

**SHARING RESPONSIBILITIES TO ADDRESS HEALTH RISKS
AT THE ANIMAL-HUMAN-ECOSYSTEMS INTERFACES:
NATIONAL AND INTERNATIONAL EXPERIENCES AND ROLES IN PREVIOUS
AND FUTURE DEVELOPMENTS IN THE 'ONE HEALTH' APPROACH**

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Summary: The current concept of “One Health” builds upon the understanding that the health of humans and animals is interlinked and that both populations affect and are affected by the environment in which they co-exist. One Health is not a new science or a new area of work, but One Health has gained momentum in the recent years, particularly in highlighting the value in taking an intersectoral collaborative approach to the prevention, detection, and control of endemic and epidemic diseases among animals and humans. A majority of emerging human diseases have their origins in animals, and emerging, re-emerging, and endemic diseases of animals can have additional implications for human health through food security and safety. Control of these diseases at the animal source will have the greatest benefit for human and animal populations. Therefore, Veterinary Services are fundamental partners in efforts to combat these diseases, and often will achieve the greatest impact when effectively collaborating with other partners on these issues.

The responses from the questionnaires sent to the OIE Delegates of the 178 Member Countries indicate that most Veterinary Services place a high priority on taking One Health approaches for many topics relevant to the animal-human-ecosystem interface, reporting frequent collaboration with relevant national Ministries. To varying degrees, national Veterinary Services are involved in intersectoral joint programmes, some of which are supported by national legislation or by joint funding across the involved Ministries. Delegates did, however, identify barriers to effective implementation of One Health approaches in their countries. The lack of resources was cited by many, including both financial and human resources. An additional barrier was the capacity of the Veterinary Services to develop and implement programmes with partners of different sectors. The provision of capacity building to overcome these barriers was one of the most commonly expressed needs by Delegates to the OIE, including in collaboration with FAO and WHO. This capacity building must be paired with advocacy for taking One Health approaches to gain support from policy makers that provide priorities and funding to the Veterinary Services and to engage other Ministries and partners necessary for implementation of these programmes. A vast majority of countries see a key role for the OIE to play in the area of One Health. At the global level, OIE standards and guidance should provide support for Member Countries to implement One Health approaches, and to be of maximum benefit to Member Countries, OIE standards and guidance for Veterinary Standards should be harmonized with those of key partners in implementing One Health approaches.

1. Introduction

The current concept of “One Health” builds upon the centuries-old understanding that the health of humans and animals is interlinked, and that both populations affect and are affected by the environment in which they co-exist. One Health has gained momentum in the recent years, particularly in highlighting the value in taking an intersectoral collaborative approach to the prevention, detection, and control of endemic and epidemic diseases among animals and humans. The OIE, in fulfillment of its overall mandate to improve animal health, veterinary public health and animal welfare world-wide, has several areas of activity that benefit from a One Health approach. In particular, activities that contribute to the prevention and control of animal diseases transmissible to humans (zoonoses) and to improved animal production food safety measures will lead to reduced risks from infectious diseases at the animal–human–ecosystems interface. The OIE is recognized by the World Trade Organization through the Agreement on the Application of Sanitary and Phytosanitary Measures (SPS Agreement) as the international standard setting organisation for animal health. This mandates the OIE to provide standards and guidance in the control of animal diseases, including zoonoses.

In the OIE Fifth Strategic Plan (2011-2015), approved by Member Countries in May 2010, one of the new major elements introduced is the application of the One Health concept for the reduction of risks of high impact diseases at the animal-human-ecosystems interface. In the Programme of Work 2011-2013 in support of the implementation of the Fifth Strategic Plan, the main contribution of the OIE to One Health issues is achieved through the prevention, control and eradication of animal diseases, including zoonoses. It was recognized in the Strategic Plan that maximally adopting such an approach will require enhancement of work in certain non-traditional areas for the national Veterinary Services (VS), such as infectious diseases in wildlife, working animals, competition and companion animals, in addition to food-producing animals – while building upon the existing direct contribution of VS to public health such as food safety and zoonotic disease control.

