STRENGTHENING VETERINARY SERVICES THROUGH THE OIE PVS PATHWAY -
“Veterinary Services preserve and develop animal resources, reducing poverty and hunger worldwide through improving rural livelihoods and feeding the world. Their additional impact on global health security by addressing ‘risk at source’ for emerging pandemic threats, antimicrobial resistance and food safety crises further safeguards the planet. For these compelling reasons, **supporting the livestock sector through investments in national animal health systems**, based on international standards and principles of ‘good governance’, **promotes and safeguards trade as well as protects and develops all communities, from global to local.**”

Dr Monique Eloit  
Director General,  
World Organisation for Animal Health (OIE)
Executive Summary  PAGE 5

The Case for Investment in Veterinary Services  PAGE 8
  Pillar 1: Investment in Veterinary Services is an obligation to achieve critical health objectives
  Pillar 2: Investment in Veterinary Services results in a long term positive return on investment
  Pillar 3: Investment in Veterinary Services yields further societal benefits

What are the problems?  PAGE 14
  Very low amount invested proportional to need
  How that investment is made in terms of effectiveness, return on investment and sustainability

What do we want to achieve?  PAGE 16

Why partner with the OIE?  PAGE 16

Our solution: the OIE PVS Pathway  PAGE 17
  The Theory of Change of the PVS Pathway
  Stage 1: Orientation
  Stage 2: Evaluation
  Stage 3: Planning
  Stage 4: Targeted Support

The PVS Pathway: a vehicle for Sustainable Development and Aid Effectiveness  PAGE 16

How can you help?  PAGE 39
EXECUTIVE SUMMARY

Animals, and the Veterinary Services which ensure their protection, are a global public good playing a vital role in the security and the economic and social wellbeing of humanity.

The rationale for strengthening health systems to counter emerging threats has never been more convincing, with animal health being a key platform. For global and national health security, prevention is better than cure, and there has been a steady and growing realisation targeting “risk at source” in animal populations is a vital strategy in safeguarding the planet from risks from emerging zoonoses, neglected zoonoses and antimicrobial resistance (AMR). 75% of recently emerging infectious diseases affecting humans are of animal origin; and approximately 60% of all human pathogens are zoonotic. In 2018 the WHO reviewed its “Blueprint” list of diseases to prioritise in public health emergency contexts due to their epidemic potential. It is notable that all 7 identified pathogens are zoonoses. Aligned with this, the recent surge in emerging zoonoses like Ebola virus, novel coronaviruses like SARS and MERS, and zoonotic avian and human influenza, has increased awareness of the opportunity and critical need for this One Health approach. Neglected zoonoses like rabies and bovine tuberculosis are also best managed in their animal source. They continue to have a devastating global impact on human health every day.

In terms of food security and nutrition, providing the highest quality protein in meat, milk and eggs for all populations, particularly rural subsistence communities, makes a valuable contribution to key nutritional indicators such as childhood mortality and stunting. Demand for meat and milk is set to triple in Africa by 2050. Such expanding markets are more demanding in terms of food safety and quality, as well as managing risks of animal disease spread.

Stronger, adapted national Veterinary Services make food and trade safer and open such growing value chains to the rural poor who gain the most in accessing their benefits. Strong Veterinary Services also provide a secure framework that gives confidence to private sector investment from both individual farmers and livestock enterprises across the value chain. Consequently, at local and broader market levels, sound investments in Veterinary Services improve economies and livelihoods.

Beyond income generation and food security, livestock are a valuable asset to the rural poor, serving as a store of wealth, collateral for credit and a safety net during times of crisis. Livestock consume waste, produce manure for fertilisation and provide draught power for ploughing and transport. To millions of smallholders and pastoralists, the sudden loss of their major asset class in livestock through disease events is devastating; a crisis that shatters resilience and forces desperate measures such as high risk borrowing, urban migration, family and social dislocation. In vulnerable worst case scenarios, such shocks can increase recruitment to conflicts and terrorism, or human trafficking, potentially involving children.
Overall, livestock and Veterinary Services are chronically under-resourced against all comparative measures (i.e. proportional to the contribution of livestock to the broader economy), within agriculture, and as a component of health security. Poor financial resources and inadequately staffed and organised Veterinary Services result in high livestock losses and uncontrolled epidemics. The rapid spread of major transboundary animal diseases such as highly pathogenic avian influenza (HPAI), foot and mouth disease (FMD), peste des petits ruminants (PPR), African swine fever (ASF), infection with tilapia lake virus and infection with white spot syndrome in many parts of Africa, Europe, Asia and the Middle East demonstrates the weakness of Veterinary Services to provide effective control methods and treatments, especially where they are needed most: in poor, remote communities. All this presents a strong case for national and international investment in the livestock sector, and particularly in the Veterinary Services that supports and protects it.

Veterinary Services are the basis of safe and equitable international and domestic trade of livestock and livestock products. **The OIE is the official standard setting organisation for safe trade in animals and animal products under the WTO Sanitary and Phyto-sanitary (SPS) agreement.** In more developed contexts, the risk of complacency in protecting livestock populations, markets and consumers is real. The recent spread of diseases such as FMD, HPAI, porcine epidemic diarrhoea (PED) and White Spot Disease (WSD) in more developed regions of the world demonstrates the need to maintain vigilance and resourcing everywhere.

Across all societies, despite cultural differences, the importance of people’s relationships with animals are universally recognised along with the principle of a duty of care to ensure that the animals are treated humanely and responsibly. **The OIE and its national Veterinary Services members lead the global development of animal welfare standards, incorporating concepts such as the five freedoms, and encouraging implementation of animal welfare principles by Member States with particular reference to critical areas such as farming, transport, slaughter, working conditions, use in research, stray dog management and during and after natural disasters.**

**The OIE is a unique intergovernmental organisation to work with to achieve a healthier and safer planet. It has a strong technical and governance reputation, harnesses the best international experts, and provides value for money and efficiency, with a relative lack of bureaucracy. Health systems are context-specific without a one-size-fits-all solution. However, the OIE has built international consensus on the principles of good governance and the quality of Veterinary Services, as incorporated within OIE international Standards.**

**The OIE has a proven track record in supporting stronger national Veterinary Services based on these principles and standards, particularly since the advent of its flagship PVS Pathway programme in 2007.** Over 140 countries have benefitted. Despite the programme’s undoubted success, the OIE is not being complacent. During 2017, it has undertaken a fully consultative process to evolve its PVS Pathway activities for the future, to ensure it remains relevant, adaptable and well targeted - a powerful mechanism for continued engagement with members and partners in developing stronger Veterinary Services, one country at a time, as a global public good.

**To this end the OIE has developed expanded PVS Pathway options to support Member Countries to understand and tailor their engagement based on their own governance and technical priorities.** The OIE also has a powerful One Health partnership with the WHO integrating the OIE PVS Pathway with the WHO International Health Regulations (IHR) Monitoring and Evaluation Framework in addressing global health security.

By engaging in proven and expanded OIE PVS initiatives closely aligned with principles of sustainable development and aid effectiveness, the global community can strengthen the capacity of national Veterinary Services to safeguard health and food security, grow economies and improve the lives of at least the 1.3 billion individuals whose livelihoods depend on healthy animals.
Veterinary Services make a vital contribution to global health security in areas such as emerging zoonoses, antimicrobial resistance and food safety, as they address “risk at source” for most major infectious threats, including pandemics.

The OIE is a unique intergovernmental organisation with key attributes as a partner in strengthening Veterinary Services, at global, regional or national levels.

Veterinary Services make a critical global contribution to food security, nutrition, poverty alleviation and resilience, given the number of poor rural communities that rely on animals for their economic livelihoods and as a food source.

The OIE has a proven track record in strengthening Veterinary Services, particularly over the last decade through its flagship OIE PVS Pathway programme, which is being expanded for the future.

The PVS Pathway shifts away from externally driven, short-term, emergency response type ‘vertical’ approaches addressing only specific diseases, and contributes to a more sustainable, long term strengthening of ‘horizontal’ systems. The process targets capacity building and good governance of Veterinary Services to improve aquatic and terrestrial animal health and welfare via improved compliance with OIE standards.

Your further support as a valued OIE partner will assist the OIE and its Member Countries to continually expand the good progress made in strengthening Veterinary Services, as a global public good.
1. THE CASE FOR INVESTMENT IN VETERINARY SERVICES

Animal health is not only about preventing and controlling diseases in aquatic and terrestrial animals. Unhealthy animals have poor welfare and are unproductive, in terms of output per animal (low input – low output), and are risky capital, reducing potential private gains. **Animal diseases spread not only to other animals, but also to humans.**

Veterinary Services are tasked with the responsibility of providing and supervising the delivery of animal health services such as disease surveillance and control in animals.

Animal health is an integral part of animal welfare; animals that are treated well are less susceptible to diseases and are more productive. In recognition of animal health and welfare as global public goods, increased international attention and investment must be placed on Veterinary Services.

Below are three pillars in making the case for investing in Veterinary Services:

**FIRSTLY,** investment in Veterinary Services is an obligation to achieve critical health objectives saving costs by preventing and containing health crises through meeting internationally adopted health standards and regulations.

**SECONDLY,** investing in Veterinary Services results in a *positive return on investment* when collectively accounting for reduced poverty and hunger and the facilitation of safe trade.

