



**WORLD ORGANISATION FOR ANIMAL HEALTH**

*Protecting animals, preserving our future*

**31st Conference of the OIE Regional Commission for  
Asia, the Far East and Oceania  
Sendai, Japan, 2- 6 September 2019**

**WORKING DOCUMENT**

**WORLD ORGANISATION FOR ANIMAL HEALTH**

Organisation mondiale de la santé animale, Organización mundial de sanidad animal  
12 rue de Prony, 75017 Paris, France - Tel: 33 (0)1 44 15 18 88 - Fax: 33 (0)1 42 67 09 87 - [oie@oie.int](mailto:oie@oie.int)



**31st Conference of the OIE Regional Commission for Asia, the Far East and Oceania**  
Sendai, Japan, 2- 6 September 2019

	<b>Page</b>
Provisional Agenda .....	1
Provisional Programme.....	3
TECHNICAL ITEM I (with questionnaire): Zoonosis and food safety - improving collaboration between animal and public health professionals to achieve a better outcome	
<u>Comprehensive report</u> : Dr Norikazu Isoda, Specially Appointed Associate Professor, Unit of Risk Assessment and Management, Research Center for Zoonosis Control, Hokkaido University, Japan.....	7
Analysis of the Animal Health Situation in Members in the Region in 2018 and the first half of 2019.....	23



**31st Conference of the OIE Regional Commission for Asia, the Far East and Oceania**  
Sendai, Japan, 2- 6 September 2019

**PROVISIONAL AGENDA**

1. The role of the OIE in supporting the Sustainable Development Goals: developing and improving collaborative partnerships
2. Regional Work Plan Framework 2016-2020: state of play and challenges
3. Technical Item I: Zoonosis and food safety - improving collaboration between animal and public health professionals to achieve a better outcome
4. AMR challenges in the region
5. The Asia-Pacific contribution to the global goal of 'zero human dog-mediated deaths by 2030'
6. Analysis of the Animal Health Situation in Members in the Region in 2018 and the first half of 2019
7. Technical Item II: Strengthening the cooperation on African Swine Fever prevention and control in the Asia-Pacific region
8. OIE procedure for official recognition of disease status and for the endorsement of national official control programmes and their maintenance
9. The OIE PVS Pathway and its technical and financial partners (panel discussion)
10. Developing an OIE Aquatic Animal Health Strategy – collaboration, sustainability, our future
11. SEACFMD Campaign: challenges and perspectives
12. Other topics:  
Proposal of dates and venue for the 32nd Conference of the OIE Regional Commission for Asia, the Far East and Oceania



**31st Conference of the OIE Regional Commission for Asia, the Far East and Oceania**  
Sendai, Japan, 2- 6 September 2019

**PROVISIONAL PROGRAMME**

**MONDAY 2 SEPTEMBER 2019**

---

- 8:00 a.m. – 9:00 a.m. Registration and distribution of documents for the Workshop
- 9:00 a.m. – 5:00 p.m. Interactive workshop on the role of OIE Delegates in OIE Standards  
**(restricted to OIE Delegates + one technical staff per OIE Member)**
- 4:00 p.m. – 6:00 p.m. Registration of participants and distribution of documents for the Regional  
Conference

**TUESDAY 3 SEPTEMBER 2019**

---

- 8:00 a.m. – 9:00 a.m. Registration of participants and distribution of documents for the Regional  
Conference (cont.)
- 9:00 a.m. Opening ceremony
- 9:45 a.m. Group Photo / Break
- 10:15 a.m. Approval of the Agenda and Programme  
Appointment of the Conference Committee (Chairperson, Vice-Chairperson and General  
Rapporteur)  
Appointment of session chairpersons and rapporteurs (Technical items and Animal Health  
Situation)
- 10:30 a.m. The role of the OIE in supporting the Sustainable Development Goals: developing and  
improving collaborative partnerships (Dr Monique Eloit, OIE Director General, Dr Mark  
Schipp, President of the OIE World Assembly of Delegates and Delegate of Australia)
- 11:00 a.m. Discussion
- 11:30 a.m. Regional Work Plan Framework 2016-2020: state of play and challenges (Dr Quaza  
Nizamuddin Hassan Nizam, Vice-President of the OIE Regional Commission for Asia, the  
Far East and Oceania and Delegate of Malaysia, and Dr Hirofumi Kugita, OIE Regional  
Representative for Asia and the Pacific)
- 12:00 p.m. Discussion
- 12:30 p.m. Posters Session
- 1:00 p.m. Lunch

- 2:00 p.m. Technical Item I: Zoonosis and food safety - improving collaboration between animal and public health professionals to achieve a better outcome (Dr Norikazu Isoda, Specially Appointed Associate Professor, Unit of Risk Assessment and Management, Research Center for Zoonosis Control, Hokkaido University, Japan)
- 2:45 p.m. Discussion
- 3:15 p.m. AMR challenges in the region (Dr Tomoko Ishibashi, Ministry of Agriculture, Forestry and Fisheries of Japan)
- 3:45 p.m. Discussion
- 4:15 p.m. Coffee break  
*Preparation of Recommendation No. 1 by designated small group*
- 4:45 p.m. The Asia-Pacific contribution to the global goal of 'zero human dog-mediated deaths by 2030' (Dr Katinka De Balogh, FAO Senior Animal Health and Production Officer)
- 5:15 p.m. Discussion
- 5:45 p.m. Analysis of the Animal Health Situation in Members in the Region in 2018 and the first half of 2019 (Dr Montserrat Arroyo, Acting Head, OIE Animal Health Information and Analysis Department)
- 6:30 p.m. Discussion
- 6:45 p.m. End of the session
- 7:30 p.m. Reception hosted by Japan

### **WEDNESDAY 4 SEPTEMBER 2019**

---

- 9:00 a.m. Technical Item II: Strengthening the cooperation on African Swine Fever prevention and control in the Asia-Pacific region (Dr Wantanee Kalpravidh, ECTAD Project Regional Manager, FAO Regional Office for Asia and the Pacific and Dr Caitlin Holley, Regional Project Coordinator, OIE Regional Representation for Asia and the Pacific)
- 9:45 a.m. Discussion
- 10:15 a.m. OIE procedure for official recognition of disease status and for the endorsement of national official control programmes and their maintenance (Dr Laure Weber-Vintzel, OIE Deputy Sub-Regional Representative for South-East Asia and Dr Wacharapon Chotiyaputta, Director of International Livestock Cooperation, Department of Livestock Development of Thailand)
- 10:45 a.m. Discussion



