases (ANSES-Alfort, France)
- c) Deltamune (South Africa)
- d) National Veterinary Services Laboratories (NVSL), United States Department of Agriculture (USDA) (Ames, Iowa, USA).

Each laboratory used their routine (internally validated and accredited) test in the first instance, and if their capacities (technical and logistic) allowed it at the time of testing, they used additional RT-PCR methods as listed in Table I.

**Table I**  
Participating laboratories and test methods used in each laboratory

Laboratory	RT-PCR method									
	RRT-PCR In-house S3(VP3) and S5(NS1)	Conventional hemi-nested RT-PCR Bremer S8(NS2)	RRT-PCR Agüero S7 (VP7)	RRT-PCR Fernández-Piñero S7 (VP7)	RRT-PCR Monaco S8 (NS2)	RRT-PCR Guthrie S7 (VP7)	RRT-PCR Bachanek S1	RRT-PCR Bachanek S3	RRT-PCR In-house Deltamune S5 (NS1) and S4 (VP4)	Conventional RT-PCR Fernández-Piñero S7 (VP7)
ARC-OVI	X	X								
LCV			X	X	X	X				
UCM			X	X		X				
Plrbright			X	X			X	X		
ANSES			X				X			
Deltamune									X	
USDA				X		X				X
<b>Total</b>	<b>1</b>	<b>1</b>	<b>4</b>	<b>4</b>	<b>1</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>1</b>

RRT-PCR: real-time reverse transcriptase polymerase chain reaction



Of the ten different protocols, methods Agüero and Fernández-Piñero (four laboratories each) and Guthrie (three laboratories) were the most widely used. Among them, Agüero and Guthrie correctly detected all the representative strains included in panel 2. They also achieved a high sensitivity in the analysis of field samples in panel 1 (Table II).

### The test validation

Taking into account the results, summarised in Table II, of the proficiency test carried out during November 2014 to May 2015, the wide use of the Agüero method within EU countries during the past six years and its well documented performance in previous proficiency tests, a full dossier in line with the OIE validation pathway [1] was developed, submitted to the OIE

Biological Standards Commission and approved.

The dossier describes the design of the test method, including the nucleotide sequence data used to direct the primers and probe set to the highly conserved sequence within the viral protein 7 (VP7) region of the AHSV genome and the characteristics of the primers and the probe.

It then proceeds to describe the analytical performance

**Table II**  
Sensitivity and specificity of all tested methods

Method	No. labs using	Sensitivity (panel 1)	Specificity (panel 1)	Inclusivity (panel 2: 18 AHSV strains)	Exclusivity (panel 2: 4 neg. horse blood, 1 EEV)	Last detected dilution	
						AHSV-7 Senegal 2007 10 <sup>-2</sup> -10 <sup>-7</sup>	AHSV-8 Ethiopia 2010 10 <sup>-2</sup> -10 <sup>-7</sup>
In-house S3+S5	1 (panels 1+2)	83.3%	100%	17/18	Correct	10 <sup>-7</sup>	10 <sup>-6</sup>
Bremer	1 (panels 1+2)	95.2%	100%	18/18	1 FP	10 <sup>-6</sup> /10 <sup>-7</sup>	10 <sup>-6</sup>
Agüero	4 (panels 1+2)	97.6% 92.9% 92.9% 76.2%	100%	18/18	Correct	10 <sup>-7</sup> 10 <sup>-7</sup> 10 <sup>-7</sup> 10 <sup>-5</sup>	10 <sup>-7</sup> 10 <sup>-7</sup> 10 <sup>-6</sup> 10 <sup>-5</sup>
Fernández-Piñero	3 (panels 1+2) 1 (panel 2)	69.0% 59.5% 57.1% -	100% - -	18/18 (4 high Ct) 18/18 (4 high Ct) 17/18 (3 high Ct) 18/18 (4 high Ct)	Correct	10 <sup>-6</sup> /10 <sup>-7</sup> 10 <sup>-6</sup> 10 <sup>-6</sup> 10 <sup>-4</sup>	10 <sup>-6</sup> 10 <sup>-6</sup> 10 <sup>-5</sup> 10 <sup>-5</sup>
Monaco	1 (panels 1+2)	88.1%	100%	15/18 (1 high Ct)	Correct	10 <sup>-7</sup>	10 <sup>-5</sup>
Guthrie	2 (panels 1+2) 1 (panel 2)	90.5% 88.1% -	100% 100% -	18/18 18/18 18/18	Correct	10 <sup>-7</sup> 10 <sup>-6</sup> 10 <sup>-6</sup>	10 <sup>-7</sup> 10 <sup>-5</sup> 10 <sup>-6</sup>
Bachanek S1	2 (panels 1+2)	95.2% 92.9%	100%	18/18 14/18 (2 high Ct)	Correct	10 <sup>-7</sup> 10 <sup>-7</sup>	10 <sup>-5</sup> 10 <sup>-3</sup>
Bachanek S3	1 (panels 1+2)	97.6%	100%	17/18	Correct	10 <sup>-7</sup>	10 <sup>-7</sup>
In-house (Deltamune) S4+S5	1 (panel 2)	-	-	18/18	Correct	10 <sup>-7</sup>	10 <sup>-6</sup>
Fernández-Piñero conventional	1 (panel 2)	-	-	15/18	Correct	10 <sup>-4</sup>	10 <sup>-4</sup> /10 <sup>-5</sup>

Ct: cycle threshold  
EEV: equine encephalosis virus  
FP: false positive



characteristics of **Stage 1** of the OIE validation process, such as *repeatability*, *analytical specificity* and *sensitivity*, and provides evidence of full compliance with the expected range.

The description of **Stage 2** of the validation process encompasses diagnostic *sensitivity* (DSe) and *specificity* (DSp), as tested on samples from animals of known infection status. The dossier presents the analysis of 180 negative blood and 90 positive spleen samples from Spanish horses plus the results generated during the proficiency test in 2014–2015, described in Table II,

resulting in a total of 186 known negative and 132 known positive samples. The results showed a DSp of 100% and a DSe of 97%.

The *reproducibility* of these results among different laboratories was demonstrated in several ring trials carried out in the framework of annual testing organised by the Central Animal Health Laboratory (LCV), Algete, Spain, acting as the AHS European Union Reference Laboratory (EU-RL) during 2009–2014 for the AHS European National Reference laboratories (NRLs), and the 2014–2015 international trial described above. The report details the results for the

latter at LCV, Pirbright and ANSES, showing that the reproducibility overall was 93.55%. However, for negative and clearly positive samples, it was 100%.

The results for the ring trials organised among NRLs by the EU-RL are detailed for the years 2009–2014: reproducibility was 99% for 2009, 97.8% for 2010, 99% for 2011, 93.4% for 2012, 98.75% for 2013 and 99.5% for 2014.



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## Conclusion

The protocol of Agüero *et al.* for an RT-PCR test for AHS was assessed by the OIE Biological Standards Commission to be in line with the OIE three-stage pathway for test validation for its intended purposes [1], namely:

- a) to demonstrate freedom from AHSV infection in a defined population of horses,
- b) to certify freedom from AHSV presence in individual

horses intended for trade/movement, and

- c) to confirm diagnosis of suspect or clinical cases of AHS when using EDTA whole blood or spleen homogenates from horses.

This provides timely support to the OIE's HHP project on facilitation of international movement of horses, which is laid out to be inclusive of horses from AHS-infected countries.

In line with the *Terrestrial Code* Chapter 12.1.7 (3c), validated

agent identification tests can be used to assure that individual horses are free from the virus, when countries are not yet be in a position to declare the territory or parts thereof to the OIE as AHS-free. The quality of the agent identification test is crucial and is the basis for the possible application of this *Terrestrial Code* provision.

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## References

1. World Organisation for Animal Health (OIE). – *Manual of Diagnostic Tests and Vaccines for Terrestrial Animals*, Chapter 1.1.5 (Principles and methods of validation of diagnostic assays for infectious diseases) and Guidelines 3.6, 3.6.1, 3.6.5 and 3.6.6.