**THIRDLY,** investment in Veterinary Services *yields further societal benefits,* including generating educational and employment opportunities for youth, empowering women, providing essential services and increasing resilience to shocks and threats.

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**GLOBAL PUBLIC GOODS: DEFINITION**

According to Kaul & al.¹, global public goods are goods that include concepts of non-rivalry (consumption of a ‘global public good’ by one group does not reduce availability for other groups) and non-excludability (no one can be excluded from their benefits). Global public goods are therefore global if they benefit all countries, the whole population and all generations.

Actions to preserve global public goods can benefit all countries and their populations and those benefits can be inter-generational. Countries are inter-dependent, and an inappropriate response by one country can affect all the others.

In the area of animal health, the control or eradication of a disease of global importance (such as zoonotic diseases or other animal diseases that have severe socio-economic impacts) can benefit all countries and none are excluded from the benefits.

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These pillars are intrinsically relevant to the 2030 Sustainable Development Agenda agreed by the international community in 2015. Veterinary Services have a significant role to play in contributing to the fulfilment of numerous of the United Nations Sustainable Development Goals (SDG) including:

**SDG 1**: End poverty in all its forms everywhere

**SDG 2**: End hunger, achieve food security and improved nutrition and promote sustainable agriculture

**SDG 3**: Ensure healthy lives and promote well-being for all at all ages

**SDG 4**: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all

**SDG 5**: Achieve gender equality and empower all women and girls

**SDG 8**: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all

**SGD 11**: Make cities and human settlements inclusive, safe, resilient and sustainable

**SDG 16**: Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels

The detailed justification of each of the three pillars for investing in Veterinary Services and their relationships to the SDGs is described hereafter:

### PILLAR 1: INVESTMENT IN VETERINARY SERVICES IS AN OBLIGATION TO ACHIEVE CRITICAL HEALTH OBJECTIVES

#### Preventing and containing health crises

Every day, Veterinary Services work to prevent, identify and control the emergence and spread of terrestrial and aquatic animal diseases, including zoonotic diseases.

Zoonotic diseases are transmitted from animals to humans and vice versa. The infectious agents – parasites, bacteria or viruses – may spread to humans via direct contact, respiratory droplets, vectors (i.e. insects and ticks), food, water, or via the environment in general. 75% of recently emerging infectious diseases affecting humans are of animal origin; and approximately 60% of all human pathogens are zoonotic.²

In February 2018, the World Health Organization of the United Nations (WHO) released an updated “Blueprint” list of diseases to prioritise, considering their potential to cause a public health emergency. All of the seven diseases listed are zoonotic diseases, confirming that the threat of zoonotic diseases is real.³ This is further demonstrated by the recent surge in emerging zoonoses such as Ebola virus, novel coronaviruses (i.e. SARS and MERS), and zoonotic avian and human influenzas, which have had significant negative impacts on the health of populations globally.

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    www.jstor.org/stable/3066689
From an economic perspective, the case for controlling zoonotic diseases is convincing: according to the World Bank (2012)\(^4\), the economic losses from six major outbreaks of highly fatal zoonoses\(^5\) for the period 1997-2009 amounted to US$ 80 billion. If these outbreaks had been prevented, the benefits of the avoided losses would have averaged US$6.7 billion per annum. Fortunately, none of the outbreaks for these six diseases escalated into a human pandemic; had this been the case, the economic losses would have been exponentially higher and would have been accompanied by enormous societal disruptions and potentially a significant number of human deaths.

Veterinary Services must have the capacity to prevent, control and respond to emerging infectious zoonotic pathogens in a sustainable manner, at source in their animal hosts; otherwise the entire global community is more vulnerable to human epidemics and, in the worst case scenario, pandemics.

**Meeting internationally adopted health standards and regulations**

The 182 Member Countries of the OIE regularly revise and formally adopt OIE international standards on sanitary health measures and animal welfare, as detailed in the **OIE Terrestrial and Aquatic Animal Health Codes (OIE Codes)**. The World Trade Organization (WTO) formally recognises the OIE as the standards setting body to facilitate safe global trade in animals and animal products. These standards are implemented by importing and exporting countries through import protocols and sanitary certification to reduce the global spread of pathogenic agents in terrestrial and aquatic animals or their products and, in the case of zoonoses, their potential spread to humans.

To operate under the tenets of good governance, Veterinary Services must have the capacity to align with Chapter 3 on the ‘Quality of Veterinary Services’ and of ‘Quality of Aquatic Health Services’ of the OIE Codes. Compliance with the standards in these Chapters, forms the basis of their capacity to implement the other technical provisions of the OIE Codes to reduce disease spread, including specific early detection, reporting and control measures. Such compliance is monitored by the OIE, on a voluntary basis, through the PVS Pathway.

**Veterinary Services also play a significant role in contributing to the achievement of the objectives of the revised International Health Regulations (IHR 2005).** With these regulations coming into force, all State Parties of the WHO must assess the ability of their national systems and resources to meet minimum national core capacities for health security and to develop a plan of action to ensure that these capacities be present and functioning throughout their territories.

To assist their members to meet these obligations, the WHO has developed the IHR Monitoring and Evaluation Framework (IHR MEF).

Similar to the PVS Pathway, the IHR MEF is an evaluation and planning framework based on an international regulatory framework (IHR). There are strong and growing links between the PVS Pathway and IHR MEF, aligned with the One Health approach and under the Tripartite Collaboration (WHO-OIE-FAO).

In addition to their input to certain specific technical areas of the IHR MEF (e.g., zoonotic diseases, food safety, antimicrobial resistance), Veterinary Services also contribute to transversal and horizontal areas of health security systems such as border measures and laboratory capacity.

Hence, effective intersectoral collaboration and coordination are essential to meet national core capacities for prevention, surveillance and response. As such, Veterinary Services must be equally considered when investments are made to strengthen health security systems.

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\(^5\) Nipah Virus, West Nile Fever, SARS, Highly Pathogenic Avian Influenza, BSE, Rift Valley Fever
Reducing poverty and zero hunger

The World Bank defines poverty as a multi-dimensional phenomenon, reflected in a pronounced deprivation of well-being. The income dimension of poverty is the most important, but poverty is also linked to poor nutrition, barriers to accessing housing, education and healthcare, which can affect individuals or groups. The highest rates of poverty were registered in sub-Saharan Africa, followed by South and East Asia, with pockets of poverty in other regions of the world: Latin America and the Caribbean, the Middle East, North Africa, Eastern Europe and Central Asia.6

80% of the poorest poor reside in rural areas and keep animals or want to keep animals.

Healthy animals can be sold in times of crises, act as household insurance, they provide animal traction and fertilization and reward their owners with a wide range of products (milk, meat and eggs to leather, hides and skin). They also provide essential income. In Nigeria, households of poor farmers who own poultry derive 80% of their cash income from selling the fruits of their production (eggs and chickens).7 Concerning aquatic animals, a recent research project based on 11 countries8 produced data at household level suggesting that per capita levels of income among fish farmers and workers equals or is greater than the average income per capita of the bottom 40% of the population in the same country, and may even equal or exceed the average national income.9

Animal diseases are a significant burden on income generation for the poor, considering that 18% of livestock are killed by diseases in low-resource setting contexts.10

Access to Veterinary Services’ care is thus essential. Poverty is the major culprit for long-term, chronic food security problems. The State of Food Security and Nutrition in the World 2017 recorded a rise in the absolute number of people affected by chronic hunger since 2014 and an increase in the global prevalence of undernourishment since 2016.11 Healthy animals can contribute to poverty alleviation by improving long-term food security through access to animal source foods (fish, meat, milk and eggs); these food products are not only rich in proteins and energy, but are also a major source of essential micronutrients. Research has shown very high statistical correlations between consumption of animal source food and healthy growth, cognitive function, physical function, fertility and disease resistance.12

The global demand for animal source foods is increasing, demand for meat and milk in Africa alone is foreseen to triple by 2050, whereas 400 million people in sub-Saharan Africa depend on fish for most of their animal protein intake. With this massive production and trade growth come attendant risks to human health, animal health and the environment. Such expanding markets are therefore more demanding in terms of food safety and quality, and managing risks of animal disease spread.

Veterinary Services are key guarantors for the stable and sustainable development of a safe and equitable world food system, by improving animal and veterinary public health. They ensure the necessary technical and regulatory environment for the identification and control of health risks and limit their impact on all animal health production sectors and humans. Healthy animals with good welfare (and their safe products), as supported by robust Veterinary Services can thus provide a sustainable pathway out of poverty by increasing market participation, enhancing smallholder and pastoral productivity and improving food safety and security and general well-being for communities globally.

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7 http://cgspace.cgiar.org/bitstream/handle/10568/333/dp28.pdf?sequence=2&isAllowed=y
8 Bangladesh, Brazil, Chile, China, India, Kenya, Nicaragua, Philippines, Uganda, Vietnam, Zambia.
11 www.fao.org/3/a-i7695e.pdf
12 http://jn.nutrition.org/content/
Facilitating and sharing benefits of safe trade

Veterinary Services are the custodians of animal health and welfare and veterinary public health issues nationally. They are the basis for sanitary certification of animals and animal products destined for trade, through which it is essential to establish a relationship of trust and confidence based on good governance, transparency and information sharing. The private sector, including farmers and industry, play an important role in partnership with Veterinary Services, as they provide assistance to Veterinary Services in fulfilling their sanitary mandate.

