

PANORAMA

Thematic portfolio

Public-Private Partnerships and perspectives in the veterinary domain



PERSPECTIVES

|

DOSSIER

|

AROUND THE WORLD

EDITORIAL

Public-private partnerships: a winning strategy to sustainably improve national Veterinary Services



© Getty Images

It is now generally acknowledged that intersectoral collaboration is a key component of animal health strategies, an excellent illustration of which are public-private partnerships (PPPs). So why are PPPs so important to the livestock sector and for controlling animal diseases?

As an introduction to this edition of *Panorama*, dedicated to PPPs, it should be noted that partnership refers to close collaboration between parties from different sectors that have common interests. This requires actively building links between the various participants who, while maintaining their autonomy, agree to pool their resources to achieve a common goal. Each party retains its mission but shares responsibilities.

In the specific case of public-private partnerships, a balance must also be found between public and private interests: defending the general interest, which is the driving force behind public action, must be reconciled with the preservation of the private commercial interests that drive the economy.

The objectives of animal disease control programmes that bring together the public and private sectors can be divided into three groups:

- an economic objective that seeks to limit production losses, provide a decent income for producers and generate benefits for enterprises associated with the sector;
- a health objective to prevent the transmission of diseases, including to humans, and to provide safe, quality food;
- a commercial objective which involves the reduction of animal health barriers to trade.

Achieving these objectives requires the implementation of coherent control programmes throughout a national territory backed by appropriate human and financial resources. But, let us move beyond the theory.

Is it possible to imagine preventive programmes that are not drawn up in collaboration with professional organisations? No. Vaccination campaigns cannot be organised without the help of professional associations. Systematic screening and culling operations are better accepted if farmers' representatives help official services to explain the reasons for such decisions. Not forgetting the important role of private veterinarians that support the official Veterinary Services.

Can you envisage control programmes without the cooperation of the private pharmaceutical sector? No. The availability of diagnostic reagents and adequate supplies of vaccines result from a common desire to adapt production to needs.

Conversely, are professionals in a position to open up markets without the support of the official Veterinary Services which negotiate animal health certificates with the authorities of importing countries, in particular to reopen borders after outbreaks of disease? No, of course not.

There are many examples of public-private partnership programmes, some of which are found in this edition of *Panorama*. They show that it is impossible to envisage an effective public sector without structured relations with the private sector, while the professional private sector cannot develop without a strong public sector.

Whatever the difficulties, the OIE is committed to working towards fruitful public-private partnerships.

I trust that you will find this issue of *Panorama* informative and enjoyable reading.

Monique Éloit
Director General
World Organisation for Animal Health (OIE)

<http://dx.doi.org/10.20506/bull.2019.3.3037>

PERSPECTIVES

Public-private partnerships: essential for strengthening Veterinary Services worldwide

KEYWORDS

#OIE PPP Handbook, #OIE PVS Pathway, #public-private partnership, #sustainable development, #veterinary domain, #Veterinary Services, #World Organisation for Animal Health (OIE).

AUTHORS

Mark Schipp, Delegate of Australia to the [World Organisation for Animal Health \(OIE\)](#) and President of the World Assembly of OIE Delegates.



In my role as President of the World Organisation for Animal Health (OIE), I have seen first hand the tremendous benefits that can be achieved through collaborative public-private partnerships (PPPs) in the agricultural and veterinary sectors.

Since the 1980s, there has been a heightened understanding that PPPs can help to deliver important animal and public health outcomes. For example, a PPP between vaccine manufacturers, the OIE, and the Food and Agriculture Organization of the United Nations (FAO) was pivotal to the successful eradication of rinderpest in 2011.

The lessons learned from this PPP are now being applied to similar eradication campaigns for peste des petits ruminants and dog-mediated rabies. If successful, these campaigns will deliver important food security and public health outcomes, and contribute to meaningful, sustainable development in affected countries.

[The OIE PPP Handbook](#) has been developed to provide guidelines for the administration of PPPs in the animal sector. It describes different types of PPPs, how they can be put into operation and the advantages and disadvantages of each. This *Handbook* can be used in conjunction with the [OIE PVS Tool](#), which allows Veterinary Authorities to explore the need for a PPP by identifying areas for development within a country's Veterinary Services.

When implemented successfully, a PPP can improve a country's Veterinary Services and lead to important economic gains in the agricultural sector. One example in Australia was the establishment of the [Animal Health Australia](#) organisation over 20 years ago, a PPP that helps to minimise the risk and potential impacts of an emergency animal disease (EAD) incursion by promoting collaboration and collective efforts in building national EAD preparedness and response capacity.

For these reasons, I advocate strong partnerships between the public and private sectors and look forward to hearing about the benefits of new and existing global PPPs, as we strive to improve international animal health outcomes.

<http://dx.doi.org/10.20506/bull.2019.3.3038>



OIE PVS Pathway Cycle

REFERENCES

1. World Organisation for Animal Health (OIE) (2019). - [The OIE PPP handbook: guidelines for public-private partnerships in the veterinary domain](#).
2. World Organisation for Animal Health (OIE). - [OIE PVS Pathway](#).

PERSPECTIVES

Public-private partnerships: benefits and challenges in the veterinary sector

KEYWORDS

#Bill & Melinda Gates Foundation, #public-private partnership, #Veterinary Services.

AUTHORS

[Samuel Thevasagayam](#), Agriculture Development, [Bill & Melinda Gates Foundation](#).

The designations and denominations employed and the presentation of the material in this article do not imply the expression of any opinion whatsoever on the part of the OIE concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers and boundaries.

The views expressed in this article are solely the responsibility of the author(s). The mention of specific companies or products of manufacturers, whether or not these have been patented, does not imply that these have been endorsed or recommended by the OIE in preference to others of a similar nature that are not mentioned.



We all recognise the importance of the quality and consistency of veterinary services, which are critical for improving animal health, optimising animal production, safeguarding public health and ensuring animal welfare. The differences between developed and developing countries in the provision of veterinary services can be significant, as many developing nations experience production losses, public health risks and compromised animal welfare.

One crucial component of the solution, as evidenced by observations from the developed world, is to bring the best skills, capabilities and resources from both the public and private sectors together, to improve the provision of veterinary services. In a highly connected world, with increasing challenges related to climate change, it is more urgent than ever before for us to work together, to collectively improve the responsible and efficient production of

animal-sourced foods, the well-being of our animal companions and the welfare of animals, humans and the environment.

The World Organisation for Animal Health (OIE) continues to lead efforts in setting standards and improving the performance of veterinary services across the world. In collaboration with its 182 Member Delegates, the OIE is best placed to show the way forward by bringing together the best of what the public and private sectors have to offer, to improve the provision of veterinary services. [The Bill & Melinda Gates Foundation](#) is honoured to partner with the OIE in this endeavour and commends the leadership that the OIE has shown in improving animal health, public health, and animal welfare, through the public-private partnership initiative.

<http://dx.doi.org/10.20506/bull.2019.3.3039>

PERSPECTIVES

Public-private partnerships build SPS capacity and develop market access

KEYWORDS

#Agreement on the Application of Sanitary and Phytosanitary Measures (SPS Agreement), #Food and Agriculture Organization of the United Nations (FAO), #Inter-American Development Bank (IDB), #public-private partnership, #safe trade, #Standards and Trade Development Facility (STDF), #World Organisation for Animal Health (OIE).

AUTHORS

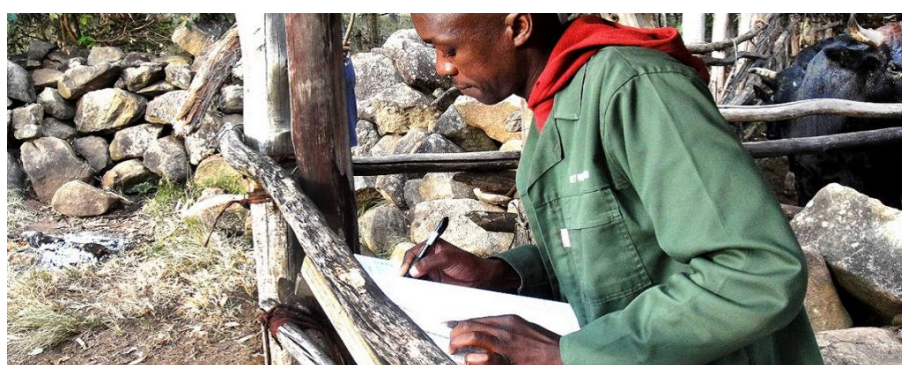
M. Spreij^{(1)*} & M. Hopper⁽¹⁾

(1) [Standards and Trade Development Facility \(STDF\)](#) Secretariat.

* Corresponding author: Melvin.Spreij@wto.org

The designations and denominations employed and the presentation of the material in this article do not imply the expression of any opinion whatsoever on the part of the OIE concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers and boundaries.

The views expressed in this article are solely the responsibility of the author(s). The mention of specific companies or products of manufacturers, whether or not these have been patented, does not imply that these have been endorsed or recommended by the OIE in preference to others of a similar nature that are not mentioned.



© OIE/P. Bastiaensen

Partnerships between governments and the private sector to improve the delivery of public goods – including sanitary and phytosanitary (SPS) capacity for food safety and animal and plant health – continue to expand across the globe. Public-private partnerships (PPPs) feature widely

in Standards and Trade Development Facility (STDF) work [1] and many projects run on a PPP model to build SPS capacity and promote market access.

Improving SPS outcomes



PPPs strengthen the implementation of SPS measures, improve SPS outcomes, enhance market access and promote competitiveness. Research into PPPs by the STDF and the [Inter-American Development Bank \(IDB\)](#) [2] highlights the private sector's contribution in stimulating innovation, leveraging knowledge and resources, and addressing gaps in the SPS infrastructure. At the basic level, successful PPPs depend upon commitment and trust; clarity about the partnership's objectives, responsibilities and financing; good governance and transparency; and high-level leadership.

The STDF's work on PPPs to build SPS capacity, including the ability to monitor and control animal diseases, was used by the World Organisation for Animal Health (OIE) to develop its global survey on the role of PPPs in strengthening Veterinary Services. The findings of the survey, which was sent to all OIE Members, as well as to several private bodies, will support future perspectives on PPPs in the field of animal health.

Safe trade opportunities

Worldwide, STDF projects are building the private sector's capacity to implement SPS measures and take advantage of safe trade opportunities. These projects contribute to private-sector development, which plays a key role in commercialising agriculture, generating economic growth, and creating employment and improved living conditions, in support of the Sustainable Development Goals.

In Latin America, under an STDF project led by [FEEDLATINA](#), the public and private sector formalised their cooperation at both the regional and national levels to harmonise regulations and improve animal feed safety. Technical support from the Food and Agriculture Organization of the United Nations (FAO), the Inter-American Institute for Cooperation on Agriculture (IICA) and the OIE to meet SPS requirements has built capacity among regulatory agencies, Veterinary Services, agricultural and food safety services, and the private sector. This, in turn,

has improved market access for animal feed in the region.

<http://dx.doi.org/10.20506/bull.2019.3.3040>

[More information on the STDF website...](#)

REFERENCES

1. Standards and Trade Development Facility (STDF). – [Partnering with the private sector: delivering SPS outcomes](#).
2. Standards and Trade Development Facility (STDF) & the Inter-American Development Bank (IDB) (2012). – [Public-Private Partnerships to enhance SPS capacity: what can we learn from this collaborative approach?](#)

PERSPECTIVES

Public-private partnerships: combining the best of both sectors

KEYWORDS

#foot and mouth disease (FMD), #HealthforAnimals, #public-private partnership, #vaccine.

AUTHORS

[Alex Rinkus](#), Communications and Stakeholder Engagement, [HealthforAnimals](#).

The designations and denominations employed and the presentation of the material in this article do not imply the expression of any opinion whatsoever on the part of the OIE concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers and boundaries.

The views expressed in this article are solely the responsibility of the author(s). The mention of specific companies or products of manufacturers, whether or not these have been patented, does not imply that these have been endorsed or recommended by the OIE in preference to others of a similar nature that are not mentioned.



© HealthforAnimals / Guilhem Alandry

The coming decades pose an unprecedented challenge. In the next ten years, nearly a billion people will join the global middle class, sparking greater demand for animal protein. This demand must be met, while protecting animal welfare and coping with increasingly unpredictable natural disasters. Farmers and veterinarians cannot face this challenge alone.

Public-private partnerships that combine the knowledge, expertise and missions of both public and private actors can support the livestock sector in facing the road ahead.

Synergistic collaboration

Public-private partnerships thrive when each side is able to offer its unique and complementary attributes to a project to ensure its success.

The public sector can offer deep wells of knowledge within governments or universities and the support to undertake projects that may be smaller, speculative or financially difficult.

The private sector possesses extensive distribution networks, along with the expertise to develop a nascent medicine into a safe, viable product for the market.

By working together, the two sectors maximise their unique experiences, knowledge and resources to address an under-served issue. The outcome is healthier animals and more developed markets, which can lead to more available medicines.