- 11:15 a.m. Coffee break  
*Preparation of Recommendation No. 2 by designated small group*
- 11:45 a.m. The OIE PVS Pathway and its technical and financial partners (panel discussion with previously selected partners)
- 12:45 p.m. Lunch
- 2:15 p.m. Developing an OIE Aquatic Animal Health Strategy – collaboration, sustainability, our future (Dr Gillian Mylrea, Head of the OIE Standards Department and Dr Ingo Ernst, President of the OIE Aquatic Animals Health Standards Commission)
- 3:45 p.m. Coffee break
- 4:15 p.m. Discussion of Recommendations
- 5:15 p.m. End of the session
- 7:15 p.m. Reception hosted by the OIE

#### **THURSDAY 5 SEPTEMBER 2019**

---

Cultural visit

#### **FRIDAY 6 SEPTEMBER 2019**

---

- 09:30 a.m. SEACFMD Campaign: challenges and perspectives (Dr Ronello Abila, OIE Sub-Regional Representative for South-East Asia)
- 10:15 a.m. Proposal of dates and venue for the 32nd Conference of the OIE Regional Commission for Asia, the Far East and Oceania
- 10:30 a.m. Break
- 11:00 a.m. Adoption of the Draft Final Report and Recommendations
- 11:30 a.m. Closing Ceremony
- 12:00 p.m. Lunch



**TECHNICAL ITEM I:  
ZOOONOSIS AND FOOD SAFETY - IMPROVING COLLABORATION BETWEEN ANIMAL AND  
PUBLIC HEALTH PROFESSIONALS TO ACHIEVE A BETTER OUTCOME**

Dr Norikazu Isoda  
Specially Appointed Associate Professor,  
Unit of Risk Assessment and Management, Research Center for Zoonosis Control,  
Hokkaido University, Japan  
[isoda@czc.hokudai.ac.jp](mailto:isoda@czc.hokudai.ac.jp)

**Summary:** *Health issues at the human-animal-ecosystems interface, including zoonosis and food safety events, cannot be effectively addressed and controlled by one health sector. The Tripartite partners (OIE, FAO and WHO) have been leading several programmes and activities at the global and regional levels to address zoonosis and food safety issues, including the development of the Tripartite Zoonosis Guide to strengthen capacities for zoonosis control by OIE Members. Multisectoral coordination mechanisms (MCMs) play a pivotal role to ensure effective control with sustainability. In the present report, to strengthen MCMs and make collaborations among relevant sectors more effective, MCMs of the Members were assessed by a questionnaire study. A total of 32 Members provided responses. Establishment of an MCM was achieved by 27 of the 32 Members, but obstacles such as inadequate governance or resources continue to hamper the establishment of an MCM by some. An MCM was achieved when the Member could identify necessary subnational structures, priority critical technical activities, and hold internal communications on a regular basis. On the other hand, efficient utilisation of domestic resources by mobilisation and funding allocation in line with a strategic plan was a big challenge at the regional level. Regarding financial resources, two-thirds of Members were supported by national sources for activities relating to zoonosis and food safety issues. However, a limited amount of funding for activities to control zoonosis and food safety issues comes from foreign organisations in several Members. A gap between Members was also confirmed in terms of governance elements agreed upon by members of the MCM. A self-monitoring and evaluation framework had been developed in only about half of the Members with an MCM. The Tripartite partners should continuously assist Members by providing technical inputs and raising capacity for control of zoonosis and food safety issues.*

## 1. Introduction

The risks of zoonotic and foodborne diseases have increased in recent decades due to socio-economic and scientific factors. Given the complexity of the animal-human-environment interface and food supply chains, both types of disease events should be monitored, assessed and responded to using a One Health approach based on multisectoral coordination.

The World Organisation for Animal Health (OIE), in coordination and collaboration with its Tripartite partners (namely the Food and Agriculture Organization of the United Nations (FAO) and the World Health Organization (WHO)), has been leading several programmes and activities at the global and regional level to address zoonosis and food safety issues. In 2019, to help Members strengthen their capacities for zoonosis control, the Tripartite developed the Tripartite Zoonosis Guide (TZG) to update and expand the initial jointly-developed, zoonotic diseases-specific guidance document to cover prevention, preparedness, detection and response to zoonotic threats at the animal-human-environment interface. These guidelines are flexible enough to cover other health threats at the animal-human-environment interface, including food safety and antimicrobial resistance. Though the Tripartite realises that the best way to build structures and systems to address zoonotic and food safety issues in every situation isn't yet known, the TZG describes the effectiveness of developing a functional multisectoral coordination mechanism (MCM) to ensure proficient implementation of activities for control zoonotic and food safety issues.

The Tripartite in the Asia and the Pacific Region implemented a questionnaire study via the 8th Asia-Pacific Workshop on Multi-sectoral Collaboration at the Animal-Human-Ecosystem Interface in April 2019, to collect information relevant to current multisectoral One Health mechanisms. These results were beneficial to analyse the current situation, achievements and challenges in MCMs, but not enough to satisfy all the critical functions and activities of MCM outlined in the TZG.