In this context, and considering the commitment of the OIE to taking a One Health approach, a questionnaire was distributed to all national Delegates on the subject of *Sharing Responsibilities to Address Health Risks at The Animal-Human-Ecosystems Interfaces: National and international experiences and roles in previous and future developments in the ‘One Health’ approach*.

2. Questionnaire

A questionnaire made up of 12 questions (including multiple embedded questions) was distributed to 178 OIE Delegates in the three official languages of the OIE (English, French, and Spanish) on 2 November 2011 with a request to reply by 27 December 2011. Questionnaires submitted by 27 January 2012 were included in the analysis.

For the purpose of this questionnaire, the concept or practice of “One Health” was defined as the intersectoral collaborative approach to preventing, detecting, and controlling diseases among animals and humans, including the collaboration among the institutions and systems that support their prevention, detection and control. The questions addressed various aspects of One Health approaches and the related needs of national VS. A series of questions was posed to the Delegates to describe their collaboration with relevant partners working in their country. Delegates were asked to indicate the Ministry in which the VS was located and then to indicate whether the VS collaborated with other Ministries, the frequency of this collaboration, and whether VS or the other entity generally initiated the collaborative activities. Delegates were asked the same series of questions regarding collaborations with other non-governmental and international partners, including the OIE.

Delegates were presented with a series of topics (e.g., food safety or antimicrobial resistance) and diseases (e.g., rabies or avian influenza) or groups of diseases (e.g., zoonoses) for which One Health approaches may be considered in countries, and were asked to indicate the level of priority for each topic that the Central Veterinary Authority placed on taking a One Health approach in their country.

The questionnaire also requested information on the political and policy situation in OIE Member countries for One Health, including the existence of One Health policy documents, joint programmes, whether such joint programmes were incorporated into national legislation and whether there was budget sharing among Ministries in support of these programmes.

Finally, Delegates were asked to identify key challenges to the VS implementing One Health in their country, indicate available education or training opportunities targeting OH issues, and propose capacity building or other support they would request from the OIE alone or in cooperation with other partners.

3. Responses from Member Countries

For the analysis of the data contained within the questionnaires, Member Countries were assigned to only one region, leading to the following distribution of Countries per OIE region: Africa (52), Americas (29), Asia and the Pacific (32), Europe (53), and the Middle East (12). Of 178 OIE Member Countries, 114 submitted questionnaires within the requested time period that were then included in the analysis, representing a 63.5% completion rate. There was variation in the completion rate of the questionnaire by OIE region, ranging from 40 of 53 Member Countries (75.5%) from the European region to 16 of 29 Members (55.2%) from the Americas region. A full list of countries submitting questionnaires can be found below:

Afghanistan, Algeria, Argentina, Armenia, Australia, Austria, Azerbaijan, Bangladesh, Belgium, Benin, Bhutan, Bolivia, Bosnia and Herzegovina, Botswana, Brazil, Bulgaria, Burundi, Canada, Cape Verde, China (People's Rep. of), Colombia, Comoros, Congo, Costa Rica, Croatia, Cuba, Cyprus, Czech Republic, Denmark, Dominican (Rep.), Ecuador, Egypt, Eritrea, Estonia, Finland, France, Gabon, Georgia, Germany, Ghana, Greece, Guatemala, Guinea Bissau, Hungary, Iceland, Iraq, Ireland, Italy, Japan, Kenya, Kuwait, Latvia, Lesotho, Lithuania, Luxembourg, Madagascar, Malawi, Malaysia, Maldives, Malta, Mauritania, Mauritius, Mexico, Micronesia (Federated States of), Moldova, Morocco, Mozambique, Myanmar, Namibia, Netherlands, New Caledonia, New Zealand, Nicaragua, Nigeria, Norway, Pakistan, Panama, Peru, Philippines, Poland, Portugal, Romania, Rwanda, San Marino, Saudi Arabia, Senegal, Seychelles, Singapore, Slovakia, Slovenia, Spain, Sudan, Swaziland, Sweden, Switzerland, Syria, Taipei Chinese, Tanzania, Thailand, Togo, Tunisia, Turkey, Uganda, Ukraine, United Arab Emirates, United Kingdom, United States of America, Uruguay, Uzbekistan, Vanuatu, Vietnam, Yemen, Zambia, Zimbabwe

