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Chargé de mission
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The importance of research for developing standards to control animal diseases: the role of the OIE

Dubrovnik, 30th August 2018
69th EAAP Annual meeting, Feed-a-Gene/SAPHIR joint session

History



1924

Creation:
Office International
des Epizooties
(OIE)

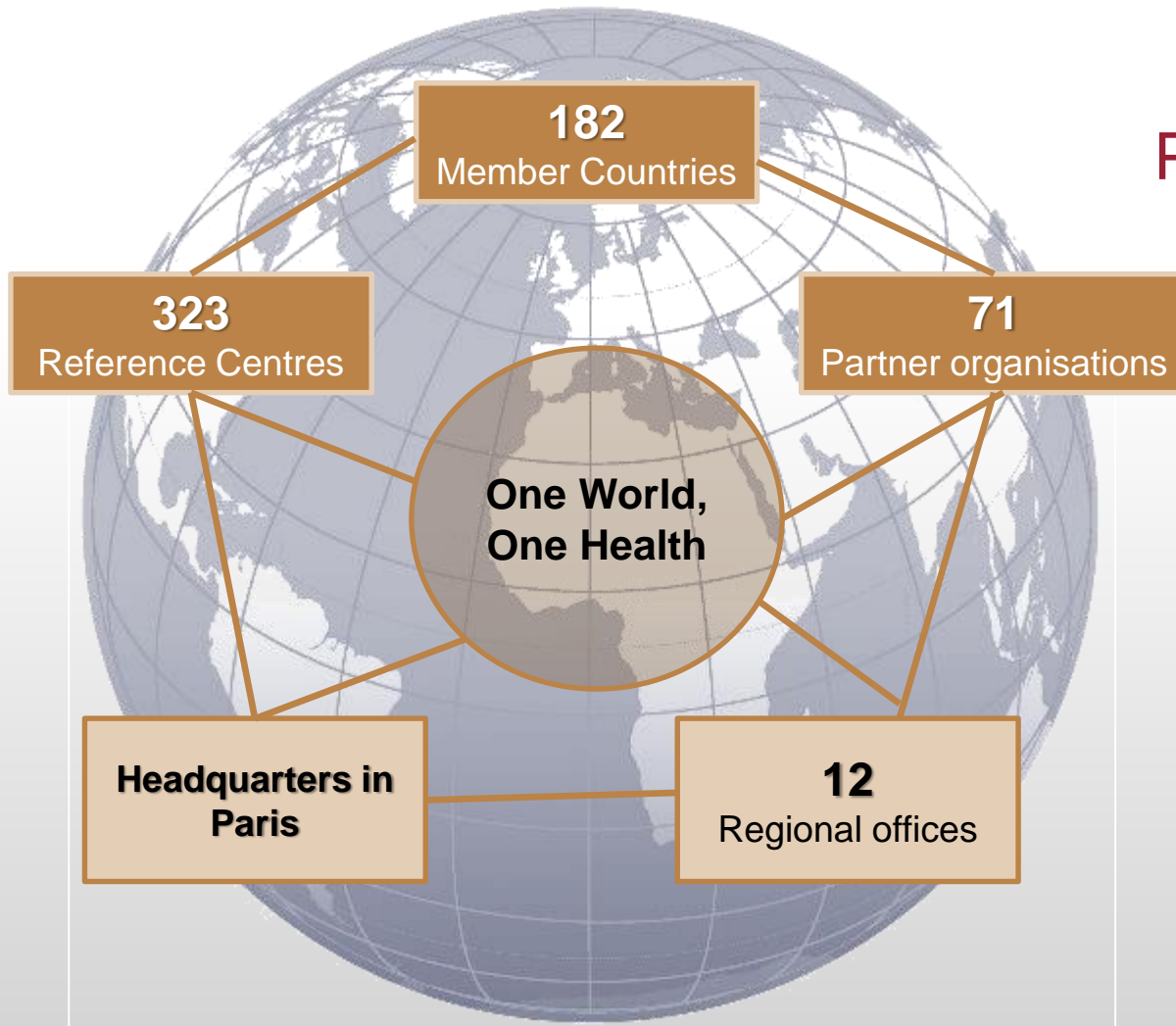
1945

Creation of the
United Nations

2003

New Name:
World Organisation
for Animal Health
(OIE)

Who we are today...