Table III

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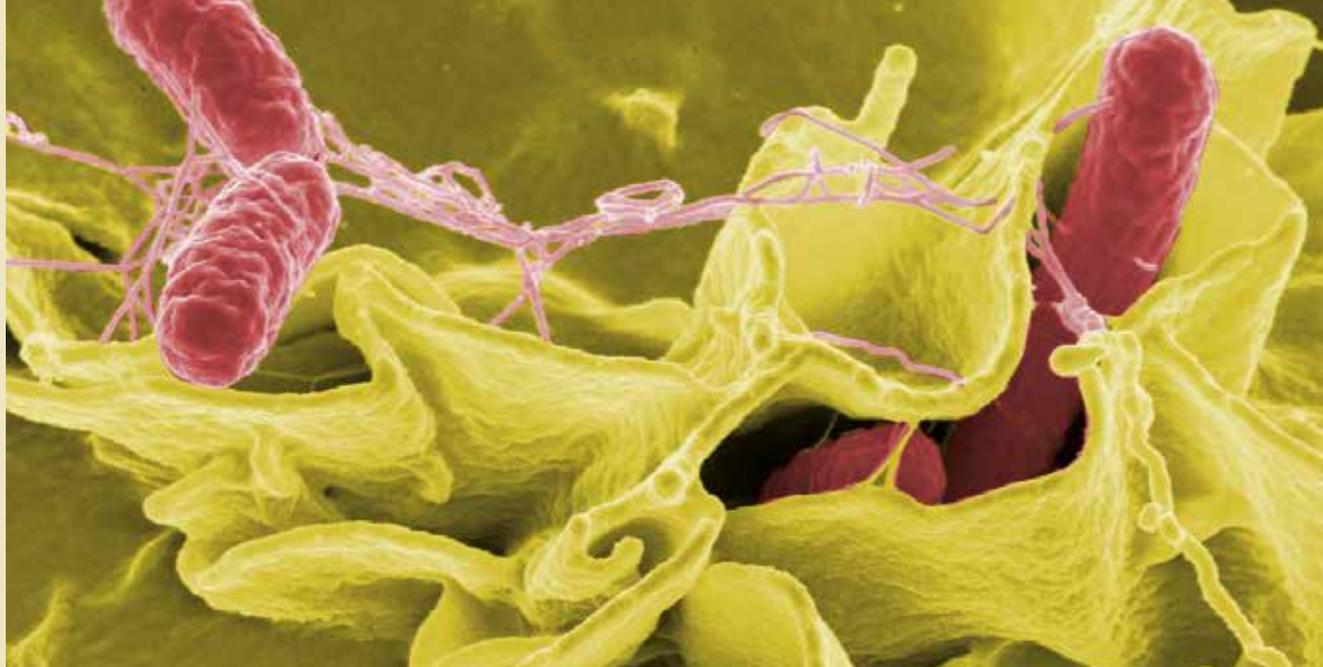
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## OIE Twinning Project between the Istituto Zooprofilattico Sperimentale delle Venezie (IZSVe, Italy) and the Central Vietnam Veterinary Institute (CVVI, Vietnam) to improve capacity for diagnosis of animal salmonellosis in CVVI

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### Keywords

OIE Twinning Project – salmonellosis.

Salmonellosis is an infection of major concern from a public health perspective but also for animal health, and its food safety implications have the potential to reduce marketing of food products of animal origin among countries with different sanitary situations.

In 2011, a twinning project between the Istituto Zooprofilattico Sperimentale delle Venezie (IZSVe), Padova, Italy, and the Central Vietnamese Veterinary Institute (CVVI), Nha Trang, Vietnam, was commenced to strengthen the CVVI's diagnostic capacity for animal salmonellosis.

The IZSVe OIE Reference Laboratory for Salmonellosis is a centre of expertise and



standardisation of diagnostic techniques; it provides scientific and technical assistance and expert advice on topics linked to surveillance and control of salmonellosis, including capacity building for animal health and food safety laboratories. The Laboratory has responsibility for the study and validation of methods for *Salmonella* detection, typing and characterisation, and is involved in training activities for veterinarians from the EU and Third Countries such as Nigeria and Macedonia.

In contrast, the main activities of CVVI involve the diagnosis of various viral, bacterial and parasitic diseases of domestic animals raised in Central Vietnam, such as avian influenza (H5N1), porcine reproductive and respiratory syndrome (PRRS), classical swine fever (CSF), foot and mouth disease (FMD), duck plague, Gumboro disease, Newcastle

disease, colibacillosis, salmonellosis and blood parasites. It also undertakes research projects funded by the Vietnamese government in the development and production of vaccines and bio-substances and the genetic analysis of antimicrobial resistance, and training activities such as the organisation and implementation of lectures for graduate students and practical and theoretical training for local veterinarians.

The overall objectives of the twinning between CVVI and IZSVe were to increase the capability for the diagnosis of animal salmonellosis, thus allowing CVVI to perform diagnostic tests for *Salmonella* spp. according to the OIE guidelines. In addition to laboratory diagnosis, the project involves establishment of the principles for starting explorative research on the prevalence of *Salmonella* spp. in the

local livestock/poultry population and introducing the principles of risk assessment in the control of salmonellosis.

With this acquired knowledge, CVVI will be able to contribute substantially to the regional OIE strategy for combating Highly Pathogenic Emerging Diseases (HPED) and Neglected Zoonoses (NZ), among which animal salmonellosis is listed.

After successful project implementation, the final project workshop was held on 26–27 March 2015 in Nha Trang, giving the participants the opportunity to discuss the results achieved and share the latest experiences on *Salmonella* epidemiology in Vietnam. A total of 34 people from parent and candidate laboratories, together with OIE representatives, took part in the event. The participants included representatives from the Deputy Minister of Agriculture and Rural Development of Vietnam, the National Institute of Veterinary Research, local Vietnamese Departments of Animal Health, the Pasteur Institute, the Vietnam Veterinary Association, and Ha Noi and Thai Nguyen Universities. The project was presented by Dr Antonia Ricci, head of the OIE Reference Laboratory for Salmonellosis at IZSVe.

Highlights, on *Salmonella* regulations in Vietnam, the status of human salmonellosis in the country, an overview of *Salmonella* contamination in food in Vietnam and salmonellosis in domestic animals in Vietnam, were provided to the participants by Vietnamese experts. The prevalence of *Salmonella* in pigs and chickens and the serotyping of strains collected in Vietnam, as well as data on the occurrence of antimicrobial resistance, were also presented.

Dr Scott Zaari from OIE presented the OIE laboratory twinning programme, giving details on how CVVI's expertise and capacity could be advanced and collaboration with IZSVe could continue.

The discussion focused on several points, including:

- the steps required for CVVI to become Reference Laboratory for animal diseases and how CVVI could be a candidate for an OIE Reference Laboratory in Vietnam;
- the standardisation of the laboratory procedures in the country and ways to improve the competencies of the laboratories;
- antimicrobial resistance issues;
- the importance of having reliable methods, including ring trials to be shared with other countries;
- awareness of salmonellosis;
- unification of the many divisions under different ministries responsible for food safety;
- how the problem has been tackled by other countries, and the establishment and implementation of a control system;
- the importance of veterinary medicine in the 'One Health' approach;
- the importance of collaboration at both national and international level.

Overall, this OIE twinning project allowed an increase in the capability of the Candidate Laboratory for the diagnosis of animal salmonellosis. The CVVI has acquired the skills to perform diagnostic tests for *Salmonella* according to the OIE and international guidelines and will be able to provide advice and assistance to other South-East Asian laboratories. In addition, the project involved establishment of the principles for starting explorative research on *Salmonella* prevalence in the local animal livestock population and characterising the occurrence of antimicrobial resistance in Vietnam. This OIE twinning project represented a unique opportunity for both Institutes to share knowledge, to improve and to lay the foundations of a successful and fruitful collaboration.

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# 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 Romania of freedom from highly pathogenic avian influenza

submitted to the OIE on 4 January 2016 by Dr Marius Grigore, Delegate of Romania to the OIE, Director of the National Sanitary Veterinary and Food Safety Authority

### Documentation to support Romania's status as free from highly pathogenic avian influenza (HPAI)

1. In accordance with Article 10.4.27 of the *Terrestrial Animal Health Code* – 'Surveillance strategies employed for demonstrating freedom from avian influenza at an acceptable level of confidence should be adapted to the local situation. Variables such as the frequency of contacts of poultry with wild birds, different biosecurity levels and production systems and the commingling of different susceptible species including domestic waterfowl require specific surveillance strategies to address each specific situation' – Romania sent to the European Commission a multiannual surveillance programme for avian influenza in

poultry and wild birds, which was approved by Grant Decision Approving National Programmes and Associated Funding no. SANTE/VP/2015/RO/SI2.700828 of 30 January 2015.

According to this, the objectives of the surveillance programmes for avian influenza in poultry are to inform the competent authority of circulating avian influenza virus with a view to controlling the disease in accordance with Council Directive 2005/94/EC of 20 December 2005 by the annual detection through active surveillance for:

a) highly pathogenic avian influenza (HPAI) and low pathogenic avian influenza (LPAI) of subtypes H5 and H7 in gallinaceous birds (namely chickens, turkeys, guinea fowl, pheasants, partridges and quail) and ratites,

ROMANIA

thereby complementing other existing early detection systems;

*b)* highly pathogenic avian influenza (HPAI) and low pathogenic avian influenza (LPAI) of subtypes H5 and H7 in domestic waterfowl (namely ducks, geese and mallards for restocking supplies of game);

**2.** In accordance with Article 10.4.28 of the *Terrestrial Animal Health Code*, in Romania each commercial animal holding is sanitary veterinary authorised only if it has biosecurity conditions and develops programmes for the sanitary veterinary surveillance of livestock. All commercial holdings are located on the map of Romania using a GIS programme. In the event of a disease suspicion/confirmation, the affected holding is isolated and maintained under control by establishing certain protection zones (minimum 3 km radius) and surveillance zones (minimum 10 km radius). For eradication activities, natural and artificial barriers are also used.

If the outbreak is located at the border, they should collaborate with the Central Veterinary Authority of the neighbouring country.