This report aims to identify the structure and functional characteristics of the Members' current MCMs between animal and public health professionals for the control of zoonosis and food safety issues and to explore any gaps. The questionnaire survey for the 31st Conference of the OIE Regional Commission for Asia, the Far East and Oceania (September 2019) was thus conducted to obtain comprehensive information about current MCMs in the region and combined with results of the questionnaire study from the 8th Asia-Pacific Workshop on Multi-sectoral Collaboration at the Animal-Human-Ecosystem Interface. The 36 OIE Delegates of the OIE Regional Commission for Asia, the Far East and Oceania were therefore requested to complete the questionnaire comprising five aspects of MCM characteristics, namely:

- Establishment of an MCM
- Governance of MCMs and other operationalisation aspect of MCMs
- Key achievements in MCMs
- Key challenges faced in the multisectoral collaboration
- Key priority activities to further strengthen multisectoral collaboration

Between 19th June 2019 and 23rd July 2019, completed questionnaires were received from 32 of the 36 (89%) Members of the OIE Regional Commission for Asia, the Far East and Oceania, including: Australia, Bangladesh, Bhutan, Brunei, People's Republic of China, Chinese Taipei, Fiji, India, Indonesia, Iran, Iraq, Japan, Republic of Korea, Laos, Malaysia, Maldives, Federal States of Micronesia, Mongolia, Myanmar, Nepal, New Caledonia, New Zealand, Pakistan, Papua New Guinea, Philippines, Singapore, Sri Lanka, Thailand, Timor Leste, United States of America, Vanuatu and Vietnam. This report provides results of this questionnaire survey and information on structural and functional aspects of current MCMs in the region by referencing the previous questionnaire survey results.

## **2. Results**

The questionnaire regarding collaboration between animal and public health sectors was completed by 32 of the 36 (89%) Members of the OIE Regional Commission for Asia, the Far East and Oceania.

### **2.1. Establishment of an MCM**

The questionnaire included three questions relating to the establishment by Members of an MCM for zoonosis and food safety issues, and to potential members and resources of these MCMs.

When asked about the establishment of an official MCM for zoonoses or food safety issues at the national level, it was confirmed in 27 of the 32 (84%) responding Members.

For the five Members which had not established an official MCM, several reasons hampering the MCM establishment were given, including:

- Lack of government initiative
- Improper resource planning
- Low technical capacity.

Other reasons given for not establishing a specific MCM were that one Member was about to develop a One Health Strategic Plan and another Member already had a specific committee to cover zoonosis and food safety issues.

Members were asked whether all official and unofficial coordination functions, mechanisms and infrastructures had been identified for the establishment of a potential MCM. Twenty-three Members had done so while the remaining nine, including the five Members which had not established the MCM at the national level, had not.

### **2.2. Governance of MCMs and other operationalisation aspect of MCMs**

For the 27 Members which had developed an official MCM for zoonosis and food safety issues at the national level, further information regarding operational aspects of the MCM was sought using three questions.

The 27 Members were asked which elements of governance had already been agreed among members of the MCM for zoonosis and food safety issues. 'Leadership of the MCM' was the most frequent response, received from 22 (81%) Members (Figure 1). Following that, 'basic working arrangement' (21 responses, 78%), 'appropriate reporting to various audiences' (17 responses, 63%) and 'administrative elements' (14 responses, 52%) were selected by more than half of this group of respondents. 'Agreement of accountability' (13 responses, 48%) and 'separation of the chair from leadership' (12 responses, 44%) were also reported. Additionally, 'presence of a reporting system at several levels (national, provincial, or district)' was noted from one Member and 'adoption of One Health approach' was noted from another Member as necessary for effective MCMs.

The 27 Members were asked if there were any formal governance documents for zoonosis and food safety issues coordinated by the MCM, including national framework, strategy and action plans. Twenty-four (89%) Members responded that they had already developed such documents.

The 24 Members with these documents were further asked whether operationalisation aspects of the MCM were cited in a section on the strategic planning of the documents. It was revealed that they were included in the strategic planning of formal governance documents in 22 of the 24 (92%) Members.

### 2.3. Key achievements in MCMs

Members were asked three questions regarding the establishment of an MCM at the subnational level and five questions regarding resource mapping, which are considered critical achievements under the MCM, as per the TZG.

Members were asked whether MCMs for zoonosis and food safety issues had been established at the subnational level. In addition to five Members which had not established an MCM at the national level, another seven Members had not established an MCM at the subnational level (Figure 2A). Conversely, 20 (63%) Members had already established the MCM at both national and subnational levels.

The 20 Members with an MCM at the subnational level were further asked to list the main reasons for its establishment. Among the five potential reasons, 'decentralisation of the governmental function' was the most frequent response from 15 Members (75%) (Figure 2B). Following that, 'zoonotic disease threats varying in different areas' (12 responses, 60%), 'coordination mechanism established at subnational level before national level' (seven responses, 35%) were confirmed as important reasons for the establishment of the MCM. On the other hand, 'geographical features' (five responses, 25%) and 'high population density' (three responses, 15%) were the main reasons given by a few Members. Some of the geographically small Members considered that a coordination mechanism at the subnational level was not needed in their cases.

The 12 Members which had not established an MCM at the subnational level were asked whether there had been an official discussion among members of the national MCM for establishment at the subnational level. Three of the 12 (25%) Members responded that they had started the official discussion, but the others had not (Figure 2C).

The 27 Members who had established an MCM for zoonosis and food safety issues were asked whether this national MCM had conducted a mapping of relevant infrastructure resources available within the government and from other sectors. Seventeen of the 27 (63%) Members responded that they had done so (Figure 3A).

The 17 Members which had conducted mapping analysis were asked which type of resources (financial resources, human resources and infrastructure) had been mapped by the MCM. It was indicated that all of three types were mapped by 11 of the 17 (65%) Members. The MCM in all 17 Members (100%) had mapped human resources, while financial resources and infrastructure were mapped by 13 (76%) and 12 (71%) of the 17 Members, respectively (Figure 3B).

The 13 Members in which financial resources had been mapped were asked whether the mapping analysis had considered future contributions from other governmental bodies responsible for areas where impacts of health burden might become significant. Ten of the 13 Members (77%) responded that they did (Figure 3C).

The 17 Members which conducted the mapping analysis were asked whether the MCM ensured aligning mobilisation or allocation of financial, human resources as well as infrastructure with strategic priorities. Six (35%) and nine (53%) Members, respectively, responded that they 'fully' or 'partially' ensured this alignment (Figure 3D). Aligning mobilisation or allocation of those resources was not ensured by only one (5%) Member. One (5%) Member did not respond to this question.

The 15 Members for which aligning mobilisation or allocation of those resources was fully or partially ensured with high priority were asked to identify whether the MCM ensured that, even if the activity required was not their own responsibility, all sectors affected by a zoonosis and food safety issue would contribute equally to addressing it. Six (40%) Members responded that they would contribute equally while the other eight (53%) answered that they would not do so (Figure 3E). One (7%) Member did not respond to this question.

