

# The challenges of good governance in the aquatic animal health sector

S. Kahn<sup>(1)</sup>, G. Mylrea<sup>(1)</sup> & K. Bar Yaacov<sup>(2)</sup>

(1) World Organisation for Animal Health (OIE), 12 rue de Prony, 75017 Paris, France

(2) Norwegian Food Safety Authority, P.O. Box 383, N 2381 Brumunddal, Norway

## Summary

Animal health is fundamental to efficient animal production and, therefore, to food security and human health. This holds true for both terrestrial and aquatic animals. Although partnership between producers and governmental services is vital for effective animal health programmes, many key activities are directly carried out by governmental services. Noting the need to improve the governance of such services in many developing countries, the World Organisation for Animal Health (OIE), using the OIE Tool for the Evaluation of Performance of Veterinary Services, conducts assessments of Veterinary Services and Aquatic Animal Health Services (AAHS) to help strengthen governance and support more effective delivery of animal health programmes. While good governance and the tools to improve governance in the aquatic animal sector are largely based on the same principles as those that apply in the terrestrial animal sector, there are some specific challenges in the aquatic sector that have a bearing on the governance of services in this area. For example, the aquaculture industry has experienced rapid growth and the use of novel species is increasing; there are important gaps in scientific knowledge on diseases of aquatic animals; there is a need for more information on sustainable production; the level of participation of the veterinary profession in aquatic animal health is low; and there is a lack of standardisation in the training of aquatic animal health professionals.

Aquaculture development can be a means of alleviating poverty and hunger in developing countries. However, animal diseases, adverse environmental impacts and food safety risks threaten to limit this development. Strengthening AAHS governance and, in consequence, aquatic animal health programmes, is the best way to ensure a dynamic and sustainable aquaculture sector in future. This paper discusses the specific challenges to AAHS governance and some OIE initiatives to help Member Countries to address them.

## Keywords

Aquatic animal health – Good governance – OIE PVS Pathway.

## Introduction

Animal health is fundamental to efficient animal production, enabling the generation of animal products for sale and trade. Healthy and sustainable aquaculture production can improve rural incomes and employment, assist the management of financial risk by diversifying farm production, and increase foreign exchange earnings and savings, all of which contribute to alleviating poverty and improving food security. The World Bank has identified the improvement of animal health as a global public good (7).

This holds true for both terrestrial and aquatic animals. Although animal health programmes depend on partnership between producers and governmental services, many key elements of animal health programmes are a direct responsibility of governmental services and are based on national veterinary legislation. Good governance of governmental services is the *sine qua non* of efficient animal health programmes.

Good governance in Veterinary Services (VS) and Aquatic Animal Health Services (AAHS) has been described as: 'services that are sustainably financed, universally

available, provided efficiently (without waste or duplication) and in a manner that is transparent and free of fraud or corruption' (7). Governance may be analysed according to the following three pillars:

- enhancing political accountability: legislation and institutions
- improving capacity: personnel skills, resources, processes and systems
- strengthening the demand for better governance: measures to give stakeholders a greater voice and increase their participation.

With the objective of strengthening governance in its Member Countries, particularly developing countries, the World Organisation for Animal Health (OIE) developed standards for efficient VS and AAHS, which are found in the *Terrestrial Animal Health Code (Terrestrial Code)* and *Aquatic Animal Health Code (Aquatic Code)*, respectively. The OIE encourages Members to follow the 'OIE PVS Pathway', based on the use of the OIE Tool for the Evaluation of Performance of Veterinary Services (OIE PVS Tool), to identify shortcomings in relation to these OIE standards. Subsequent PVS missions, notably the PVS Gap Analysis, can help VS/AAHS, in collaboration with governments and donors, to identify the investments and actions that are needed to improve governance and support effective animal health programmes.

While good governance of AAHS is based on the same principles that apply to VS, there are some specific challenges to AAHS governance. These specific challenges and the steps taken by the OIE to help countries to deal with them are addressed in this paper.

## Pillar I: Enhancing political accountability – institutions and legislation

### Institutions

#### Agencies with responsibility for the aquatic animal sector

Governmental management of aquatic animals is traditionally based on the management of wild-caught fisheries, with an emphasis on economically sustainable management and little reference to aquatic animal health. Diseases of aquatic animals are not, as a rule, zoonotic, and food safety issues generally relate to the quality of growing water (for bivalves) and hygiene in product handling and processing.

As wild-caught fisheries decline and aquaculture becomes more important, the governmental authority needs staff with different knowledge and experience. Staff with knowledge of disease prevention and diagnosis and epidemiology may be recruited to the governmental agency for fisheries or, alternatively, the responsibility for aquatic animal health management of the aquaculture sector may be located within the VS.