Commercial poultry holdings must be registered and sanitary-veterinary approved in order to operate. The legal framework for carrying out a commercial activity with poultry and poultry products is represented by:

*a)* Council Directive 2009/158/EC of 30 November 2009 on animal health conditions governing intra-Community trade in, and imports from third countries of, poultry and hatching eggs;

*b)* Commission Decision 2011/214/EU of 1 April 2011 amending Annexes II to IV to Council Directive 2009/158/EC on animal health conditions governing intra-Community trade in, and imports from third countries of, poultry and hatching eggs;

*c)* the Order of the President of the National Sanitary Veterinary and Food Safety Authority no. 16/2010 for approving the sanitary and

veterinary norm on the sanitary-veterinary registration / authorisation of the units / collection centres / farms of origin and of the means of transport in the field of health and animal welfare, of the establishments involved in the storage and neutralisation of animal by-products not intended for human consumption and of processed products.

In order to be sanitary-veterinary approved, poultry holdings shall satisfy, in accordance with the legislation in force, the following conditions:

*a)* appropriate facilities and operation;

*b)* application of the 'Programme of surveillance, prevention and animal disease control of the diseases transmissible from animals to humans, animal protection and environmental protection' approved by the President of the Order of the National Sanitary Veterinary and Food Safety Authority;

*c)* at least one inspection visit per year by the official veterinarian;

*d)* additional checks to verify the compliance of the establishment with the hygiene measures and the operation of the establishments.

**3.** In accordance with Article 10.4.29 of the *Terrestrial Animal Health Code*, 'The target population for surveillance aimed at identification of disease and infection should cover all the susceptible poultry species within the country, zone or compartment.'

In Romania there are: 206 holdings of laying hens, 47 holdings of breeding chickens, 1 holding of ratites, 7 holdings of pheasants, 11 holdings of quail, 9 holdings of turkeys and 2 holdings of palmipeds.

Also, non-commercial holdings situated in target localities will be sampled, in accordance with the specific requirements for detection of infections with H5/H7 subtypes of avian influenza in poultry, so that samples can be considered as representative for the whole territory. The risk analysis conducted revealed the existence of 729 'target' localities (Fig. 1).



Note that within the same non-commercial holdings situated in the respective 729 'target' localities, both gallinaceae and palmipeds are also reared. Backyard poultry are reared only for family consumption.

Based on a risk assessment and the specific situation of Romania, the sampling design also considered:

a) The production types specific to Romania and their specific risks: commercial farms in areas that are the biotope of wild birds, backyard flocks where poultry are kept outdoors, the proximity of wetlands, the proximity of water sources, lakes and pools, the presence of more than one species on the holding and other relevant factors;

b) The number of turkeys, ducks and geese from commercial or non-commercial holdings to be sampled will be defined to ensure the identification of at least one infected holding if the prevalence of infected holdings is at least 5%, with a 99% confidence interval;

c) Where holdings producing game, ratites and quail are present, they shall be included in the programme. With regard to quail, only adult (or laying) breeders shall be sampled;

d) The sample will be taken during seasonal production for commercial farms, and during the entire year for backyard flocks. However, where appropriate, sampling can be adapted to other identified periods at local level, during which time the presence of other poultry

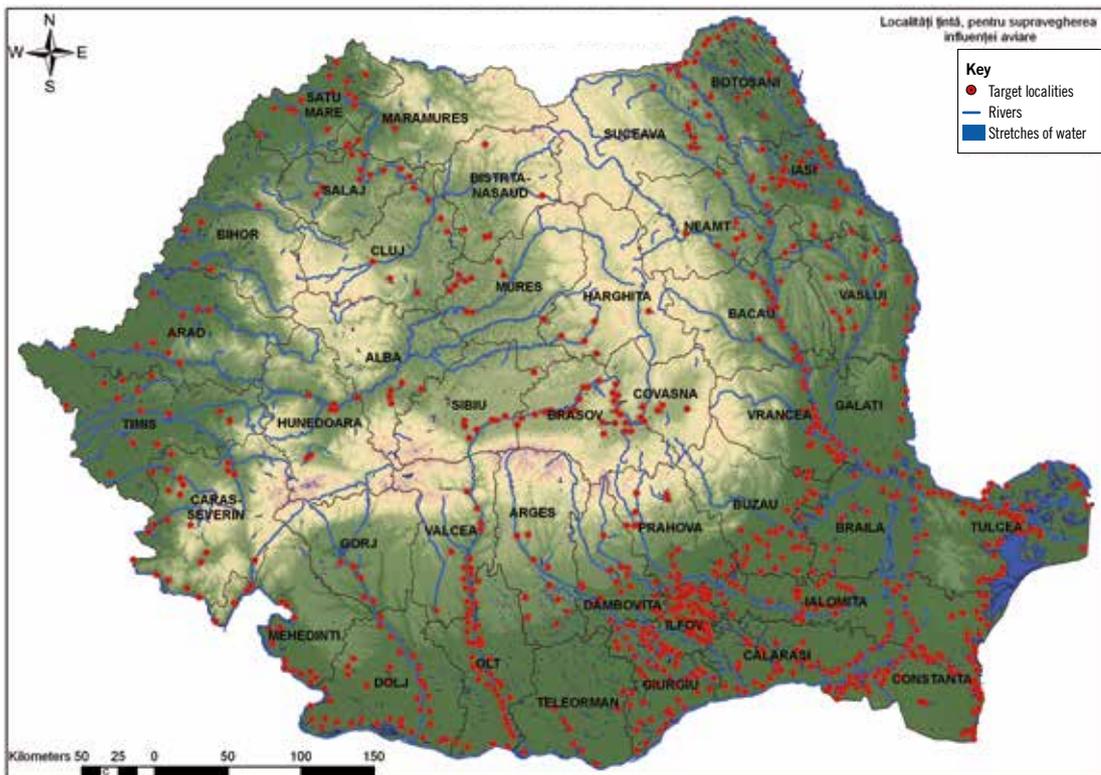


Fig. 1  
Romania. Target localities for avian influenza surveillance



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hosts on a holding might pose a greater risk of disease introduction (e.g. in the Danube Delta area, along the Danube River and in the neighbourhood of pools and lakes that are a biotope for wild birds);

e) Surveillance is mandatory and extends to backyards flocks, their number being significant for Romania.

Also according to the same article 'Active and passive surveillance for avian influenza should be ongoing, with the frequency of active surveillance being appropriate to the epidemiological situation in the country'; the last two occurrences of the HPAI virus in Romania were:

a) 15 March 2010: two outbreaks in Tulcea County (the Danube Delta Biosphere Reservation), in two backyards, 127 backyard poultry in total;

b) 27 March 2015: one case in wild birds, in pelicans, Constanța County, in the same Danube Delta Biosphere Reservation, involving one colony of 250 pelicans, two-thirds of which finally died.

The disease did not evolve as epidemics, but only as isolated cases. Both cases were notified to the OIE in good time. None of these outbreaks involved any commercial farms.

Taking into account the provisions of the *Terrestrial Animal Health Code* referring to HPAI in wild birds, Romania did not lose country freedom when it notified the case in wild birds.

**Passive surveillance** of wild birds is targeted at:

a) areas where an increased incidence of morbidity and mortality in wild birds occurs;

b) areas close to the Black Sea, the Danube river, lakes, rivers and waterways which constitute biotopes for wild birds;

c) areas in close proximity to poultry holdings where wild birds live;

d) birds belonging to species identified as 'higher risk' which may come into contact with both poultry and wild birds.

**Active surveillance** on living and clinically healthy and/or clinically diseased, injured birds shall be targeted at:

a) migratory birds belonging to the order of Anseriformes (water fowl) and Charadriiformes (shorebirds and gulls);

b) identified areas for concentration and mixing of high numbers of migratory birds involving different species, in particular when these areas are near domestic poultry farms;

c) a selection of higher risk species in accordance with Annex II Part 2 of Commission Decision no. 2010/367/EU of 25 June 2010.

**4.** In accordance with Article 10.4.29 of the *Terrestrial Animal Health Code*, 'The strategy employed may be based on randomised sampling requiring surveillance consistent with demonstrating the absence of infection with avian influenza viruses at an acceptable level of confidence. Random surveillance is conducted using serological tests. Positive serological results should be followed up with molecular or virological methods'.

The sampling procedure in Romania is carried out in accordance with the *Diagnostic Manual for Avian Influenza* set out in the Annex to Commission Decision 2006/437/EC. Samples are collected during the production season for commercial farms and during the entire year for non-commercial holdings. However, if necessary, the sampling can be adapted to other periods identified at local level, during which the presence of other hosts, such as poultry from a holding, can represent a higher risk of disease introduction (e.g. in the Danube Delta area, across the Danube and in proximity to ponds and lakes which are a biotope for wild birds). Surveillance is mandatory on the entire territory of Romania.



Laboratory tests are carried out in accordance with the *Diagnostic Manual for Avian Influenza*.

Samples are tested at National Laboratories for avian influenza (NL) in Romania, as well as at county sanitary veterinary and food safety laboratories and the Bucharest sanitary veterinary and food safety laboratory under the control of the NRL.

- All results are sent to the Community Reference Laboratory for Avian Influenza (CRL) for collation. A good flow of information is ensured. The CRL provides technical support and keeps a large stock of diagnostic reagents. Antigens for use in surveillance are supplied to NLs by the CRL to ensure uniformity.

- All avian influenza virus isolates of cases in wild birds are submitted to the CRL in accordance with European Union legislation, unless a derogation according to paragraph 4 of Chapter V under 'Differential diagnosis' in the *Diagnostic Manual for Avian Influenza* laid down in Commission Decision 2006/437/EC is granted. Viruses of H5/H7 subtype are submitted without delay and subjected to the standard characterisation tests (nucleotide sequencing/IVPI) according to the said *Diagnostic Manual for Avian Influenza*.