With globalisation, increased importance is being placed on animal health measures facilitating safe international and regional trade of animals and animal products, while avoiding unnecessary impediments to trade. To harmonise sanitary and phytosanitary measures on a global basis, the Agreement on the Application of Sanitary and Phytosanitary Measures (SPS Agreement) encourages the members of the World Trade Organization (WTO) to base their sanitary measures on international standards, guidelines and recommendations, where they exist.

For animal health and zoonoses, the OIE is recognised as the reference organisation for measures relating to international trade in animals and animal products. The implementation of OIE standards by OIE Member Countries is the best way to facilitate safe international trade. WTO Members may introduce sanitary or phytosanitary measures, resulting in a higher level of sanitary protection than would be achieved based on the relevant international standards, guidelines or recommendations alone. In this case the member must provide a scientific justification, or defend it as a consequence of the level of sanitary protection that a Member determines to be appropriate in accordance with the relevant provisions of the SPS Agreement.

Aquatic animal products from fisheries and aquaculture are a major international commodity, with more than one third of the world’s production traded internationally. Aquatic animal production accounts for 10% of total global agricultural exports. Twice as much seafood (fisheries and aquaculture) is traded internationally compared to terrestrial animal meat products (beef, poultry, sheep and pig meat). Given the rapid growth and attendant risks, OIE aquatic animal health standards for the sanitary safety of global trade are increasingly important and relevant to all regions of the world. Effective implementation of OIE standards will contribute to ensuring a sustainable sector that can provide a key source of high quality animal protein for our growing human population.

Analysis of regional and global flows of trade in animals and animal products demonstrate that exports can offer a precious source of income for developing countries and their rural producers, however, due to sanitary reasons, this outlet is often difficult for them to reach. Access to markets with better prices, will only be possible through appropriate investments in Veterinary Services.

Compliance with OIE standards relating to the effective control of animal diseases – among others - in these countries would therefore assist them with accessing valuable markets from which they are currently barred as they are unable to control or eradicate the most important of these diseases.

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Beyond their direct role in generating income and ensuring food security, livestock are a valuable asset, serving as a store of wealth, collateral for credit and an essential safety net during times of crisis. Livestock are also central to mixed farming systems: they consume waste products, produce manure for soil fertilization and provide draught power for ploughing, harvest and transport. The important economic and societal role assigned to animals and the health system, which ensures their protection, is often underestimated.

The sudden loss of livestock through disease events can be devastating to families and rural communities, a crisis that shatters resilience and forces desperate measures such as high risk borrowing, urban migration, family and social dislocation. In highly vulnerable and worst case scenarios, such shocks can increase human trafficking or recruitment to conflicts and terrorism, both potentially involving children.

Providing training opportunities for community animal health workers in becoming a veterinary paraprofessional can also have direct benefits to local economies. For example, developing the local workforce by providing practical training to conduct vaccination campaigns or undertake field surveillance with smallholders or pastoralists also provides local employment in rural areas, where alternative employment opportunities are otherwise severely limited. Governments and resource partners can play an important role here, especially to support veterinary paraprofessionals to train and establish themselves, with the ultimate aim of creating a functioning and sustainable fee-for-service model that effectively integrates public and private goods service provision. This can contribute to preventing rural decline and attendant risks in vulnerable parts of Africa, the Americas, Asia, Europe, Eurasia and the Middle East.

The economic and moral rationale for empowering women in the agriculture sector in general, and in animal health programs in particular, is undeniable. 60 to 80% of the share of the total food in developing countries is produced by women and 400 million is the estimated number of low income women in rural areas (out of the total of 600 million) relying heavily on livestock as a primary source of income, food, and input to other agricultural enterprises.

Identifying and supporting women’s roles as livestock owners, processors and users of livestock products and ensuring their access to veterinary service delivery, are key aspects in promoting women’s economic and social empowerment and consequently provides a way to enable rural women to break the cycle of poverty.

**CONCLUSION**

Robust Veterinary Services can prevent and contain health crises and save lives, while delivering a positive economic return, particularly in rural communities, which aligns with the SDGs. However, to capture these benefits, all countries must meet their obligations and have the capacity to ensure that their Veterinary Services operate under the tenets of good governance aligned with international standards and regulations.

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14 www.fao.org/docrep/013/am307e/am307e00.pdf
2. WHAT ARE THE PROBLEMS?

There are two major problems associated with the capacity, support and performance of Veterinary Services today:

- **FIRSTLY**, severely low level of investment proportional to need,

- **SECONDLY**, how that investment is made and targeted in terms of effectiveness, potential for return, country ownership and sustainability.

Very low amount invested proportional to need

There is major underinvestment in the broader agricultural sector, and more specifically in animal health and welfare. Despite up to 80% of the population being employed in agriculture in many developing countries, the agricultural sector has long been recognised for neglect in terms of public and international development investment, compared to sectors such as infrastructure. Animal health has been particularly neglected and this can be observed when looking at levels of government and international aid investments relative to the contribution of animal production to Gross Domestic Product (GDP). For example, livestock contributes 40% of agricultural GDP in developing countries, yet only 4.5% of development funding for agriculture targets livestock. Although not fully recognised as a major contributor to GDP in many countries, fisheries and aquaculture production are an important contributor to many national economies across the world, with the fishery and aquaculture sector contributing to more than 10% of national GDP in some major fish-producing developing countries.

All governments, from developing to developed countries, have a clear mandate to invest in animal health, particularly to manage disease spread in aquatic and terrestrial animals.

Despite this, the challenge of securing adequate resources for Veterinary Services has long been a problem for many developing countries and in-transition economies. More recently, this challenge has also been shared by a number of developed countries, both domestically and as part of the international donor community, where they have faced economic constraints in the wake of recent financial downturns.

Such underinvestment in Veterinary Services has shattering consequences, resulting in high animal diseases losses and the spread of zoonotic diseases with devastating consequences. Evidence from the OIE's PVS Pathway reports has shown cases of the rapid withdrawal of a public animal health field network, often in the absence of established, sustainable private operators capable of service provision or linked effectively to the public network for disease reporting. This has led to the sudden cessation of many services provided to and protective of farmers, with serious consequences for animal production performance, resilience and disease spread. The recurrence and rapid spread of major animal transboundary and endemic diseases in many parts of Africa, Asia, Europe, Eurasia and the Middle East; are representative of the weakness of national Veterinary Services to provide effective control methods and maintain a presence where they are needed most: servicing poor and hard to reach communities.

Concerning global health security, poor levels of investment also result in reduced capacities of national Veterinary Services to effectively contribute to the challenge of preventing the spread of zoonotic and emerging diseases as well as antimicrobial resistance (AMR) across sectors. Recent global events have clearly underlined that an optimal level of performance is not being met, and this is having unhealthy and costly global repercussions. This has confirmed the critical need to address health issues by re-focusing more on a systems approach that includes targeting risk at its animal source. A One Health systems approach is more sustainable, because a strong system can handle any threat. This is further justification for increasing the resourcing of national Veterinary Services, and is reflected in the recent Tripartite Strategy Document between WHO, OIE and FAO (2017).

How that investment is made in terms of effectiveness, return on investment and sustainability

In addition to the chronic underinvestment in animal health and welfare and Veterinary Services, the way in which investments have been made has regularly been sub-optimal. In the face of fewer resources, governments (as well as resource partners) are under pressure to ensure that services are effective, of assured quality, and that their investment corresponds to societal need/demand and potential for return on investment. To date, there have been too many failures in following established principles of ‘public good’ focused investment and aid effectiveness, to develop a robust, country-owned prioritisation of resourcing and activity based on good governance and sound science.

Given that transboundary diseases spread, it is animal health, rather than animal production, that is most clearly the ‘public good’ element, which deserves sustainable investment at national, regional or global level.

Central to this, is the solid platform provided by well governed and functional national Veterinary Services, from farm to fork. All governments have a clear mandate to invest in animal health, particularly to manage disease spread nationally and internationally. Conversely, animal production inputs (e.g. nutrition, reproduction, and husbandry) are more private goods, with direct commercial benefit to individual farmers or companies.

Strong national Veterinary Services provide a solid public sector framework that increases security, minimises risk, and creates confidence for private sector investment and development in livestock nutrition, reproduction and infrastructure, either from the individual farmer or company stakeholder. The need for public investment in animal health is particularly stark in providing confidence for private investment that targets international trade of livestock or livestock products. Many investments (often large scale) to produce and/or trade in animal and animal products that were in the pipeline for developing countries have been thwarted by a lack of confidence in national Veterinary Services to provide the necessary government health certification (and related ongoing sanitary assurances) to support and sustain export markets.

The following sections will demonstrate how governments and resource partners can work with the OIE to strengthen Veterinary Services.
3. WHAT DO WE WANT TO ACHIEVE?

The World Organisation for Animal Health’s (OIE) mission is to improve animal health and welfare worldwide; national Veterinary Services provide the basis of global capacity to achieve this mission. Recognising this, the OIE has developed international standards on both the quality of Veterinary Services’ provision, as well as technical animal health and welfare and veterinary public health management.

To comply with these standards, national Veterinary Services must be: sustainably financed, universally available, and efficiently provided without waste or duplication and in a manner that is science-based, transparent, consultative, and free of corruption. They must be supported by a comprehensive and clear regulatory and properly implemented policy framework.

Based on these principles and standards, the OIE has developed the PVS Pathway, a series of proven tools and methods to evaluate, plan and provide estimated costs for improving national Veterinary Services.