### Veterinary Services

Within the national governmental framework the evolution of roles and responsibilities differs between VS and AAHS. Traditionally, the *raison d'être* of the VS is the regulation of animal diseases at the national level. Diseases of regulatory priority include the highly contagious 'transboundary' diseases; endemic diseases that seriously limit productivity; and zoonotic diseases, which threaten human health. As a natural extension of this regulatory role, VS commonly have responsibility for other activities related to animal health, such as import quarantine, export health certification, health controls over reproductive material, and, in some cases, the inspection of foods of animal origin. The close association of VS and livestock production is reflected by the fact that VS are usually part of the national governmental agencies responsible for agriculture.

### Veterinary Statutory Bodies

As stated by the OIE, the independent Veterinary Statutory Body (VSB) plays a key role in ensuring the quality of veterinary undergraduate training and other elements important to the quality of Veterinary Services, such as ongoing professional education and ethical practices (12). In addition, the licensing system for practising veterinarians administered by a national VSB provides for both standards of professional practice and sanctions for those who fail to meet the standards. Effective VSBs may impose serious sanctions, such as barring veterinarians from practising veterinary medicine, which certainly provides an incentive to take professional obligations seriously.

### Engagement with the OIE on setting standards relevant to aquatic animals

National Delegates to the OIE (who are generally the Head of the VS) often lack expertise in aquatic animal health and, more importantly, may face organisational and structural difficulties in obtaining the specialised advice needed for effective participation in the development of OIE standards.

In the past decade, the OIE Aquatic Animal Health Standards Commission (Aquatic Animals Commission) has recognised the relative lack of engagement of OIE

Members in standard setting. The Commission receives routine submissions from fewer than ten of the 178 OIE Member Countries (excluding the 27 European Union Member States, whose comments are submitted as a consolidated document) (15). Only six of the countries in the Asia, Far East and Oceania region routinely submit comments to the Aquatic Animals Commission, yet this region has for many years been the source of most of the world's aquaculture production (6). Recognising the challenges facing AAHS, particularly in developing countries, the OIE has tried to improve this situation. One important step taken by the OIE was to encourage national Delegates to nominate Aquatic Animal Focal Points (AAFP), to help the country participate in the work of standard-setting. These Focal Points may be located within the VS or in another government agency but, in all cases, they are under the authority of the national OIE Delegate. As at 4 October 2011, 146 (82%) of the total 178 OIE Members had nominated AAFP, with the Middle East region having the highest response rate of all OIE regions (Table I).

Nomination of Focal Points on aquatic animals, and on other strategic topics identified by the OIE (6), provides important benefits to OIE Members. Nominated officials have the opportunity to attend regular OIE seminars on the OIE standards and other key issues relating to good governance, such as transparency in disease reporting, and certification for products in international trade. The nomination of Focal Points, particularly if there is stability within the VS/AAHS structure, can, over time, help to improve good governance.

### Legislation

Within the modern aquaculture regulatory framework, aquatic animal health is just one among several important topics. The potential of aquaculture development to harm the environment and biodiversity is a cause for concern at national and regional level. Risk management, particularly in the context of environmental protection and invasive alien species, requires new knowledge, which governments must incorporate into the regulatory framework for aquaculture. In some cases, this multiplicity of functions

and associated disciplines, i.e. resource management, animal health, biodiversity and environmental protection, may lead to several different governmental agencies or ministries sharing authority and responsibility. This creates coordination and communication problems and makes it difficult to achieve the desired objectives for sustainable development of the aquaculture sector. The legislative framework for aquatic animal industries and health frequently reflects this complexity of administrative arrangements. Notwithstanding this, for international trade, negotiation of market access can only proceed on the basis of a clear definition of the authority and responsibility for aquatic animal health programmes and export certification.

## Pillar 2: Improving capacity – personnel skills, resources, processes and systems

### Personnel skills: scientific and technical expertise

Many AAHS, especially those in developing countries, face significant challenges regarding the availability of scientific expertise; it is particularly difficult to find suitably qualified staff for diagnostic laboratories for aquatic animal diseases, epidemiology and associated scientific research. National diagnostic and epidemiological services have a key role in supporting aquatic animal health programmes (AAHP). In many countries, the AAHS cannot provide adequate scientific support to the aquatic animal sector. However, financial investment in strengthening AAHS governance and fundamental scientific and technical services is often overlooked, with the preference being for direct investment in the production sector.