In accordance with Commission Decision 2010/367/EU, Annex I, sampling of the following poultry species and production categories are included in the surveillance programme:

- laying hens
- breeder chickens
- fattening turkeys
- ratites
- pheasants
- quail
- backyard gallinaceous birds
- backyard palmipeds
- palmiped holdings.

Also, in accordance with Annex I, point 3, 'in the following specified exceptional circumstances, the following poultry categories may also be included: broilers, but only when: (i) they are kept in significant numbers in free range production and (ii) they are considered to pose a higher risk of infection with avian influenza'.

It should be noted that in Romania, at this moment, there are no veterinary authorised commercial broiler farms with free-range production and significant numbers of poultry.

A commercial animal holding is sanitary veterinary authorised only if it satisfies biosecurity conditions and develops programmes for the sanitary-veterinary surveillance of livestock.

**Therefore, taking into account:**

- the information presented concerning the surveillance programme,
  - the freedom from HPAI that has been maintained in Romania since 21 October 2011,
  - the provisions of Article 10.4.3 of the *Terrestrial Animal Health Code (2015)*;
- the Delegate of Romania to the OIE declares that the country is free from highly pathogenic avian influenza.

## The launch of ‘Peste des petits ruminants roadmaps’ to achieve the goal of eradicating the disease by 2030

**April 2015 is an important date in world veterinary history** because it marks the official launch of the global strategy for the control and eradication of peste des petits ruminants (PPR), during the Abidjan conference<sup>1</sup>, with the goal of a world free from PPR by 2030. The FAO/OIE global strategy for the control and eradication of PPR – adopted unanimously on this occasion – provides global guidelines for eradication and precise regional operational frameworks called ‘PPR regional roadmaps’ for this purpose. These roadmaps define the control and eradication measures to be implemented in each country, progressively and in stages (see box opposite and Figure 1 below), knowing that countries can take shortcuts when suitable.

At national level, the strategic approach is based on four stages, beginning with Stage 1, when the epidemiological situation is being assessed, and culminating with Stage 4, when the country can provide evidence that there is no virus circulation and is ready to apply for official OIE recognition of the status ‘free from PPR’.

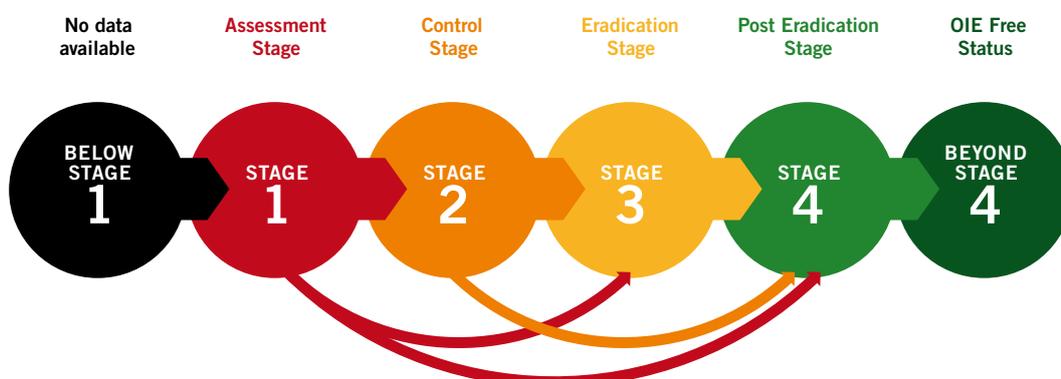


Fig. 1  
Step-wise approach to control and eradicate PPR

<sup>1</sup> See *Bulletin*, no. 2015–2, pp. 107–115

The transboundary dimension of the disease requires harmonised and synchronised interventions at country/ regional level in order to ensure every chance of success, and any country that does not take the necessary measures in good time could single-handedly undermine the efforts of neighbouring countries. The regional partners – in particular the regional economic communities – are closely associated with these regional initiatives. Nine regional PPR roadmaps are planned, covering Africa, the Middle East, western Eurasia and Asia. The principle of these regional PPR roadmaps is very similar to the roadmaps for FMD, apart from the fact that they target eradication within 15 years.

Three regional initiatives have already been launched during the second half of 2015, in line with the tight eradication timetable. These are the PPR roadmaps for:

- Central Africa
- East Africa
- The Middle East.

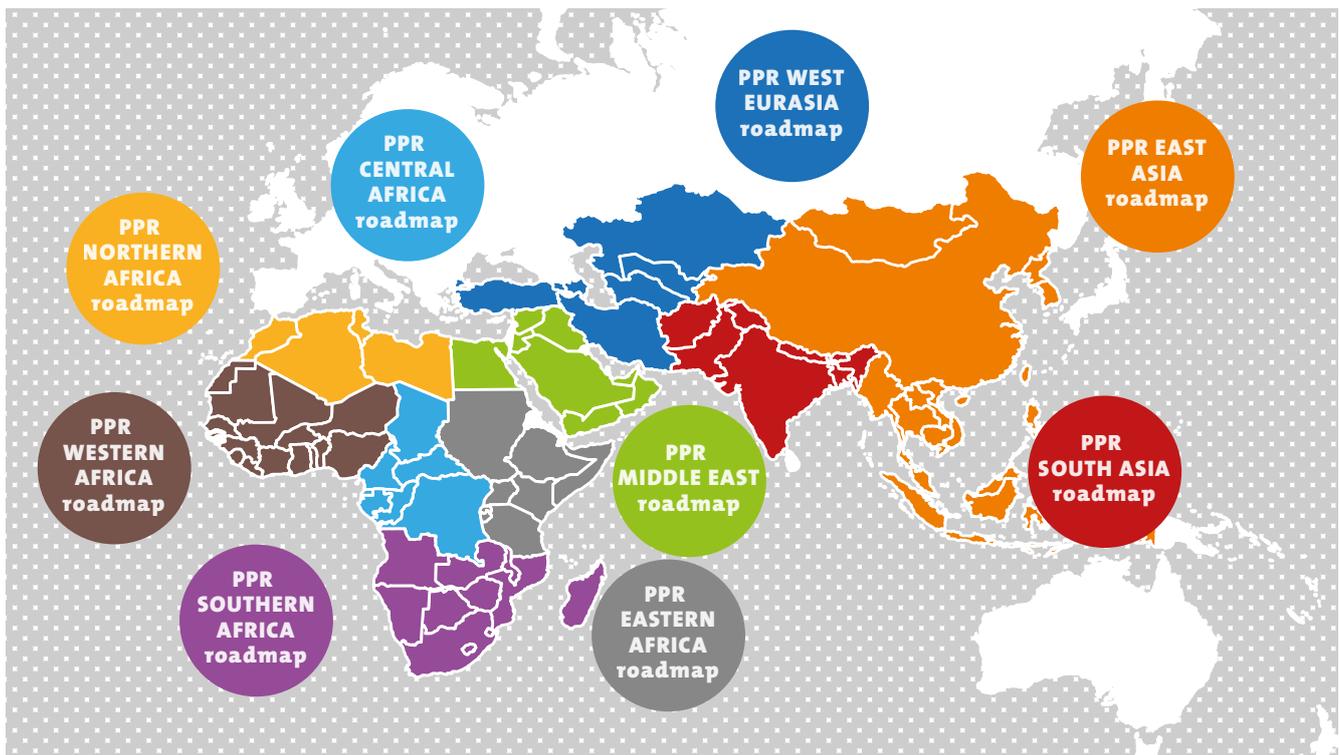


Fig. 2  
PPR control and eradication regional roadmaps

The agenda for these first Roadmap meetings is similar and includes the following sessions:

- presentation of the PPR Global Control and Eradication Strategy (GCES),
- presentation of the PPR monitoring and assessment tool (PMAT) of the GCES at national level,
- presentation by the countries of their situation and control measures already in place,
- presentation of technical subjects such as surveillance, post-vaccination evaluation, strengthening of Veterinary Services as a prerequisite for the effectiveness of technical control actions for PPR and other major diseases of small ruminants.

Five results are systematically expected from these meetings:

1. A good understanding of the global strategy and its implications in terms of implementation at regional and national level (four-phase approach, with the option of 'shortcuts' between different stages; three components).
2. The commitment of countries to these regional initiatives, with regular progress monitoring based on self-assessments using the PMAT.
3. The definition of a provisional starting point in the stage-wise approach in 2015 – which should be confirmed by an accurate self-assessment using the PMAT during the days following the PPR meeting –, both for PPR and for the quality of Veterinary Services, and a PPR eradication forecast roadmap for each country. Compilation of national data is used to obtain a **regional eradication vision**, acknowledging that it may be revised during subsequent PPR roadmap meetings, depending on the results of countries' control activities and epidemiological data.

4. A list of priority diseases of small ruminants in the region, to be controlled at the same time as PPR, using combined actions (vaccination or other);

5. Setting up a Regional Advisory Group (RAG) composed of elected members (OIE Delegates) and world and regional PPR experts, charged with assigning a precise Stage to each country. The RAG is also responsible for preparing the recommendations of PPR meetings and monitoring their implementation between two meetings, with the support of the FAO and OIE regional offices, as well as the GF-TADs<sup>2</sup> PPR Working Group.