When examining particular diseases and the priority that Delegates assigned to each for taking a One Health approach by the VS in his or her country, general zoonoses received the highest average score of 4.6 out of a possible ranking of 1 to 5 (Table 1). Rabies and avian influenza were also high priority for One Health; both had an average score of 4.4. In contrast, disease of bees and the viral hemorrhagic fevers (Rift Valley fever and other viral hemorrhagic fevers) were considered as the lowest average priority by national VS for taking a One Health approach among the diseases included in the questionnaire. This prioritization, however, could be affected both by the overall One Health relevance of a given disease and also by whether that disease is considered as important in a given country. For example, while Rift Valley Fever was considered as relatively low priority as compared with other diseases globally, it received a higher average priority score in Africa and the Middle East (a major trading partner with Africa) when examined by region.

When examining broader topics or programmes of the VS (Table 1), the area seen as the highest priority for taking a One Health approach by national VS was food safety (average priority=4.6), followed by disease reporting and emerging diseases (average scores 4.6 and 4.5, respectively). In contrast, the areas considered of lowest priority for One Health were land use changes associated with animal productions, biodiversity of wild animal populations, and climate change.

Of the 114 countries, 100 replied that the national VS was involved in joint national programmes with intersectoral partners. Among these countries, information on 233 specific programmes was provided, where each country could list up to three different joint programmes in which they were involved. When examining the 233 programmes mentioned, the joint programmes could be grouped into larger categories. The most commonly mentioned topics fell into the following categories: influenza, including pandemic preparedness and avian influenza programmes; rabies, including dog population control; zoonoses, including intersectoral working groups on zoonotic diseases and other human-animal interface issues; food safety and foodborne diseases; and brucellosis and tuberculosis. Other joint programmes mentioned by several countries included: antimicrobial resistance, wildlife and wildlife disease surveillance, education and training, foot and mouth disease, and emerging diseases from animals.

Table 1. Average ranking of disease areas and topics by the priority which One Health approaches may be considered by the VS in countries (where a ranking of 1 = very low priority and a ranking of 5 = very high priority)

Region	Africa	Americas	Asia and the Pacific	Europe	Middle East	All countries
Disease areas						
Zoonoses	4,58	4,40	4,61	4,80	3,86	4,59
Rabies	4,67	4,60	4,17	4,40	3,29	4,40
Avian influenza	4,45	4,67	4,50	4,13	4,14	4,35
Brucellosis	4,24	4,73	3,83	4,20	3,86	4,20
FMD	4,22	4,43	3,94	4,18	4,29	4,19
Bovine tuberculosis	4,33	4,73	3,89	4,15	3,29	4,19
Vector-borne diseases	4,34	4,13	3,72	4,00	3,71	4,05
Peste des petits ruminants	3,91	2,23	2,83	2,87	4,00	3,17
Rift Valley fever	3,79	2,69	2,28	2,77	3,43	3,03
West Nile Fever	2,84	3,20	2,56	3,41	2,57	3,03
Other viral hemorrhagic fevers	3,32	2,31	2,61	2,85	2,29	2,84
Diseases of bees	2,45	3,20	2,28	3,35	2,43	2,84
Topic						
Food safety	4,52	4,73	4,44	4,73	4,29	4,59
Diseases reporting	4,52	4,93	4,44	4,55	4,43	4,57
Emerging diseases	4,52	4,60	4,22	4,58	4,57	4,50
Surveillance / early warning	4,48	4,80	4,17	4,58	3,86	4,47
Border posts	4,52	4,67	4,33	4,26	4,71	4,43
International Cooperation	4,33	4,53	4,17	4,35	3,86	4,31
Laboratory diagnostics/technology	4,12	4,73	4,17	4,18	4,29	4,24
Biosafety	4,03	4,40	4,28	4,33	3,71	4,20
Food security	4,45	4,60	3,83	4,03	4,14	4,20
Professional training	4,27	4,13	3,72	4,10	3,86	4,08
Trade	3,97	4,40	3,50	4,28	4,14	4,07
AMR	3,78	3,60	3,22	4,10	3,29	3,75
Research	3,61	3,53	3,67	3,85	2,71	3,64
Companion	3,36	3,13	3,39	3,53	3,14	3,38
Climate	3,61	3,47	3,22	3,25	3,00	3,36
Biodiversity	3,33	3,20	2,78	2,93	2,57	3,04
LandUse	3,12	2,93	2,72	2,60	2,86	2,83