### Capacity for disease diagnosis

For diseases that are significant at the regional and international level, OIE Reference Laboratories (RL) play a

**Table I**  
**Nomination of Aquatic Animal Focal Points by OIE Member Countries (August 2011)**

OIE region	Number of nominated Focal Points and % of number of OIE Members	Number of OIE Members
Africa	44 (85%)	52
Americas	24 (83%)	29
Asia, Far East & Oceania	28 (82%)	34
Europe	41 (77%)	53
Middle East	9 (90%)	10
<b>Total</b>	<b>146 (82%)</b>	<b>178</b>

key role in transparency, by supporting early diagnosis and rapid reporting to the OIE. As of August 2011, there were 43 OIE RL for aquatic animal diseases and 182 RL for terrestrial animal diseases (13). Experts at OIE RL make an important contribution to the development of OIE standards. To date, all but four of the OIE RL for aquatic animal diseases are in developed countries (13). This presents a challenge to AAHS in developing countries as they often lack the capacity for early diagnosis of disease events, leading to delays in response and ineffective management. They are obliged to seek support from other countries and regions – which may, or may not, respond as quickly as needed. Good governance, including clarity and transparency relating to who has the authority to request diagnosis and submit reports to the OIE, is essential for providing a sound basis for dealing with animal diseases and other threats.

### **Resources: capital and financial**

To help address the governance challenges discussed above, governments and donors must be encouraged to provide resources for improving governance and building basic AAHS capacity. Industry profitability and sustainability (private goods) directly reflect the degree to which animal health, food safety and environmental sustainability (public goods) can be assured. Thus, investment models based on public sector/private sector cost-sharing are appropriate.

### **Processes and systems: professional education and ethical standards**

The AAHS include many professional disciplines, compared with the veterinary ‘monoculture’ in the VS, and this brings important governance implications. As a result of their training, veterinary graduates have the required knowledge and, with appropriate clinical experience, they gain the skills for effective performance of disease diagnosis and prevention. In addition, the scientific training of veterinarians enables them to participate in many associated activities, such as epidemiological investigations, laboratory diagnosis, scientific research, meat inspection and the management of veterinary drugs and vaccines.

As already mentioned, the independent VSB plays a key role in ensuring the quality of veterinary training and ethical practices (12).

In contrast, professionals of many different scientific disciplines are found in AAHS, which have many diverse responsibilities in addition to the management of fisheries. The increasing importance of aquaculture and the need to address environmental issues and biodiversity as part of

sustainable development generate a need for new scientific disciplines. Although veterinarians can, and do, play an important role in AAHS, for example in diagnostic laboratories and epidemiology units, the staff of AAHS are not principally made up of veterinary professionals nor is veterinary science the most important discipline within most AAHS.

Aquatic animal health professionals may follow a similar undergraduate training to that of veterinarians. However, many different areas of knowledge must be covered, reflecting the diverse systems of aquaculture production. Surveillance and disease control in the aquatic environment has its own limitations. Understanding the possibilities and limitations in the field needs special expertise and competence. In addition, there is no standard definition of an aquatic animal health professional, and there is no equivalent organisation to the VSB. This presents challenges in terms of setting standards for initial and ongoing training, and for assuring that professionals meet the scientific and ethical standards deemed appropriate by the national government.

### **Professional training**

The issue of professional training is a key governance challenge for AAHS. Clearly, technical competence is based on professional training. Yet, despite the growing importance of the aquaculture sector, and increasing recognition of the need for veterinary expertise in aquatic animal health, few countries include aquatic animal health in undergraduate veterinary training. Rather, this is regarded as a post-graduate specialisation (14), meaning that at graduation, veterinarians are neither highly motivated nor well prepared to work in the aquatic sector. Notable differences exist in some countries that have a well-developed aquaculture sector, such as Chile and Norway, where veterinarians receive specific education in aquatic animal health as part of their undergraduate training. The OIE is taking steps to identify the need for training in aquatic animal health as part of its work programme on veterinary education.

Typically, aquatic animal health professionals have a science degree and have undertaken specialised training in areas such as aquatic pathobiology, epidemiology and disease prevention/management. However, the educational qualifications of professionals working in aquatic animal health vary.

### **Disease management in the aquatic animal sector**

Some aquaculture industries are well established and farming is effectively ‘industrialised’, resulting in

efficiencies of scale and an internationally competitive market presence. This is the case for salmon and trout farming, where it has been reported that production is most commonly conducted under intensive conditions and by relatively 'better-off' farmers (2). In contrast, the production of carp and shrimp, which are amongst the most important aquatic species cultured globally, is typically carried out by small-scale, often poor, producers. Most carp and shrimp production is undertaken in developing countries in Asia (2). Furthermore, the rapid up-scaling and intensification of aquaculture, particularly in developing countries, is often based on the introduction of new species for farming, sometimes under non-optimal environmental conditions.