The provisional 2015 results show that all countries consider themselves to be at PPR Stage 1 (evaluation) or Stage 2 (control):

Central Africa PPR Roadmap	2015*
Cameroon	1
Central African Republic	1
Chad	1
Rep. of Congo	1
Dem. Rep. of Congo	1
Equatorial Guinea	0
Gabon	1
Sao Tomé	0

\* Provisional for 2015 pending country self-assessments

N.A.: country not evaluated (absent)



East Africa PPR Roadmap	2015*
Burundi	1
Djibouti	1
Eritrea	1 (2)
Ethiopia	2
Kenya	2
Rwanda	N.A
South Sudan	1
Somalia	2
Sudan	2
Tanzania	2
Uganda	2

Middle East PPR Roadmap	2015*
Bahrain	2
Egypt	1
Iraq	2
Jordan	2
Kuwait	2
Lebanon	2
Oman	N.A
Palestine	N.A
Qatar	1
Saudi Arabia	2
Syria	N.A
United Arab Emirates	2
Yemen	N.A

\* Provisional for 2015 pending country self-assessments

N.A.: country not evaluated (absent)

During the first half of 2016, 'PPR roadmap' meetings are scheduled for:

- Western Eurasia (Kazakhstan, 23–25 February 2016)
- South Asia (Nepal, 11–12 April 2016)
- West Africa (country to be confirmed, April 2016).

The PPR global secretariat, to be set up at FAO headquarters in Rome in early 2016, will take over from the GF-TADs PPR Working Group in order to organise and monitor these and subsequent Roadmaps.

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## Why the HHP concept matters

by the International Horse Sports Confederation

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The approval of the principle of the 'High-Health, High-Performance' horse (HHP) at the 2014 OIE General Session marked a milestone for international horse sports.

When implemented, this concept, which defines a sub-population of lower-disease-risk sport horses (see pp. 51–54), will serve as the blueprint for Chief Veterinary Officers of Veterinary Authorities to work together to harmonise and safeguard the temporary international movement of high performance racehorses and sport horses when they attend competitions in other countries.

### No overriding of existing agreements

As Louis Romanet, chair of the International Horse Sports Confederation (IHSC) and the International Federation of Horseracing Authorities (IFHA), points out, the implementation of the HHP concept is not intended to replace existing international agreements for the movement of horses.

*'Existing agreements have functioned very efficiently for decades,' he says. 'The idea of the HHP concept is to provide a framework in which authorities can work to move horses between two countries in the absence of any established agreements between them.'*

### Two world governing bodies with common concerns

The IHSC was formed in 2013 as a vehicle for cooperation between the world's leading bodies for equestrian sport – the IFHA and the *Fédération Équestre Internationale* (FEI).

Created in 1921 and based in Lausanne, Switzerland, the **FEI** has 134 Member Federations and is the regulatory body for all international events in seven equestrian disciplines:

- jumping
- dressage and para-equestrian dressage
- eventing
- driving and para-equestrian driving
- endurance
- vaulting
- reining.

Equestrian sport has been on the programme of the Olympic Games since 1912.

The **IFHA** was officially created in 1993 but its roots date back to 1961. Its mission is to promote good regulation and best practice on international matters. Today, it unites horseracing authorities from 61 countries which, each year, update the International Agreement on Breeding, Racing and Wagering, endorsed by the International Conference in 1974.





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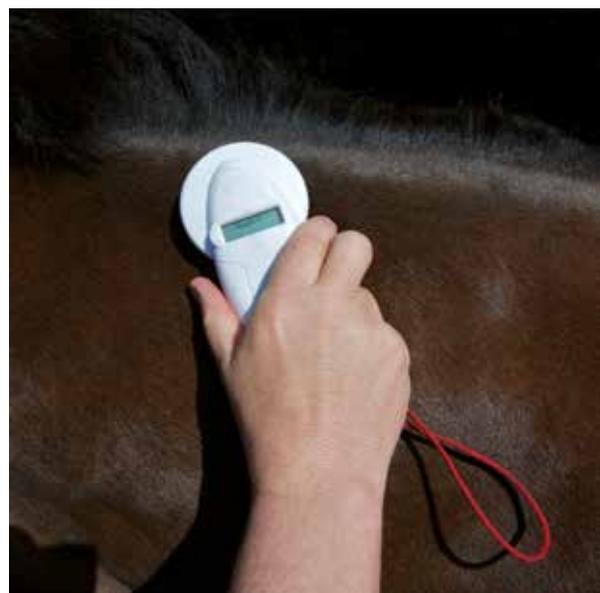
The health and safety of human and equine athletes are central to all FEI and IFHA activities. In addition to the FEI Veterinary Regulations and IFHA International Agreement mentioned above, this commitment involves administering all processes related to equine anti-doping and controlled medication within equestrian sports.

### Horse sports grow and boost economies

The past two decades have seen the rapid development of equestrian sport in Central and South America, Africa, South-East and Central Asia and the Balkans. The number of FEI events has risen from 466 in 1994 to 3,988 in 2015.

Equestrian sport has a significant impact on the economy, not only in terms of tourism but also because of the vast array of related industries and services, including tack and feed suppliers, livery yards, breeding, training and racetrack and show operators. The circa 4,000 equestrian events organised under the control of the FEI also have an important economic impact. As an example, the Alltech FEI World Equestrian Games™ 2014 in Normandy, France, generated an estimated direct and indirect economic impact of EUR 190 million for the region. In terms of spectator attendance, the event came sixth in the 2014 Global Sports Impact survey, behind major events such as the FIFA World Cup, the Commonwealth Games and the Winter Olympic Games. The impact (direct and indirect) of the FEI's flagship event across the rest of France totalled EUR 368 million.

Racing is also a major global economic contributor, with recent figures from the IFHA estimating that worldwide betting turnover from 2014 totalled more than EUR 95 billion and prize money for participants reached just over EUR 2.8 billion. Like equestrian sport, racing is a significant global employer and supports a wide range of ancillary businesses that sustain the industry.



© FEI/David Sinclair

**Microchip scanning: individual identification and full traceability, two keys for the integrity of the HHP concept**



© FEI/David Sinclair

**Getting ready for embarkation : high performance horses are frequently moved abroad for competition purposes**

### One world, many approaches

The remarkable growth of equestrian sport has highlighted the issues stemming from different government approaches to the international movement of sport horses. It is these differences that the HHP concept is designed to address.

FEI Veterinary Director Göran Akerström points to one example – how the diseases covered by a horse's health certificate vary from country to country.

*'In addition, the tests that horses must undergo to comply with the specifications set up in the certificate may be different,' he says. 'This may be further complicated by the fact that importing countries may not approve all national laboratories that carry out export testing.'*

These and other variations mean that some athletes competing internationally are disadvantaged, simply because of their geographical origin. For example, a horse from Australia can travel directly to Brazil to compete but must spend six months in quarantine in Europe before returning to Australia. This means that an Australian athlete must find and pay for stabling in Europe and is not able to compete with his or her horse outside the continent. By contrast, a European horse can travel directly to and from Brazil under the agreed certificate between the European Union and Brazil.

### Stringent regulations

Yet all sport horses that compete internationally are strictly monitored and supervised. In the case of the FEI, measures to protect horses in and out of competition and to prevent the spread of equine diseases are enshrined in the FEI Veterinary Regulations. All competition horses are registered with the FEI database, so it would not be difficult to set up an HHP database since the foundations are already there. For racehorses, it is the IFHA's International Agreement on Breeding and Racing that issues guidelines on health requirements for racehorses competing internationally.

FEI and IFHA horses are required to have a passport, which not only identifies them but also serves as a medical record by listing vaccinations and any laboratory tests carried out for infectious diseases. Since 2013, FEI horses must be microchipped according to defined ISO standards.

At least four months before an international equestrian event takes place, the Organising Committee must inform the appropriate National Veterinary Authority. Athletes and their support teams are responsible for ensuring that horses that are temporarily imported for an event comply with government animal health requirements.

On arrival at a competition, horses undergo a veterinary inspection before they can even enter the venue. FEI events must have isolation stables and a contingency plan for isolating stable blocks if a disease risk becomes



© FEI/www.horsemovethailand.com



apparent. The temperatures of competing horses are taken at least once a day and recorded. Any horse showing signs of illness is immediately reported to the Veterinary Committee or the Veterinary Delegate, depending on the type of event. Horses undergo checks before, during and prior to leaving an international event.

The implementation of the OIE's concept of an equine-disease-free zone (EDFZ) (see pp. 55–64) at the 2014 Asian Games in the Republic of Korea proved how import requirements can be successfully developed in line with the HHP concept.

Horses from nations such as the People's Republic of China and India were able to undergo appropriate health preparation in their resident countries, travel to Korea and return to their resident countries without quarantine requirements. As a result, the number of countries participating in the 2014 Asian Games increased by 100% compared to the 2002 Asian Games, which were also hosted in Korea.

### The future

The IHSC meets regularly with the aim of developing a roadmap for practical implementation of the HHP concept. The Member Federations of the FEI and Horseracing Authorities of the IFHA strongly support the HHP concept and have high hopes for its successful implementation.