Proven model

The Pirbright Institute in the United Kingdom has developed a potential vaccine for foot and mouth disease (FMD) that offers protection against four FMD serotypes, which affect livestock in some of the poorest areas of the world. However, this vaccine needs distribution, manufacturing and testing networks, etc. The Pirbright Institute has partnered with a global animal medicines company (and [HealthforAnimals](#) member) to make use of its expertise and networks to deliver an approved, commercially viable and affordable vaccine to those who need it. This partnership combines public-sector knowledge with established private-sector infrastructure to benefit livestock farmers in the poorest regions. This is just one example of how PPPs can tackle difficult challenges.

Future of public-private partnerships

As the human population and challenges confronting our world increase, so do the challenges we face in livestock production. It is essential that public and private sectors work in tandem, so the unique characteristics of each side can combine to solve problems that cannot be solved alone.

<http://dx.doi.org/10.20506/bull.2019.3.3041>

PERSPECTIVES

The role of public-private partnerships in the dairy sector

KEYWORDS

#animal welfare, #antimicrobial resistance (AMR), #International Dairy Federation (IDF), #public-private partnership, #World Organisation for Animal Health (OIE), #zoonosis.

AUTHORS

C. Emond⁽¹⁾ & M. Sánchez Mainar^{(1)*}

(1) [International Dairy Federation](#).

* Corresponding author: msanchezmainar@fil-idf.org

The designations and denominations employed and the presentation of the material in this article do not imply the expression of any opinion whatsoever on the part of the OIE concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers and boundaries.

The views expressed in this article are solely the responsibility of the author(s). The mention of specific companies or products of manufacturers, whether or not these have been patented, does not imply that these have been endorsed or recommended by the OIE in preference to others of a similar nature that are not mentioned.



© Caroline Emond

In the [International Dairy Federation \(IDF\)](#), we believe that healthy and productive dairy animals contribute to a safe, sufficient and nutritious food supply. Diseases in dairy animals can decrease productivity and also result in food waste, due to discarded milk. Sustainable milk production is achieved through good management of animal care. Poor animal health may endanger the fulfilment of the United Nation's Sustainable Development Goals. Collaboration

throughout each stage of the value chain is essential to deliver successful results when confronted with these challenges.

Control of antimicrobial resistance

Since antimicrobial resistance (AMR) is a complex issue that has the potential to affect all living beings, isolated interventions can only have limited impact. Coordinated public-private partnership (PPP) actions are needed to minimise the emergence and spread of AMR and its related impacts.

The IDF promotes prudent and responsible use of antimicrobial agents within the global dairy sector to ensure that they continue to be effective in keeping animals in good health. The IDF guidance on AMR [1] and on the prudent use of antimicrobial agents in dairy production [2] supports the harmonised implementation of the global strategies on AMR.

Control programmes for paratuberculosis

Paratuberculosis, caused by *Mycobacterium avium* subsp. *paratuberculosis* (MAP), is an example of disease control that requires a strong national control programme and collaboration among many stakeholders.

The IDF contributes to a PPP biannual forum to discuss the current state of paratuberculosis research and national control programmes [3]. Key drivers for the implementation of those programmes include growing concerns in the dairy sector about the zoonotic potential of MAP, the desire to be proactive in taking control measures at both the farm and processor levels, and the need to meet trade requirements.

Welfare of dairy animals

Good animal welfare practices benefit everyone, from the animals themselves and farmers to processors and consumers, and society as a whole. In 2019, the IDF, in collaboration with the World Organisation for Animal Health (OIE) and the Food and Agriculture Organization of the United Nations (FAO), released an updated *IDF Guide to Good Animal Welfare in Dairy Production* [4]. This PPP collaborative effort promotes the implementation of good animal welfare practices in dairy production at a global scale. It refers to key international standards and provides guidelines to help dairy farmers and milk processors to interpret and implement these standards, based on scientific evidence and expertise.

<http://dx.doi.org/10.20506/bull.2019.3.3042>

REFERENCES

1. International Dairy Federation (IDF) (2017). – [Guidance on antimicrobial resistance from the dairy sector](#). IDF Factsheet 003/2017-05.
2. International Dairy Federation (IDF) (2013). – [Guide to prudent use of antimicrobial agents in dairy production](#).
3. International Dairy Federation (IDF) (2018). – [Proceedings of the 6th Paratuberculosis Forum](#). Bulletin of the International Dairy Federation No. 493.
4. International Dairy Federation (IDF) (2019). – [The IDF guide to good animal welfare in dairy production 2.0](#). Bulletin of the International Dairy Federation No. 498.

PERSPECTIVES

Public-private-producer partnerships (4Ps) in agricultural value chains

Sustainable inclusion of smallholders in agricultural value chains

Value chains in agriculture involve a variety of actors and institutions, the vast majority of which are private-sector companies. These companies provide the financial services, technology, know-how and information needed to meet the standards dictated by specific value chains. As a result, the value-chain development projects financed by the International Fund for Agricultural Development (IFAD) involve forging linkages between small-scale producers and private companies.

KEYWORDS

#International Fund for Agricultural Development (IFAD), #OIE PPP Handbook, #public-private partnership, #public-private-producer partnership (4Ps), #smallholder farmer, #value chain, #World Organisation for Animal Health (OIE).

AUTHORS

[Luis Jiménez-McInnis](#), Office of Partnerships and Resource Mobilisation (PRM), [International Fund for Agricultural Development \(IFAD\)](#).

The designations and denominations employed and the presentation of the material in this article do not imply the expression of any opinion whatsoever on the part of the OIE concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers and boundaries.

The views expressed in this article are solely the responsibility of the author(s). The mention of specific companies or products of manufacturers, whether or not these have been patented, does not imply that these have been endorsed or recommended by the OIE in preference to others of a similar nature that are not mentioned.



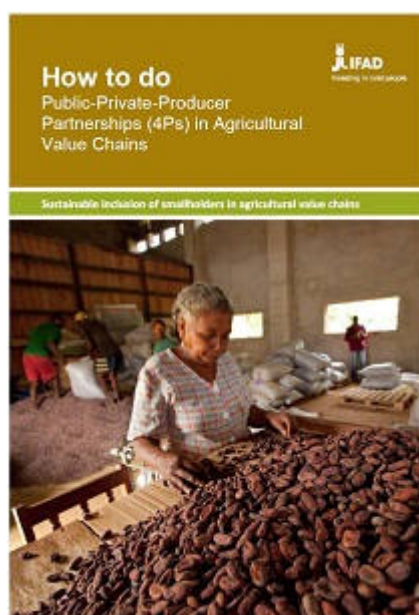
Kirirí indigenous community of Marcação, Brazil. © IFAD/Lianne Milton/Panos

The public-private-producer partnership (4Ps) approach generates opportunities to scale up development results. Using a 4Ps approach within an [International Fund for Agricultural Development \(IFAD\)](#)-funded project can provide support to leverage private investment, strengthen policy dialogue, and secure the necessary technology and know-how. Moreover, it can make more effective use of other stakeholders' social and political capital to produce more positive and more sustainable results.

Partnering with the private sector is not new to IFAD. Past and present IFAD-supported projects have generated considerable experience and many lessons have been learned. IFAD promotes the 4Ps as a more systematic way of doing business with the private sector through the projects it supports. This involves interacting with global stakeholders, partners and clients on IFAD's unique approach to partnerships that enhance the well-being of small-scale producers.

The IFAD 4Ps model ensures that smallholder producers are recognised and established partners since they are explicitly considered an integral part of the public-private partnership (PPP) process. This is consistent with the approach recommended by the OIE in its [PPP Handbook](#), but puts an extra emphasis on smallholder producers as an essential component of PPPs in many countries. Transparency, fairness and accountability are also very important, especially when it comes to recognising the tenure rights of local communities and the vital role of women, as well as the importance of environmental issues. Within this sphere, livestock play a key role. Investing in livestock means investing in the livelihoods of poor rural households. Livestock can provide food and nutrition security and, at the same time, strengthen the resilience of families facing economic challenges. A 4Ps approach could serve to protect animal health, boost productivity and link producers to profitable markets.

How organisations and agribusinesses can achieve better 4Ps



To harness greater domestic public investment, it is essential that the 4Ps model is adopted in a sustainable manner. If this model is used properly, local institutions, banks, equity investors and other value chain suppliers –

through the 4Ps approach – will be attracted to invest more in the combination of financial instruments, public goods and contractual engagements with agribusinesses and small-scale producers.

<http://dx.doi.org/10.20506/bull.2019.3.3043>

REFERENCES

1. International Fund for Agricultural Development (IFAD) (2013). – [IFAD and public-private partnerships: selected project experiences](#).
2. International Fund for Agricultural Development (IFAD) (2015). – [Sustainable inclusion of smallholders in agricultural value chains](#).
3. Thorpe J. & Maestre M. (2015). – [Brokering development: enabling factors for public-private-producer partnerships in agricultural value chains](#). International Fund for Agricultural Development (IFAD) & Institute of Development Studies (IDS).
4. Camagni M., Kherallah M. & Baumgartner P. (2016). – [How to do public-private-producer partnerships \(4Ps\) in agricultural value chains](#). International Fund for Agricultural Development (IFAD).

DOSSIER

Public-private partnerships: at the heart of animal health surveillance

In this article, we consider animal disease surveillance as a public-private partnership where public and private stakeholders pool resources, responsibilities and risks to achieve a common goal: controlling animal diseases and generating mutual benefits.

KEYWORDS

#animal health, #Global Burden of Animal Diseases (GBADs), #Indonesia, #public-private partnership, #surveillance, #World Organisation for Animal Health (OIE).

AUTHORS

Marisa Peyre, Animal, Health, Territory, Risks and Ecosystems (ASTRE) Unit, French Agricultural Research Centre for International Development (CIRAD), Montpellier, France.

The designations and denominations employed and the presentation of the material in this article do not imply the expression of any opinion whatsoever on the part of the OIE concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers and boundaries.

The views expressed in this article are solely the responsibility of the author(s). The mention of specific companies or products of manufacturers, whether or not these have been patented, does not imply that these have been endorsed or recommended by the OIE in preference to others of a similar nature that are not mentioned.



Participatory evaluation of surveillance systems by private and public actors.

© CIRAD/M.Peyre

In most cases, animal disease surveillance consists of the ongoing collection of data from private stakeholders (farmers, private veterinarians) in order to inform public decision-makers

(Veterinary Services) with a view to action (outbreak investigations, control measures, etc.). The private sector therefore plays a key role in surveillance and animal disease management at local level, frequently with limited interactions, in practice, with national surveillance systems.

Parallel surveillance systems

In the majority of Global South countries, private surveillance systems operate in parallel with official public systems because of a lack of collaboration and limited trust between the sectors [1]. The situation is different in Global North countries, where the public sector, represented by the state, gives a mandate to the private sector to implement animal health surveillance, illustrating a 'win-win' type of public-private partnership. This type of partnership sometimes lacks transparency and cooperation and could be reinforced [2]. It is therefore vital to improve the links between surveillance performed by the private and public sectors [3].

Limited recognition of the constraints and needs of the different stakeholders

It is imperative to take further account of the constraints and needs of the stakeholders involved in surveillance in order to nurture their commitment and improve surveillance systems.

In **Indonesia**, the [iSIKHNAS](#) animal health surveillance system was developed in cooperation with local stakeholders and focuses on their needs. iSIKHNAS is not only effective, with more than five million voluntary users, it is also sustainable, because the economic model is based on a public-private partnership with concrete commitments and risks shared between the public and private sectors.

The Global Burden of Animal Diseases (GBADs) initiative, supported by the OIE [4], provides an opportunity to integrate the constraints and needs of private and public stakeholders involved in surveillance and to reinforce and extend these links.

<http://dx.doi.org/10.20506/bull.2019.3.3044>

REFERENCES

1. Bisdorff B., Schauer B., Taylor N., Rodríguez-Prieto V., Comin A., Brouwer A., Dórea F., Drewe J., Hoinville L., Lindberg A., Avilés M.M., Martínez-López B., Peyre M., Ferreira J.P., Rushton J., Schaik G.V., Stärk K.D.C., Staubach C., Vicente-Rubiano M., Witteveen G., Pfeiffer D. & Häslar B. (2016). – Active animal health surveillance in European Union Member States: gaps and opportunities. *Epidemiol. Infect.*, **145** (4), 802-817. <https://doi.org/10.1017/S0950268816002697>.
2. Delabougli A., Dao T.H., Truong D.B., Nguyen T.T., Nguyen N.T.X., Duboz R., Fournié G., Antoine-Moussiaux N., Grosbois V., Vu D.T., Le T.H., Nguyen V.K., Salem G. & Peyre M. (2015). – When private actors matter: information-sharing network and surveillance of Highly Pathogenic Avian Influenza in Vietnam. *Acta Trop.* **147**, 38-44. <https://doi.org/10.1016/j.actatropica.2015.03.025>.
3. Figue M., Peyre M.I. & Binot A. (2013). – Surveillance of infectious animal diseases in Southeast Asia. Promoting the multiplicity of information networks. *Perspective*, **23** (1-4). <https://doi.org/10.19182/agritrop/00040>.
4. Rushton J., Bruce M., Bellet C., Torgerson P., Shaw A., Marsh T., Pigott D., Stone M., Pinto J., Mesenhowski S. & Wood P. (2018). – Initiation of Global Burden of Animal Diseases Programme (GBADs). *Lancet*, **392** (10147), 538-540. [https://doi.org/10.1016/S0140-6736\(18\)31472-7](https://doi.org/10.1016/S0140-6736(18)31472-7).
5. Delabougli A., Antoine-Moussiaux N., Phan T.D., Dao D.C., Nguyen T.T., Truong B.D., Nguyen X.N.T., Vu T.D., Nguyen K.V., Le H.T., Salem G. & Peyre M. (2015). – The perceived value of passive animal health surveillance: The case of highly pathogenic avian influenza in Vietnam. *Zoonoses Public Hlth*, **63** (2), 112-128. <https://doi.org/10.1111/zph.12212>.