The fact that the aquaculture sector is in rapid expansion, and that there is pressure to find new species and environmental systems to exploit, presents particular challenges to the AAHS with respect to its central role – to avoid disease outbreaks and to facilitate the production of safe products. Small farmers moving into new types of production (e.g. those based on the use of previously unknown species) will frequently lack knowledge on key elements of animal health, environmental health and food safety. The AAHS, particularly in developing countries, face several major challenges in the development of effective partnerships with producers – starting with the difficulty of conveying information and training to producers where there is no established industry association.

Another important consideration relates to the actual production system used. Some aquaculture production systems are less amenable to 'classical' techniques for controlling animal diseases, e.g. bivalve farming in open water, which requires the application of knowledge from multiple associated disciplines.

Even for those industry sectors where management of animal production and disease is perfectly feasible, new industries face significant knowledge gaps. The production and export sector must be more vocal to convince governments and donors to fund essential research.

## Strengthening the demand for better governance

### **A greater voice for the production sector**

Producers are increasingly concerned about losses due to infectious diseases, which can be significant enough to impact national economies (4). A survey of aquaculture producers in developing countries found that, despite wide variation between countries and aquatic species farmed, disease remains the primary short- to medium-term

sustainability constraint (8). It is clearly important to ensure that this concern is relayed to governments and donors as an argument for strengthening animal health programmes.

A primary tenet of the OIE PVS Tool is that government–stakeholder partnerships are critical to effective animal health programmes. The successful implementation of disease surveillance and reporting programmes developed by government depends on the cooperation of private health professionals and livestock producers with the competent authorities. Where aquaculture industries are well established, with large-scale production and investment, producer associations can have a strong voice (see, for example, the website of the Federation of European Aquaculture Producers: [www.feap.info/feap/](http://www.feap.info/feap/)). However, the vast majority of aquaculture production comes from developing countries, principally in Asia. Typically, these industries comprise smaller-scale producers and producer associations are lacking. The AAHS in developing countries must find ways to strengthen producer calls for better governance. However, where there is a history of poor governance, producers may be reluctant to engage with the AAHS or to call for investment (fearing to 'send good money after bad').

Well-organised industry organisations may make significant financial contributions and can play an important role in demanding better governance and influencing government and donor priorities and programmes, including for scientific research.

In some countries, depending on national policies, industry organisations may be entrusted with the responsibility of developing and implementing programmes for production-level diseases, thereby freeing up government resources to focus on the prevention and management of serious diseases and other issues of national, regional or international significance.

Producer associations can be highly instrumental in providing information and training to producers, as well as developing industry codes of practice, all of which can help to facilitate the implementation of government policies and programmes.

The OIE encourages the formation of effective partnerships with associations representing producers, processors and private-sector veterinarians (17), as this enables stakeholders to voice their opinions and increases their participation in animal health programmes.

### **A greater voice for the export sector**

There is extensive international trade in live aquatic animals, including eggs and gametes, and products.

Aquatic animals are traded for human consumption, as pets, for ornamental purposes, and for reproduction and farming. Concerns about the transfer of pathogens via this trade are based on real-life catastrophes, such as the introduction of necrotising hepatopancreatitis disease and Taura syndrome to North-East Africa with *Penaeus vannamei* broodstock from Mexico (5), and the introduction of Koi herpesvirus disease to Indonesia with ornamental cyprinids (8).

International trade in live aquatic animals, including eggs, is needed to support the expansion of the aquaculture sector. Development of the sector is often based on the introduction of non-native species and novel production systems. Disease risks are associated with the introduction of new host species and the exposure of these species to endemic disease agents. The international community is also increasingly concerned about the growing international trade in ornamental fish, involving both cultured and wild-caught species. This presents an important risk for the introduction of new diseases and invasive alien species other than disease agents (1). Driven by the concerns of industry and government, more countries are requiring official certification as to freedom from aquatic animal diseases, in addition to the well-established food safety certification requirements. Developing countries face barriers in exporting to high-value international markets because trading partners have concerns about governance issues (e.g. independence and transparency) and technical capacities (e.g. disease diagnosis) and are sceptical about the quality of certification provided by national Competent Authorities.

One consequence of this scepticism is the growth of private standards, which involves private organisations in exporting countries certifying compliance with the requirements of importers. Certification may address health and safety, environmental protection, social issues and ethical practices. Private standards present a particular challenge to small-scale farmers in poor countries (9).