Protecting animals,
Preserving our future



Dr Monique Eloit
Director General
2016 - 2020

OIE global mandate



We work to protect the health and welfare of animals globally, leading to economic prosperity as well as social and environmental well-being of populations

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 and welfare by appropriate RISK MANAGEMENT

we are

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

- Antimicrobials use and alternatives
- Global disease control and eradication
- Climate change and biodiversity
- Biothreat reduction

we will

- Incorporate **social, economic and environmental sciences**
- Take into account **new technologies**
- 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***

* The OIE World Animal Health Information System

*OIE Programme to improve the performance of Veterinary Services

Excellence

quality SCIENCE timeliness

objectivity knowledge transfer new technologies

Engagement

Expert groups

Specialist Commissions

Reference Centres

diversity and selection

next generation scientists

Management

regional adaptations

roles and responsibilities

financial resources

partnerships

OIE Standards

OIE develops standards in relation with its mandate:

- for the prevention and control of animal diseases as well as for the safe trade of animals and animals products (mandated under the SPS agreement of the WTO)
- for diagnostic tests and vaccines as well as for veterinary laboratories and transport of biological materials
- for animal production food safety and to promote science-based animal welfare
- for the quality of Veterinary Services



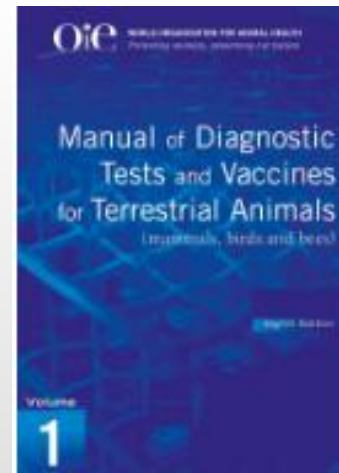
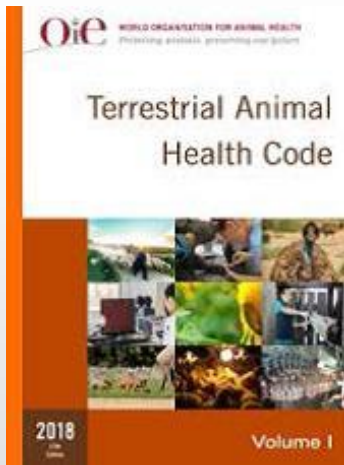
OIE Standards

CODES

- Terrestrial
- Aquatic

MANUALS

- Terrestrial
- Aquatic



Codes and *Manuals* available on the OIE website

OIE Specialist Commissions

- Elected experts.
- **Use current scientific information** to study problems of epidemiology, prevention and control of animal diseases, to develop and revise OIE's international standards and to address scientific and technical issues raised by OIE Members.
- Can request the help of an *ad hoc* Group when needed.

OIE Specialist Commissions

- Terrestrial Animal Health Standards Commission ("Code Commission")
 - Ensures that the recommendations of the Terrestrial Code reflect current scientific information on the **protection of international trade and surveillance methods** for animal diseases and zoonoses.
- Scientific Commission for Animal Diseases ("Scientific Commission")
 - Assists in **identifying** the most appropriate **strategies and measures for disease prevention and control**.
 - Examines Member Country submissions regarding their **animal health status** (for the official recognition of OIE 'Disease-free' status).
- Biological Standards Commission ("Laboratories Commission")
 - Establishes or approves **methods for diagnosing diseases** of mammals, birds and bees and for recommending the **most effective biological products** such as vaccines.
 - Oversees the Reference Centres.
- Aquatic Animal Health Standards Commission ("Aquatic Animals Commission")
 - Compiles information on **diseases of fish, molluscs and crustaceans** and on methods used to **control these diseases**.