Speaking on behalf of the ISHC, Louis Romanet comments: *'We now have a good basis on which to continue our work. For the concept to be successfully implemented, we need to work on raising awareness through education and set up relevant infrastructures.'*

He adds: *'The HHP recognises that top equine athletes, when managed under practical scientific guidelines set by the OIE, represent a lower risk in international movement. The International Horse Sports Confederation looks forward to working even more closely with the OIE in furthering the HHP concept to become accepted through regulation by Chief Veterinary Officers and governments throughout the world.'*

doi:10.20506/bull.2016.1.2507

OIE web portal on facilitation of international competition horse movement:

[www.oie.int/en/our-scientific-expertise/specific-information-and-recommendations/international-competition-horse-movement/](http://www.oie.int/en/our-scientific-expertise/specific-information-and-recommendations/international-competition-horse-movement/)



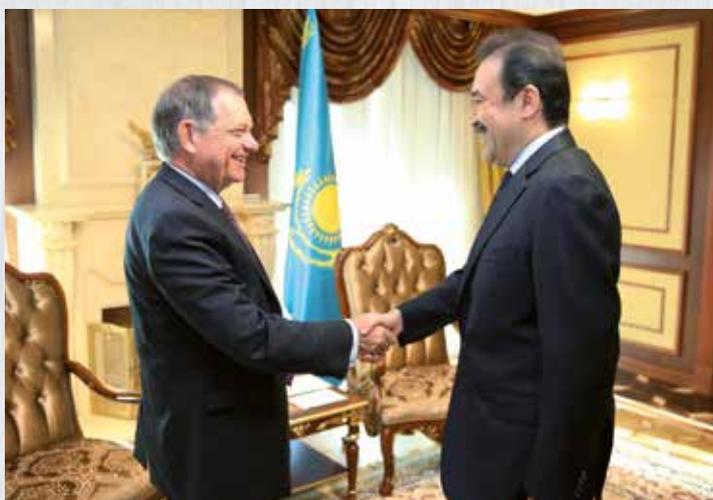
# international news

## special events

### OIE Director General meets with high-level authorities in Kazakhstan

On a visit to Kazakhstan, from 8 to 11 October 2015, Dr Bernard Vallat, Director General of the OIE at that time, met the Prime Minister, Mr Karim Kajymkanouli Massimov; the Minister of Agriculture, Mr Assylzhan Mamytbekov; and the Vice-Minister of Agriculture, Ms Gulmira Issayeva, to agree on future collaboration between the OIE Office in Astana and the Government of Kazakhstan.

Kazakhstan's objective is to improve its status in regard to various contagious diseases and these meetings paved the way for future action on this issue, covering such subjects as the development of a vaccine bank for foot and mouth disease, the preparation of Kazakhstan's applications for recognition of disease status, a regional veterinary reference laboratory, an OIE PVS Follow-Up mission and the organisation of an OIE regional conference on veterinary education in 2016.



Dr Bernard Vallat (left) meets Mr Karim Massimov, Prime Minister of Kazakhstan



Group photo in front of the OIE Sub-Regional FMD Coordination Unit Office in Kazakhstan, with Mr Assylzhan Mamytbekov, Minister of Agriculture, and Ms Gulmira Issayeva, Vice-Minister of Agriculture of Kazakhstan



## The Food and Agriculture Organization of the United Nations (FAO) pays tribute to Bernard Vallat

On 28 October 2015, José Graziano da Silva, Director General of the Food and Agriculture Organization of the United Nations (FAO), organised a ceremony to honour Dr Bernard Vallat at the FAO Headquarters in Rome, in recognition of the work which Dr Vallat has accomplished during his 15 years at the head of the OIE and to thank him for his 'determination to earn animal health the respect it deserves and to improve the Veterinary Services of FAO Member Countries as a worldwide public good'.



© FAO/Giulio Napolitano

**Bernard Vallat (OIE) and José Graziano da Silva (FAO)**

## The President of Mongolia and the Director General of the OIE join forces to protect pastoralism



**Front left:** Mr Tsakhia Elbegdorj, President of the Republic of Mongolia;  
**front right:** Dr Bernard Vallat, Director General of the OIE

In November 2015, the Director General of the OIE, Dr Bernard Vallat, welcomed the President of the Republic of Mongolia, Mr Tsakhia Elbegdorj, to OIE Headquarters during his official visit to France. Their meeting tackled various issues relating to pastoralism and animal health in Mongolia, a country that is actively working to improve its animal health situation, with the aim of developing its rural economy and foreign trade.

Protecting pastoralism in a huge country with a strong pastoral tradition, such as Mongolia, and throughout the world was a particular focus of discussion, leading to an agreement



to organise a high-level conference on this subject, under the patronage of the President of the Republic of Mongolia and the OIE, with the scientific support of the OIE.

As Dr Bernard Vallat emphasised during the meeting, *‘Supporting the resilience of pastoral societies requires a coordinated response from the world. The disappearance of these communities would be a social, cultural and environmental catastrophe.’*

Controlling animal diseases in Mongolia, as well as in neighbouring countries, is essential, not only to safeguard a centuries-old activity but also to ensure a prosperous economy and foreign trade. The elimination of animal diseases such as foot and mouth

disease (FMD) and brucellosis would bring important benefits for national food security and public health, as well as for the export of animals and animal products. With the support of the OIE, Mongolia has already undertaken to implement control programmes for these diseases and to improve governance of its national Veterinary Services. In time, its aim is to be recognised as being free from FMD by the World Assembly of OIE Delegates.

Mongolia has already benefited from several OIE PVS Pathway missions between 2007 and 2015 to improve the performance of its Veterinary Services, as well as from vaccines from the OIE’s regional FMD vaccine bank, and confirmed its intention to

comply with the OIE intergovernmental standards on disease control and the quality of Veterinary Services. Mongolia has also confirmed its application for membership of the OIE Sub-Commission for Foot and Mouth Disease Control (SEACFMD Campaign).

## ‘Agriculture in a Post-Kyoto Terrain’

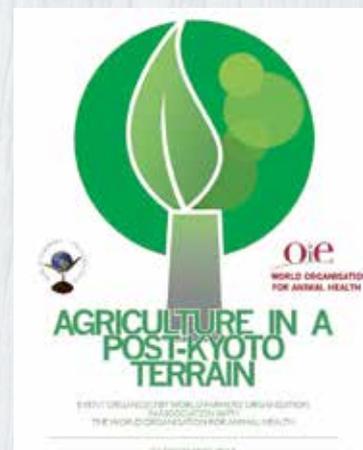
Statement by Dr Bernard Vallat on the occasion of the Climate Conference



© VideoEarth

Dr Bernard Vallat, OIE Director General until December 2015, was invited to participate in a high-level panel on the impacts of climate change during the event ‘Agriculture in a Post-Kyoto Terrain’, organised in association with the World Farmers’ Organisation (WFO) on the side of the 21st Conference (COP21) of the Parties to the United Nations Framework Convention on Climate Change (UNFCCC), last December.

On this occasion, Dr Bernard Vallat gave a speech, in order to remind the audience of the importance of the benefits of both terrestrial and aquatic animal productions for human society.





The key messages are listed below:

- In my remarks I would like to highlight two main areas for consideration this morning. The **first** is the unfortunate and damaging imbalance in the public debate of the benefits versus the unintended consequences of animal production. The **second** is the impact of climate change on animal health and health outcomes.

- The terrestrial and aquatic animal production sectors are vital for global food security and for the economic well-being of many countries and their citizens. According to the FAO, for over one billion poor people in the world, animals, their products and by-products contribute directly to family livelihoods.

- While reports have been published that demonstrate the negative impacts that can be associated with intensive production systems, unfortunately they often fail to tell the whole story of the diversity of the global production system and of the significant positive contributions that livestock make to humans.

- Unfortunately the science is invariably complex and too often in attempting to simplify the communication the context and full disclosure is lost. Two recent examples are the contribution of livestock to greenhouse gas emissions and the second is the report of red meat as a carcinogen.

- In the case of the former, much of the debate draws from the publication of the *Livestock's Long Shadow* report from several years ago. Both the authors of that report and other researchers have revised the estimates downwards in subsequent publications but, because they are less sensationalist, they have tended to be ignored. If properly managed, livestock can have a positive effect on the environment and provide climate change mitigation options through efficiency gains and carbon sequestration. Livestock play an important role in ecosystem restoration and biodiversity conservation through soil and vegetation renewal. Properly handled

livestock waste can be used as a source of renewable energy and organic fertiliser thus substituting for fossil-fuel based inputs.

- In the case of the latter (cancer risk), issues of life style contribution, method of meat processing and preparation, genetic predisposition and the inability to repeat some of the data findings in the published literature are not equally reported. Nor is the critical role that many micronutrients that are readily and in some cases almost exclusively available in red meat play in brain and early childhood development. Informed decisions in the public interest should not be made on the basis of selective science or pseudoscience that may be driven by an agenda unrelated to the stated objective of sustainable, climate-smart agriculture.

- Livestock productions systems are diverse at the global level and range from pastoralists to extensive husbandry systems to intensive systems.

- It is also important to understand the capacity for climate change to impact on animal disease occurrence and spread. This is equally true for those diseases which affect animals as well as zoonotic diseases which are capable of being transmitted between animals and humans. Whether through the potential changes in vector competency and distribution, migration patterns, immune competency, or the loss of biodiversity, the factors that could lead to increased disease occurrences require that we make the necessary investments in early disease detection, disease reporting, the quality of Veterinary Services and public-private partnerships to better prevent, prepare and respond to disease occurrences.