## **2.4. Key challenges faced in inter-sectoral collaboration**

Members were asked three questions regarding funds and their source for MCMs and also the development of monitoring and evaluation system of MCMs.

Members were asked to list the funding sources in animal health sector for activities relating to zoonosis and food safety issues. Among the four specific categories, 'government' was the most frequent response from 31 (97%) Members (Figure 4A). After that, 'national private sectors' (13 responses, 41%) and 'foreign aid' (11 responses, 34%) were considered essential funding sources. 'Foreign private sectors and others' were also reported as funding sources for four (13%) Members.

Subsequently, Members were asked what percentage of funds for activities relating to zoonosis and food safety issues came from national sources. Though all Members responded to the query, appropriate responses, including 21 numerical and five categorical responses were obtained from 26 Members. Numerical responses were categorized into five ranges; 0-20%, 21-40%, 41-60%, 61-80%, and 81-100%. Categorical responses were converted to numerical ranges. 'Very small component' was defined as the corresponding to the '0-20%' range and 'Majority' as the '81-100%' range. Thirteen (50%) responses ranged from 81% to 100% (Figure 4B). One response (4%) corresponded to the range '61% to 80%' and three responses (12%), to the range '41% to 60%'. On the other hand, four (15%) responses corresponded to the range '0 to 20%' and five (19%), to the range '21% to 40%'.

The 27 Members which had established MCMs for zoonosis and food safety issues at the national level were asked how much funding came from the animal health sector. Fourteen (52%) Members responded that 'some' funding and seven (26%) that 'very little' funding comes from the animal health sector for MCM activities (Figure 4C). On the other hand, no (0%) Members responded that 'all' funding and five (19%) responded that 'most' funding comes from the animal health sector. The 27 Members which had established an MCM for zoonosis and food safety issues were asked whether guidelines for self-monitoring and evaluation system of the MCM had been developed. Fourteen (52%) Members responded that they had already developed guidelines while 12 (44%) Members answered that they had not done so yet.

The 14 Members which had developed guidelines for a self-monitoring and evaluation system of the MCM were further asked about its implementation. Eleven (79%) Members had already started self-monitoring and evaluation, and two (14%) were preparing for its implementation. Only one (7%) Member did not have any practical schedule for its implementation due to cross-sectoral administrative issues.

## **2.5. Key priority activities to further strengthen multisectoral collaboration**

Members were asked four questions regarding key priority activities under the MCM and three questions regarding regular meetings with partner organisations and stakeholders.

The 27 Members which had established an MCM for zoonosis and food safety issues were asked if specific technical activities to be implemented for more effective control of these issues had been identified. Twenty-five (93%) Members responded that their MCM had identified specific technical activities (Figure 5A).

The twenty-five Members which identified specific activities to be implemented were asked to list the activities in an open-ended question. Among 23 appropriate responses, ten (40%) Members listed activities relating to 'surveillance systems' (Figure 5B). Thereafter, responses were related to 'regulations or guidelines for emergency preparedness' (seven responses, 28%), 'risk reduction activities' (five responses, 20%), 'awareness' (four responses, 16%), 'information sharing system' (four responses, 16%), 'technical capacity building' (four responses, 16%) and 'outbreak investigation and response' (three responses, 12%). Few responses including 'research' (two responses, 8%), 'prioritising zoonosis' (two responses, 8%), 'risk assessments or analysis' (two responses, 8%), 'improvement of coordination (one response, 4%)', 'meetings or conferences' (one response, 4%), 'simulation exercises' (one response, 4%) and 'reviewing existing reports' (one response, 4%) were also received.

The 25 Members which had identified specific technical activities to be implemented were further asked if detailed descriptions regarding financial, human and infrastructural resources existed for each activity. It was revealed that these resources were 'fully', and 'partially' described in detail for the technical activities in nine (36%), and 13 (52%) Members, respectively (Figure 5C).

The twenty-two Members which had some detailed descriptions of the resources needed for the MCM specific technical activities were further asked whether these specific technical activities had been prioritised. Twenty-one of the 22 (95%) Members responded that specific technical activities had been prioritised by the MCM (Figure 5D).

The 27 Members which had established an MCM for zoonosis and food safety issues were asked whether they held meetings with and among partner organisations and stakeholders on a regular basis. It was revealed that the national MCM in 21 of the 27 (78%) Members held regular meetings (Figure 6A). For the remaining six (22%) Members, meetings of the national MCM were held on an ad hoc basis.

Members where the national MCM held regular meetings were further asked about the frequency of meetings. Regular meetings were held 'more than six times a year' by three (11%) Members, 'between two and five times' a year in 15 Members (56%) and 'once a year' in three (11%) (Figure 6B).

The 21 Members in which the national MCM held regular meetings for control of zoonosis and food safety issues were then asked to list the main agenda items. 'Information sharing' between members was implemented in all the 21 Members. Following that, 'identification and prioritisation of technical activities' (17 responses, 81%), 'reviewing and updating governance' (14 responses, 67%), 'administrative issues' (14 responses, 67%), 'development of guidance messages for zoonotic and food safety issues' (14 responses, 67%) and 'capacity development' (14 responses, 67%) showed relatively high frequencies. Though the percentages are less than 50%, 'mapping, aligning and allocation of resources and infrastructure' (ten responses, 48%) and 'assessment and evaluation for the coordination mechanism' (six responses, 29%) were also reported as agenda items. For one Member, 'outbreak and case reports' was also on the agenda at regular meetings.

### **3. Discussion**

Health issues at the human-animal-ecosystems interface cannot be effectively addressed and controlled by one sector or by multisectoral collaboration without formal agreements. Collaboration across all relevant sectors and disciplines is required to address zoonosis and food safety issues. An MCM is regarded as the formalised group that acts to strengthen or develop collaboration, communication and coordination across several sectors in charge of addressing zoonosis and food safety issues at the human-animal-environmental interface.