OIE Reference Centres

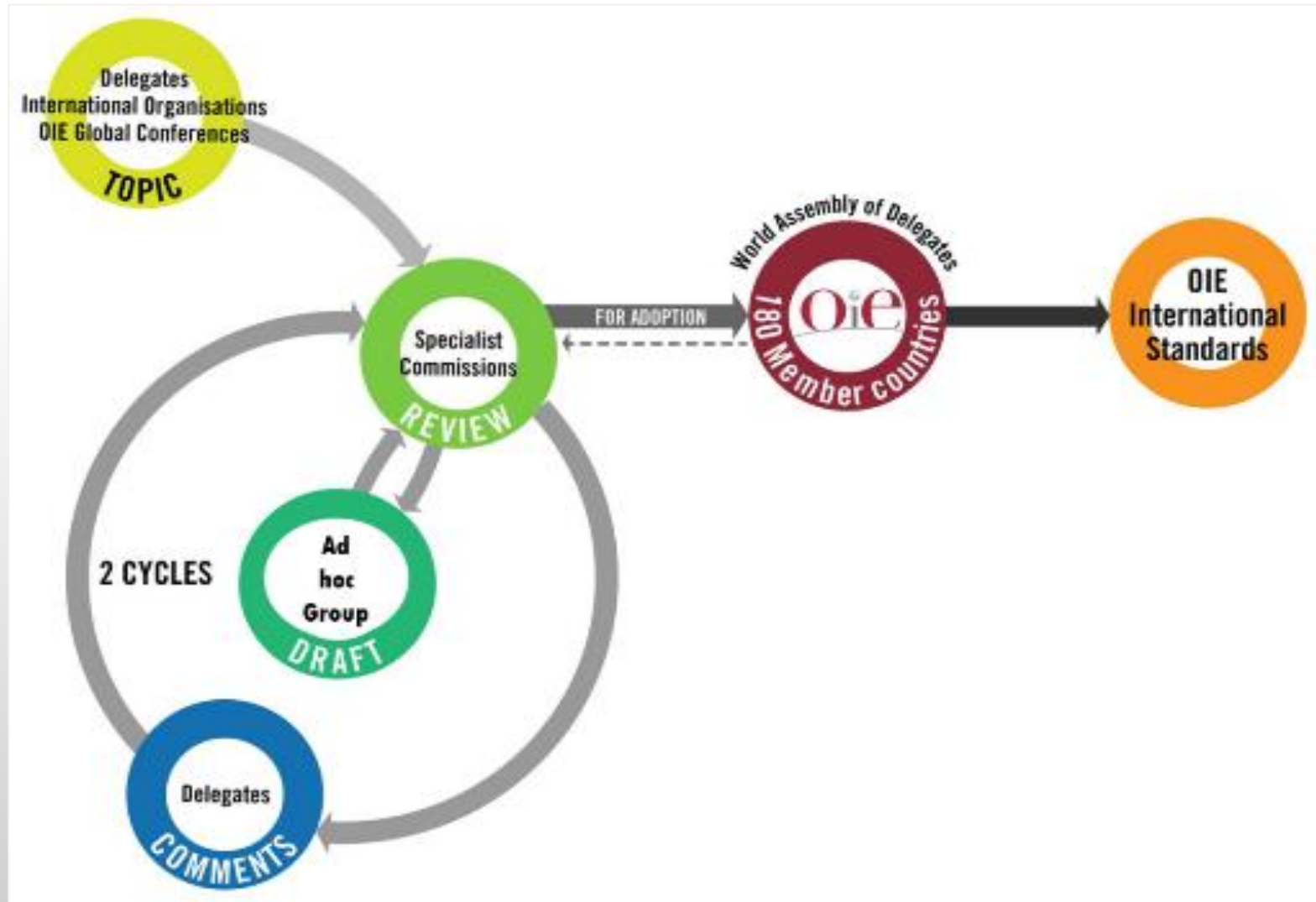
- An OIE Reference Centre is designated either as:
 - “**OIE Reference Laboratory**” are world reference centre of expertise on designated pathogens or diseases;
 - “**OIE Collaborating Centre**” are world centre of research, expertise, standardisation of techniques and dissemination of knowledge on a specialty;
- The network of Reference Centres constitutes the **core of OIE scientific expertise and excellence**.
- Their contribution to the work of the OIE ensures that standards, guidelines and recommendations developed by the Specialist Commissions and published by the OIE are scientifically sound and up-to-date.