Of the 100 countries in which the VS does participate in joint intersectoral national programmes, these programmes are variably included in national legislation; only 33% mentioned that all programmes were supported by legislation and 42% stated some programmes were in legislation. For 25% of countries, joint programmes were not included in national legislation. Among the 100 countries, 55% of the joint programmes also involved budget sharing among the involved Ministries, while the balance either had no budget sharing (38%) or the information was not known.

Of the 114 responding Delegates, 103 provided their perception regarding at least one of the greatest barriers to implementing One Health, with a total of 220 barriers provided. These barriers could be grouped into a series of categories and these categories into overarching themes. The most frequently mentioned theme was a lack of resources; 80 Delegates responded that the lack of resources was a major barrier, citing most commonly budget or financial resources (n=47), but also human resources (n=23), or simply resources in general (n=10). In order of mention, answers fell into five other main themes: the recognition that collaboration is a complex and at times difficult process (n=47), inadequate capacity within the VS (n=45), a lack of adequate legislation, policy or guidance (n=22), a lack of political will or support for One Health activities (n=10), or technical or other challenges (n=10). A small number of barriers identified (n=6) could not be clearly categorized based on the information provided.

Most Delegates (80 of 114, or 71% of those responding) reported that there were educational opportunities in their country for veterinarians and veterinary para-professionals to advance technical knowledge and capacity on One Health approaches. Among these 80 countries, 42 (53%) reported that mandatory coursework was available, 38 (48%) reported optional coursework was available, 54 (68%) stated other graduate coursework was offered, and 56 (70%) stated that continuing education was available on One Health approaches.

Almost all countries, 100 of 114 responding or 88%, stated that the national VS needed more technical capacity building on One Health approaches. When asked to indicate which types of capacity building initiatives the Delegate may request, the most frequently cited response (91% of respondents) was joint training workshops on intersectoral collaboration for relevant topics (e.g., laboratory methods, surveillance for zoonotic diseases, intersectoral contingency planning). In addition, 85% would request assistance to improve the governance of VS to develop and implement One Health approaches, 68% would request an intersectoral evaluation or assessment focused on One Health approaches, 62% would request an intersectoral post-evaluation analysis of weaknesses and of the cost of the investments needed, focused on One Health approaches, and 56% would request an OIE PVS Pathway mission focused on One Health approaches as part of activities of the Veterinary Services.

When Delegates stated what assistance they would expect from the OIE or what assistance they would ask of the OIE in collaboration with other partners (especially the Food and Agriculture Organization of the United Nations [FAO] and the World Health Organization [WHO]), responses were clearly linked to the barriers and needs identified. Not surprisingly, capacity building was among the most common reply. Frequently, this capacity building addressed general methods to implement One Health approaches (e.g., governance and legislation) or training on specific intersectoral activities (e.g., joint surveillance or risk analysis). Member countries also look to the OIE to provide guidance and standards related to intersectoral collaboration at the country level, including guidance developed collaboratively with human health and other partners. Some Delegates particularly mentioned their desire to see the OIE continue working with FAO and WHO to advance One Health at the international level and to see the concepts in the Tripartite Concept Note extended to the regional and national level.