In the questionnaire study from the 8th Asia-Pacific Workshop on Multi-sectoral Collaboration at the Animal-Human-Ecosystem Interface, a total of 28 Members provided response. Responses were provided by multi-sectors in 19 (68%) of the 28 Members, whereas the responses in eight (29%) and one (4%) Members were from animal and public health sector, respectively. A National One Health coordination mechanism was reported in 24 of the 28 (86%) Members. This proportion is close to the results of the questionnaire survey in the similar Workshop held in 2015, where at the time, 20 of 23 Member indicated they already had a National One Health Coordination Mechanism. Seventeen (61%) Members responded that they achieved resource mobilisation. Sixteen (57%) Members responded that they developed a One Health coordination mechanism at the subnational level. Members were asked about major gaps in addressing One Health. Nine (32%) responded that they had the major gap in funding, and this proportion is similar to the results of the questionnaire in 2015 (7/23 Members, 30%). Sixteen (57%) Members responded that they held a stakeholder meeting more than three times per year, and nine (32%) responded that they held it either one or twice a year.



### **3.1. Establishment of an MCM**

Twenty-seven of the 32 (84%) Members responded that they had established an MCM in their national government. A similar result was obtained from the questionnaire study conducted via the 8<sup>th</sup> Asia-Pacific Workshop on Multi-sectoral Collaboration at the Animal-Human-Ecosystem Interface, where a national One Health coordination mechanism was reported in 24 of 28 (86%) responding Members. Comparing this latest questionnaire with results from the previous study, the proportion of MCMs has not increased and fundamental difficulties for their establishment could not be solved by these Members. Key functions for establishing an MCM are illustrated in the TZG. Agreement on the need for an MCM is mainly triggered by weak responses to a zoonotic or food safety event or the identification of a gap in coordination capacity by external assessments such as those using the JEE and PVS Tools. Identification of necessary subgroups focusing on a particular activity or function more specifically, whether internal or external, may allow an MCM to obtain technical expertise from them.

Available infrastructure and resources should be identified prior to MCM establishment. In the present questionnaire study, nine Members (including four Members in which an MCM was successfully established) had not identified available resources for an MCM. Ensuring sustainable and equitable financing among all relevant sectors of an MCM is critical for ensuring continuous implementation for zoonosis and food safety issue control. Funding from the animal health sector for MCMs in these four Members was low (either 'some' or 'very little' funding), indicating that aligning the allocation of resources with strategic priorities is critical for the sustainability of specific activities in the control of zoonosis and food safety issues under MCMs.

### **3.2. Governance of MCMs and other operationalisation aspect of MCMs**

The six representative elements of governance (See question three of the questionnaire) that should be agreed by members of the MCM are proposed in the TZG. In the present questionnaire study, these were overall well-achieved in Members, with agreement for "leadership of the MCM" in 81%, and for "basic working arrangement" in 78% of the MCMs. However, the number of elements achieved ranged widely. Five of the 27 Members had already reached agreement on all six elements, while four Members had reached agreement on two elements and three Members on only one element. Reviewing and updating the governance is necessary to ensure sustainability of an MCM.

In the present study, Members were asked about formal governance documents and description of operationalisation aspects of MCMs. Overall, formal governance documents were developed in Members with an MCM and covered operationalisation elements.

### **3.3. Key achievements in MCMs**

TZG argues the benefits of establishing an MCM at the subnational level for Members with federalised or decentralised governments, which are geographically large, have a high population density or have a variety of zoonotic and food safety threats in different areas. In this questionnaire, 63% of Members had already established an MCM at the subnational level, which is a similar result to the previous questionnaire (57%, 16/28). Since decentralised government and/or establishment of an MCM at the subnational level before the national level was reported in 19 of the 20 Members, strong governance even at the subnational level rather than a variety of threats or characteristics of the area were more likely to influence the establishment of the MCM. On the other hand, seven of the ten Members without a subnational MCM had not had an official discussion regarding the establishment of subnational MCMs. Though some of the Members may not need to establish a subnational MCM—due to for instance, covering a small territory suffering limited types of threats or having an effective nationwide MCM—intensive discussions regarding the need for a subnational MCM and resources for its establishment are essential between national and subnational stakeholders and authorities.

In the present questionnaire, 63% of the Members had conducted a mapping analysis of the resources and infrastructure available in the government and from other sectors. This finding is similar to the previous questionnaire study where 61% (17/28) of Members responded that they could mobilise resources in the MCM. Though 11 Members achieved mapping of all three types of resource (financial, human and infrastructure), some members had difficulty in conducting mapping of financial and infrastructural resources. Most Members could achieve fund allocation for future cooperation and collaborations. However, ensuring full resource mobilisation under strategic priorities was made in fewer than half of the Members. This is a concern for sustainability of activities for zoonosis and food safety issues control, as resource mobilisation and funding allocation with strategic prioritisation is considered necessary to ensure effective use of finite resources. Another concern revealed in the present questionnaire study regarding resource mobilisation is sharing responsibility for coordination of funding between sectors. Members may ensure resource mobilisation or allocation of funds for activities of the MCM but affected sectors might not provide an equal contribution. To make activities required for the control of zoonosis and food safety issues under the MCM more functional, resource allocation after mapping should be considered in respect of strategic priorities with equal and equitable responsibility shared among affected sectors.

### **3.4. Key challenges faced in the inter-sectoral collaboration**

In the present questionnaire study, activities relating to zoonosis or food safety issues conducted by animal health sectors in most Members were sponsored by the government, and nearly half were also sponsored by the private sector within the nation. Furthermore, in 17 of the 26 Members, more than 40% of the budget for activities in zoonosis or food safety issues were supported by national sources. Sustainable funding, such as financial resources available within the government or tax resources, would ensure continuity of activities for control of zoonosis and food safety issues. In that respect, the remaining nine Members may have difficulty in planning activities considering their unstable funding. In these nine Members, it was revealed that either 'some' or 'very little' funding came from the animal health sector for MCM activities. Given these results, funding is still a potential concern for MCMs with either unstable funding sources and/or with limited amounts of funding.

Self-monitoring and evaluation (SME) of function and impact is considered in the TZG as an essential element for an MCM. Among the 27 Members with the national MCM, about half had started SME based on their own guidelines. SME is a useful tool to identify gaps between plans and implementation and to improve control of MCM activities for zoonosis and food safety issues including technical MCM activities. The Members should consider the implementation of SME and the development of an SME scheme referring to comprehensive guidelines such as the TZG.