OIE International Standards: *ad hoc* Groups

- The initial drafting of new OIE standards, recommendations or guidelines is undertaken by an **OIE *ad hoc* Group**.
- Up to 10 experts (including observers) with **internationally recognised expertise** on a specific topic.
- Members nominated on the basis of excellence, expertise, and **geographical balance**.

OIE Reference Centres are a common source of experts but participants are also drawn from **academia, industry organisations, NGOs and partner organisations**.

OIE Standard setting process



OIE and research: case studies

1. Solving specific scientific issues
2. Support research prioritisation
3. Research prioritisation and coordination: STAR-IDAZ
IRC

1_Overwintering and seasonal disease freedom



- The OIE *Terrestrial Code* foresees, for some vector-borne diseases (bluetongue), the concept of **seasonal freedom**, based on the absence or cessation of activity of vectors for part of a year.
- Scientific publications pointed out that competent vectors have been detected during seasonally free period.
- Climate change can influence vector density and distribution.

OIE Member Countries asked the OIE Scientific Commission the validity of the seasonal freedom concept.

Rev. Sci. Tech. Off. Int. Epiz., 2015, 34 (1), 123-37

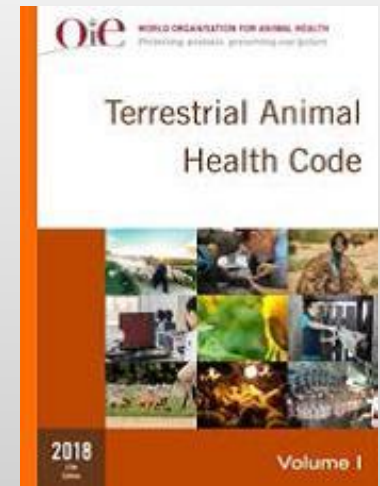
**Mosquitoes and *Culicoides* biting midges:
vector range and the influence of climate change**

A.R.W. Elbers ^{(1)*}, C.J.M. Koenraadt ⁽²⁾ & R. Meiswinkel ⁽³⁾

Method



- Literature review to provide:
 - Scientific basis to assess validity of VBD seasonal freedom;
 - Support development of criteria influencing and defining VBD seasonal freedom;
 - Impact of climate change on criteria influencing seasonal freedom.
- Consultation with the OIE Reference Centres
- (eventually) Convening of an *ad hoc* Group
- (eventually) Revision of relevant OIE standards



2_ *ad hoc* Groups on Prioritisation of diseases for which vaccines could reduce antimicrobial use in animals

Provide guidance on prioritisation of disease for which the use of already available or new vaccines could reduce antimicrobial use in animals:

- pigs, poultry and fish (May 2015)
- cattle, sheep and goats (May 2018)



Method

- Identification of the most prevalent and important **bacterial infections** associated with high antibiotic use, and associated prevalent bacterial infections in those species.
- Identification of common **non-bacterial infections** (e.g. protozoal, viral) showing clinical signs that trigger empirical antibiotic treatment (e.g. for diarrhoea) and which also result frequently in bacterial co-infection.
- Development of a template and guiding criteria for the **ranking** of diseases, for the purpose of stimulating research into new or better adopted vaccines with the aim of reducing the use of antibiotics.

Disease prioritisation

Disease prioritisation parameters	
• Key Syndrome	Age or type of animal
• Primary Pathogen(s) (disease)	<i>Genus species</i>
• Antibiotic Use	Low / Medium / High
• Commercial* vaccine exists	Yes / No
• Major Constraints to use of vaccine • or vaccine development	Various factors identified
• Vaccine Research Priority	Low / Medium / High

* 'Commercial vaccine' does not include autogenous vaccines

Outcomes and conclusions

- List of prioritised pathogens for all species
- Identification of horizontal priority research gaps (*e.g.*):
 - Maternal antibody interference.
 - Cross-protection.
 - Occurrence of immunological interference in multivalent vaccines.
 - Innovative delivery systems to enable mass-vaccination.
- General recommendations
 - Establish a **global vaccine research network** to pool resources and expertise to address gaps for each of the priority diseases
 - Establish **public-private partnership** to ensure transfer of innovative technologies to vaccine manufacturers

3_STAR-IDAZ International Research Consortium

Global forum of public and private R&D programme owners/managers on animal health

Aims to coordinate research at international level to contribute to new and improved animal health strategies for at least **30 priority diseases/infections/issues**.