DOSSIER

An example of the role of public-private partnership in trade facilitation

Quality, safety and trade continuity for natural sausage casings

KEYWORDS

#African swine fever (ASF), #casing, #classical swine fever, #International Meat Secretariat (IMS), #International Natural Sausage Casing Association (INSCA), #public-private partnership, #trade impediment, #virus inactivation, #World Organisation for Animal Health (OIE).

AUTHORS

Tinka Wieringa-Jelsma⁽¹⁾, Joris J. Wijnker^{(2)*}, Esther M. Zijlstra-Willems⁽¹⁾, Aldo Dekker⁽¹⁾, Norbert Stockhofe-Zurwieden⁽¹⁾, Riks Maas⁽¹⁾ & Henk J. Wisselink⁽¹⁾

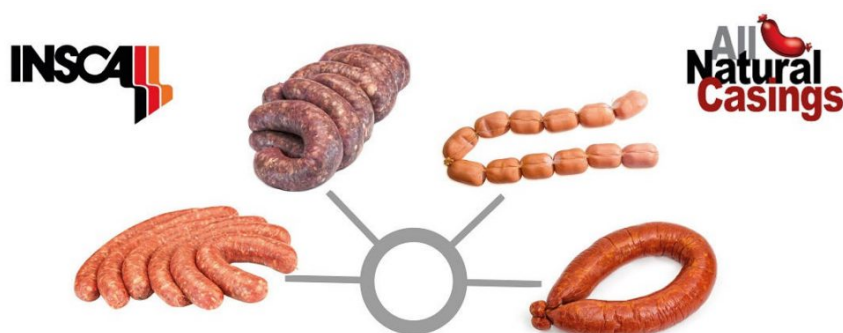
(1) [Wageningen Bioveterinary Research](#), Lelystad, The Netherlands.

(2) [International Natural Sausage Casing Association \(INSCA\)](#) / Faculty of Veterinary Medicine, [Utrecht University](#), The Netherlands.

* Corresponding author: insca@insca.org

The designations and denominations employed and the presentation of the material in this article do not imply the expression of any opinion whatsoever on the part of the OIE concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers and boundaries.

The views expressed in this article are solely the responsibility of the author(s). The mention of specific companies or products of manufacturers, whether or not these have been patented, does not imply that these have been endorsed or recommended by the OIE in preference to others of a similar nature that are not mentioned.



Research on the prevention of the spread of animal diseases via casings is funded by industry, represented by the [International Natural Sausage Casing Association \(INSCA\)](#), and carried out by prominent research institutes. Losing this highly valued commodity for international trade would have a negative impact on the sustainability of the meat industry.

Animal intestines are processed into sausage casings and subsequently shipped to sausage producers worldwide. Contagious animal viruses and bacteria could be present in these casings. Past disease threats that have been effectively dealt with through dedicated research on casings include bovine spongiform encephalopathy (BSE), foot and mouth disease virus (FMDV) and classical swine fever virus (CSFV). Given that African swine fever virus (ASFV) is now a major global threat, Article 15.1.24 in the OIE *Terrestrial Animal Health Code* describes the inactivation of ASFV in casings from pigs [1]. Countries can use this article to develop clear and science-based trade requirements.

3D collagen matrix model for casings

In order to be prepared for disease outbreaks threatening the casings trade, a 3D collagen casing matrix model was developed and published in 2011 [2]. Application of this *in-vitro* model, validated for FMDV in 2012 [3] and CSFV and ASFV [4], means that live animal studies are no longer necessary to evaluate the inactivation of specific diseases in casings.

The results presented in Figures 1A (ASFV) and 1B (CSFV) clearly show temperature and treatment dependent viral inactivation over time. Differences between the treatment with table salt (NaCl) or phosphate-supplemented salt (P-salt) versus the control treatment at each time point were significant when $P < 0.05$ (*), and highly significant when $P < 0.001$ (**). The detection limit of virus titrations is represented by dotted lines: for African swine fever virus it is 1.4 TCID₅₀/mL (Fig. 1A) and for classical swine fever virus 1.4 TCID₅₀/mL (Fig. 1B). A recent study using experimentally infected pigs confirmed the validity of the 2011 results for both CSFV and ASFV [4].

The 3D collagen model has now been validated for different species and diseases, showing how disease inactivation in casings can be studied closely with lower variance and without the need for live-animal experiments. Not only will the application of this model allow other diseases to be studied more quickly and cost-effectively, but no longer using live animals for these experiments is a major ethical improvement.

This example illustrates how both public and private sectors can collaborate in contributing to the facilitation of trade in animal products.

Fig. 1A

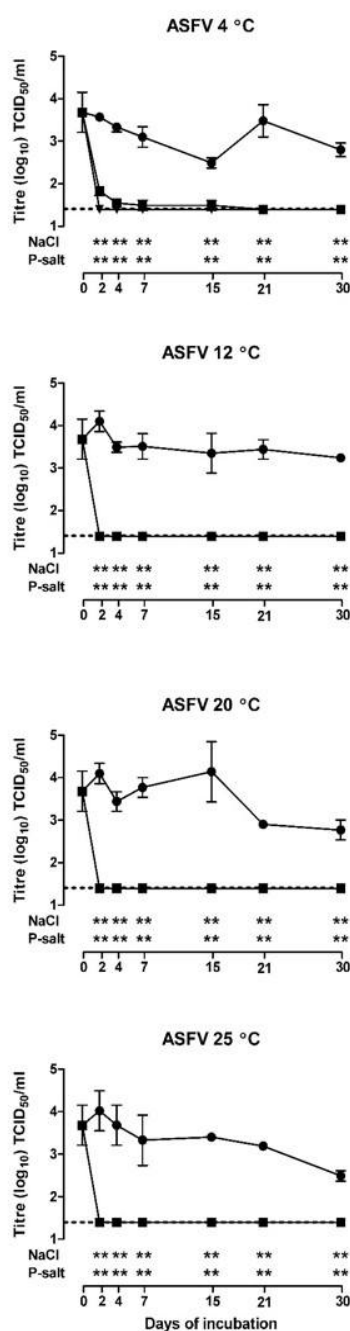
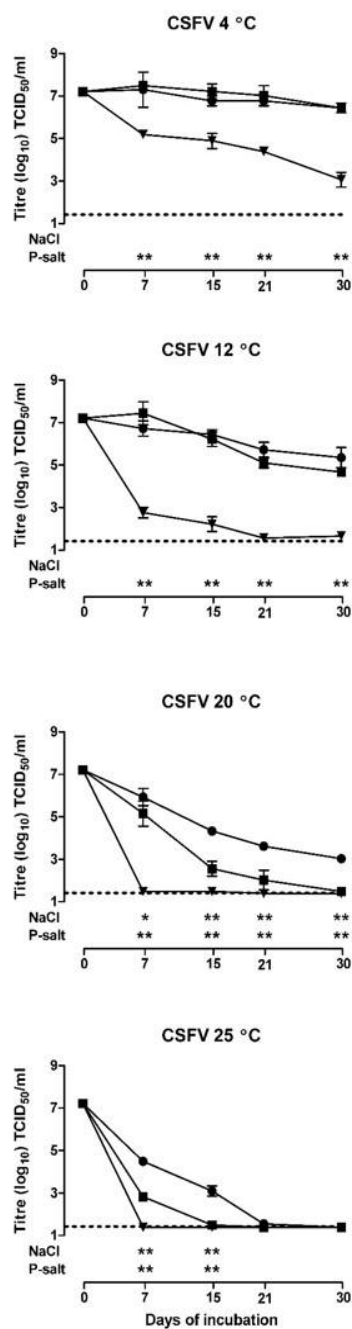


Fig. 1B



Mean virus titres and standard deviations in \log_{10} TCID₅₀/ml (50% tissue culture infectious dose) in virus infected cells, embedded in bovine collagen type I after no treatment (●), treatment with NaCl (■) and treatment with phosphate supplemented salt (▼) at different time points and temperatures.

© Wieringa-Jelsma et al., 2011.

<http://dx.doi.org/10.20506/bull.2019.3.3045>

REFERENCES

1. World Organisation for Animal Health (OIE) (2019). – Article 15.1.24. Procedures for the inactivation of ASFV in casings of pigs. In Terrestrial Animal Health Code.
2. Wieringa-Jelsma T., Wijnker J.J., Zijlstra-Willems E.M., Dekker A., Stockhove-Zurwieden N., Maas R. & Wisselink H.J. (2011). – Virus inactivation by salt (NaCl) and phosphate supplemented salt in a 3D collagen matrix model for natural sausage casings. *Int. J. Food Microbiol.*, **148** (2), 128-134. <https://doi.org/10.1016/j.ijfoodmicro.2011.05.010>.
3. Wijnker J.J., Haas B. & Berends B.R. (2012). – Inactivation of foot-and-mouth disease virus in various bovine tissues used for the production of natural sausage casings. *Int. J. Food Microbiol.*, **153** (1-2), 237-240. <https://doi.org/10.1016/j.ijfoodmicro.2011.11.013>.
4. Jelsma T., Wijnker J.J., Smid B., Verheij E., van der Poel W.H.M. & Wisselink H.J. (2019). – Salt inactivation of classical swine fever virus and African swine fever virus in porcine intestines confirms the existing *in vitro* casings model. *Vet. Microbiol.*, **238**, 108424. <https://doi.org/10.1016/j.vetmic.2019.108424>.

DOSSIER

Canada leverages public-private partnerships to keep African swine fever at bay

KEYWORDS

#African swine fever (ASF), #Canada, #emergency preparedness, #public-private partnership.

AUTHORS

S. Doyle⁽¹⁾, B. Blackie⁽¹⁾, A. Ellis^{(1)*}, J. Komal⁽¹⁾, F. Seppey⁽²⁾, A.C. Poulin⁽²⁾, R. McAlpine⁽³⁾ & J. Ross⁽⁴⁾

(1) [Canadian Food Inspection Agency](#).

(2) Market and Industry Services Branch, [Agriculture and Agrifood Canada](#).

(3) Government and Industry Relations, [Maple Leaf Foods](#).

(4) [Canadian Pork Council](#).

* Corresponding author: andrea.ellis@canada.ca

The designations and denominations employed and the presentation of the material in this article do not imply the expression of any opinion whatsoever on the part of the OIE concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers and boundaries.

The views expressed in this article are solely the responsibility of the author(s). The mention of specific companies or products of manufacturers, whether or not these have been patented, does not imply that these have been endorsed or recommended by the OIE in preference to others of a similar nature that are not mentioned.



African Swine Fever Forum, Ottawa, Canada, 30 April – 1 May 2019. © Patrick Doyle, Canadian Press

As African swine fever (ASF) continues to spread globally, Canada is taking additional steps to help prevent its entry into the country and minimise its impact. The Government of Canada and

the pork industry are working together to protect the swine sector and the people that draw their livelihood from it, providing a strong foundation for a public-private partnership (PPP) on ASF.

This active collaboration with industry on African swine fever includes:

The ASF Executive Management Board: Senior industry and government representatives provide leadership and strategic direction in coordinating and prioritising activities and providing guidance on the risk management of ASF.

An Action Plan: An ASF Action Plan is being developed to ensure a Canada-wide approach to ASF. The plan outlines government and industry accountabilities, such as:

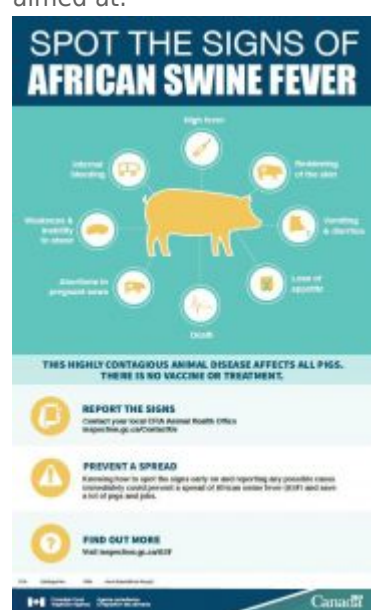
- testing preparedness plans through national and regional joint exercises
- determining what tools and tactics will be used to mitigate trade impacts, such as zoning and compartmentalisation
- implementing outreach strategies to strengthen import controls and on-farm biosecurity.

International engagement

Canada hosted an international [ASF Forum](#), planned jointly by government and industry representatives from Canada, the United States of America and Mexico, which developed a framework outlining actions to address the threat to the region of the Americas.