### **3.5. Key priority activities to further strengthen multisectoral collaboration**

In the present questionnaire study, most of the Members with an MCM had already identified specific technical activities for more effective control of zoonosis or food safety issues. Though the response rates for each activity were different from the results of the previous questionnaire, activities with the highest frequency responses were similar – such as surveillance systems, regulations or guidelines for emergency preparedness. In summary, critical specific technical activities vary among Members, and support for the Members should be adjusted accordingly to optimise them. Moreover, specific activities identified were mostly prioritised by the MCM to effectively utilise resources.

Members were asked about the frequency of regular meetings of the national MCM. In the present questionnaire, two-thirds of the Members with an MCM had regular meetings more than twice per year. This results match those of the previous study. Regarding agendas of MCM meetings, most items relating to governance, function, guidelines and administrative issues were addressed by most of the Members, indicating that a fundamental role of the meetings is to review and update the MCM function.

#### **4. Conclusions**

Though many Members achieved the establishment of an MCM at the national level, the results of the present and the previous questionnaire in April 2019, as well as the similar questionnaire carried out in 2015, the proportion of such Members has not changed in recent years. This indicates that inherent difficulties might be present in the region, hampering the establishment of an MCM. Identification of infrastructure and resources are required for the establishment of an MCM. Resource mapping is needed for Members with low funding proportions from animal health sectors to MCMs as well as for Members with no current MCM.

Agreement on governance elements with MCM members and description of the operationalisation aspects of an MCM were generally achieved in most Members. However, all the elements of governance proposed in the TZG were agreed in a limited number of Members. Reviewing and updating governance of MCMs is essential to make them more effective.

Establishment of an MCM at the subnational level has been achieved in 63% of the Members due to decentralisation of the government or retention of an original MCM at the subnational level. However, 70% of Members with a national MCM but no subnational MCM do not have plans to establish subnational MCMs.

Resource mapping analysis for aligning the allocation of resources with strategic priorities has been implemented by the MCM in 63% of cases. Furthermore, mapping of all infrastructural, human and financial resources has been conducted by 41% of Members. However, full resource mobilisation under strategic prioritisation, or equal and equitable responsibility for MCM funding were ensured only in a limited number of Members.

Though activities for zoonosis or food safety issues in animal health sectors were mainly sponsored by national funding in most Members, animal health sectors in 28% of Members supported less than 40% of the activities using national funding. Unstable funding from overseas organisations is a critical challenge for MCMs. Monitoring and evaluation systems should be used to assess the efficacy of technical activities and aid selection of activities and resources used for their implementation. However, the SME system has been established in less than half of the Members with an MCM; development of an SME framework is also required at the regional level.

Among members of the MCM, key activities were prioritised and resources for their implementation were identified (mostly estimated) although the contents of the activities were wide-ranging. Holding regular meetings with high frequency is a key priority activity to further strengthen MCMs.