- Those involved in the rearing and care of animals are some of the most resourceful and innovative people on the planet. They are able to adapt to changes in climatic conditions consumer demands and changes in technology.

- We need to ensure a collective, interdisciplinary approach to the development and adoption of best practices to position the sector for success in the post-Kyoto terrain.

- The cooperation between the WFO and OIE is very welcome.

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## New global framework to eliminate rabies

**Global elimination of dog-mediated human rabies: the time is now!**

WHO/OIE International Conference

Geneva, Switzerland, 10–11 December 2015



On 10 and 11 December 2015, experts, donors, and human and animal health officials met in Geneva to adopt an action plan to eliminate dog-mediated human rabies worldwide and save tens of thousands of lives every year. A new global framework was discussed by almost 250 participants, with the aim of rolling out large-scale, long-term vaccination of dogs, and providing swift and effective, post-exposure human treatment in all regions affected by rabies.

Jointly organised by the World Health Organization (WHO) and the World Animal Health Organisation (OIE), in collaboration with the United Nations Food and Agriculture Organization (FAO) and with support from the Global Alliance for Rabies Control (GARC), the *Global Elimination of Dog-Mediated Human Rabies: the Time is Now!* international conference was a milestone in efforts to combat rabies.

The 250 conference participants agreed to implement the actions set forth in the new global framework<sup>1</sup> to eliminate rabies, developed jointly by WHO, OIE and FAO, expressing their conviction that this strategy represents the most effective way to eliminate dog-mediated human rabies by 2030. The new global framework calls for three key actions:

- make human vaccines and antibodies affordable

- ensure that people who are bitten receive prompt treatment
- conduct mass vaccinations of dogs to tackle the disease at its source.

Every year, tens of thousands of people die from rabies around the world – that is one person every 10 minutes – a majority of them children living in Asia and Africa.

But the cost of human vaccines to protect against rabies is beyond the reach of many of those who may need it. And treatment for people who are bitten can cost USD 40–50, representing an average of 40 days' wages in the affected countries. Recognising that human vaccination is currently not always affordable, the new global framework emphasises prevention, through the vaccination of dogs, whose bites cause 95% of human rabies cases. A dose of canine vaccine costs less than USD 1.

*'Regularly vaccinating 70% of dogs in zones where rabies is present could reduce human cases to zero. Eliminating canine rabies through dog vaccination is the most cost-effective and only long-term solution,'* confirmed Dr Bernard Vallat, OIE Director General. *'Human deaths can be prevented when mass dog vaccination is combined with responsible pet ownership and stray dog population management, complying with OIE intergovernmental standards, as well as with bite treatment, as recommended by WHO.'*

<sup>1</sup> Global framework for the elimination of dog-mediated human rabies: [www.oie.int/fileadmin/Home/eng/Media\\_Center/docs/pdf/Rabies\\_portal/EN\\_TimeisnowGlobalFramework.pdf](http://www.oie.int/fileadmin/Home/eng/Media_Center/docs/pdf/Rabies_portal/EN_TimeisnowGlobalFramework.pdf)

A rationale for investing in the global elimination of dog-mediated human rabies, which called for support from various national, regional, global and other stakeholders, including the private sector, was released in September by WHO, OIE and FAO, in collaboration with GARC.

While vaccinating dogs is key to the new approach, the elimination of rabies and saving the lives of people who are bitten will only be possible by making human vaccines more affordable. Bringing down the cost of human rabies vaccines and treatments will require strong international cooperation to make quality vaccines and rabies immunoglobulin available to health centres in regions where rabies is endemic.

Speakers reiterated the importance of raising awareness and educating people, especially children, on how to avoid being bitten, as well as the importance of community engagement to facilitate and strengthen data collection, bite-incidence reporting and the demand for post-exposure treatment for human populations.

## Hats off to Botswana and the African Union Pan-African Veterinary Vaccine Centre for their efforts to maintain global freedom from rinderpest

For centuries, outbreaks of rinderpest have decimated millions of livestock animals and wildlife worldwide, resulting in famine and starvation. Owing to the combined efforts of countries, the Food and Agriculture Organization (FAO) and the OIE, in May 2011 the OIE World Assembly of Delegates adopted Resolution no. 15 recognising all OIE Member Countries and a number of non-OIE Member Countries as free from rinderpest, effectively declaring global freedom from the disease.

In the post-eradication era and following this declaration, OIE Member Countries unanimously adopted Resolution no. 18 (2011), which committed the international community to specific activities to maintain global freedom from rinderpest. These activities include:

- destroying remaining stocks of material containing rinderpest virus or ensuring that they are sequestered and safely stored in an approved holding facility;
- forbidding any research which involved the manipulation of rinderpest virus-containing material unless the research is approved by the OIE and the FAO; and lastly
- maintaining vigilance.



© N. Thekiso / OIE

**The Minister of Agriculture, Patrick Ralotsia (left) and Assistant Minister Kgotla Autwetse (right) carrying the packaged material to the transport van**

Furthermore, the OIE and the FAO, through the Joint Advisory Committee developed procedures for designation of rinderpest virus holding facilities and it was adopted by Member Countries in 2014. The African Union Pan-African Veterinary Vaccine Centre (AU-PANVAC) in Ethiopia is one of five rinderpest holding facilities that have been inspected, approved and designated. As a rinderpest holding facility, PANVAC is available to store and maintain rinderpest virus-containing material on behalf of other countries in accordance with the necessary biosecurity and biosafety standards.

In accordance with Resolution no. 18, Botswana agreed to transfer its rinderpest vaccine from the Botswana Vaccine Institute (BVI) to PANVAC.

In order to mark this milestone achievement, BVI organised a send-off event on 12 November 2015. The event was attended by the Minister and Assistant Minister of Agriculture, the Permanent Secretary and his Deputies, Ambassadors/High Commissioners, representatives from the OIE and the FAO (international organisations), senior Ministry management staff, Botswana Couriers (transporter) and BVI board of directors, management and staff.

The event started with invitees witnessing the safe packaging and loading of material. BVI and the courier company staff explained the safe packaging process, including the use of a state-of-the-art transportation biosecurity container. They explained that the procedure is compliant with international animal health and aviation standards to ensure safe transit of the material.

The Minister of Agriculture, Hon. Patrick Ralotsia, gave a keynote address, in which he commended BVI for contributing significantly to rinderpest eradication by producing vaccines and keeping the infectious material safe until it was transferred to a designated facility, PANVAC.

Remarks on the event were provided by Dr Moetapele Letshwenyo, OIE Sub-Regional Representative for Southern Africa, who gave a brief historical background on rinderpest eradication efforts and the role of the OIE in support of Veterinary Services to eradicate diseases such as rinderpest. On behalf of the OIE and all member countries he commended the commitment and leadership demonstrated by Botswana in maintaining freedom from rinderpest and setting an example for other countries to follow.

The event was officially closed by the Assistant Minister of Agriculture, Hon. Kgotla Autlwtse; he similarly applauded the BVI and pleaded with other countries in Africa who may have rinderpest material to follow the example set by BVI and transfer their materials to PANVAC.



Minister Ralotsia giving the keynote address

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OIE Sub-Regional Representative for Southern Africa, Moetapele Letshwenyo giving remarks

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Assistant Minister Autlwtse giving the closing remarks

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## April

*Regional Seminar for OIE National Focal Points on Animal Production Food Safety*  
30 March – 1 April  
Rhodes, Greece

*Regional Seminar for OIE National Focal Points for Veterinary Laboratories*  
5–7 April  
Jeju, Republic of Korea

*Regional Seminar for OIE National Focal Points on Animal Welfare*  
6–7 April  
Amman, Jordan

## May

*Information Seminar for Recently Appointed OIE Delegates*  
21 May  
Paris, France

*84th General Session of the OIE World Assembly of Delegates*  
22–27 May  
Paris, France

## June

*4th OIE Global Conference on Veterinary Education*  
22–24 June  
Bangkok, Thailand  
[www.oie.int/eng/vet-education-conf2016/introduction.html](http://www.oie.int/eng/vet-education-conf2016/introduction.html)

*Regional Seminar for OIE National Focal Points for Veterinary Laboratories*  
27–30 June  
Argentina

## July

*Regional Seminar for OIE National Focal Points on Wildlife*  
5–7 July  
Belarus

*Regional Workshop on the OIE World Animal Health Information System (WAHIS) (in French)*  
12–14 July  
Tunis, Tunisia

## September

*Regional Workshop on the OIE World Animal Health Information System (WAHIS)*  
5–9 September  
Panama

*27th Conference of the OIE Regional Commission for Europe*  
19–23 September  
Lisbon, Portugal

*Regional Seminar for OIE National Focal Points for Communication (in English)*  
26–30 September  
Mombasa, Kenya

*Regional Seminar for OIE National Focal Points for Veterinary Laboratories*  
27–29 September  
Kaslik, Lebanon

## October

*OIE Regional Conference on Veterinary Education*  
10–13 October  
Almaty, Kazakhstan

*Regional Seminar for OIE National Focal Points for Communication (in French)*  
10–14 October  
Bamako, Mali