Raising awareness

Industry and all levels of government have been working together to broaden awareness of ASF. This information is aimed at:



- producers – through videos, infographics and Web content on feed imports and biosecurity standards
- the general public – using social media campaigns through various government and industry channels
- travellers – through signage in international airports and in-flight announcements.

Coordinated actions by government and industry are essential to help prevent the entry and spread of ASF, and to support emergency response management. Canada will continue to explore and make effective use of additional PPP arrangements in the prevention of ASF.

<http://dx.doi.org/10.20506/bull.2019.3.3046>

DOSSIER

The voluntary response to antimicrobial resistance by the United Kingdom

KEYWORDS

#antibiotic, #antimicrobial resistance (AMR), #public-private partnership, #Responsible Use of Medicines in Agriculture Alliance (RUMA), #United Kingdom.

AUTHORS

Chris Lloyd, [Responsible Use of Medicines in Agriculture Alliance \(RUMA\)](#), United Kingdom.

The designations and denominations employed and the presentation of the material in this article do not imply the expression of any opinion whatsoever on the part of the OIE concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers and boundaries.

The views expressed in this article are solely the responsibility of the author(s). The mention of specific companies or products of manufacturers, whether or not these have been patented, does not imply that these have been endorsed or recommended by the OIE in preference to others of a similar nature that are not mentioned.



© Responsible Use of Medicines in Agriculture Alliance (RUMA)

The United Kingdom (UK) Government Review on Antimicrobial Resistance (AMR) by Lord O'Neill established AMR as a key priority [1]. It set a target for antibiotic use in agriculture of 50 mg/kg Population Correction Unit (PCU) by 2018. In response to the O'Neill Review final report published in May 2016, the [Responsible Use of Medicines in Agriculture Alliance \(RUMA\)](#) convened a [Targets Task Force \(TTF\)](#), bringing together representatives of the farmed livestock sectors. The TTF developed sector-specific targets to reduce antibiotic use in UK livestock production, which were published in November 2017.

The TTF first convened in December 2016, composed of a specialist veterinarian and a leading farmer for each of the agricultural sectors, covering beef, dairy, eggs, fish, gamebirds, pigs, poultry meat and sheep. The associated government agencies – the Veterinary Medicines Directorate and Food Standards Agency – took part in the group as observers and provided input on data and methodology.

In November 2017, after a year of intensive effort and partnership with stakeholder organisations, the TTF published a series of sector targets designed to reduce, refine or replace antibiotics without affecting the animal health and welfare of farmed animals across UK agriculture [2].

The common theme across all sectors is the partnership between veterinarians and producers

The targets reflect the different start points and challenges for each sector, although they all committed to specific targets. The next steps explain how the targets will be delivered. The common theme across all sectors is the partnership between veterinarians and producers as they adopt a proactive approach to disease prevention, but, when needed, prescribe and use antibiotics responsibly. The targets come to fruition in 2020.



In November 2018, RUMA published a progress report [3] for each sector with a second in October 2019 [4] reporting the following highlights:

- UK sales of antibiotics for food-producing animals fell 53% since 2014; overall use in 2018 was 29.5 mg/kg, one of the lowest quantities in the EU and below the government target of 50 mg/kg
- Sales of highest priority critically important antibiotics (HP-CIA) fell 68% between 2014 and 2018
- Only 30% of the UK's antibiotics are now estimated to be used to treat disease in farm animals.

<http://dx.doi.org/10.20506/bull.2019.3.3047>



© MSD Animal Health

REFERENCES

1. The Review on Antimicrobial Resistance (2016). – [Tackling Drug-Resistant Infections Globally: final report and recommendations](#).
2. Responsible Use of Medicines in Agriculture (RUMA) Alliance (2017). – [Targets Task Force Report - 2017](#).
3. Responsible Use of Medicines in Agriculture (RUMA) Alliance (2018). – [Targets Task Force: One Year On - November 2018](#).
4. Responsible Use of Medicines in Agriculture (RUMA) Alliance (2019). – [Targets Task Force: Two Years On - October 2019](#).

DOSSIER

Engaging the actors to ensure impacts of public-private partnerships

Participatory impact evaluation

Evaluation and actor engagement are essential to ensure performance and sustainability of actions implemented, especially under public-private partnerships (PPPs). In the context of the OIE PPP initiative, the OIE and CIRAD have developed a participatory evaluation method to assess the added value of PPPs in the veterinary domain.

KEYWORDS

#Centre de coopération internationale en recherche agronomique pour le développement (CIRAD), #OIE PPP Handbook, #participatory evaluation, #public-private partnership, #socio-economic impact, #World Organisation for Animal Health (OIE).

AUTHORS

Mariline Poupaud⁽¹⁾, Bernard N'Bocho Guessan⁽²⁾, Isabelle Dieuzy-Labaye⁽³⁾ & Marisa Peyre^{(4)*}

(1) PhD student at the [French Agricultural Research Centre for International Development \(CIRAD\)](#), Montpellier, France and at the [University of Liège](#), Belgium.

(2) PhD student at [Robert Koch Institute](#), Germany, and [Laboratoire National d'Appui au Développement Agricole \(LANADA\)](#), Côte d'Ivoire.

(3) [World Organisation for Animal Health \(OIE\)](#).

(4) Animal, Health, Territory, Risks, Ecosystems (ASTRE) Joint Research Unit, [French Agricultural Research Centre for International Development \(CIRAD\)](#), Montpellier, France.

* Corresponding author: marisa.peyre@cirad.fr

The designations and denominations employed and the presentation of the material in this article do not imply the expression of any opinion whatsoever on the part of the OIE concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers and boundaries.

The views expressed in this article are solely the responsibility of the author(s). The mention of specific companies or products of manufacturers, whether or not these have been patented, does not imply that these have been endorsed or recommended by the OIE in preference to others of a similar nature that are not mentioned.



Impact pathway built during the first participatory workshop with the stakeholders of Ethiochicken initiative. © CIRAD/M. Peyre

Evaluation is recognised by decision makers as an essential tool to ensure performance and sustainability of implemented actions [1]. To be meaningful, both technical performance and socio-economic factors should be considered. The World Organisation for Animal Health (OIE) and the French Agricultural Research Centre for International Development (CIRAD) have joined forces to develop a participatory methodology to evaluate the impact of public-private partnerships (PPPs) in the veterinary domain.

A participatory evaluation method

Participatory impact evaluation promotes self analysis of how programmes are built and how actors adopt and engage with them to attain impacts [2]. Actors can share their perception of the programmes and impacts and co-design the corrective actions needed to ensure that expected impacts are reached [3]. The OIE and CIRAD adapted and are applying this method to three case studies, in Ethiopia, Indonesia and Paraguay.

Evaluating the added value of PPP: the case study of Ethiochicken in Ethiopia

Ethiochicken is a chicken-producing company that partners with the Government of Ethiopia to ensure the delivery of its products to smallholder farmers. PPP was essential in achieving impacts (including societal impacts such as improved education, empowerment of women and employment opportunities). This PPP contributes to building trust between private producers and Veterinary Services (VS), strengthening VS activities.

Constraints that affect business have been identified, linked to issues with accessing foreign currency and the limited training in poultry production in Ethiopia. Public and private stakeholders joined forces during participatory workshops to co-develop scenarios to overcome such constraints, satisfying both public and private parties.

Impact of the evaluation itself

By engaging directly with all the different actors, the participatory impact evaluation has an explicit goal of

triggering positive changes in the partnership [4]. This method has proven relevant to evaluating the impact of PPPs in the veterinary domain. It has already been used to characterise PPP contributions in different types of impact and benefits, as presented in *The OIE PPP Handbook*.

<http://dx.doi.org/10.20506/bull.2019.3.3048>



Impact pathway built during the first participatory workshop with the stakeholders of the Ethiochicken initiative. © CIRAD/M. Peyre

REFERENCES

1. Galière M., Peyre M., Muñoz F., Dehove A., Roger F. & Dieuzy-Labaye I. (2019). – Typological analysis of public-private partnerships in the veterinary domain. *PLoS ONE*, **14** (10) e0224079. <https://doi.org/10.1371/journal.pone.0224079>.
2. Douthwaite B., Kuby T., van de Fliert E. & Schulz S. (2003). – Impact pathway evaluation: an approach for achieving and attributing impact in complex systems. *Agric. Syst.*, **78** (2), 243–265. [https://doi.org/10.1016/s0308-521x\(03\)00128-8](https://doi.org/10.1016/s0308-521x(03)00128-8).
3. Antoine-Moussiaux N., Peyre M., Bonnet P., Bebay C., Bengoumi M. & Tripodi A. (2017). – The value chain approach in One Health: conceptual framing and focus on present applications and challenges. *Front. Vet. Sci.*, **4**, 206. <https://doi.org/10.3389/fvets.2017.00206>.
4. Barret D., Blundo Canto G., Dabat M.H., Devaux-Spatarakis A., Faure G., Hainzelin E., Mathé S., Temple L., Toillier A., Triomphe B. & Vall E. (2017). – Guide méthodologique ImpresS. Évaluation ex post des impacts de la recherche agronomique dans les pays du Sud. Centre de coopération internationale en recherche agronomique pour le développement (CIRAD). <https://doi.org/10.19182/agritrop/00005>.

DOSSIER

Strengthening animal health services through public-private partnerships

A sustainable, resource-smart, development approach

KEYWORDS

#animal health, #OIE PPP Handbook, #public-private partnership, #service delivery, #United States Agency for International Development (USAID), #World Organisation for Animal Health (OIE).

AUTHORS

A. Bisson^{(1)*}, C. Jost⁽²⁾ & A. Kutnick⁽³⁾

(1) Bureau for Food Security, [United States Agency for International Development \(USAID\)](#).

(2) Office of US Foreign Disaster Assistance, Bureau for Democracy, Conflict, and Humanitarian Assistance, [United States Agency for International Development \(USAID\)](#).

(3) Private Sector Engagement Division, Bureau for Food Security, [United States Agency for International Development \(USAID\)](#).

* Corresponding author: abisson@usaid.gov

The designations and denominations employed and the presentation of the material in this article do not imply the expression of any opinion whatsoever on the part of the OIE concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers and boundaries.

The views expressed in this article are solely the responsibility of the author(s). The mention of specific companies or products of manufacturers, whether or not these have been patented, does not imply that these have been endorsed or recommended by the OIE in preference to others of a similar nature that are not mentioned.



Animal health services can struggle to meet the growing demands placed upon them. The [United States Agency for International Development \(USAID\)](#) seeks to achieve maximum

development impact through sustainable public-private partnerships (PPPs) and enterprise-led growth, enabling transformative change in the delivery of animal health services in low- and middle-income countries (LMICs). The OIE PPP Handbook [1] provides an excellent resource, grounded in the realities of the field, to achieve effective PPPs.

Substantial livestock-sector growth in LMICs drives the demand for animal health services, placing public services under pressure and creating opportunities for the private sector.

Those involved in both the public and private animal health sectors are looking for mechanisms to foster collaboration and partnership, and modify policy and other aspects of the enabling environment to improve the efficiency and efficacy of service delivery.

The burden of livestock disease has severe negative impacts on the livelihoods, health and nutrition of millions of poor households. In many LMICs it is the *delivery* of effective disease prevention and control inputs, not the inputs themselves, that is proving most elusive. Challenges include limited public-sector resources, large livestock populations spread over vast territories, rapidly expanding commercial production systems, and sub-optimal policy frameworks. Limited use is made of PPPs in LMICs, in contrast to their widespread application in higher-income countries.

Public-private partnerships have proven highly effective for the delivery of animal health services but remain underused in most low- and middle-income countries

USAID pursues an enterprise-driven development strategy, led by the private sector, while also recognising the vital role played by the public sector in facilitating sustainable, equitable growth. USAID's Private Sector Engagement Policy [2] asks these guiding questions:

- is a market-based approach viable?
- what motivations does the private sector have?
- what is holding the private sector back?

USAID supports animal health PPPs by facilitating collaboration among key stakeholders, piloting approaches and evaluating outcomes, and helping to shape policy and service delivery systems.

PPP examples include:

- strengthened service delivery models (by sub-contracting private animal health providers to deliver public goods [sanitary mandate] and integrating veterinary para-professionals [VPPs] into extensive livestock production systems [3])
- improved vaccine development and delivery (including 'payment for results' approaches [4])
- animal health support for smallholder poultry expansion in Ethiopia [5].

The OIE PPP Handbook represents a useful capacity-development tool, assisting stakeholders in identifying and selecting partnership options. It is based on experience and best practices, and aims to accelerate learning and

provide a suite of options for decision-makers. It constitutes a significant resource for strengthening animal health service capacity.

<http://dx.doi.org/10.20506/bull.2019.3.3049>



Private veterinarian in his pharmacy, Ethiopia. © Cultivating New Frontiers in Agriculture (CNFA)

REFERENCES

1. World Organisation for Animal Health (OIE) (2019). - [The OIE PPP handbook: guidelines for public-private partnerships in the veterinary domain](#).
2. United States Agency for International Development (USAID) (2019). - [Private sector engagement policy](#).
3. Abebe D. (2016). - [Veterinary Services in Karamoja, Uganda: a review](#). Karamoja Resilience Support Unit, USAID/Uganda, Kampala.
4. [AgResults](#).
5. [Ethiochicken](#).