The best way for developing countries to improve access to high-value international markets is to strengthen the governance and technical capacity of national Competent Authorities, as a basis for the provision of credible animal health and food safety certification. The export sector can be highly influential in demonstrating the economic arguments for this investment.

## The way forward

As part of its global support to its Members, the OIE has taken several steps to increase the focus on AAHS, including organising two global conferences – the first, in Bergen, Norway: ‘The OIE Global Conference on Aquatic

Animal Health’ (October 2006) and the second in Panama: ‘Aquatic Animal Health Programmes – Their Contribution to Food Security’ (June 2011). Both conferences identified the need for action to strengthen AAHS governance (3, 14).

Participants at the Panama conference endorsed the work of the OIE to date and provided a clear direction for the future (10). The Conference Resolution encourages the OIE to collaborate with governments and with relevant international and regional organisations, with the overall goal of strengthening AAHS and their governance, and national AAHP. In particular, the Resolution emphasises the need for:

- greater awareness of the importance of AAHP and disease reporting
- recognition of the role of veterinarians and aquatic animal health professionals and their educational needs, as appropriate
- investment in VS and AAHS as a global public good
- increased involvement of AAHS in the PVS Pathway and OIE twinning projects
- support for national Delegates and AAFP under their authority, to improve Members’ participation in the standard-setting process
- applied research relevant to AAHP, including research into aquatic animal feed, welfare, therapeutics and vaccines.

The Panama Conference Resolution also encourages OIE Member Countries:

- to request an OIE PVS Evaluation of their AAHS
- to improve compliance with OIE standards and guidelines
- to nominate national Focal Points for Aquatic Animals (if not already done)
- to provide resources to their OIE Reference Centres for aquatic animal diseases and to consider participating in the OIE Twinning Programme
- to support and encourage applied research on key questions related to AAHP
- to comply with the obligations of the World Trade Organization Sanitary and Phytosanitary Agreement, as appropriate.

Since the Panama conference, the OIE has continued to stress the importance of capacity-building and to provide support in this area to AAHS.

The OIE PVS Pathway for strengthening VS is well accepted by Member Countries and donors, with 102 PVS

Evaluation missions and 38 PVS Gap Analysis missions conducted to 6 June 2011. A PVS Evaluation enables OIE Members to assess the compliance of their VS (and AAHS) with the OIE standards. To date, relatively few OIE Members have requested an evaluation of their AAHS. This may reflect a view of national governments that AAHS are a lower priority than VS in terms of national growth and prosperity. It may also reflect the fact that international donors do not necessarily recognise the added value of good governance of AAHS; instead focusing their capacity-building efforts on trying to help producers deal with disease risks by improving biosecurity.

Based on some pilot missions the OIE has already identified some of the specificities of AAHS and has begun to develop a modified edition of the PVS Tool. The OIE has convened a new expert group (the *Ad hoc* Group on the Evaluation of AAHS) to work on this revised PVS Tool (Aquatic Animals), which will include indicators that more specifically relate to aquatic animal health services.

One of the most important developments is the proposal by the Aquatic Animals Commission of an official definition of 'aquatic animal health professional' in the *Aquatic Code*. In future, the OIE will propose minimum competencies for such professionals (i.e. the skills and knowledge they should have at the time of their graduation), similar to the established recommendations on the competencies graduating ('Day 1') veterinarians must have to enable them to fulfil the OIE mandate (18).

The Aquatic Animals Commission continues to update the standards in the *Aquatic Code*, with the notable addition, in 2011, of text on 'safe commodities', i.e. commodities for which no specific health measures are required regardless of the health status of the exporting country (note: this may be based on the product undergoing a specific treatment or processing for human consumption) (11). Standards for 'safe commodities' can help to reduce excessive and burdensome health certification. In all cases, AAHS should apply the standards in order to prevent the transmission of pathogens via international trade.

The OIE continues to encourage participation in the global Laboratory Twinning initiative (16), with the objective of extending scientific expertise to developing countries and encouraging participation in standard-setting. At the beginning of 2012, one twinning project on infectious salmon anaemia (Canada and Chile) had been approved and was under way and a new twinning agreement on epizootic ulcerative syndrome (Thailand–Zambia) had been approved and was due to commence.

The closer engagement of Member Countries on aquatic animal standards is encouraging. This is illustrated by the

increasing number of nominations for AAHP (160 at 1 May 2012, compared with 146 just after the Panama conference).