By making smart investments aligned with principles of aid effectiveness, the global community has an opportunity to sustainably improve the capacity of national Veterinary Services to assess, plan, resource and deliver, and then periodically review, system performance and accountability. They are then equipped with the workforce, governance structure and capacity to face current and future global health challenges.

The OIE remains committed to help its Member Countries and partners in this ambitious, but necessary, long-term endeavour.

4. WHY PARTNER WITH THE OIE?

Working towards a healthier and safer planet with the OIE as a unique intergovernmental organisation is beneficial and appealing to countries as well as resource partners for the following reasons:

- The OIE’s strong technical and governance reputation in animal health and welfare, and role as the official standard setting organisation for the safe trade of animals and animal products under the WTO SPS Agreement, provide excellent levels of national government interest and engagement.

- Working with the OIE provides value for money, particularly for donors, due to a hard won reputation for excellent financial governance including budgetary discipline and the timely delivery of reporting with results.

- In addition to its excellent governance reputation, countries and resource partners appreciate working with the OIE, as it is a timely and effective organisation. The OIE’s short and efficient chain of command means decisions and policies can be made and implemented rapidly, and adjusted effectively when required.

- The OIE is capable of harnessing the best international experts from across the globe based on a strong reputation for governance and scientific excellence, and by providing them with the opportunity to influence directions in global animal health, consistent with the Sixth Strategic Plan of the OIE (2016 - 2020).

The OIE has a proven track record in supporting countries to strengthen their Veterinary Services, through its flagship PVS Pathway programme.
5.

OUR SOLUTION: THE OIE PVS PATHWAY

The Performance of Veterinary Services (PVS) Pathway is the OIE’s flagship capacity building platform for the sustainable improvement of national Veterinary Services. The PVS Pathway has proven an unmitigated success over the last decade and the numbers testify to this, with 140 countries actively engaged. OIE’s consultation and analysis, including of national case studies, have identified certain key characteristics essential to the success of the PVS Pathway. These attributes have made the PVS Pathway unique in its capacity to foster good levels of engagement and support from both countries and partners/donors as a key stepping stone to real change. These rare characteristics include:

“BASIS IN INTERNATIONAL STANDARDS”: the PVS Pathway is based on OIE international standards targeting both governance and technical aspects. This represents the ideal platform upon which a framework and tools for evaluation and planning can be built.

“A SUSTAINABLE SYSTEMS-BASED APPROACH”: the PVS Pathway is a properly broad-based systems approach, which promotes sustainability and covers all threats. As a further testament to its success, there have been many similar programmes developed following the successful model of the PVS Pathway, particularly in terms of systems evaluation by partner international organisations in related sectors of health security, food safety and plant health.

“HELPING COUNTRIES HELP THEMSELVES”: the PVS Pathway has proven value in resource advocacy, with its reports representing highly valuable tools for Veterinary Services to use in advocating with relevant Ministries for increased resources. Moreover, countries also use their PVS Pathway reports to advocate for resource mobilisation with external partners and resource partners.

“The Country in the Driver Seat”: the PVS Pathway is a voluntary, country driven process primarily focused on a country’s internal systems and resources to optimise sustainability. The engagement in the process and use of the reports are completely up to the country. These are reflected in the need for an official country request for a mission and the confidentiality provision relating to the final report. In addition, since the country is the driver throughout the PVS Pathway missions, priorities are set by them, not by others, and based on their own needs.

“The Long View”: the PVS Pathway has a longer term strategic focus (5-10 years) and encourages countries to plan with a more sustainable and long-term outlook, beyond annual budget cycles or shorter term election cycles. Through its evaluation and monitoring mechanism, it provides an opportunity to not only plan for the future, but also to look back on lessons learnt and successes to structure future interventions.

“The Outsider’s View”: an independent, external process to assess Veterinary Services, provides fresh insights to national staff who have always worked on the same things or done things in the same “proven” way. Gaps may only be apparent via a new, outsider’s view based on benchmarking against the OIE standards.

“Methods that Work”: the PVS Pathway uses effective and efficient tools/methods, which have been refined over more than a decade.

“Not an Audit”: the PVS Pathway is participatory, supportive and collaborative, rather than being directive or presenting a risk to countries; as such it is perceived and experienced very differently, for example, to a bilateral trading partner audit.
The Theory of Change of the PVS Pathway

The Theory of Change of the OIE PVS Pathway comprises three elements which are key to achieve the outcome of strengthened Veterinary Services worldwide:

1. “GLOBAL CONSISTENCY”: the PVS Pathway is based on international standards and a globally consistent methodology. Application of the PVS Pathway enables countries to implement a standardized approach and establish benchmarks for the delivery of Veterinary Services of quality. Thus, at global level, this consistent approach across national systems provides a global framework to guide Veterinary Service’s improvement. This is essential given that Veterinary Services are a global public good due to their fundamental role in preventing and controlling the spread of transboundary diseases and that all country Veterinary Services should perform in a manner consistent with OIE standards (as the global system is only as strong as its weakest link).

2. “NATIONAL OWNERSHIP AND PRIORITISATION OF SYSTEMS DEVELOPMENT”: the PVS Pathway empowers national Veterinary Services by providing them with a comprehensive understanding of their strengths and weaknesses using a globally consistent methodology providing a useful external perspective that can reveal inefficiencies and opportunities for innovation. This enables countries to take ownership and prioritize improvements to their animal health system. This is particularly important in resource constrained environments and can offer opportunities to leverage investments to be fully compliant with international standards on the quality of Veterinary Services.

3. “LEVERAGING RESOURCES AND STIMULATING ACTION”: by using the outputs of the PVS Pathway, national Veterinary Services can leverage the resources and stimulate the actions needed to strengthen their national animal health system. Support to the implementation of the PVS Pathway constitutes a modest initial investment considering the multiple outcomes generated at country level.

Among other gains, countries benefit from clear guidance on which areas they can make strategic and sustainable investments in order to increase impact and move closer towards to compliance with OIE standards on the quality of Veterinary Services. Resource partners also use the PVS Pathway to ensure that investments align with national priorities and international standards.

All of these elements of the PVS Pathway ‘Theory of Change’ can be demonstrated at global and national levels. It should be noted that the ‘level of change’ varies significantly among countries and is subject to national engagement and investment in the PVS Pathway.

With this in mind, during 2017, marking the ten year anniversary of the PVS Pathway, the OIE convened a PVS Pathway Think Tank Forum to confirm its successes, take stock of lessons learned and set directions for the future. The Forum affirmed the necessity of the PVS Pathway and existing activities and identified new activities to ensure that all countries are continually engaged in this process and equally benefit from its outputs.
Cyclical in nature, the PVS Pathway provides a robust mechanism for the continuous improvement of national Veterinary Services.

Further to the PVS Think Tank Forum and in consultation with numerous stakeholders, the OIE has further expanded the PVS Pathway to reinforce its system of measurement and evaluation and to ensure continued engagement from countries.

The below graphic presents the four main stages of PVS Pathway Toolkit and the opportunities for engagement by countries.

Newer PVS Pathway options have been designed to increase positive impact and change in countries.

Although these elements - PVS Training, PVS Self-Evaluation, PVS specific content, PVS strategic planning support and PVS/IHR National Bridging Workshops - are relatively new as formal elements of the PVS Pathway, they have been extensively trialled and piloted by the OIE over many years.

The different steps of the PVS Pathway are categorised by stage and letter to enable easy reference to the diagram below as components of the PVS Pathway’s staged, cyclical process.
Careful analysis of both PVS Pathway successes and lessons learnt at national level over the last decade has revealed that the level of national understanding and engagement was the key determinant of success. Good engagement flows into better preparation and conduct of missions, better quality reports, and most significantly, effective use of the reports to source funding and drive change to strengthen Veterinary Services.

By providing PVS Training and Sub-Regional planning workshops, the OIE has proven that PVS ownership and engagement is enhanced (including via PVS Self-Evaluation) and that the outcomes in countries are stronger.

A PVS Pathway Orientation Training Workshops

The OIE has a consolidated experience in providing PVS Pathway orientation training to countries, both at national and sub-regional levels, all over the world. The three- to four-day fully interactive training format incorporates theory, practical and planning aspects. The purpose of such training and the benefits it provides to countries are manifold:

• PVS Training demystifies the PVS Pathway enhancing understanding and ownership of not only PVS processes and outputs, but of country’s own Veterinary Services, its component parts and its collective functioning.

• PVS Training potentiates PVS Self-Evaluation within countries as an opportunity for continued and in depth country monitoring of the performance of its own Veterinary Services, including at decentralised level.

• PVS Training will create knowledgeable, engaged PVS contact persons in country that can better prepare for and support PVS missions to enhance their quality, but most importantly better follow up and respond to PVS Pathway report findings and recommendations.

• PVS Training at sub-regional level will create a PVS specialist network amongst neighbouring countries. A network of trainees with experience as both PVS mission hosts in their own country and PVS mission observers in neighbouring countries will collectively be a rich source for sub-regional approaches and planning to build Veterinary Services’ capacity and fight transboundary diseases at the sub-regional, as well as national level. This also presents the opportunity for targeted projects based on regionally or sub-regionally owned PVS analysis and planning.

Although the majority of PVS Pathway trainees would be from national Veterinary Services and act as the key beneficiaries, at each workshop it is anticipated that a selection of key OIE technical and resource partners would also be invited to also expand their understanding and use of the PVS Pathway processes and results, including at sub-regional level.