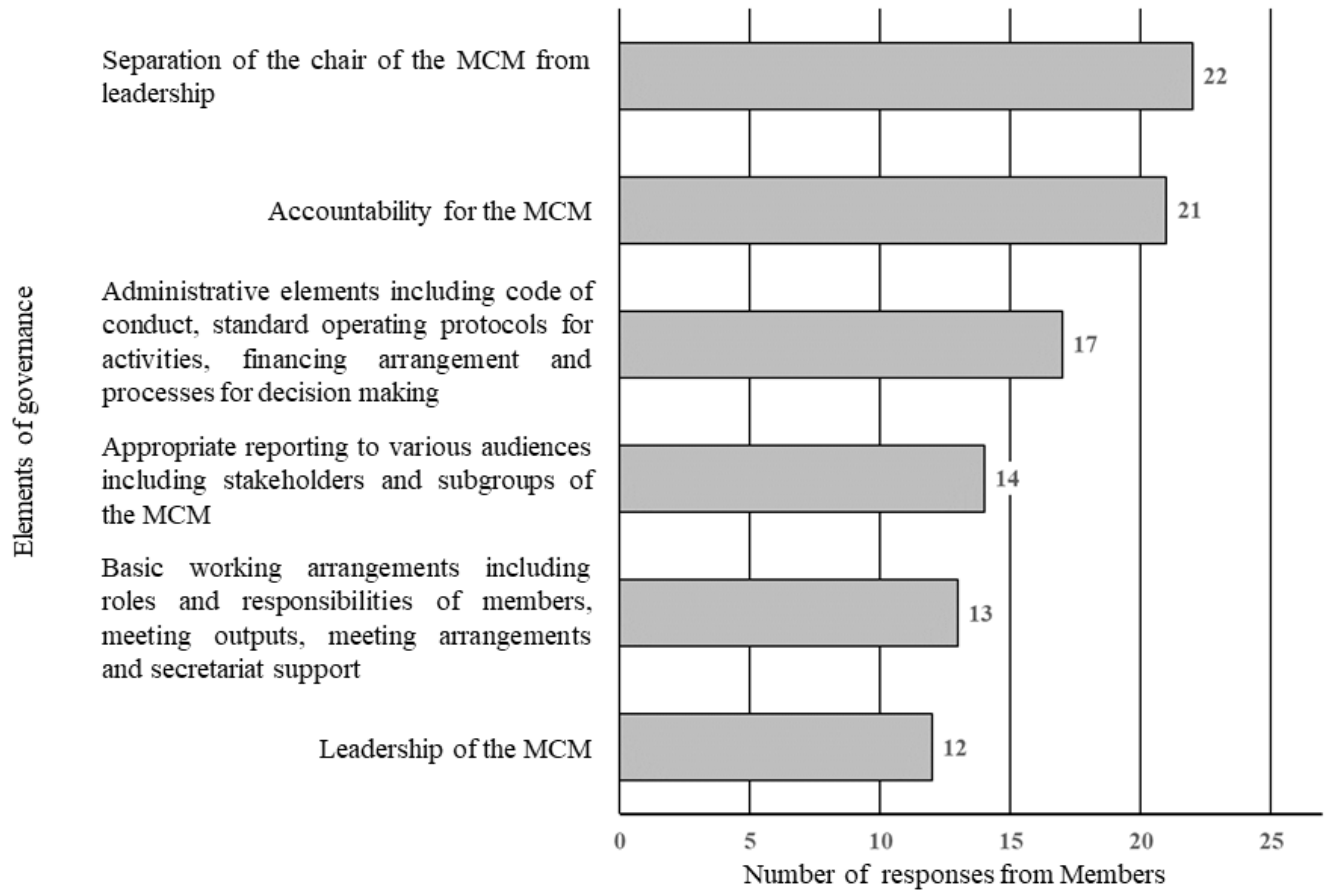
## **5. Acknowledgements**

I am grateful to OIE secretariats especially Dr Hirofumi Kugita for inviting me to conduct this work and the valuable support from Dr Francois Caya, Ms Nathaly Monsalve, Dr Lesa Thompson, and Dr Maho Urabe in the conduct of the OIE Delegates survey. I appreciate the OIE Delegates cooperation in data collection for the questionnaire and timely submission. Finally, I acknowledge Dr Hiroshi Kida and Dr Yoshihiro Sakoda of Hokkaido University, Japan, for assisting my work relating to Tripartite activities.

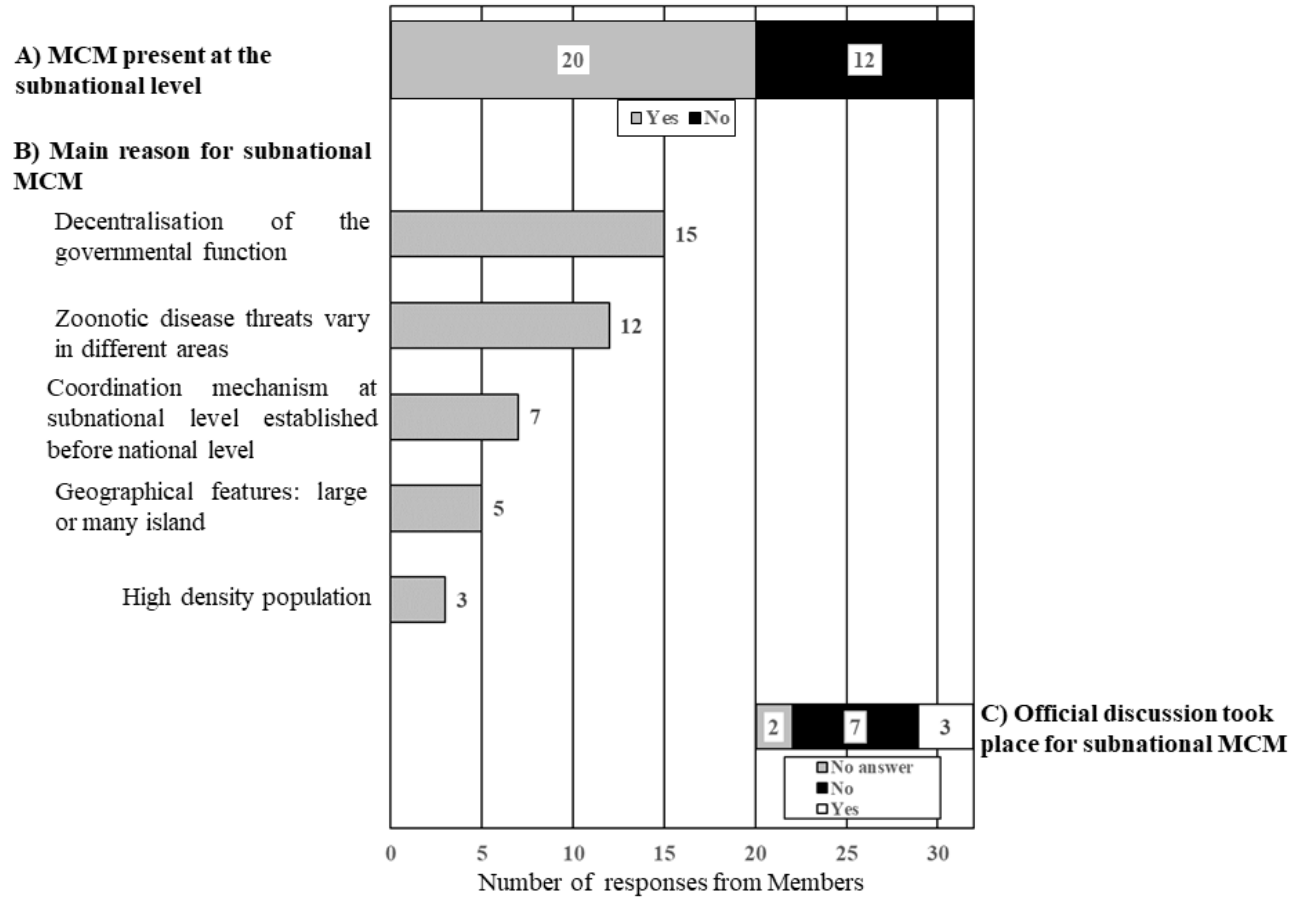
## **6. References**

1. FAO, OIE and WHO. 2019. Taking a Multisectoral, One Health Approach: A Tripartite Guide to Addressing Zoonotic Diseases in Countries. Rome, Paris, and Geneva.
2. WHO and OIE. 2015. Handbook for the assessment of capacities at the human-animal interface. Geneva.
3. Oh Y. 2019. Questionnaire Analysis on One Health Mechanism. Presentation in 8<sup>th</sup> Asia Pacific Workshop on Multi-sectoral Collaboration at the Animal-Human-Ecosystems Interface. 9-11 April 2019. Bangkok, Thailand.
4. FAO, OIE and WHO. 2012. High-Level Technical Meeting to Address Health Risks at the Human-Animal-Ecosystems Interfaces. Geneva.