One of the most important short-term challenges for the OIE and national VS is to convince governments and donors of the relevance of following the OIE PVS Pathway to strengthen governance of AAHS. Veterinary Services must show that if these services are managed more effectively the aquaculture sector can make a major contribution to economic growth. Presentation of well-chosen case studies in appropriate fora could help to demonstrate that the lessons learned from the use of the PVS Tool in the terrestrial sector are also of relevance to the aquaculture sector. There is a need for closer collaboration to ensure that the activities and investments of international organisations, donors and national governments are all working together. This is even more pertinent for the aquatic animal sector, where the government authorities and stakeholders at national level are diverse and not as well 'joined up' as in the agriculture sector. The involvement of producers, and the export sector, is essential when working to convince governments and donors to invest in good governance.

Together with donors and governments, the OIE recommends that external funding and capacity-building projects should only be approved if the AAHS has undergone a PVS Evaluation (this is already the case for Veterinary Services).

## Conclusions

Sustainable development of the aquaculture sector, particularly in developing countries, depends on strengthening AAHS governance and improving the delivery of efficient AAHP. As discussed in this paper, the challenges to AAHS governance have been recognised for several years. These challenges can be addressed through use of the PVS Pathway and other OIE capacity-building initiatives in close collaboration with governments and donors. These challenges must be addressed if the growing global demand for food is to be met. New and emerging aquatic animal diseases and gaps in the scientific and technical capabilities of AAHS will continue to threaten sustainable aquaculture development. Investments to support the delivery of effective AAHP, including the modernisation of legislation in line with OIE recommendations, are needed to support sustainable and ethical aquaculture production.



## Les défis d'une bonne gouvernance dans le secteur de la santé des animaux aquatiques

S. Kahn, G. Mylrea & K. Bar Yaacov

### Résumé

La santé animale est un facteur déterminant de l'efficacité de la production animale et, partant, de la sécurité alimentaire et de la santé humaine. Ceci s'applique aussi bien aux animaux terrestres qu'aux animaux aquatiques. Bien que l'existence de partenariats entre les producteurs et les services gouvernementaux soit un préalable à l'efficacité des programmes de santé animale, nombre d'activités cruciales dans ce domaine sont conduites directement par les services gouvernementaux. Constatant la nécessité d'améliorer la gouvernance de ces Services dans de nombreux pays en développement, l'Organisation mondiale de la santé animale (OIE) a élaboré un Outil pour l'évaluation de la performance des Services vétérinaires (Outil PVS de l'OIE), grâce auquel les Services vétérinaires et les Services sanitaires chargés des animaux aquatiques (SSAA) peuvent se soumettre à une procédure d'évaluation visant à renforcer leur gouvernance et à soutenir une mise en œuvre plus efficace des programmes de santé animale.

Si les principes de la bonne gouvernance et les outils visant à l'améliorer sont globalement les mêmes dans le secteur des animaux aquatiques et celui des animaux terrestres, le secteur aquicole présente néanmoins des enjeux spécifiques qui ont une incidence sur la gouvernance des services dans ce domaine. Par exemple, le secteur de l'aquaculture connaît un essor rapide et s'intéresse à un nombre croissant d'espèces nouvelles ; les connaissances scientifiques sur les maladies des animaux aquatiques sont encore lacunaires ; il convient d'approfondir les connaissances sur les modes de production durables ; la profession vétérinaire est peu engagée dans le domaine de la santé des animaux aquatiques ; enfin, les qualifications et la formation des professionnels en charge de la santé des animaux aquatiques manquent d'homogénéité au niveau mondial.

La croissance de l'aquaculture peut être un moyen de lutter contre la pauvreté et la faim dans les pays en développement. Néanmoins, les maladies animales, l'impact négatif sur l'environnement et les risques en matière de sécurité sanitaire des aliments risquent d'entraver le développement du secteur. Le renforcement de la gouvernance des SSAA et des programmes de santé des animaux aquatiques est le meilleur moyen d'assurer la pérennité et le dynamisme futurs de l'aquaculture.

Les auteures examinent les enjeux spécifiques liés à la gouvernance des SSAA et présentent certaines initiatives conduites par l'OIE pour aider les Pays Membres à relever ces défis.

### Mots-clés

Bonne gouvernance – Processus PVS de l'OIE – Santé des animaux aquatiques.