17 The OIE defines 5 regions globally: Africa; the Americas; Asia, the Far East and Oceania; Europe; and the Middle East. A sub-region is a subset of countries from a particular region. For example, Central America is a sub-region within the Americas, and South East Asia is a sub-region within Asia, the Far East and Oceania.
PVS Pathway Orientation Lessons Learnt Workshops

Subsequent to an initial round of PVS Training, followed by PVS missions and targeted support over a period of several years, a PVS Pathway Follow Up and Lessons Learnt workshop at sub-regional level will be held to focus on key learnings, report analysis and sub-regional planning, in partnership with a relevant Regional Economic Community (REC) and/or OIE resource partner(s).

A PVS Pathway Follow Up and Lessons Learnt workshop was successfully held for South East Asian countries in 2015. As well as retrospective analysis, the workshop also provides an opportunity to undertake further PVS training and forward planning for ongoing engagement.

This workshop will also comprise a key step to undertake structured participatory monitoring and evaluation of the PVS Pathway and to measure impact in countries. The information emerging from such workshops will inform the development of new PVS Pathway activities targeted to country needs.

Implementation of the PVS Pathway experience in more than 140 countries has clearly identified that leadership and management skills and experience are often lacking in national Veterinary Services. This constitutes a major bottleneck in the strengthening of Veterinary Services in many countries. The OIE may incorporate training in aspects of leadership, management or strategic planning, particularly in the context of using PVS results, as part of these Sub-Regional Workshops.
PVS Evaluation and PVS Evaluation Follow-Up missions have been the proven core component of the PVS Pathway since its inception, and will firmly remain so. They provide a careful evaluation of the current performance of the national Veterinary Services, and the capacity to undertake ongoing monitoring of performance over time using consistent methods.

Reflecting their great success, many of OIE’s peer organisations have now developed similar systems-based assessment tools using similar methods in their fields (e.g. WHO, Codex Alimentarius, International Plant Protection Convention etc).

**A PVS Evaluation mission (initial)**

PVS Evaluations comprise a 2-6 week mission which delivers a thorough, qualitative assessment of the performance of a country’s Veterinary Services and their compliance with OIE international standards. It is an external evaluation conducted by a group of OIE trained and certified experts which collect and analyse baseline information and evidence collated during the mission, including an extensive field component. The mission uses the proven OIE PVS Tool, where 47 Critical Competencies are systematically evaluated via documentation reviews, interviews and physical observations against five graded levels of advancement, each with detailed descriptions or indicators to transparently guide the process.

The final output is a comprehensive assessment report, providing a complete overview of the Veterinary Services’ condition, evaluating its performance and identifying strengths and weaknesses, based on OIE international standards. This establishes a solid baseline for both planning and ongoing routine monitoring and follow-up of the overall level of performance of the Veterinary Services.

Continuity of this process requires a true partnership between the public and the private sectors, as reflected in the PVS Evaluation methodology. Although leadership from the public sector is a fundamental and critical determinant of success, collaboration with the private sector in the form of Public-Private Partnerships (PPPs) is also important.
PVS Pathway reports and a recent OIE survey, sent to all OIE Delegates as well as private partners in 2017, has shown many examples where PPPs have successfully strengthened Veterinary Services, while also serving private interests, in the form of a positive contribution to improved animal health.

There is considerable interest to further expand such positive and sustainable collaborations between the two sectors. The text boxes showcase two national case studies (Thailand and Ethiopia) of success relating to the use of PVS Evaluation reports: both resourced by government nationally.

**CASE STUDY – THAILAND**

**A PRO-ACTIVE APPROACH TO PVS ENGAGEMENT TO OPTIMISE BENEFITS VIA INTERNAL RESOURCING**

**PVS Evaluation in 2012 | PVS Gap Analysis in 2014**

High level Advocacy using PVS resulted in a 13% increase in the budget of the Department of Livestock Development (DLD) of Thailand from 2012-13

**PVS Report findings and Thailand’s Response:**

- **Lack of field veterinarians:** During 2013-15, 280 veterinarians were recruited to cover districts, including establishment of 35 dairy health units and implementation of a 10 year plan to recruit 1,000 new veterinarians.

- **Lack of regulatory drug control:** New DLD’s Division of Feed Safety and Vet Products Control was established.

- **Gaps in domestic food safety:** Good Manufacturing Practice system developed support to smaller slaughterhouses and milk processors.


**CASE STUDY – ETHIOPIA**

**INTEGRATION OF THE PVS PATHWAY INTO A NATIONAL STRATEGIC PLAN FOSTERED INTERNAL RESOURCING AND CHANGE**

**PVS Evaluation in 2011 | PVS Gap Analysis in 2012**

Based on the PVS Pathway outcomes, in 2013, Ethiopia developed a Veterinary Services Strategy with 13 major / 5 subsidiary interventions which started in 2014.

**Key achievements in response to the PVS findings:**

- Real time mobile phone-based Animal Health information system.

- National paper based reporting > partially web-based, now includes abattoir, quarantine station and laboratory data.

- A national Livestock Identification and Traceability System piloted in 2 locations for 2 production systems.

- The Veterinary Services Rationalization Road Map identifying three groups of Veterinary Services: private good, public good and private-public partnership (PPP) with resources targeted accordingly.
PVS Evaluation Follow-Up mission

The PVS Evaluation Follow-Up mission serves as a measuring and evaluation tool to update the assessment and progress made by countries, using consistent methods over time. Cross-referencing to the initial PVS Evaluation and considering the goals established during the PVS Gap Analysis (PVS Costing Tool), in addition to taking into account other PVS Pathway related activities undertaken in the country, this mission assesses and monitors progress made (change in legislation, technical capacities, etc.) using the OIE PVS Tool and its levels of advancement to directly measure change.

PVS Evaluation Follow-Up missions register improvements and acknowledges actions to maintain existing performance levels, as well as noting new deficiencies. The output is an updated comprehensive diagnosis to guide and accordingly revise the public Veterinary Services’ strategic initiatives.

PVS Self-Evaluation

The OIE international standards on the Quality of Veterinary Services underscores the importance of evaluating Veterinary Services. In line with this, the OIE PVS Tool is publically available for OIE Member Countries to use for PVS Self-Evaluation purposes. To support this, the OIE conducts PVS Training to support countries in undertaking PVS Self-Evaluations in the absence of mission or reporting support from the OIE (e.g. Brazil, New Zealand, China).

More recently PVS Self-Evaluation has been used to supplement the national PVS Evaluation at a more detailed, decentralised level (e.g. China, Australia, Indonesia). The OIE encourages all its Member Countries to make use of the OIE PVS Tool to undertake PVS Self-Evaluation in a systematic way to monitor and evaluate Veterinary Services performance over time, including between and as inputs to the external OIE PVS Pathway missions.
PVS Evaluation of Aquatic Animal Health Services

The production of and trade in aquatic animals and their products is of increasing importance and the aquaculture sector is growing fast in response to the strong and growing global demand for high quality protein. In some countries the Veterinary Services are the competent authority for aquatic animal health services. Regardless of whether veterinarians are involved in the aquatic animal health services, it is clear that the general principles for quality would be similar to those that apply to Veterinary Services. For example, appropriate legislation and good governance are required to support aquatic animal health services in complying with OIE requirements, including for disease detection, reporting and control.

The application of the PVS Tool to the evaluation of aquatic animal health services commenced in 2009 when the OIE undertook a pilot mission in Vietnam. Following this mission and several subsequent missions, it was clear that a stand-alone tool for the evaluation of aquatic animal health services was necessary due to differences between the terrestrial and aquatic sectors. The OIE has developed the OIE Tool for the Evaluation of Performance of Veterinary Services and/or Aquatic Animal Health Services (OIE PVS Tool: Aquatic) which is based on the OIE PVS Tool and includes amendments to some Critical Competencies and Levels of Advancement so that the Tool is more appropriate for the evaluation of the performance of aquatic animal health services.

To date, 10 countries have received PVS Evaluation (Aquatic) missions, there has been one pilot PVS Gap Analysis (Aquatic) mission and one PVS Evaluation Follow Up (Aquatic) mission. Feedback on the value and usefulness of the missions has been excellent, despite its earlier stage of maturity. A further seven countries have expressed interest in receiving a PVS Evaluation (Aquatic) demonstrating uptake by countries and the growing importance of the aquaculture sector to national economies.

PVS Evaluation Specific Content

The option of including specific content related to global priority diseases and issues, such as PPR and AMR, into the PVS Evaluation and Evaluation Follow Up missions is now being provided to Member Countries by the OIE. This benefits Member Countries by providing practical guidance in the linking of stronger Veterinary Services applied to a practical, real life priority animal health or One Health issue the country faces.

Such missions also emphasise national obligations and promote regional and global solidarity in addressing major health and development priorities. In all cases, specific content elements align with the integrity of the OIE PVS Tool as a whole-of-system approach and are a supplement to the programme.
STRENGTHENING VETERINARY SERVICES THROUGH THE OIE PVS PATHWAY

To achieve this, a strategic planning workshop can support the incorporation of PVS Pathway inputs within a newly initiated or established national strategic planning cycle at the animal health, livestock, agricultural, or health security sector level. Using the PVS Gap Analysis report as the basis and with broader stakeholder consultation, a national strategic planning template is developed and agreed on via this workshop, with OIE and/or strategic planning expert support.