4. Discussion

The OIE has made a strong commitment to improving the implementation of One Health approaches to reduce the health risks at the animal-human interface. This commitment was first concretely expressed in the 2008 document “Contributing to One World, One Health: A Strategic Framework for Reducing Risks of Infectious Diseases at the Animal–Human–Ecosystems Interface¹”, jointly prepared by FAO, OIE, WHO, UNICEF, the United Nation System Influenza Coordination, and the World Bank. The strategy outlined in this document was to build upon the investments made to combat avian influenza and transition to a broader approach to improve the global ability to fight diseases at the human-animal-ecosystems interface, leading to overall improved pandemic preparedness. Building upon this Strategic Framework in its ongoing approach to One Health, the OIE has focused on a few key principles: competent Veterinary Services functioning under a system of good governance is a global public good and the best way to prevent and control animal diseases,

¹. FAO, OIE, WHO, UNICEF, UNSIC, World Bank. Contributing to One World, One Health: A Strategic Framework for Reducing Risks of Infectious Diseases at the Animal–Human–Ecosystems Interface. Interministerial Conference on Avian and Pandemic Influenza, Sharm El-Sheik, Egypt. 14 October 2008. Available at http://un-influenza.org/files/OWOH_14Oct08.pdf. Last accessed: 10 March 2012.

including zoonoses; the most effective and efficient method to control emerging zoonotic diseases is to control them at their animal source; and it is inherent in the responsibilities of national VS to contribute to the protection of public health through the protection and promotion of animal health.

The OIE, in its ongoing collaboration with the other international organizations sharing responsibility for animal and human health (FAO and WHO), continues to expand upon and specify the concepts outlined in the Strategic Framework. The areas on which the three organisations collaborate were further described in a joint statement referred to as the 2010 Tripartite Concept Note², “Sharing responsibilities and coordinating global activities to address health risks at the animal-human-ecosystems interface”. In this context, taking a One Health approach is intended to indicate an intersectoral collaborative approach to preventing, detecting, and controlling diseases that occur among animals and humans, through cooperation and coordination of the institutions and systems that support their prevention, detection and control.

The importance of the collaboration among the OIE, FAO and WHO has been further supported in a recent statement from the Ministers of Agriculture. In the ministerial declaration *Action plan on food price volatility and agriculture*, during the G20 Meeting taking place in Paris, 22 and 23 June 2011, the Ministers declared³: “As far as public health, animal health and plant health are concerned, we stress the importance of strengthening international and regional networks, international standard setting taking into account national and regional differences, information, surveillance and traceability systems, good governance and official services, since they ensure an early detection and a rapid response to biological threats, facilitate trade flows and contribute to global food security. We encourage international organizations, especially FAO, WHO, OIE, the Codex Alimentarius Commission (Codex), the International Plant Protection Convention (IPPC) and WTO to continue their efforts towards enhancing interagency cooperation.”

The global perspective provided by the OIE national Delegates collected in support of this Technical Item provides an extremely useful picture both of how and when One Health approaches are thought to be useful, and sheds light on the manner in which the Delegates and the national VS expect the OIE to provide guidance and assistance relative to One Health. There was support that the OIE should continue much of the work that is underway in its “One Health” approach, particularly the OIE activities that assist countries, such as developing standards and guidance and providing regional and country level capacity building. Member Countries also expect the OIE to continue collaborating at the international level with key partners such as FAO and WHO – to advocate for One Health globally, to further develop the principles of the Tripartite Concept Note, and to lead by example in implementing One Health approaches.

There was general agreement among Member Countries regarding issues where One Health approaches were a priority for the VS of their country. Diseases such as rabies and other zoonoses were priority areas, as were topics such as food safety and disease reporting. A global effort to control and ultimately eliminate canine rabies can serve as the model issue for which One Health collaborative approaches are not only beneficial for effective programmes, but necessary. It is estimated that at least 55 000 people die of rabies each year in Africa and Asia alone and some 14 million people receive post-exposure prophylaxis⁴ leading to a global annual cost of more than US \$ 1 billion. Globally, the main reservoir of rabies is the dog, responsible for almost 99% of fatal rabies cases in humans through bites or scratches. The control and elimination of rabies in dogs through vaccination and dog population control remains the most cost-effective single intervention to protect humans from contracting the disease. In spite of the availability of effective tools to control canine rabies, however, the success of the implementation of national rabies control programmes remains dependent on good governance of Veterinary Services, political commitment, community participation, and adequate

² FAO, OIE, WHO. The FAO-OIE-WHO Collaboration. Sharing responsibilities and coordinating global activities to address health risks at the animal-human-ecosystems interfaces. A Tripartite Concept Note. April 2010. Available at: http://www.oie.int/fileadmin/Home/eng/Current_Scientific_Issues/docs/pdf/FINAL_CONCEPT_NOTE_Hanoi.pdf. Last accessed 26 March 2011.