AROUND THE WORLD

► OIE ACTIONS

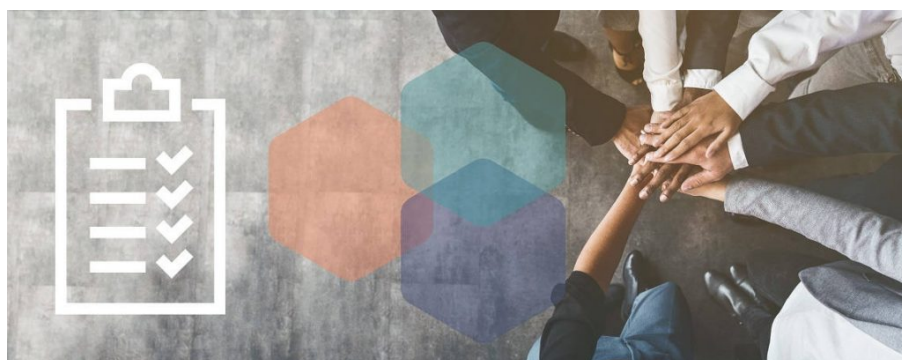
Global typology and impact of the OIE public-private partnership initiative

KEYWORDS

#Centre de coopération internationale en recherche agronomique pour le développement (CIRAD), #guidelines, #OIE PPP Handbook, #public-private partnership, #veterinary domain, #World Organisation for Animal Health (OIE).

AUTHORS

Isabelle Dieuzy-Labaye, [World Organisation for Animal Health \(OIE\)](#).



After a survey of its 181 Members in 2017, involving both public and private sectors, the [World Organisation for Animal Health \(OIE\)](#), with the support of the [French Agricultural Research Centre for International Development \(CIRAD\)](#), has produced a set of categories (typology) of [public-private partnerships \(PPPs\) in the veterinary domain](#).

This typology describes three main types of partnership in support of Veterinary Services:

- transactional, as in Tunisia or Afghanistan
- collaborative, with examples in Paraguay and Namibia
- transformative, as in India or Kenya.

CLUSTER ONE	Transactional PPP: driven by the need for local Veterinary Services in the field, initiated and funded by the public sector.			
	Private partners	Action and governance	Key obstacles	OIE next steps
	<ul style="list-style-type: none"> Private veterinarians and veterinary para-professionals (VPPs) Veterinary associations Veterinary Statutory Body 	<ul style="list-style-type: none"> Accreditation of private veterinarians and VPPs to provide in-field service delivery (vaccination, surveillance, etc.) Governed by sanitary mandate or contract 	<ul style="list-style-type: none"> Communication and trust Funding and sustainability Human resource availability and capacity 	<ul style="list-style-type: none"> Encourage creation of Veterinary Statutory Bodies, training and education of veterinarians and VPPs, and legislation (including products)
CLUSTER TWO	Collaborative PPP: driven by trade, exports and/or commercial interests, initiated by both the public and private sectors.			
	Private partners	Action and governance	Key obstacles	OIE next steps
	Ranging from producer associations to consortia (may include: industry organisations and possibly private companies)	<ul style="list-style-type: none"> Eradication programmes or epidemics surveillance Joint accreditation and consultation programmes Legislation and strong governance 	<ul style="list-style-type: none"> Potential conflicts of interest Lack of proper governance Greater need for good private sector organisation, strong partner involvement, and sustained funding and well-trained personnel 	<ul style="list-style-type: none"> Develop governance guidelines for PPPs Promote use of PPR or AMR control initiatives as a driving force in Africa, Middle East, and Asia
CLUSTER THREE	Transformative PPP: driven by development objectives, initiated and funded by the private sector.			
	Private partners	Action and governance	Key obstacles	OIE next steps
	Local and multinational companies	<ul style="list-style-type: none"> Joint programmes with national Veterinary Services on disease control, product supply, improved genetics, etc. Memorandums of Understanding and contracts 	<ul style="list-style-type: none"> Lack of governance Absence of resources, in the form of sustained funding and well-trained personnel Greater need for enabling political environments 	<ul style="list-style-type: none"> Develop governance guidelines for PPPs Help reconcile UN Sustainable Development Goals and business interests Promote proper legislation, training of public veterinarians and VPPs

A global typology of public-private partnerships in support of national Veterinary Services. © 2019 Galière et al.

Guidelines for successful PPPs are assembled in the [OIE PPP Handbook](#), together with an [e-learning course for PPP practitioners in the field](#).

Types of PPP

The PPP types are mainly differentiated by:



Type of private partner



Initiation and funding



Typical governance

OIE PPP e-learning platform

REFERENCES

1. Galière M., Peyre M., Muñoz F., Poupaud M., Dehove A., Roger F. & Dieuzy-Labaye I. (2019). – Typological analysis of public-private partnerships in the veterinary domain. *PLoS ONE*, **14** (10), e0224079. <https://doi.org/10.1371/journal.pone.0224079>.

AROUND THE WORLD

► OIE ACTIONS

The OIE published guidelines for public-private partnerships in the veterinary domain

KEYWORDS

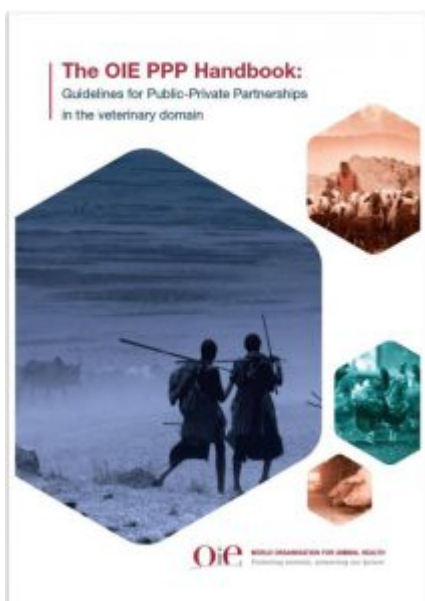
#guidelines, #OIE PPP Handbook, #public-private partnership, #World Organisation for Animal Health (OIE).

AUTHORS

[Nigel Gibbens](#), Itinerant Vets Ltd, West Barn, Wepham, Arundel, West Sussex BN18 9RD, United Kingdom.



Public-private partnerships (PPPs) enable the development of animal health services, policies and trade to a scale, quality or degree of geographic penetration that is unachievable by the public sector alone. Veterinary services can be improved across the globe by increasing their application.



With the support of the [Bill & Melinda Gates Foundation](#) and in collaboration with the [French Agricultural Research Centre for International Development \(CIRAD\)](#), the OIE has produced a set of PPP guidelines, based on a large survey of public and private partners in its Members.

The OIE PPP Handbook has been conceived to be instrumental in the development of impactful and sustainable PPPs in the veterinary arena. It distils the knowledge and experience of PPP practitioners from across the world to give practical and informed advice on making PPPs work.

REFERENCES

1. World Organisation for Animal Health (OIE) (2019). – [The OIE PPP handbook: guidelines for public-private partnerships in the veterinary domain](#).

AROUND THE WORLD

► OIE ACTIONS

The OIE public-private partnership initiative: interest and possible routes for dissemination

KEYWORDS

#e-learning, #European Commission for the Control of Foot-and-Mouth Disease (EuFMD), #OIE PPP Handbook, #public-private partnership, #webinar, #World Organisation for Animal Health (OIE).

AUTHORS

[Keith Sumption](#), [The European Commission for the Control of Foot and Mouth Disease \(EuFMD\)](#), Food and Agriculture Organization of the United Nations (FAO).

The designations and denominations employed and the presentation of the material in this article do not imply the expression of any opinion whatsoever on the part of the OIE concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers and boundaries.

The views expressed in this article are solely the responsibility of the author(s). The mention of specific companies or products of manufacturers, whether or not these have been patented, does not imply that these have been endorsed or recommended by the OIE in preference to others of a similar nature that are not mentioned.



© P.B. Hayet

The European Commission for the Control of Foot and Mouth Disease (EuFMD) warmly welcomes [The OIE PPP Handbook](#), since it provides an excellent starting point for discussions on public-private partnership (PPP) in foot and mouth disease control in both endemic and emergency management situations.

So far, the EuFMD has provided training to more than 10,000 veterinarians through its [e-learning platform](#). The

Executive Secretary of EuFMD believes that tutored courses on PPP application at the national level would be in high demand and highly relevant to students.

There is a need to share experience in PPP application and a programme of webinars, podcasts and other media could help to communicate the benefits of PPPs, as well as the issues that we need to address. Through this, a community of practice may quickly emerge to help guide and support those getting started in PPPs.

OIE PPP e-learning course

developed in collaboration with **eofmd**

freely available at: <https://elearning-ppp.oie.int>

The screenshot displays the OIE PPP e-learning platform. On the left is a red sidebar menu with options: PPP Introductory Course, Participants, Badges, Grades, Course Materials, Home, Dashboard, My courses, Cours introductif PPP, and PPP Introductory Course. The main content area is titled 'Public-Private Partnerships in the Veterinary Domain: An Introductory Course' and shows the breadcrumb 'Home / My courses / PPP Introductory Course / Course Materials / Section 1: A Win-win Strategy'. Below this, 'Section 1: A Win-win Strategy' is displayed. An exercise is presented with a diagram and five numbered items for classification.

Exercise: Now you have learnt some definitions, look at the categories in the diagram. Then read the descriptions below. Can you drag the correct number onto the appropriate category?

Diagram: A Venn diagram showing the relationship between the Public Sector and the Private Sector. The intersection is the Veterinary Domain, which contains Veterinary Services, which in turn contains the Veterinary Authority.

Items to classify:

- 1 Encompassing all activities which protect animal health, welfare and food safety. Includes the Governmental Authority, and so it is by definition a public sector body. It encompasses the responsibility and competence for ensuring or supervising the implementation of animal health and welfare measures, international veterinary certification and other OIE standards and recommendations.
- 2 The part of the national economy that is not under direct state control.
- 3 All public and private organizations that implement animal health and welfare measures and other standards and recommendations by the OIE.
- 4 The part of the economy that is controlled by the state.
- 5

Buttons: Reset, Submit

Footer: Glossary, Section 1: PPP as a win-win strategy

REFERENCES

1. World Organisation for Animal Health (OIE) (2019). - [The OIE PPP handbook: guidelines for public-private partnerships in the veterinary domain](#).

AROUND THE WORLD

► NETWORK INITIATIVES

Achieving the Sustainable Development Goals

Effectiveness of the African Development Bank's public-private partnership interventions

KEYWORDS

#African Development Bank (AfDB), #infrastructure, #public-private partnership, #Sustainable Development Goal (SDG).

AUTHORS

Youssef Kabore^{(1)*} & Christopher Ndi⁽¹⁾

(1) Department of Agriculture and Agro-Industry (AHAI), [African Development Bank](#), Abidjan, Côte d'Ivoire.

* Corresponding author: y.kabore@afdb.org

The designations and denominations employed and the presentation of the material in this article do not imply the expression of any opinion whatsoever on the part of the OIE concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers and boundaries.

The views expressed in this article are solely the responsibility of the author(s). The mention of specific companies or products of manufacturers, whether or not these have been patented, does not imply that these have been endorsed or recommended by the OIE in preference to others of a similar nature that are not mentioned.



Photo © Hu Chen - Unsplash

The [African Development Bank's](#) public-private partnership (PPP) mechanism for the 2006–2016 period, with a portfolio of 39 projects totalling US\$ 2.4 billion, places strong emphasis on infrastructure and PPPs as tools for intervention to overcome the bottlenecks that have hampered developing countries and their ability to attract direct foreign investments.

The Bank's Private Sector Development Strategy and its subsequent updates introduced PPPs as intervention tools for the bank's operations.

In 2005, the African Development Bank's [New Partnership for Africa's Development \(NEPAD\)](#) established a special fund, in collaboration with international donors, to assist African countries. This fund, known as the [Infrastructure Project Preparation Facility](#), offered another stimulus for PPPs in Africa.

The bank's governance strategy and action plan have always stressed the importance of strengthening PPP policy, legislation and regulatory frameworks to aid in developing livestock infrastructure in Africa (e.g. dip tanks, crush pens, vaccination crushes, feeding and drinking troughs, veterinary laboratories, etc.).



Some photographs from the African Development Bank-funded Livestock Infrastructure Support Programme (LISP) in Zambia. Left: a vaccination crush in Nakonde; right: a feeding and drinking trough in Kasama.

REFERENCES

1. United Nations (2015). – [Sustainable Development Goals \(SDGs\)](#).
2. African Development Bank – Group Independent Development Evaluation (IDEV) (2019). – [Evaluation of the bank's utilization of the public-private partnership mechanism, 2006–2017](#).
3. World Bank Institute (WBI) & Public-Private Infrastructure Advisory Facility (PPIAF) (2012). – [PPP Basics and Principles of a PPP Framework](#).
4. The Economist Intelligence Unit (EIU) (2015). – [The 2015 Infrascope: evaluating the environment for public-private partnerships in Africa](#).
5. African Development Bank Group – Governance, Economic and Financial Management Department (OSGE) (2017). – [Governance Strategic Framework and Action Plan – GAP II. Promoting good governance and accountability for Africa's transformation \(2014–2018\)](#).
6. John K.B. (2016). – [Feed Africa: Strategy for Agricultural Transformation in Africa 2016–2025](#). African Development Bank Group.