A PVS Gap Analysis

The PVS Gap Analysis (incorporating the PVS Costing Tool) is a carefully structured exercise with national Veterinary Services to determine the priority goals, strategies, activities and investments required to improve national Veterinary Services. During the mission, the country’s Veterinary Services, supported by a team of OIE-certified experts, and using the PVS Evaluation information as a baseline, prioritise their own outcomes, and develop strategic and costed actions to improve their performance and meet these national targets.

The final output identifies the Veterinary Services’ objectives and priorities in terms of compliance with OIE quality standards as well as the activities and their estimated cost to reach the desired level of compliance within a five-year timeframe. In the report, this cost is illustrated by an indicative annual budget and a budget for exceptional investments developed during the mission; these are also consolidated into a provisional five-year budget for the public Veterinary Services.

The PVS Gap Analysis can be used to identify priorities and present justifications when applying for national and/or international financial support (loans and/or grants from donors). Similarly, PVS Gap Analysis reports are extremely useful for international development banks or donors to guide their Veterinary Services’ investments at national, regional or global levels.

B PVS Pathway Integration with Strategic Planning Cycles

The most effective and sustainable use of the PVS Pathway for countries arises from properly internalising findings and recommendations within the government itself.

CASE STUDY - INDONESIA

ILLUSTRATES PVS PATHWAY USE BY A COUNTRY PARTNERING WITH A MAJOR DEVELOPMENT PROJECT TO ENHANCE AND CONNECT THE NATIONAL ANIMAL HEALTH SYSTEM

PVS Evaluation in 2007 | PVS Gap Analysis in 2010

The PVS Pathway reports set the directions for strengthening the Indonesian system feeding the design of the AUD$22mill government-to-government Australia Indonesia Partnership for Emerging Infectious Diseases project. From 2011-2015, Indonesia has:

- Strengthened Veterinary Services’ institutions, through leadership training and improved coordination.
- Increased the number of veterinary education establishments (and graduates) with a harmonised curriculum aligned to OIE guidelines.
- Improved interaction with private veterinarians via the establishment of joint PPP Livestock Committees.
- Improved technical skills of the Veterinary Services and laboratory network (e.g. development of new BSL3 laboratories).
- Enhanced disease reporting with electronic animal health information system including direct mobile phone reporting of outbreaks to headquarters.
- Increased legislative authority, including amendments to the Livestock and Animal Health Act.

To achieve this, a strategic planning workshop can support the incorporation of PVS Pathway inputs within a newly initiated or established national strategic planning cycle at the animal health, livestock, agricultural, or health security sector level. Using the PVS Gap Analysis report as the basis and with broader stakeholder consultation, a national strategic planning template is developed and agreed on via this workshop, with OIE and/or strategic planning expert support.
The final output goes further, being an official national Veterinary Services owned strategic plan, with the government logo and in the national language, effectively incorporating PVS inputs targeting truly sustainable national resourcing and implementation. This option of further internal planning support has been piloted effectively in several countries, and may in particular be targeted to developing countries to support the translation of the PVS Pathway reports into their effective use via a national policy document.

Noting that a significant number of countries do not undertake multi-year strategic planning processes, this option is a powerful incentive to encourage countries to initiate such planning, with careful OIE support. Even for countries with existing sectoral strategic planning cycles, the use of the PVS Pathway represents a systematic, robust and in depth method to update strategic plans, compared to what might be the current practice.

In these cases, PVS Pathway support would be carefully timed to coincide with updating the national strategic plan based on the existing cycle (usually 5 years).

**CASE STUDY – HAITI**

**DEMONSTRATES HOW RESOURCE PARTNERS CAN MAKE INVESTMENTS BASED ON COUNTRIES NEEDS**

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<tr>
<th>PVS Evaluation in 2010</th>
<th>PVS Gap Analysis in 2012</th>
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PVS Evaluation provided knowledge of structural gaps

- Understanding from policy makers in the Ministry of Agriculture of the need to reform the Veterinary Services’ organizational structure.
- Development of inter-ministerial joint activities involving zoonoses and food safety.
- Better allocation of staff to the national Veterinary Services.

**After Gap Analysis:**

- USD 38m investment plan for the modernisation of Veterinary, Plant Health and Food Safety drafted.
- USD 14m grant from resource partners.
- Better understanding and involvement at the political level on the need of improving the Veterinary Services.
Based on PVS Evaluation and PVS Gap Analysis results and analysis of such outputs over the last decade, the OIE has identified priority gaps at global level, for which it has developed a suit of PVS Pathway targeted support, as further options for PVS Pathway engagement by its Member Countries.

One Health Integration (WHO IHR – OIE PVS National Bridging Workshops)

Poor intersectoral collaboration has been an all too common PVS report finding over the last decade. In partnership, the WHO and OIE have rolled out interactive workshops targeting a truly operational One Health approach at national level. The workshops, with equal participation by the Human Health and Animal Health sectors, enable countries to explore in depth overlapping areas and develop, where relevant, appropriate bridges to facilitate coordination between sectors, to jointly address major health security risks, many of which are zoonotic.

The main objective of the IHR-PVS Pathway National Bridging Workshop is to provide an opportunity to both health sectors of hosting countries to build on almost parallel systems of national evaluation and planning based on international standards (regulations) in the animal and human health fields respectively. While the OIE PVS Pathway supports country compliance with OIE international standards, the WHO has developed the International Health Regulations Monitoring and Evaluation Framework (IHR MEF) to support capacity in responding to public health events. The equivalent to the PVS Evaluation step on the human health side is the WHO Joint External Evaluations (JEE), a tool which is also based on an independent assessment of the country’s capacity to comply with the IHR.

The OIE routinely sends OIE-PVS experts to JEE missions facilitated by WHO, to ensure that the animal health and veterinary public health dimension is duly considered.

Using a structured approach and incorporating user-friendly material, these workshops collectively and systematically review, side-by-side, the country PVS and JEE reports together. This enables policy makers to identify synergies, review gaps and define operational strategies to improve intersectoral collaboration. The workshops are facilitated by representatives from the WHO and OIE and also include the participation of OIE-PVS experts having undertaken the PVS Pathway mission or missions to the host country.

IHR-PVS National Bridging Workshops increase individual and cross sectoral awareness and understanding of the IHR (2005) and the PVS Pathway, their roles and interactions. These workshops also identify the necessary information to guide future investments and project design inputs for implementing joint national roadmaps to strengthen intersectoral health services and comply with international standards.

These outputs provide useful contributions to the National Action Planning for Health Security phase of the IHR MEF, another component for which the WHO and the OIE are working to enhance synergies. To date, 10 National Bridging Workshops globally have been delivered with excellent feedback from participants. Many more workshops are in the pipeline, particularly in Africa.

Undertaking a country PVS Evaluation Follow Up mission provides an up-to-date assessment of the national Veterinary Services and is an important input to consider for national health security assessment and planning, both through National Bridging workshops and the IHR MEF more generally.
To effectively control transboundary zoonotic and animal diseases, ensure animal welfare and food safety, control AMR and mitigate the risk of bioterrorism, Veterinary Services must be able to act quickly and decisively through the power of clearly written and enforceable laws. The lack of such laws can indeed be a matter of life or death for both animals and humans.

The absence of quality veterinary legislation has been a frequent finding in PVS Pathway Evaluation missions and the VLSP was developed to provide countries with the opportunity to have their laws in the veterinary domain systematically reviewed by VLSP experts, identify gaps and weakness in their legislation, to strengthen their capacity in legal drafting and develop new legislation. Close to 60 Countries have participated in the VLSP to date and notable benefits have been achieved.

Some VLSP case studies are provided in the following box:

**CASE STUDIES**

**AFGHANISTAN**

While efforts at new veterinary legislation in the country had been initiated in 2007 through a European Union funded project, the VLSP Identification mission in 2010 provided support in reviewing and revising drafts of new legislation and helped to ensure that OIE standards on veterinary legislation were addressed in the draft bills. A legislation working group, with ongoing technical support from the European Union and USAID, continued to refine the veterinary legislation following the OIE mission and the Afghanistan Parliament approved the new Animal Health (Veterinary) Act in July 2016.

**UGANDA**

With support from OIE through a VLSP Identification mission and a follow on VLSP Veterinary Legislation Agreement completed in 2016, was able to draft and finalize a new Veterinary Practice Act for submission to Parliament that regulates both veterinarians and for the first time, veterinary paraprofessionals.

**BARBADOS**

In 2016, a comprehensive review of animal health, plant health and food safety legislation was being undertaken through a FAO SPS Legislation Reform Programme. The OIE, through a VLSP Agreement, was able to collaborate directly with FAO at the request of the Government of Barbados, to provide technical support on the development of the new Animal Health Veterinary Public Health and Food Safety Bills, which were finalized for submission to Parliament in November of 2017.
The VLSP now has another important application - the analysis of veterinary legislation related to specific themes of particular interest to OIE, its partners and Member Countries.

The first of these has been biological threat reduction. With resource partner support, the OIE has been able to provide additional training to VLSP experts on the global legal framework for biological threat reduction and to carry out three VLSP missions with an added focus on legislation related to biological threat reduction in the veterinary domain.

Through these missions in Belize, Panama and Guatemala, the OIE has been able to increase awareness about the role of Veterinary Services in the mitigation of biological threats, the need for strengthening veterinary legislation to ensure that the power to act in the face of intentional introduction of biological agents is clear, and that the need for cooperation with other competent authorities is recognised and addressed through collaborative arrangements that are in place before incidents occur.