The deliverables include :

- candidate vaccines, and/or
- diagnostics, and/or
- therapeutics and other animal health products, and/or
- procedures and/or
- key scientific information/tools to support risk analysis and disease control



Partners and commitment

Partner	Country	Partner	Country
DTU	Denmark	Ministry of Health	Italy
Regional Consortium (Universiteit Ghent; Universite de Liege; Federal Public Service, Health Food Chain Safety and the Environment; CODA-CERVA)			
ANSES	France	USDA-ARS	US
INRA	France	USDA-ARS	US
Ministry of Economic Affairs	The Netherlands	Kimron Veterinary Institute	Israel
INIA	Spain	INTA	Argentina
Defra	UK	MINCYT	Argentina
BBRC	UK	CFIA	Canada
Nigerian Animal Health Research Network (NAHRN)			
ILRI	International	European Commission	International
Zoetis	Private	Bill and Melinda Gates Foundation	Private
Health for Animals	Organisation	Diagnostic for Animals	Organisation

High level of commitment

- Agreed minimum level of investment (\$US 10 million over 5yrs)
- Agreed delivery targets
- Agreed to coordinate/align funding to deliver these targets
- Agreed to share research results

Total combined research budget >\$US 2.5 billion

The OIE is an associated partner, and sits in the Executive Committee

Governance and structure



STAR-IDAZ
International Research
Consortium on Animal Health

IRC Executive Committee
(Representatives of Funders)

STAR-IDAZ

Secretariat

Scientific Committee

Working Groups

Vaccinology	Diagnostics	Influenza	Integrated pathogen control for the reduction of resistance*
ASF	Vector-borne diseases	Brucellosis	Bovine Tuberculosis
FMD	Emerging Issues	One Health	Coronaviruses
Mastitis	Animal genetics/genomics	Foresight	Epidemiology
Helminths	Porcine Respiratory Disease Complex	PRRS	????

Priorities 2017

New priorities 2018



OIE role

- OIE **co-hosts** the **Secretariat** of the STAR-IDAZ IRC (SIRCAH).
- OIE is represented in the STAR-IDAZ IRC **Executive Committee**.
- OIE will **underpin the STAR-IDAZ WGs** on specific diseases and cross-cutting issues through its activities (Reference Centres, Specialist Commissions, ad hoc Groups, and publications).
- Building on its network, OIE helps to **develop effective relationships** with a greater range of potential contacts, supporting the **Consortium enlargement** and **building awareness** about STAR-IDAZ IRC.

Research roadmaps

IRC Research Roadmaps

Mapping, monitoring and coordinating animal health research to accelerate the delivery of disease control tools and strategies

Disease Roadmaps



DISEASE

Bovine TB



DISEASE

Porcine Reproductive and
Respiratory Syndrome (PRRS)



DISEASE

Brucellosis

Cross-cutting Roadmaps



ROADMAP

Candidate vaccine
development

<https://www.star-idaz.net/>

Conclusion

- OIE is a science based organisation, and is increasing its focus on science.
- Scientific research is key to find **effective ways** to prevent, control, and eradicate diseases posing threats to both animal and human health.
- **Scientific based** and **transparent standards** are more easily accepted and implemented at global level.
- National and international **research collaborations** are fundamental for ensuring the timely delivery of needed disease control tools.
- Direct connection with research funders (STAR-IDAZ IRC) to guide research on **priority diseases and issues**.

Thank you for your attention



WORLD ORGANISATION FOR ANIMAL HEALTH
Protecting animals, preserving our future

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