³ Declaration of the G20 Ministers of Agriculture “*Action plan on food price volatility and agriculture*”, G20 Meeting, Paris France, 22-23 June 2011. Available at: http://agriculture.gouv.fr/IMG/pdf/2011-06-23-Action_Plan_-_VFinale.pdf. Last accessed 22 February 2012.

⁴ Lembo T, Atllan M, Bourhy H, Cleaveland S, Costa P, de Balogh K, Dodet B, Fooks AR, Hiby E, Leanes F, Meslin FX, Miranda ME, Müller T, Nel LH, Rupprecht CE, Tordo N, Tumpey A, Wandeler A, Briggs DJ. Renewed global partnerships and redesigned roadmaps for rabies prevention and control. *Vet Med Int*. Volume 2011 (2011), Article ID 923149, 18 pages.

financial resources at the global, regional, national and local levels. The OIE can serve a critical role in advancing the global effort to eliminate canine rabies, advocating along with international partners to mobilize financial and political support for this effort and providing standards, guidance and technical support to national VS to actively combat this disease.

Delegates did, however, identify challenges to implementing One Health. The lack of resources was an important issue, both financial and human resources. Many Delegates identified the need to improve the capacity within the VS on many aspects of One Health and methods to practically approach or improve intersectoral collaboration. In the Fifth Strategic Plan, the OIE outlined that attention would be paid to One Health issues, combined with training and capacity building, and strengthening the skills of and providing information to OIE Delegates and national focal points. The opinion of the Delegates as captured in this survey shows strong continued support for this direction of work by the OIE. The OIE should examine components of capacity building efforts in place, such as training for new OIE Delegates and for national focal points, and assess how capacity building for One Health could be improved within these efforts. The OIE should also continue and enhance work at global and regional levels with intersectoral partners to increase opportunities for joint, or at a minimum harmonized, capacity building for the areas identified as important by Delegates.

Delegates recognize the benefit of taking a One Health approach in relevant situations, but also see a strong need for advocacy and the need to increase awareness regarding One Health. Such advocacy and awareness building would improve the political support from within their Ministries, mobilize resources within countries and from regional and international partners to support One Health programmes, and enhance the ability to build effective partnerships to implement One Health. The OIE must play a leadership role in this area.

The OIE has provided venues to advance the understanding of the science of work at the animal-human interface, such as through the joint FAO-OIE-WHO Scientific Consultation on Influenza and other Zoonotic Diseases⁵. The OIE has also advanced the science and standards of One Health issues, enlisting the participation of Member countries, such as through the OIE Global Conferences on Rabies Control and on Wildlife Animal Health and Biodiversity, both held in 2011. The OIE, with partners, should act upon recommendations from these global meetings. The OIE has committed to continue providing a global forum to make progress on key issues, such as during the OIE Global Conference on the Prudent Use of Antimicrobial Agents for Animals scheduled to take place in 2013.

The OIE's ability to provide such guidance and technical assistance to Member Countries is also linked to the dissemination of methods and approaches that have been developed with intersectoral partners. The OIE has collaborated with FAO, WHO, and other key partners to identify successful examples and feasible methods to implement One Health from an operational perspective. In 2011, the OIE, in collaboration with FAO, WHO and the Government of Mexico, convened a high-level technical consultation on reducing the risk of health risks as the human-animal-ecosystem interface, specifically intended to translate the principles laid out in the Tripartite Concept Note into national and regional actions, and to identify successful national and regional level programmes that could be implemented more broadly. The findings of this meeting⁶ should be acted upon by the OIE in collaboration with its partners to continue the advancement of One Health approaches at national and regional levels, implementing first the priority subjects identified (rabies, antimicrobial resistance, and zoonotic influenza).