Similarly, VLSP missions are useful to address the veterinary legislative frameworks required to deal effectively with AMR and the veterinary legislative frameworks required for the effective control and eradication of PPR, for which OIE and FAO launched a joint global eradication campaign in 2015.

**Work with national Veterinary Statutory Bodies (VSBs)**

Proper regulation of the veterinary profession must be in place to ensure the effective performance of Veterinary Services. Each country should have standards for qualifications, training, professional conduct, licensing and continuing education requirements for veterinarians and each category of veterinary paraprofessional identified and permitted to work within the country. For the protection of society, disciplinary measures should be in place for those registered that do not meet the required standards.

The OIE recommends that an independent Veterinary Statutory Body (VSB) be established and legally empowered to carry out this regulatory oversight of the veterinary profession.

Once again, PVS Evaluations have indicated that substantial numbers of countries do not have a VSB. They do not effectively regulate veterinarians and veterinary paraprofessionals, lacking the legal basis or the capacity and means for such a body to adequately perform its required functions.

In addition, the VLSP has provided support in this area by assisting countries such as Uganda and Ethiopia in reviewing existing legislation on the establishment of VSBs. The VLSP can provide assistance to develop new legislation to create a VSB, develop secondary legislation to animate a VSB that is established in primary law, but does not yet function, or reform legislation to expand the role of the VSB to include regulation of veterinary paraprofessionals.

Many regions are now also establishing networks of VSBs to share best practices and also facilitate regional mobility of veterinary professionals, through standardized processes for registration.
Traditional laboratory evaluations assess technical capacity and suggest improvements such as standard operating procedure implementation, equipment maintenance and calibration, additional training in new techniques, purchase of new equipment, or proficiency testing exercises, often in the context of short-term donor-funded projects. As these missions are generally restrained by the context and terms of reference, they often do not allow for the in-depth examination of the national laboratory network’s sustainability, including strategic, management and financial issues.

Often this leads to simplified technical recommendations and over-investment in structures that are systematically unable to implement the recommendations properly, with underlying complications, such as insufficient budget allocations, lack of human and physical resources, or procurement difficulties, going unaddressed.

There is also a tendency for veterinary laboratories, given their technical nature, to be addressed in isolation from their role as a service provider to the national Veterinary Services. The activity of veterinary laboratories should closely reflect their diagnostic role in supporting the planning and priorities of the national Veterinary Services.

The OIE PVS Evaluation missions and PVS Gap Analysis missions allow for the evaluation of Veterinary Services’ official need for laboratory analysis as well as their availability and cost as a first step, but do not allow an in-depth analysis of the pertinence and efficiency of the national laboratory network. In particular, the heavy cost of a national laboratory network is not considered in terms of Veterinary Services’ need for laboratory analysis. It is for this reason that the PVS Pathway Laboratory Mission was developed.
A high level of scientific expertise is also essential to allow countries to formulate science-based animal health control strategies and to maintain national veterinary scientific communities to support the OIE standard setting process.

Each twinning project directly links an existing OIE Reference Laboratory or Collaborating Centre with a selected candidate laboratory. Knowledge and skills are exchanged through this link over a determined project period through staff exchanges, quality assurance and biosafety training and proficiency testing. Twinning projects provide mutual benefits for both laboratories including through creating joint research opportunities, and the whole international community will benefit from stronger global disease surveillance networks for the control of animal diseases.

Building upon the outcomes of the Second OIE Global Conference on Biological Threat Reduction (Canada 2017), such twinning projects provide a structured mechanism to ensure the application of existing international standards and guidelines for biosafety and biosecurity as well as the application of risk based approaches to disease control and management and the transportation of biological material.

**CASE STUDY – KYRGYZSTAN**

PVS Evaluation Follow-Up in 2016  |  PVS Pathway Laboratory in 2017

As proposed by the PVS Laboratory team, an effort to rationalise the national laboratory network has led to a reduction in the coming years of the number of laboratories, presenting opportunities to better ensure the quality of laboratory services, manage biological risks throughout the laboratory network, while leading to substantial cost savings.

Key goals in the short term will be to implement a thorough quality assurance system in all remaining laboratories as well as a continuing education programme at all levels.

These activities have been already initiated by the Kyrgyz Republic in view of improving the laboratories services provided as part of its Veterinary Services.

**Veterinary Laboratory Twinning Projects**

Twinning is not a new concept and has been used extensively to facilitate capacity building and networking, and to bring communities together. Since 2006, the OIE has been applying the concept to laboratories to build expertise for the most important animal diseases, zoonoses and dangerous pathogens in priority regions, in direct support of the OIE’s strategy to improve global capacity for disease prevention, detection, and control through better veterinary governance.

Through twinning, the OIE aims to provide a more balanced geographical distribution of advanced expertise, allowing more countries to access high-quality diagnostic testing and technical knowledge within their own region, thus facilitating early disease detection or confirmation and rapid control.

STAGE 4: TARGETED SUPPORT

**Veterinary and Veterinary Paraprofessional Education**

**Veterinary Education**

Indications from PVS Evaluation reports relating to the competencies of veterinarians suggested that in many countries, veterinary education establishments (VEE) were not adequately preparing their veterinary graduates to possess the necessary competencies at graduation to protect the public good in the areas of animal and zoonotic disease control and food safety. As a result and in order to address these deficiencies, the OIE developed the following to support its Member Countries:
During the curricular review process with the beneficiaries, the University of Minnesota (USA), in its OIE twinning with Chiang Mai University in Thailand, have recognised that their own curriculum could be improved in the context of the OIE ‘Day 1 graduates’, and are offered as an initial step to enhance and sustain national Veterinary Services.

The OIE Guidelines on Veterinary Education Core Curriculum\(^\text{20}\) represent a basis on which national needs and circumstances could be added in the implementation of the OIE ‘Day 1 graduates’, and are offered as an initial step to enhance and sustain national Veterinary Services.

A VEE Twinning Programme was also established to create the opportunity for a ‘beneficiary’ VEE wishing to improve its performance, to link with a ‘parent’ VEE in a formal partnership to address specific, agreed upon targets for capacity building, with OIE support.

These two initiatives have resulted in a successful synergy, as several of the twinning institutions have utilised the OIE Day 1 Competencies and the OIE Model Core Veterinary Curriculum as the basis for curriculum review and development in the ‘beneficiary’ VEE.

### Veterinary Paraprofessionals (VPPs) Education

Based on the clear success of the efforts in veterinary education, OIE has now launched a similar effort in the area of veterinary paraprofessional (VPP) education. The OIE recognises the importance of veterinary paraprofessionals in veterinary service delivery and the PVS Pathway Tool includes assessments related to the staffing and competency of veterinary paraprofessionals as well as veterinarians.

Once again, the PVS Evaluation missions have indicated deficiencies in veterinary paraprofessional training and competency. In 2017, the OIE established an ad hoc group on veterinary paraprofessionals to develop expected competencies for three different categories of VPPs, namely animal health, veterinary public health and laboratory diagnostics. The ad hoc group completed the preparation of the proposed competencies for the three VPP categories in 2017 and those competencies have been sent out for review and comment by OIE Member Countries.

The ad hoc group has now commenced the development of the model core curricula to support the competencies for the three categories of VPPs. A programme is being developed to promote and extend such performance standards for veterinary paraprofessionals globally. In developing countries, this is particularly relevant in order to upgrade the existing community or village animal health workers, to a higher level of competency and performance, including through strengthening relationships and linkages with the national Veterinary Services as a public-private partnership.

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\(^{19}\) www.oie.int/fileadmin/Home/eng/Support_to_OIE_Members/Vet_Edu_AHG/DAY_1/DAYONE-B-eng-vC.pdf (also known as the ‘OIE Day 1 Competencies’)

\(^{20}\) www.oie.int/Veterinary_Education_Core_Curriculum.pdf (also known as the ‘OIE Core Curriculum’)
In 2007, the OIE launched a global workforce development programme for OIE Delegates and National Focal Points. The National Focal Point is designated by the OIE Delegate for eight key topics, of critical importance to the Veterinary Services: animal disease notification, wildlife, veterinary products and AMR, animal production food safety, animal welfare, aquatic animals, communication, and laboratories. The National Focal Point should assist the Delegate in fulfilling his/her responsibilities to the OIE, especially in these areas of specialisation, in order to ensure a standard setting process that is transparent and fully participatory among OIE Member Countries. This programme provides Veterinary Services’ good governance concepts to OIE Members and explains the role of the OIE National Focal Points in order to facilitate consistency and harmonisation amongst OIE Members when assigning duties to these officials.

Regional seminars are held in each OIE Region and for each topic, roughly on a biannual basis. These seminars aim to provide participants with knowledge on the rights, commitments and responsibilities on behalf of the OIE Delegates in the standard-setting process and on compliance with the OIE international standards in addition to raising awareness about regional and global issues and concerns outside of the national context. The seminars provide specialised and horizontal training across the OIE mandate on topics relevant to their area of expertise, while also promoting reflection on how national systems can further work towards compliance with the OIE standards, including via the PVS Pathway.