AROUND THE WORLD

► SUCCESS STORIES

Public-private partnership: a key strategy to achieve 'LastMile' veterinary service delivery

How the engagement of the public Veterinary Services and veterinary para-professionals is essential to the success of the LastMile Initiative

KEYWORDS

#public-private partnership, #service delivery, #smallholder farmer, #veterinary domain, #veterinary paraprofessional, #Veterinary Services.

AUTHORS

[Lazare Tano](#), Africa Marketing & Technical Manager, [Boehringer Ingelheim Animal Health](#).

The designations and denominations employed and the presentation of the material in this article do not imply the expression of any opinion whatsoever on the part of the OIE concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers and boundaries.

The views expressed in this article are solely the responsibility of the author(s). The mention of specific companies or products of manufacturers, whether or not these have been patented, does not imply that these have been endorsed or recommended by the OIE in preference to others of a similar nature that are not mentioned.



With the support of the [Global Alliance for Livestock Veterinary Medicines \(GALVmed\)](#) and the [Bill & Melinda Gates Foundation](#), the [LastMile Initiative](#) aims to bridge current gaps in access and awareness of quality animal healthcare solutions for smallholder farmers in sub-Saharan Africa. A public-private partnership (PPP) between Veterinary Services and the private sector is in place in several countries to reach these goals.

[Boehringer Ingelheim](#) is aiming to establish groups of qualified animal health technicians who will travel to areas that are difficult to access through the usual distribution networks. These veterinary para-professionals will help to increase farmers' knowledge on disease prevention and treatment, while still working within the boundaries of national legislation on veterinary activities.

| Most of the information and products proposed to farmers are taken more seriously when validated by public Veterinary Services

Boehringer Ingelheim invests human resources and the necessary funds to improve service delivery, thus contributing to a 'win-win' partnership. Working in synergy with the public sector will allow LastMile teams to plan their roadshow and create long-lasting partnerships with local farming communities, in an effort to establish and drive sustainable businesses that are integrated into the wider national economy. The farmers' knowledge of disease prevention and treatment will be substantially increased. Most of the information and products proposed to farmers are taken more seriously when validated by public Veterinary Services. This can be achieved simply by having a staff member of the public Veterinary Services present, or through positive comments when farmers visit their offices.

In **Nigeria**, for example, [Boehringer Ingelheim](#) has worked with a group called [the National Commission for Nomadic Education \(NCNE\)](#), a government initiative to reach end users, i.e. the same target audience as the LastMile Initiative. Public Veterinary Services are involved with farmer groups and cooperatives in their local areas and are key influencers on the leaders of these groups. This can be crucial when trying to inform farmers of the use and value of various products and services.

It is therefore [Boehringer Ingelheim's](#) view that the LastMile Initiative constitutes a sustainable PPP between public Veterinary Services and the company; in particular, through the company's team of private veterinary para-professionals who reach all farmers, everywhere in the country, for education and animal care.

<http://dx.doi.org/10.20506/bull.2019.3.3050>

AROUND THE WORLD

► SUCCESS STORIES

A Programme for Sanitary Management in Aquaculture

A public-private initiative to optimise aquaculture in Chile

KEYWORDS

#aquaculture, #Caligus sea lice, #Chile, #piscirickettsiosis, #public-private partnership, #salmon.

AUTHORS

M. Lara^{(1)*}, A. Gallardo⁽¹⁾ & R. Montt⁽¹⁾

(1) [Servicio Nacional de Pesca y Acuicultura \(SERNAPESCA\)](#), Chile.

* Corresponding author: mlara@sernapesca.cl

The designations and denominations employed and the presentation of the material in this article do not imply the expression of any opinion whatsoever on the part of the OIE concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers and boundaries.

The views expressed in this article are solely the responsibility of the author(s). The mention of specific companies or products of manufacturers, whether or not these have been patented, does not imply that these have been endorsed or recommended by the OIE in preference to others of a similar nature that are not mentioned.



The Chilean National Fisheries and Aquaculture Service, in collaboration with the Ministry of Economy, Development and Tourism and the Chilean Salmon Industry Association, implemented a Programme for Sanitary Management in Aquaculture from 2016 to 2019.

Salmon farming is of particular importance in Chile because it is, among non-mining exports, the third most

valuable economic activity in the country and the first in the southern zone. According to the Food and Agriculture Organization of the United Nations (FAO) [1], Chile accounts for about 30% of the world's production of farmed salmon, being the second largest global producer, and, according to the Ministry of Foreign Affairs [2], revenues from Chilean salmon exports reached US\$ 4.728 billion in 2018. However, the growth of salmon farming has been associated with various diseases, with piscirickettsiosis and infestation with *Caligus* sea lice currently having the greatest impact on the health of the fish, given the high costs associated with their management and control.

The objective of this public-private partnership is to promote the development of knowledge on the most important challenges in Chilean aquaculture: piscirickettsiosis and *Caligus* sea lice

Such diseases are difficult to control, and there are significant knowledge and technology gaps that limit the ability to manage salmon farming to ensure sustainability. In response, this programme seeks to promote and improve research, innovation and the development of strategic knowledge, with a multidisciplinary approach to address current gaps in the research on both piscirickettsiosis and *Caligus* sea lice. It also aims to generate public awareness and improve regulations for official sanitary management, through the modification of current sanitary programmes and the creation of new certifications, promoting good practices within the industry, and generating new business opportunities and lines of research.

The overall aim of the programme is to maintain sustainability and enhance productivity within the Chilean salmon and aquaculture industry.

<http://dx.doi.org/10.20506/bull.2019.3.3051>



REFERENCES

1. Food and Agriculture Organization of the United Nations (FAO) (2017). – Global aquaculture production dataset 1950–2015 (FishStatJ).
2. Ministerio de Relaciones Exteriores, República de Chile (2019). – Comercio Exterior de Chile. Anual 2018.
3. Rozas-Serri M., Peña A., Arriagada G., Enríquez R. & Maldonado L. (2018). – Comparison of gene expression in post-smolt Atlantic salmon challenged by LF-89-like and EM-90-like *Piscirickettsia salmonis* isolates reveals differences in the immune response associated with pathogenicity. *J. Fish Dis.*, **41** (3), 539-552. <https://doi.org/10.1111/jfd.12756>.
4. Arriagada G.A. & Marín S.L. (2018). – Evaluating the spatial range of the effect of synchronized antiparasitic treatments on the abundance of sea lice *Caligus rogercresseyi* (Boxshall & Bravo, 2000) in Chile. *Aquacult. Res.*, **49** (2), 816-831. <https://doi.org/10.1111/are.13513>.
5. Marshall S.H., Flores-Herrera P., Henríquez F.A. & Gómez F.A. (2018). – Identification and characterization of two variants of the Hfq-sRNA-chaperone in the fish pathogen *Piscirickettsia salmonis*. *J. Fish Dis.*, **41** (3), 501-509. <https://doi.org/10.1111/jfd.12752>.
6. San Martín B., Fresno M., Cornejo J., Godoy M., Ibarra R., Vidal R., Araneda M., Anadón A. & Lapierre L. (2019). – Optimization of florfenicol dose against *Piscirickettsia salmonis* in *Salmo salar* through PK/PD studies. *PLoS ONE*, **14** (5), e0215174. <https://doi.org/10.1371/journal.pone.0215174>.
7. Rozas-Serri M., Ildefonso R., Peña A., Enríquez R., Barrientos S., & Maldonado L. (2017). – Comparative pathogenesis of piscirickettsiosis in Atlantic salmon (*Salmo salar*) post-smolt experimentally challenged with LF-89-like and EM-90-like *Piscirickettsia salmonis* isolates. *J. Fish Dis.*, **40** (10), 1451-1472. <https://doi.org/10.1111/jfd.12671>.

AROUND THE WORLD

► SUCCESS STORIES

Public-private partnership: responsibility for managing aquatic animal diseases

KEYWORDS

#animal disease, #aquatic animal, #Australia, #contingency planning, #emergency management, #public-private partnership.

AUTHORS

K. Scutt^{(1)*} & I. Ernst⁽¹⁾

(1) Aquatic Animal Health Policy, [Department of Agriculture](#), Canberra, Australia.

* Corresponding author: katie.scutt@agriculture.gov.au

The designations and denominations employed and the presentation of the material in this article do not imply the expression of any opinion whatsoever on the part of the OIE concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers and boundaries.

The views expressed in this article are solely the responsibility of the author(s). The mention of specific companies or products of manufacturers, whether or not these have been patented, does not imply that these have been endorsed or recommended by the OIE in preference to others of a similar nature that are not mentioned.



© Ingo Ernst

Aquatic animal diseases are the greatest risk to aquaculture production globally [1]. They can also impact the environment [2, 3], local communities [4], national economies [5], food security [6] and a diverse range of public users of aquatic animal resources (e.g. recreational fishers).

Partnerships between public (represented by governments) and private (represented by industries) sectors to manage aquatic animal diseases provide a mechanism for both sectors to agree on goals that provide a common benefit. Public-private partnerships (PPPs) also motivate both sectors to work together to achieve their shared goal and increase trust. The sectors may also be willing to compromise their individual short-term goals in order to achieve a long-term shared goal that provides common benefits.

Public-private partnerships are key to improving aquatic animal health outcomes, including disease prevention and response to disease outbreaks.

An Australian example

In Australia, the development of a PPP for managing and funding responses to aquatic animal disease outbreaks is close to completion. Up to 18 industry and government sectors have been working together since 2014 to establish one legally binding agreement, known as the [Aquatic Deed](#). This agreement represents an intention to form a long-term PPP to share the responsibilities and costs of responding to disease outbreaks and to coordinate disease prevention activities to reduce shared risk.

The Aquatic Deed will provide incentives for early reporting (including compensation for affected businesses), establish mechanisms for decisive and rapid decision-making, secure funding for disease response, increase certainty and establish governance arrangements in advance. It will also strengthen risk mitigation activities through sector-specific biosecurity plans, surveillance, training and preparedness activities. Most importantly, it formalises the involvement of public and private sectors that would benefit from a disease response because it is likely that some sectors may need to take action that is contrary to their short-term goals (e.g. destroying stock on a farm to prevent disease spread). Establishing a common goal that all sectors invest in is likely to lead to a collaborative approach to managing a response and better aquatic animal health outcomes.

<http://dx.doi.org/10.20506/bull.2019.3.3052>

REFERENCES

1. Food and Agriculture Organization of the United Nations (FAO) (2016). – The state of world fisheries and aquaculture 2016. Contributing to food security and nutrition for all. <https://doi.org/10.18356/e68e16bb-en>.
2. Moore J.D., Finley C.A., Robbins T.T. & Friedman C.S. (2002). – *Withering syndrome and restoration of southern California abalone populations*. *CalCOFI Rep.*, **43**, 112–119.
3. Alderman D.J. (1996). – Geographical spread of bacterial and fungal diseases of crustaceans. In Preventing the spread of aquatic animal diseases (B.J. Hill & T. Håstein, eds.). *Rev. Sci. Tech. Off. Int. Epiz.*, **15** (2), 603–632. <https://doi.org/10.20506/rst.15.2.943>.
4. Gallardo Lagno A., Lara M., Gaete A. & Montecinos K. (2019). – Recovering sustainability after a health crisis in aquatic animals. In The role of aquatic animal health in food security (I. Ernst & E.J. Peeler, eds.). *Rev. Sci. Tech. Off. Int. Epiz.*, **38** (2), 601–614. <http://dx.doi.org/10.20506/rst.38.2.3007>.
5. Flegel T.W. & Alday-Sanz V. (1998). – The crisis in Asian shrimp aquaculture: current status and future needs. *J. Appl. Ichthyol.*, **14** (3-4), 269–273. <https://doi.org/10.1111/j.1439-0426.1998.tb00654.x>.
6. Hounmanou Y.M.G., Mdegela R.H., Dougnon T.V., Achoh M.E., Mhongole O.J., Agadjihouèdé H. & Dalsgaard A. (2018). – Tilapia lake virus threatens tilapiines farming and food security: socio-economic challenges and preventive measures in sub-Saharan Africa. *Aquaculture*, **493**, 123–129. <https://doi.org/10.1016/j.aquaculture.2018.05.001>.

AROUND THE WORLD

► SUCCESS STORIES

Successful implementation of compartmentalisation in aquaculture: the production of Atlantic salmon in Iceland

KEYWORDS

#animal health, #aquaculture, #aquatic animal, #Chile, #compartmentalisation, #Iceland, #public-private partnership, #salmon.

AUTHORS

[Eduardo Rodriguez](#), Functional Genomics, [Stofnfiskur](#), Iceland.

The designations and denominations employed and the presentation of the material in this article do not imply the expression of any opinion whatsoever on the part of the OIE concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers and boundaries.

The views expressed in this article are solely the responsibility of the author(s). The mention of specific companies or products of manufacturers, whether or not these have been patented, does not imply that these have been endorsed or recommended by the OIE in preference to others of a similar nature that are not mentioned.