In addition to citing the need for capacity building on One Health issues, Delegates also identified the need for fundamental capacity building for the VS addressing broader issues including good governance. This highlights an important consideration as the OIE continues to advance its One Health efforts; the ability for VS to collaborate with intersectoral partners is dependent on a certain level of overall capacity within the VS. Thus, the OIE efforts to improve and advance One Health efforts must continue to go hand-in-hand with efforts to improve the competency of national VS through the PVS Pathway and other mechanisms. The lack of appropriate legislation to support VS and facilitate national One Health approaches was identified as a

⁵ FAO/OIE/WHO Joint Scientific Consultation Writing Committee. 2011. Influenza and other emerging zoonotic diseases at the human-animal interface. Proceedings of the FAO/OIE/WHO Joint Scientific Consultation, 27-29 April 2010, Verona (Italy). FAO Animal Production and Health Proceedings, No. 13. Rome, Italy.

⁶ Preliminary Summary High Level Technical Meeting to Address Health Risks at the Human-Animal-Ecosystems Interfaces, November 15-17, Mexico City, Mexico. Available at: www.oie.int. Last accessed: 15 February 2012.

barrier by several Delegates and an area they wish the OIE to provide assistance. Competent national VS functioning working under a system of good governance supported by enabling legislation will be best suited to continue to provide the front-line services directed at reducing the health risks at the animal–human–ecosystems interface, as they fulfill their responsibility for the health of the animals at the source of such diseases, including zoonoses and food-borne diseases.

The OIE should continue the ongoing implementation of the existing steps within the PVS Pathway to increase the compliance of national VS with the OIE international standards, and should also continue to actively conduct pilot missions of the OIE PVS One Health Evaluation when requested by Member Countries. These missions allow a deeper assessment of the activities of the VS with a focus on the collaboration with various partners to maximally comply with the international standards related to issues at the animal-human interface, particularly those activities most directly linked with public health outcomes; more than half of Delegates showed interest in requesting this type of technical assistance. Delegates showed even stronger interest in assessment or gap analysis missions that would be conducted as joint, intersectoral exercises. This expressed need is consistent with the growing collaboration between the OIE and WHO in the area of governance. Although the public health sector currently does not have official international standards at this time comparable to the OIE *Terrestrial and Aquatic Animal Health Codes* nor assessment tools comparable to the OIE PVS, the International Health Regulations (IHR) established by WHO with Member States lay out a framework for countries to conduct a self-assessment of their competency to conduct public health activities according to a series of core capacities⁷. The OIE PVS Pathway and the WHO IHR implementation framework include areas of potential overlap, particularly related to zoonoses. Thus, the OIE should continue working with WHO to harmonizing the approaches to these areas of overlap such that countries can best use the outcomes to identify critical areas for capacity building, such as joint epidemiological surveillance and multisectoral risk analysis, and to make decisions about optimally improving national programmes that involve multiple sectors and achieve synergy.

Delegates support the OIE One Health efforts to develop surveillance capacity, including the development of tools and monitoring processes for use at national, regional and global levels. This capacity building should address not only the collection of quality animal health surveillance data through sound epidemiological surveillance methods, but also methods by which these data can be used effectively at the national level to support intersectoral programmes that incorporate coordinated human and animal surveillance data. At the global level, the OIE should continue monitoring the animal health situation through the World Animal Health Information System and the occurrence of priority diseases through the joint FAO, OIE, WHO Global Early Warning System (GLEWS), a system that should continue the process of ongoing refinement and improvement of its function and scope.

The concept of One Health is not new, but One Health approaches are becoming more necessary than has been the case for decades. Humans and animals have been living together for the history of our respective species, but perhaps never before in such high concentration, with such unrestricted global movement, and with an ever increasing demand and competition for space and resources. The OIE must play a leadership in promoting the important role of VS in reducing the health risks at the animal-human-ecosystem interface by preventing and controlling animal diseases including zoonoses, contributing to food production to feed the human population.

⁷ International health regulations (2005) -- 2nd ed. World Health Organization 2008.

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