The OIE works to empower National Focal Points to share information with their relevant colleagues, provide further training on OIE standards to staff, and to better connect the areas of the Veterinary Services operating in the veterinary domain but not necessarily under the Veterinary Authority (e.g., aquatics, wildlife). Efforts are underway to take advantage of the OIE’s network of Collaborating Centres to provide specialised training support to OIE Member Countries as well as to develop new training mechanisms and platforms, including e-learning.

Monitoring and Evaluation of the PVS Pathway

Monitoring and Evaluation is a fundamental component to review progress made in countries and to inform the development of additional capacity building activities within the PVS Pathway.

Efforts to strengthen Veterinary Services using a systems approach necessitates systematic and integrated monitoring and evaluation. The OIE will continue to assess strengths and limitations of current approaches, and develop a monitoring and evaluation plan that outlines a comprehensive approach to measuring improved capacities and positive change in countries.

This framework will include the development of measurement tools and indicators, formal and informal consultations with stakeholders as well as suggest novel approaches to increase impact in countries. The framework will also include the development of an internal PVS Pathway database. Grouping qualitative and quantitative data from PVS Pathway activities, the database will include a dashboard per country comprising key data, benchmarks, indicators and progress registered.

In addition to grouping fundamental information about countries, this will also enable the development of regional and topic matter analyses to support investments from resource partners. Such data could also inform the implementation of socio-economic analyses, among others, relating to the economic gains from investing in animal health, the contribution of animal health systems in strengthening health security, and identifying models to justify spending to ensure global public goods.
Public-Private Partnerships

The OIE is providing support to its Member Countries to explore, plan and implement Public-Private Partnerships (PPPs) in the delivery of Veterinary Services. Through an in-depth and consultative process, the OIE has developed guidelines for Public-Private Partnerships in the Veterinary Domain (the "OIE PPP Handbook") to provide practical advice to its Member Countries and relevant private sector stakeholders. Such PPPs can take the form of official delegation of tasks to private sector expertise, such as the government contracting private veterinarians to undertake vaccination campaigns.

It might also be in the form of joint arrangements for the planning, resourcing and delivery of animal health and welfare programmes between government and relevant industry groups, producer associations or companies, where both parties are beneficiaries. The OIE is exploring providing further support via regional or national workshops or trainings on PPPs in the veterinary domain, based on the OIE PPP Handbook.
6. THE PVS PATHWAY: A VEHICLE FOR SUSTAINABLE DEVELOPMENT AND AID EFFECTIVENESS

Resource partners can benefit from engagement with the PVS Pathway by using its outputs, particularly the PVS Pathway reports, in partnership with the host country, to guide the design and implementation of development programmes in support of stronger Veterinary Services.

Indeed, there is a wealth of sound information available within PVS reports, and numerous successful projects have been developed using the PVS Pathway as the foundation for project definition and needs analysis. The OIE does not have a mandate in field implementation within countries, it relies on governments or technical and resource partners to follow up and respond to recommendations made in PVS Pathway reports.

The PVS Pathway can bring governments and donors together very effectively. There are many cases where active donors have linked the two forms of engagement by initially financing missions as a robust mechanism to further guide their animal health investment in supporting the country to respond to its PVS Pathway report findings and recommendations.

In terms of this resource partner interest in the PVS Pathway, as a vehicle for sustainable development, it is worthwhile reviewing the unique characteristics of the PVS Pathway through the prism of aid effectiveness. A key example of the aforementioned in captured in the following text box.

Moreover and coinciding roughly with the advent of the PVS Pathway, two landmark global agreements focused on Aid Effectiveness were endorsed, the Paris Declaration on Aid Effectiveness of 2005 and its follow up, the Accra Agenda for Action of 2008.

### CASE STUDY – REGIONAL SAHEL PASTORALISM SUPPORT PROJECT

PRAPS is a US$248 Million project (2015-2020) to support/scale up selected activities within the six countries (Republic of Mali, Burkina Faso, Republic of Senegal, Republic of Chad, Republic Islamic of Mauritania, Republic of Niger) focusing on the regional integration of pastoralist communities, through the following components: Animal Health Improvement ($ 50.48 M); Natural Resources Management Enhancement ($ 70.87 M); Market Access Facilitation ($ 45.38 M); Pastoral Crisis Management ($ 37.56 M); and Project Management and Institutional Support ($ 43.71 M).

Relating to animal health, PRAPS will support critical national and regional efforts to build more sustainable and efficient National Veterinary Services. The project will focus specifically on providing local animal health services in remote pastoral areas.

As reported by the World Bank Project Document Appraisal “the project design draws upon findings and recommendations from each country’s PVS Pathway reports, which provide an objective means of identifying priorities and guiding investments for the sustainable improvement of national Veterinary Services. Information from the six PVS Pathway reports was consolidated to design a consistent regional program for PRAPS”. 21

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The Paris Declaration was made at the Second High Level Forum on Aid Effectiveness and was endorsed by 137 developing and developed country governments, as well as all major donor agencies, regional development banks and relevant international agencies. The Paris Declaration went much further than previous agreements in representing a broader consensus among the international community about how to make aid more effective, based on first-hand experience of what works and does not work. At its heart was the commitment to help developing-country governments formulate and implement their own national development plans, according to their own national priorities, using, wherever possible, their own planning and implementation systems. Designed to strengthen and deepen implementation of the Paris Declaration, the Accra Agenda for Action (2008) took stock of progress and set the agenda for accelerated advancement towards the Paris Agreement targets proposing four main areas for improvement.

Below we have grouped the five principles of the Paris Declaration and the four areas for improvement of the Accra Agenda for Action and provided a description of how the PVS Pathway aligns with such principles. Most development practitioners would agree that these key principles for effective aid remain relevant today.

**ALIGNMENT**

The PVS Pathway provides a unique way for countries to evaluate the capacity of their Veterinary Services with respect to international standards. It enables them to plan and prioritise accordingly. Improvement of the country’s own Veterinary Services is the target, via national budget resourcing. Separate donor technical and financial assistance is funnelled to support (not in country replacement of) the government and its role via donor and partner use of the PVS Pathway.

**OWNERSHIP**

The PVS Pathway is country driven focused on all aspects of local institutional improvement. The PVS Gap Analysis planning step is country-led (expert supported) in setting national policies and priorities. PVS Pathway activities support the Veterinary Services to strengthen their own national systems. OIE delivery creates no conflict of interest such as relevant to geopolitical influence or ‘tied’ aid, as the OIE does not implement programmes at national level considering this to be the task and responsibility of the county. As only the teams are funded by OIE, no individual within a recipient country has ever financially benefitted directly from engaging in PVS Pathway activities. The PVS Tool’s Critical Competencies such as technical independence and transparency assess and mitigate risks of Veterinary Services’ corruption.

**HARMONISATION/INCLUSIVE PARTNERSHIPS**

No other organisation has the role, reputation and capacity to undertake PVS Pathway activities for Veterinary Services, therefore there is little risk of duplication. However, the OIE actively encourages countries and all interested partners to make full use of its PVS Pathway results, with the express agreement of the government, consistent with country ownership (i.e. reports made public or available to partners and donors).
The core principles for aid effectiveness as set out in the Paris Declaration and the Accra Agenda Action have been maintained and reinforced in global fora and agreements made since that time. At Busan, Korea in 2011, the 3rd High Level Forum established a Global Partnership for Effective Aid Development, which came into effect the following year in 2012 and continues to the present day.

This key mechanism is based around the four core principles of ownership, focus on results, inclusive partnerships and accountability. To monitor progress, a framework consisting of ten indicators were developed and countries and institutional performance is tracked against them and regularly reported.

The indicators are generally well aligned with the broader principles of the Paris Declaration and Accra Agenda for Action as well as with the PVS Pathway, as they are very much centred on results that meet developing countries’ priorities, the engagement and contribution of the private sector, and in the case of effective institutions – country systems are strengthened and used.

In conclusion, the PVS Pathway aligns with globally recognised principles, agreements and indicators in best practice aid effectiveness.
7. HOW CAN YOU HELP?

The OIE’s World Animal Health and Welfare Fund (OIE World Fund) is a multi-donor trust fund collecting voluntary contributions to support the implementation of OIE capacity building activities.

Funding to support the global rolling out of the PVS Pathway can be provided to the OIE World Fund through a combination of existing and new resource partners, including:

- Resource partners already in the field of animal health and agriculture
- Resource partners from countries that historically have not contributed directly to multilateral aid
- The corporate sector
- Foundations
- Philanthropic institutions

International non-governmental organisations willing to contribute to Official Development Assistance (ODA), government aid designed to promote the economic development and welfare of low and middle income countries.

Financial contributions received through the OIE World Fund can be earmarked:

- For specific activities: based on the catalogue of activities included in the PVS Pathway Toolkit, resource partners can identify the activities which most align with their strategic objectives and investments.

- In certain countries or regions: resource partners can chose to allocate funding to specific geographic areas or their interest.

- Over specific periods of time: financial contributions can be time-specific and linked to the implementation of a particular project or programme.

- As lump sums supporting the strengthening of Veterinary Services through the PVS Pathway.

To deliver value for money, the OIE will measure success through indicators that reflect its goal of improving the efficiency and effectiveness of Veterinary Services to prevent, control and detect animal diseases.

Regular monitoring and evaluation of activities will allow the OIE to share knowledge and to learn from examples. Specific project governance mechanisms can be established in order to collectively monitor the investment and impact made.

In order to ensure transparency on actions implemented and the use of funds, detailed technical and financial reports are provided to resource partners in accordance with their requirements.