Vogar, Iceland. © Eduardo Rodriguez

[Stofnfiskur](#), thanks to its animal health status, is the only foreign provider allowed to export Atlantic salmon eggs to Chile.

The company's land-based farms are supplied with unpolluted seawater and freshwater from boreholes. This water, naturally filtered through porous lava, provides the best disease-free habitat for fish. Together with the Icelandic Food and Veterinary Authority ([MAST](#)), the company has developed and implemented effective biosecurity management measures focused on preventing and protecting our fish from infectious disease agents. As a result,

the company is now a biosecure compartment.

The Icelandic Food and Veterinary Authority formally established a strategy to conduct and support the compartmentalisation process

The provisions for the implementation of compartmentalisation established in the OIE *Aquatic Animal Health Code* [1] and *Terrestrial Animal Health Code* [2] are merely recommendations and they do not provide specific guidance on how to implement, evaluate or officially approve a compartment. Consequently, MAST formally established a strategy to conduct and support the compartmentalisation process and drafted legislation. MAST published the Official Standard on the requirements for compartmentalisation for disease management in March 2015 [3].

Once all the legal instruments were set up, Stofnfiskur applied for official approval of the first biosecure compartment. MAST performed site visits to all sub-units of the compartment and verified their documentation, and official certification was granted on 2 October 2015. Subsequently, Stofnfiskur submitted the relevant documentation to the Chilean National Fisheries and Aquaculture Service ([SERNAPESCA](#)), with the aim of obtaining official recognition for the compartment in Chile. SERNAPESCA began collecting the necessary documentation in 2014 and recognised the first international compartment in Iceland on 1 March 2016.

The process described above clearly demonstrates the importance of collaboration between the private and public sectors. The alliance between Stofnfiskur and MAST is another example of a successful public-private partnership in aquaculture. In addition, this alliance has contributed to economic growth in Iceland.

<http://dx.doi.org/10.20506/bull.2019.3.3053>

REFERENCES

1. World Organisation for Animal Health (OIE) (2019). - [Chapter 4.2. Application of compartmentalisation](#). In *Aquatic Animal Health Code*.
2. World Organisation for Animal Health (OIE) (2019). - [Chapter 4.5. Application of compartmentalisation](#). In *Terrestrial Animal Health Code*.
3. Iceland Food and Veterinary Authority (MAST) (2015). - Official standard by which the conditions for development, assessment and approval of compartments for aquatic animals disease-free are set.

AROUND THE WORLD

► SUCCESS STORIES

Sanitary mandate in the field of animal disease control

In Tunisia, the implementation of the sanitary mandate has been successful in several areas and the results are considered satisfactory. This is a way to ensure the sustainable delivery of veterinary service activities.

KEYWORDS

#brucellosis, #foot and mouth disease (FMD), #public-private partnership, #sanitary mandate, #Tunisia, #vaccination, #World Organisation for Animal Health (OIE).

AUTHORS

S. Zargouni⁽¹⁾, S. Ferchichi⁽²⁾, A. Ripani⁽³⁾, R. Bouguedour⁽³⁾ & M. Zrelli^{(1)*}

(1) General Directorate of Veterinary Services, [Ministry of Agriculture, Tunisia](#).

(2) [National Centre of Zoonoses and Food Safety, Ministry of Agriculture, Tunisia](#).

(3) [World Organisation for Animal Health \(OIE\) Sub-Regional Representation for North Africa](#).

* Corresponding author: zrelli.malek@iresa.agrinet.tn

The designations and denominations employed and the presentation of the material in this article do not imply the expression of any opinion whatsoever on the part of the OIE concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers and boundaries.

The views expressed in this article are solely the responsibility of the author(s). The mention of specific companies or products of manufacturers, whether or not these have been patented, does not imply that these have been endorsed or recommended by the OIE in preference to others of a similar nature that are not mentioned.



© OIE/ Nazaria Nyaga

In Tunisia, the sanitary mandate is governed by legislation. The sanitary mandate is an agreement between the government's Veterinary Services and accredited private veterinarians, which enables the Tunisian Government to provide vaccination campaigns against regulated animal diseases, such as foot and mouth disease (FMD), free of charge to all farmers. This programme was launched in 2006.

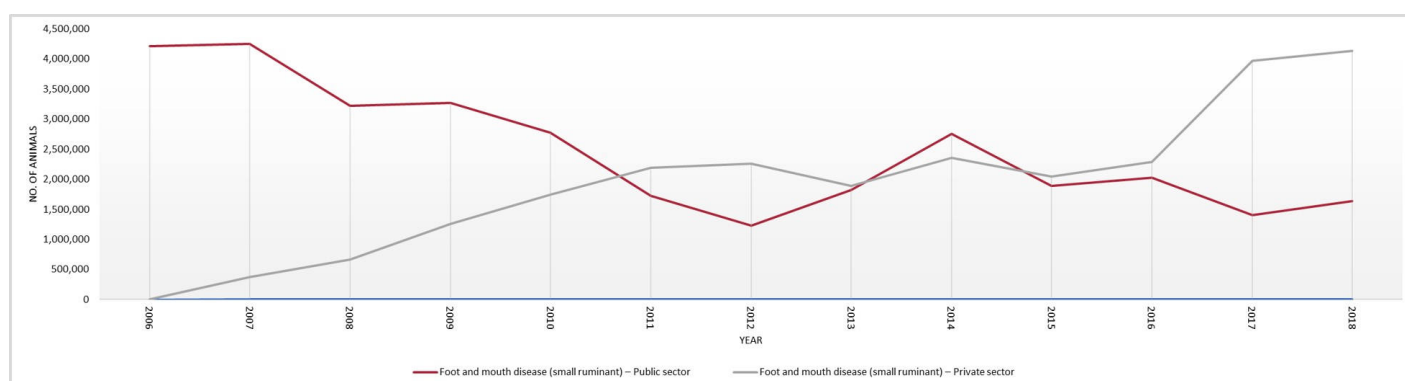
At the beginning of this public-private partnership (PPP), there were ten private veterinarians in six pilot governorates. Today, among 609 private veterinarians, 245 have a sanitary mandate to conduct vaccination campaigns.

The sanitary mandate programme has allowed the development of a progressive 'win-win' collaboration

In the last decade, the growing responsibilities of the Tunisian Government's Veterinary Services have been amplified by multiple global trends, especially increasing threats from transboundary animal diseases. Moreover, declining budgets allocated to Veterinary Services have made disease control challenging. The sanitary mandate programme has allowed the development of a progressive 'win-win' collaboration and partnership between the public and private veterinary sectors in the field of prophylactic vaccination of small ruminants.

As a result of this partnership, immunisation coverage against notifiable diseases for small ruminants, such as FMD, has steadily increased from 48% in 2006 to 75% in 2018. In addition, the duration of vaccination campaigns has been considerably shortened (60 days instead of 120 days).

Cost-benefit analysis has also demonstrated that there was a net benefit to the state budget of US\$ 0.045 for each vaccinated animal [1].



Evolution of the participation of the public and private sector in FMD vaccination campaigns. © General Directorate of Veterinary Services, Ministry of Agriculture, Tunisia

In addition, this programme has created employment opportunities for young graduate veterinarians. In fact, it is

one of the main driving forces to encourage young veterinarians to take up private practice in under-served rural areas.

The implementation of the sanitary mandate is a way of ensuring the sustainable delivery of veterinary service activities.



Private veterinarian who holds a sanitary mandate vaccinating livestock against FMD in Béja Governorate. © Hajer Kilani

The implementation of the sanitary mandate has been successful in many areas and the results are considered satisfactory. This is a practical way to ensure the sustainable delivery of veterinary service activities.

The involvement of the private sector can be extended to different areas, such as disease investigation (collecting samples during outbreaks), diagnosing animal tuberculosis and food safety.

Finally, the sustainability of the programme is affected by its financing. In Tunisia, this programme depends exclusively on public funding. For this reason, to ensure the sustainable delivery of veterinary service activities, a special animal health fund is needed.

<http://dx.doi.org/10.20506/bull.2019.3.3054>

REFERENCES

1. Drira H. & Le Brun Y. (2008). – Deuxième mission d'appui au fonctionnement du mandat sanitaire. Projet de renforcement des services d'appui à l'agriculture. Prêt BIRD (Banque internationale pour la reconstruction et le développement) n° 7063-TN.

AROUND THE WORLD

► SUCCESS STORIES

How public-private partnerships can help to bring quality animal health products and extension services to sub-Saharan Africa

Some county governments in Kenya work closely with the grassroots network of a company called Sidai, which provides vaccination, disease investigation and clinical services to livestock keepers.

KEYWORDS

#extension service, #Kenya, #pastoralism, #public-private partnership, #Sidai, #vaccination.

AUTHORS

[Christie Peacock](#), [Sidai Africa Ltd.](#)

The designations and denominations employed and the presentation of the material in this article do not imply the expression of any opinion whatsoever on the part of the OIE concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers and boundaries.

The views expressed in this article are solely the responsibility of the author(s). The mention of specific companies or products of manufacturers, whether or not these have been patented, does not imply that these have been endorsed or recommended by the OIE in preference to others of a similar nature that are not mentioned.



The arid and semi-arid areas of Kenya, where most of its livestock population (valued at USD 4.4 billion) are kept, are particularly poorly served by both suppliers and qualified professionals. Fewer than 5% of the livestock are vaccinated on a routine basis. The Kenyan Government lacks the resources to provide an effective service and is only able to respond to disease outbreaks as

they arise.

Livestock keepers in sub-Saharan Africa lack access to the quality veterinary pharmaceuticals, vaccines and knowledge they need to keep their livestock healthy and productive. Livestock products may be defectively manufactured, poorly stored or even counterfeit.

Some county governments in Kenya work closely with Sidai's network, which provides vaccination, disease investigation and clinical services to livestock keepers

Sidai is a company in Kenya with a unique, professionally staffed distribution network that supplies quality-assured vaccines and pharmaceutical, clinical and diagnostic services to 300,000 livestock keepers. Sidai has over 100 veterinary staff, a network of 100 professionally run franchises and 1,500 retail shops, all of which ensure that farmers get the specialist knowledge they need to prevent disease and farm profitably.

By combining resources through a public-private partnership agreement, the government is able to focus its resources on controlling diseases that affect public health and transboundary diseases (Rift Valley fever, foot and mouth disease, peste des petits ruminants, etc.), leaving Sidai to provide routine vaccination against the major diseases that affect the livelihoods of livestock keepers (contagious caprine pleuropneumonia, lumpy skin disease, enterotoxaemia, etc.).

Sidai is able to bundle extension services into its product offering, ensuring pastoralists receive accurate information on animal health and production on a financially sustainable basis. It is hoped that this model of partnership can be extended throughout Kenya.

<http://dx.doi.org/10.20506/bull.2019.3.3055>

AROUND THE WORLD

THEMATIC EVENTS

Dissemination of the OIE guidelines for public-private partnership in the veterinary domain

KEYWORDS

#e-learning, #OIE PPP Handbook, #public-private partnership, #workshop, #World Organisation for Animal Health (OIE).

AUTHORS

Isabelle Dieuzy-Labayé, [World Organisation for Animal Health \(OIE\)](#).



Participants in the workshop held in Ethiopia on 21 and 22 August 2019. © OIE/O.Valsson

At the 87th OIE General Session in May 2019, the [OIE PPP Handbook](#) was released; it presents guidelines on how to advocate, develop and implement effective and sustainable public-private partnerships (PPPs) in the veterinary domain. Following this, the OIE launched several dissemination activities, starting with an [OIE PPP e-learning course](#), as well as various regional workshops.

Four such training workshops have taken place, in Ethiopia for Anglophone African countries, in Tunisia for Francophone African countries, in Nepal for South Asia, and in Thailand for South-East Asia. More thematic events will take place in 2020.

RESOURCES

EXTERNAL PUBLICATIONS

Typological analysis of public-private partnerships in the veterinary domain



M. Galière, M. Peyre, F. Muñoz, M. Poupaud, A. Dehove, F. Roger & I. Dieuzy-Labaye.

PLoS ONE, **14** (10): e0224079

October 2019

DOI: 10.1371/journal.pone.0224079

[[Download the article from PLoS ONE website](https://doi.org/10.1371/journal.pone.0224079)]

RESOURCES

▶ EXTERNAL PUBLICATIONS

Public-private partnerships for agribusiness development

A review of international experiences



Authors: Marlo Rankin, Eva Gálvez Nogales, Pilar Santacoloma, Nomathemba Mhlanga & Costanza Rizzo

Food and Agriculture Organization of the United Nations (FAO)

2016

ISBN 978-92-5-109252-1

164 pages

This publication investigates 70 public-private partnership (PPP) cases from 15 developing countries to better understand how PPPs for agri-food systems have been approached around the world. The main lessons are synthesized, and recommendations made on the public skills and institutions required to enable more effective partnerships with the private sector.