## Dificultades del buen gobierno en el sector de la sanidad de los animales acuáticos

S. Kahn, G. Mylrea & K. Bar Yaacov

### Resumen

La sanidad animal es un elemento básico para una producción animal eficaz y, por ende, para la seguridad alimentaria y la salud humana, lo que se aplica a los animales tanto terrestres como acuáticos. Aunque la colaboración entre productores y servicios gubernamentales es vital para aplicar programas zoonosológicos eficaces, muchas de las actividades básicas corren directamente a cargo de los segundos. Consciente de la necesidad de mejorar los sistemas de gobierno de esos servicios en muchos países en desarrollo, la Organización Mundial de Sanidad Animal (OIE), valiéndose de la herramienta de la OIE para evaluar la eficacia de los Servicios Veterinarios (Herramienta PVS de la OIE), lleva a cabo evaluaciones de los servicios veterinarios y los servicios de sanidad de los animales acuáticos (SSAA) para ayudar a mejorar sus sistemas de gobierno y favorecer una ejecución más eficaz de los programas zoonosológicos. Aunque la idea de buen gobierno y las herramientas para mejorar la administración en el sector de los animales acuáticos reposan básicamente en los mismos principios que se aplican al sector de los animales terrestres, también hay ciertos problemas específicos del sector acuático que repercuten en la gestión de los servicios en este ámbito, por ejemplo: la industria de la acuicultura ha experimentado un rápido crecimiento, y el uso de nuevas especies va en aumento; hay importantes lagunas en el saber científico sobre enfermedades de los animales acuáticos; se requieren más datos sobre la producción sostenible; la profesión veterinaria interviene poco en la sanidad de los animales acuáticos; y la formación de los profesionales en sanidad de los animales acuáticos está poco normalizada.

El desarrollo de la acuicultura puede ser un medio para aliviar la pobreza y el hambre en los países en desarrollo. Sin embargo, las enfermedades de los animales, la negativa influencia de factores ambientales o los riesgos en materia de inocuidad de los alimentos amenazan con lastrar este desarrollo. Reforzar los sistemas de gobierno de los SSAA y, en consecuencia, los programas en la materia, es el mejor medio para dotarse en el futuro de un sector acuícola dinámico y sostenible.

Las autoras examinan los problemas específicos que plantea el buen gobierno de los servicios de sanidad de los animales acuáticos, así como algunas iniciativas de la OIE para ayudar a los Países Miembros a resolverlos.

### Palabras clave

Buen gobierno – Procedimiento PVS de la OIE – Sanidad de los animales acuáticos.