*Regional Seminar for OIE National Focal Points for Veterinary Products*  
11–13 October  
Budapest, Hungary

## agenda

*Regional Workshop on the OIE World Animal Health Information System (WAHIS)*  
17–21 October  
Armenia

*Annual Meeting of OIE Regional and Sub-Regional Representatives*  
25–28 October  
OIE Headquarters, Paris, France

## November

*Regional Workshop on the OIE World Animal Health Information System (WAHIS) (in English)*  
1–3 November  
Sharm El Sheikh, Egypt

*23rd Conference of the OIE Regional Commission for the Americas*  
14–18 November  
Santa Cruz de la Sierra, Bolivia

*Regional Seminar for OIE National Focal Points on Wildlife (in English)*  
22–24 November  
Aberdare / Nakuru, Kenya

## December

*4th OIE Global Conference on Animal Welfare*  
6–8 December  
Guadalajara, Mexico

*Alternatives to Antibiotics (ATA) International Symposium*  
13–15 December  
OIE Headquarters, Paris, France  
[www.ars.usda.gov/alternativestoantibiotics/](http://www.ars.usda.gov/alternativestoantibiotics/)

## February

*22nd Conference of the OIE Regional Commission for Africa*  
(dates to be confirmed)  
Swakopmund, Namibia



## Congratulations to the winners of the 2015 OIE/ IVSA Student Competition!

### 'OIE animal welfare standards in my country'

Last autumn, the World Organisation for Animal Health (OIE) and the International Veterinary Students' Association (IVSA) organised a joint competition open to veterinary students from all over the world on the topic of animal welfare. Two winners have been selected with regard to the quality of their work.

Dubbed 'OIE animal welfare standards in my country', the competition sought to provide participants with the opportunity to strengthen their knowledge of animal welfare, discover the scope of OIE intergovernmental standards on the topic and become aware of their level of implementation in their country.

Entrants were asked to submit an essay describing and illustrating, through photos or videos, the implementation of an OIE welfare standard of their choice in their homeland. The competition was thus aimed to encourage them to learn about the work of the OIE and enlarge their network within the veterinary community of their country.

The OIE and the IVSA received numerous applications from students in all regions of the world. After serious deliberation, the jury, composed of Bernard Vallat, Director General of the OIE, and Anıl Türer, President of the IVSA, selected the essays that best demonstrated a deep understanding of OIE's standards in the field of animal welfare and most accurately illustrated how these standards are implemented in the participant's country.

Each prize winner will be offered an OIE sponsorship to attend the IVSA Animal Welfare Conference<sup>1</sup>, which will be held in Utrecht, The Netherlands, from 22 to 24 April 2016.

<sup>1</sup> The conference will focus on the issues related to this complex topic and provide a great opportunity to the two winners to increase their knowledge in this field. The programme will include didactic lectures, as well as practical training and workshops, a discussion panel and local excursions to support and strengthen the educational material



They unanimously selected the following two winners:

The OIE congratulates the winners and profoundly thanks the numerous participants!

	<p><b>Mariana Marrana</b> Portugal University of Porto (ICBAS)</p> 	<p><b>Paula Vasconcelos</b> Brazil Federal University of Lavras (UFLA)</p> 
<b>OIE welfare standard covered</b>	<p>Welfare aspects of stunning and killing of farmed fish for human consumption <i>(Chapter 7.3. of the Aquatic Animal Health Code)</i></p>	<p>Animal welfare <i>(Section 7 of the Terrestrial Animal Health Code)</i></p>
<b>Why?</b>	<p><i>'I decided to further investigate the application of welfare standards of farmed fish due to the small expression this topic has. In order to provide an accurate description, I visited two aquaculture facilities in northern Portugal.'</i> – <b>Mariana Marrana</b></p>	<p><i>'In 2004, Brazil has achieved the status of the world's largest exporter of meat and remains at that level today. [...] 'A consequence of the increased importance of livestock as an economic activity, and also the adoption of new actions aimed at animal welfare, was a socio-economic development in Brazil; this generated changes in the profile of consumers'</i> – <b>Paula Vasconcelos</b></p>
<b>The jury's comment</b>	<p><i>'Mariana strived to analyse different aquaculture methods and compare their respective procedures to ensure the welfare of farmed fish'</i> – <b>Bernard Vallat</b>, Director General of the OIE</p>	<p><i>'Paula was able to depict the big picture of Brazil's situation with regard to animal welfare and provide us with a sound description of several aspects of animal welfare legislation in her country'</i> – <b>Anil Türer</b>, President of the IVSA</p>

Discover their work!  
[goo.gl/EXjB91](http://goo.gl/EXjB91)

IVSA Animal Welfare Conference:  
<http://animalwelfareconfe.wix.com/iawc>



## World Veterinary Day 2016 will highlight continuing education with a 'One Health' focus

**For the 16th year running, World Veterinary Day will be celebrated on the last Saturday of April and will emphasise the benefits brought by the veterinary profession to society, in a specific area.**

**Given that the health of people, animals and the environment is inextricably linked, veterinarians play a central role in preserving global health and need to be trained accordingly. Therefore, the selected theme for the 2016 Edition of World Veterinary Day aims to illustrate 'Continuing Education with a One Health Focus'.**

Veterinary associations are invited to communicate details of their projects relating to this theme and to apply for the **World Veterinary Day Award**, organised jointly by the World Veterinary Association (WVA) and the World Organisation for Animal Health (OIE). This competition will reward the most successful contribution by the veterinary profession on the selected theme for 2016.

Veterinarians play a crucial role in protecting global health. In all areas of the profession, they have opportunities and responsibilities to improve the health and welfare of animals, and therefore to improve the health of humans. In the current era of globalisation, the emergence or re-emergence of unexpected disease events is accelerating. It is estimated that five new emerging infectious human diseases appear each year, of which three are zoonotic. The recent Ebola epidemic, as well as the numerous human deaths caused each year by rabies, are chilling reminders of the strong links that exist between the health of people and that of animals and the environment, and consequently the need for multisectoral approaches illustrated through the 'One Health' concept.

All countries depend on the performance of their national Veterinary Services, in their public and private components, not only to control these diseases successfully, but also to tackle food safety issues and to prevent or control biological disasters. Therefore, veterinarians should be well trained to preserve animal health and welfare, as well as to tackle public health issues.





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**Veterinarians protect the health and welfare of animals, and therefore also protect the health of humans. Early detection of zoonoses can prevent their transmission to humans or introduction of pathogens into the food chain.**

Given that the veterinary profession and veterinary science are constantly evolving, continuing education is essential for veterinarians to keep their knowledge updated with the latest developments, skills and new technologies required to enable them efficiently to control health risks at their animal source.

Therefore, this year, the theme of World Veterinary Day focuses on how veterinarians can continue their education efforts to increase their

expertise in One Health topics, such as zoonotic diseases, food safety and antimicrobial resistance, and how they collaborate with the human health sector to tackle these issues.

The World Veterinary Day Award is open to all WVA member associations, alone, or in cooperation with any other selected body of the animal or human health sector until 10 May 2016.

The organisers will select the winners according to the quality of their project and activities, their ability to raise awareness on the topic, through communications materials and media coverage in their country, as well as their capacity to demonstrate a concrete implementation of the 'One Health' approach.

For the first time this year, entrants have the option to present activities that took place before World Veterinary Day 2016 (30 April), those that are still ongoing, or those that are planned to take place in the future.

The winner of the 2016 Award will be announced at the Opening Ceremony of the OIE 84th General Session, to be held in Paris on 22 May 2016, and will receive a prize of USD 1,000.

**For more information:**

[www.oie.int/en/for-the-media/press-releases/detail/article/world-veterinary-day-award-2016/](http://www.oie.int/en/for-the-media/press-releases/detail/article/world-veterinary-day-award-2016/)

# OiE members (180)

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ANGOLA	DOMINICAN REP.	LESOTHO	SAUDI ARABIA
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AUSTRIA	EQUATORIAL GUINEA	LITHUANIA	SIERRA LEONE
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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
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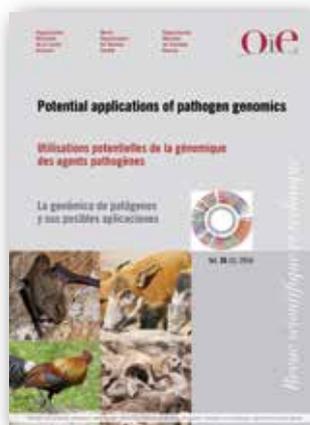
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## New!

### Potential applications of pathogen genomics *Scientific and Technical Review*, Vol. 35 (1)



#### **Coordinators and editors:**

**P.R. Murcia, M. Palmarini & S. Belák**

This issue of the *Scientific and Technical Review* provides a collection of in-depth articles on potential applications of pathogen genomics.

The increasing power of high-throughput sequencing, bioinformatics and computational biology have revolutionised most aspects of biomedical and veterinary sciences. Such new technologies and tools have also had a big impact on the diagnosis, control and management of animal diseases.

This issue describes new high-throughput sequencing technologies and bioinformatic tools that are applied to pathogen genomics. In addition, applications of genomics to disease surveillance or during outbreaks of infectious diseases are also described. As sequencing data constitute a unique resource of information, there is also a section on databases and their possible applications to improving animal health worldwide.

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