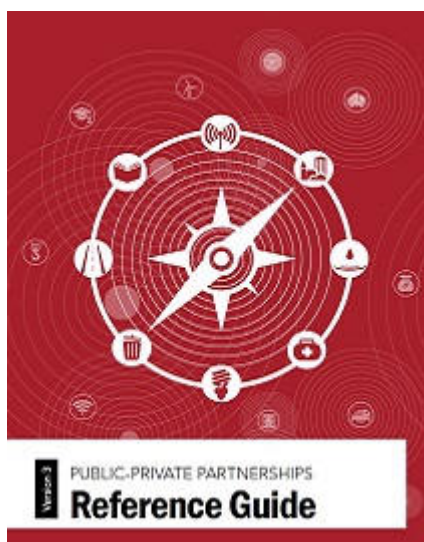
[[Download the publication from the FAO website](#)]

RESOURCES

▶ EXTERNAL PUBLICATIONS

Public-Private Partnerships Reference Guide

Version 3



International Bank for Reconstruction and Development / The World Bank

3rd edition, 2017

238 pages

This Reference Guide aims to disseminate good practices on infrastructure and public-private partnership (PPP) policies and implementation.

It is available from the online PPP knowledge dissemination platform that the World Bank Group shares with other multilateral organisations.

[[Download the Guide from the PPP Knowledge Lab](#)]

RESOURCES

EXTERNAL PUBLICATIONS

Determinants of public-private partnerships in infrastructure



Authors: Mona Hammami, Jean-Francois Ruhashyankiko & Etienne B. Yehoue

International Monetary Fund (IMF)

2006

37 pages

This working paper presents an empirical analysis of the cross-country and cross-industry determinants of public-private partnership (PPP) arrangements. Authors find that PPPs tend to be more common in countries where governments suffer from heavy debt burdens and where aggregate demand and market size are large. Their findings also suggest that macroeconomic stability is essential for PPPs. They provide evidence on the importance of institutional quality, where less corruption and effective rule of law are associated with more PPP projects. PPPs are also more prevalent in countries with previous PPP experiences. At the industry level, they find that PPP determinants vary across industries depending on the nature of public infrastructure, capital intensity, and technology required. They also find that private participation in PPP projects depends on the expected marketability, the technology required, and the degree of 'impurity' of the goods or services.

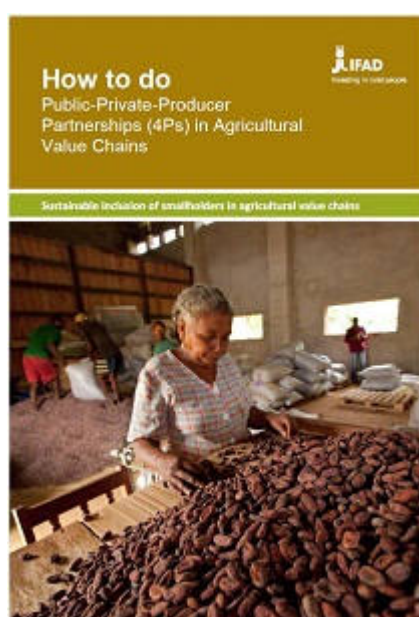
[[Download the document from the World Bank website](#)]

RESOURCES

▶ EXTERNAL PUBLICATIONS

How to do Public-Private-Producer Partnerships (4Ps) in agricultural value chains

Sustainable inclusion of smallholders in agricultural value chains



International Fund for Agricultural Development (IFAD)

2016

33 pages

This how-to-do note provides guidance for project design teams on how to design a 4P component and how to support the implementation of 4Ps within IFAD-funded projects. It builds on findings and lessons learned from previous IFAD-supported projects.

[[Download the document from the IFAD website](#)]

RESOURCES

► EXTERNAL PUBLICATIONS

A guide for developing and implementing public-private partnership models for sustainable fisheries and aquaculture development in Africa



African Union – Interafrican Bureau for Animal Resources (AU-IBAR)

2019

ISBN 978-9966-1659-5-4

24 pages

This work, which was prepared by Solomon Enebi Agamah, was done under the project ‘Strengthening institutional capacity to enhance governance of the fisheries sector in Africa’, funded by the European Union.

[[Download the document from the AU-IBAR website](#)]

RESOURCES

EXTERNAL PUBLICATIONS

Implementation of international standards through public-private partnerships



Standards and Trade Development Facility (STDF) 2018

The STDF has on-going work on the implementation of standards through public-private partnerships (PPPs). In March 2018, the concept note on PPPs was updated to outline planning for new STDF work on PPPs, with the overall aim of building on, updating and complementing previous work by the STDF and its partners.

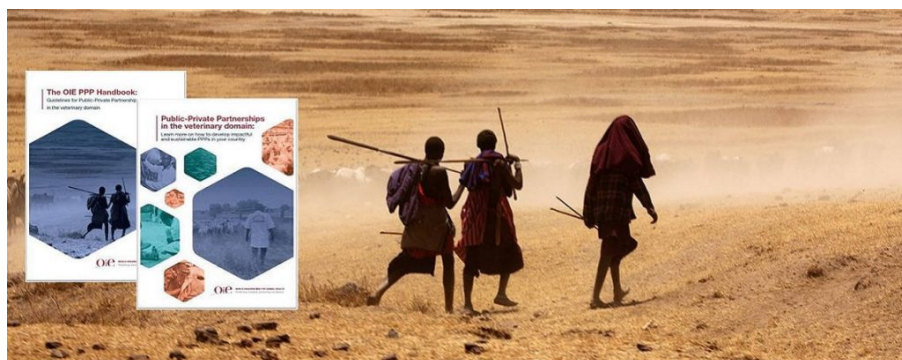
[[Download the concept note from the STDF website](#)]

RESOURCES

► OIE PUBLICATIONS

The OIE PPP Handbook

Guidelines for Public-Private Partnerships in the veterinary domain



World Organisation for Animal Health (OIE)

2019

DOI: 10.20506/PPP.2965

[[Download the handbook](#)] [[Download the leaflet](#)]

RESOURCES

► OIE PUBLICATIONS

Public-private partnerships in the veterinary domain: the OIE Web portal



<https://www.oie.int/en/for-the-media/oie-public-private-partnerships/>

RESOURCES

► OIE PUBLICATIONS

The OIE Resolution no. 39 of May 2017



Public-Private Partnerships: expectations of private sector partners for international animal health and livestock development programmes and the implications for the OIE

CONSIDERING

1. The critical role the animal health and livestock sectors play in contributing to the achievement of the United Nations Sustainable Development Goals (SDGs),
2. That the engagement of private sector entities, including corporations, small and medium enterprises (SMEs), private foundations and philanthropists, can accelerate progress towards the accomplishment of the SDGs,
3. That Public-Private Partnerships (PPPs) provide an optimal mix of the unique strengths of both the public and private sectors and can often accomplish much more than the most determined effort by any one operating alone,
4. That PPPs are a recognised mechanism for sourcing and engaging complementary resources, expertise and capabilities and offer substantial opportunities in meeting the SDGs as well as other national specific priorities,
5. That the private sector is keen to complement the efforts of national Veterinary Authorities, provided that there is a clear delegation of responsibilities, transparent governance, functional regulatory framework, consistent application of rules, regular review and clear exit arrangements,
6. That private sector partners require clear objectives and measureable impacts be defined prior to engaging in PPPs and although these may differ from the public sector, the results of the PPP will be of mutual benefit and create a win-win situation,
7. That internationally agreed animal health and welfare standards continue to apply in all aspects of PPPs, and that

the OIE *Terrestrial Animal Health Code* glossary definition of Veterinary Services includes both the governmental and non-governmental organisations that implement animal health and welfare measures, thus recognising private sector organisations, veterinarians and veterinary para-professionals as vital contributors to national Veterinary Services,

8. That PPP arrangements should and often do reflect the OIE Strategic Plan with an emphasis on diversity, inclusiveness, transparency and engagement, and also acknowledge the Tripartite approach,

9. That the OIE assesses the capacity of Veterinary Authorities to interact with interested stakeholders through the Performance of Veterinary Services (PVS) Pathway,

10. That the Bill & Melinda Gates Foundation, as a private partner, thus has specific objectives for its investments which must align with the Foundation's vision to help reduce inequity,

11. That, in October 2016, the OIE signed a three-year collaboration with the Bill & Melinda Gates Foundation entitled Public Private Progress to study the impact of PPPs in improving Veterinary Service delivery in Africa and Asia, and, as such, has started garnering positive experiences with PPPs at the global level,

THE ASSEMBLY RECOMMENDS THAT

1. The OIE develop a global resource mobilisation strategy targeting private investors, and engage with them in order to stimulate investments in international/regional/national animal health and livestock sector development programmes in collaboration with relevant partners,

2. The OIE and the Bill & Melinda Gates Foundation, in the framework of their collaboration, use the results of the Public Private Progress initiative to demonstrate the positive impacts of PPPs and disseminate best practices to support OIE Member Countries in developing successful and sustainable PPPs in the field of animal health and livestock sector development,

3. In recognition of the fact that the growth of the private sector often outpaces that of Veterinary Authorities, the required resources be allocated to Veterinary Authorities to create enabling environments for PPPs,

4. The Member Countries encourage and facilitate the organisation of producer (commodity or industry) groups that can serve as partners with the public sector as a prelude to developing the enabling environments for the Veterinary Authority to support the development of the livestock sector through expanded production and trade,

5. The Member Countries take stock of the best practices identified by the OIE and promote, develop and implement policies and legislation to incentivise collaborations with the private sector to improve animal health and livestock sector development,

6. OIE Member Countries make every effort to appropriately manage any perception of conflict of interest arising from any PPPs,

7. When developing PPPs, Member Countries ensure that such arrangements also contribute to existing global efforts for the control of animal diseases such as Peste des Petits Ruminants (PPR), Foot and Mouth Disease (FMD), rabies or avian influenza,

8. Where relevant, Member Countries are encouraged to request a PVS Evaluation Follow-Up mission to monitor country progress in complying with OIE standards including their capacity to interact with interested stakeholders, as assessed in fundamental component III.

AND INVITES

The Bill & Melinda Gates Foundation and other investors to take action, in collaboration with the OIE, and continue to advocate and support the development of suitable private sector partners with which national

Veterinary Authorities can engage to create an enabling environment for PPPs targeting the development of the livestock sector and contributing to the achievement of the SDGs.

(Adopted by the World Assembly of Delegates of the OIE on 25 May 2017
(in view of an entry into force on 26 May 2017))

RESOURCES

► OIE PUBLICATIONS

Public-private partnerships: expectations of private sector partners for international animal health and livestock sector development programmes



Authors: S.J. Thevasagayam, I. Dieuzy-Labaye & E. Tagliaro

World Organisation for Animal Health (OIE)

2017

DOI: 10.20506/TT.2658

Report on a Technical Item presented to the OIE World Assembly of Delegates during its 85th General Session (21-26 May 2017).

[[Download the report](#)]

RESOURCES

► OIE PUBLICATIONS

Public-private partnerships (PPPs) for efficient sustainable animal health systems and veterinary services



Author: Bouda Vosough Ahmadi

World Organisation for Animal Health (OIE)

2019

DOI: 10.20506/TT.2776

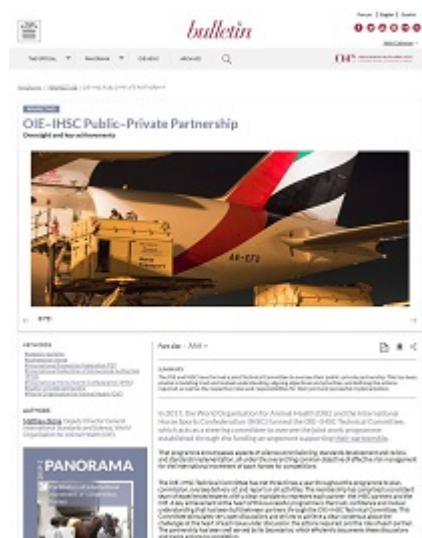
Report on a Technical Item presented to the 15th Conference of the OIE Regional Commission for the Middle East, Abu Dhabi, United Arab Emirates (10–14 November 2019).

[[Download the report](#)]

RESOURCES

► OIE PUBLICATIONS

Panorama, 2019-2 issue



Issue no. 2019-2 of *Panorama* contains the following articles, among others:

- [International movement of competition horses. A successful partnership between the IHSC and the OIE](#)
- [History of the OIE-IHSC public-private partnership](#)
- [OIE-IHSC Public-Private Partnership. Oversight and key achievements](#)
- [Public-private partnership supporting scientific research to contribute to the OIE standard-setting process](#)
- [Fostering public-private partnerships at the national and regional levels. A key step in building capacity for safe temporary importations of competition horses](#)

[[Download issue no. 2019-2 of *Panorama*](#)]

The OIE is an international organisation created in 1924 with a mandate from its 182 Member Countries to improve animal health and welfare. Its activities are permanently supported by 312 centres of scientific expertise and 12 regional offices with a presence on every continent.



Follow the OIE: www.oie.int



@OIEAnimalHealth



World Organisation for Animal Health - OIE



OIEVideo



World Organisation for Animal Health



World Organisation for Animal Health (OIE)



Digital version: www.oiebulletin.com



WORLD ORGANISATION FOR ANIMAL HEALTH
Protecting animals, preserving our future

12, rue de Prony - 75017 Paris, France
Tel.: +33 (0)1 44 15 18 88 - Fax: +33 (0)1 42 67 09 87 - oie@oie.int