## References

1. Convention on Biological Diversity (CBD) (2006). – Decision VIII/27: 8th Ordinary Meeting of the Conference of the Parties to the Convention on Biological Diversity, 20–31 March, Curitiba, Brazil. Available at: [www.cbd.int/decision/cop/?id=11041](http://www.cbd.int/decision/cop/?id=11041) (accessed on 16 February 2012).
2. Corsin F, Giorgetti G. & Mohan C.V. (2007). – Contribution of science to farm-level aquatic animal health management. *In Proc. OIE Global Conference on Aquatic Animal Health*, 9–12 October, Bergen, Norway (B. Dodet & the OIE Scientific and Technical Department, eds). *Dev. Biol. (Basel)*, **129**, 35–40.
3. Dodet B. & the OIE Scientific & Technical Department (eds) (2007). – The OIE Global Conference on Aquatic Animal Health, 9–12 October, Bergen, Norway. *Dev. Biol. (Basel)*, **129**.
4. Hill B. (2011). – OIE Aquatic Animal Health Standards. *In Proc. OIE Global Conference on Aquatic Animal Health Programmes: their benefits for global food security*, 28–30 June, Panama. World Organisation for Animal Health (OIE), Paris. Available at [www.oie.int/eng/A\\_aquatic/en\\_presentations.htm](http://www.oie.int/eng/A_aquatic/en_presentations.htm) (accessed on 16 February 2012).
5. Lightner D. (2011). – Global health issues: crustaceans. *In Proc. OIE Global Conference on Aquatic Animal Health Programmes: their benefits for global food security*, 28–30 June, Panama. World Organisation for Animal Health (OIE), Paris. Available at: [www.oie.int/eng/A\\_aquatic/en\\_presentations.htm](http://www.oie.int/eng/A_aquatic/en_presentations.htm) (accessed on 16 February 2012).
6. Mohan C.V. (2011). – Aquaculture and aquatic animal health management issues in the Asia-Pacific region. *In Proc. OIE Global Conference on Aquatic Animal Health Programmes: their benefits for global food security*, 28–30 June, Panama. Available at [www.oie.int/eng/A\\_aquatic/Docs/Abstracts/Mohan.pdf](http://www.oie.int/eng/A_aquatic/Docs/Abstracts/Mohan.pdf) (accessed on 16 February 2012).
7. Msellati L. (2012). – Appendix: Guidance note for authors. *In Good governance and financing of efficient Veterinary Services* (L. Msellati, ed.). *Rev. sci. tech. Off. int. Epiz.*, **31** (2), 709–712.
8. Sunarto A., Taukhid B., Rukyani A., Koeshayani I., Supriyadi H., Gardenia L., Huminto H., Agungpriyono D.R., Pasaribu F.H., Widodo A., Herdikiawan D., Rukmono D. & Prayitno S.B. (2005). – Field investigations on a serious disease outbreak among koi and common carp (*Cyprinus carpio*) in Indonesia. *In Proc. 5th Symposium on Diseases in Asian Aquaculture* (P.J. Walker, R.G. Lester & M.G. Bondad-Reantaso, eds). Fish Health Section of the Asian Fisheries Society, Manila, 125–136.
9. Wolff C. & Scannell M. (2008). – Implication of private standards in international trade of animals and animal products. Technical Item presented at the OIE General Session, 25–30 May, Paris. World Organisation for Animal Health (OIE), Paris. Available at: [www.oie.int/fileadmin/Home/eng/International\\_Standard\\_Setting/docs/pdf/A\\_private\\_20standards.pdf](http://www.oie.int/fileadmin/Home/eng/International_Standard_Setting/docs/pdf/A_private_20standards.pdf) (accessed on 16 February 2012).
10. World Organisation for Animal Health (OIE) (2010). – OIE Annual Report. OIE, Paris. Available at: [www.oie.int/fileadmin/Home/eng/Media\\_Center/docs/pdf/Key\\_Documents/RAPPORT-FINAL-EN.pdf](http://www.oie.int/fileadmin/Home/eng/Media_Center/docs/pdf/Key_Documents/RAPPORT-FINAL-EN.pdf) (accessed on 16 February 2012).
11. World Organisation for Animal Health (OIE) (2011). – Aquatic Animal Health Code, 14th Ed. OIE, Paris. Available at: [www.oie.int/en/international-standard-setting/aquatic-code/](http://www.oie.int/en/international-standard-setting/aquatic-code/) (accessed on 16 February 2012).
12. World Organisation for Animal Health (OIE) (2011). – Chapter 3.2. Evaluation of Veterinary Services. *In Terrestrial Animal Health Code*, 20th Ed. OIE, Paris, 77–95. Available at: [www.oie.int/index.php?id=169&L=0&htmfile=chapitre\\_1.3.2.htm](http://www.oie.int/index.php?id=169&L=0&htmfile=chapitre_1.3.2.htm) (accessed on 16 February 2012).
13. World Organisation for Animal Health (OIE) (2011). – List of OIE Reference Laboratories. OIE, Paris. Available at: [www.oie.int/en/our-scientific-expertise/reference-laboratories/list-of-laboratories/](http://www.oie.int/en/our-scientific-expertise/reference-laboratories/list-of-laboratories/) (accessed on 16 February 2012).
14. World Organisation for Animal Health (OIE) (2011). – Panama Declaration. *In Proc. OIE Global Conference on Aquatic Animal Health Programmes: their benefits for global food security*, 28–30 June, Panama. OIE, Paris. Available at: [www.oie.int/fileadmin/Home/eng/Conferences\\_Events/docs/pdf/recommendations/A\\_Declaration.pdf](http://www.oie.int/fileadmin/Home/eng/Conferences_Events/docs/pdf/recommendations/A_Declaration.pdf) (accessed on 16 February 2012).
15. World Organisation for Animal Health (OIE) (2012). – Aquatic Animal Commission & Reports. OIE, Paris. Available at: [www.oie.int/en/international-standard-setting/specialists-commissions-groups/aquatic-animal-commission-reports/](http://www.oie.int/en/international-standard-setting/specialists-commissions-groups/aquatic-animal-commission-reports/) (accessed on 16 February 2012).
16. World Organisation for Animal Health (OIE) (2012). – Laboratory Twinning. OIE, Paris. Available at: [www.oie.int/en/support-to-oie-members/laboratory-twinning/](http://www.oie.int/en/support-to-oie-members/laboratory-twinning/) (accessed on 16 February 2012).
17. World Organisation for Animal Health (OIE) (2012). – OIE Tool for the Evaluation of Performance of Veterinary Services. OIE, Paris. Available at: [www.oie.int/en/support-to-oie-members/pvs-evaluations/oie-pvs-tool/](http://www.oie.int/en/support-to-oie-members/pvs-evaluations/oie-pvs-tool/) (accessed on 16 February 2012).
18. World Organisation for Animal Health (OIE) (2012). – Veterinary education. Available at: [www.oie.int/en/support-to-oie-members/veterinary-education/](http://www.oie.int/en/support-to-oie-members/veterinary-education/) (accessed on 16 February 2012).