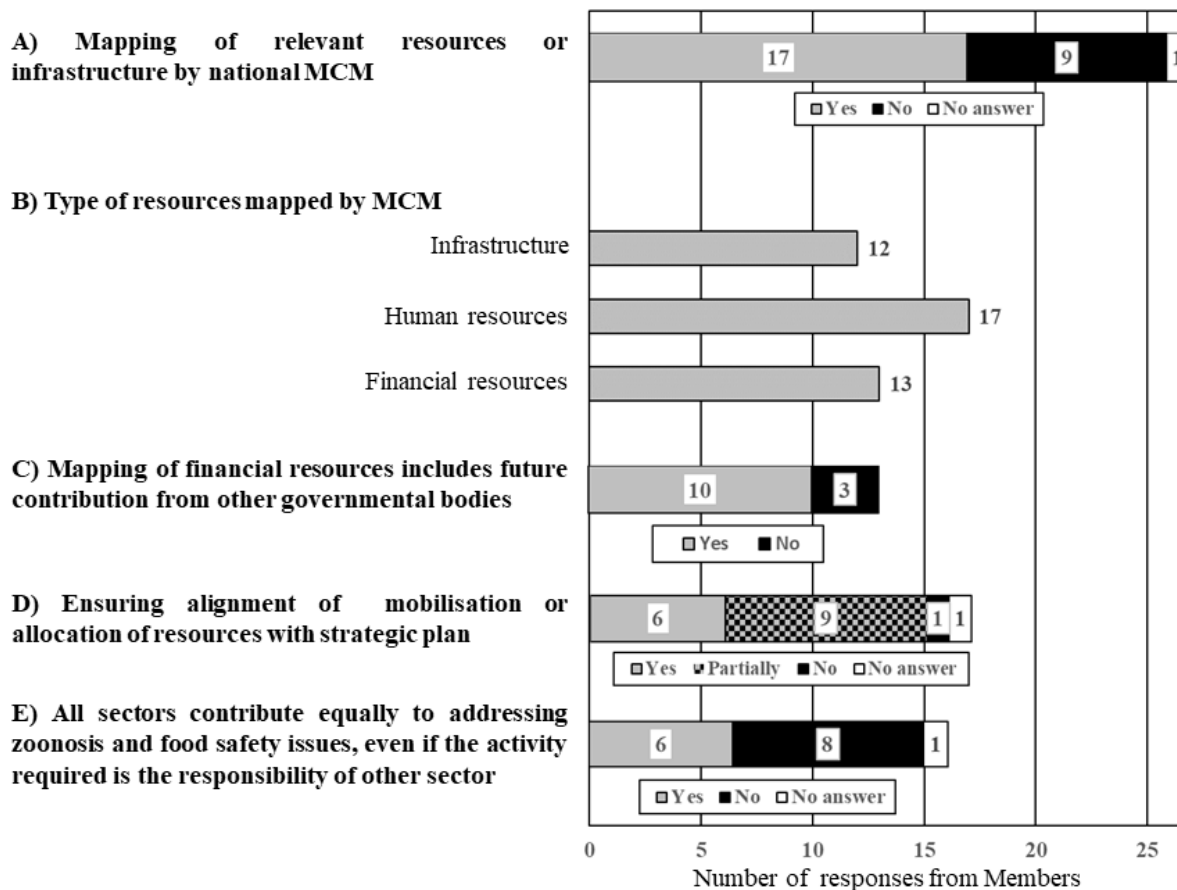
**Figure 1. Elements of governance agreed within multisectoral coordination mechanisms for zoonosis or food safety issues. Valid responses obtained from 27 Members are accounted for in each element or question. MCM: multisectoral coordination mechanism**



**Figure 2. Elements and reasons for the establishment of a multisectoral coordination mechanism at subnational level. Valid responses obtained from 27 Members are accounted for in each element or question. MCM: multisectoral coordination mechanism**

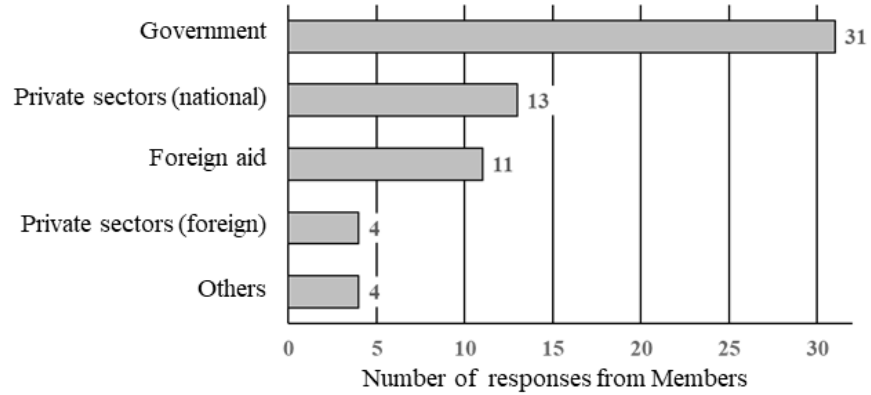


**Figure 3. Resource mapping, mobilisation, allocation and responsibility for activities relating to zoonosis or food safety issues. Valid responses obtained from 27 Members are accounted for in each element or question. MCM: multisectoral coordination mechanism**

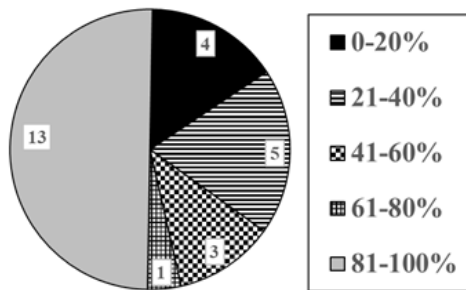


**Figure 4. Funding of activities for zoonosis or food safety issues in the animal health sector. Valid responses obtained from 32 Members are accounted for in each element or question.**

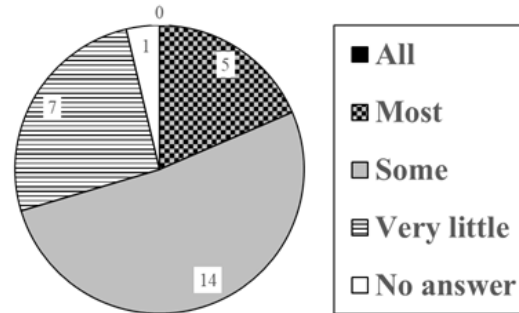
**A) Funding sources in animal health sectors for activities relating to zoonosis and food safety issues**



**B) Percentages of funding for activities coming from national sources**

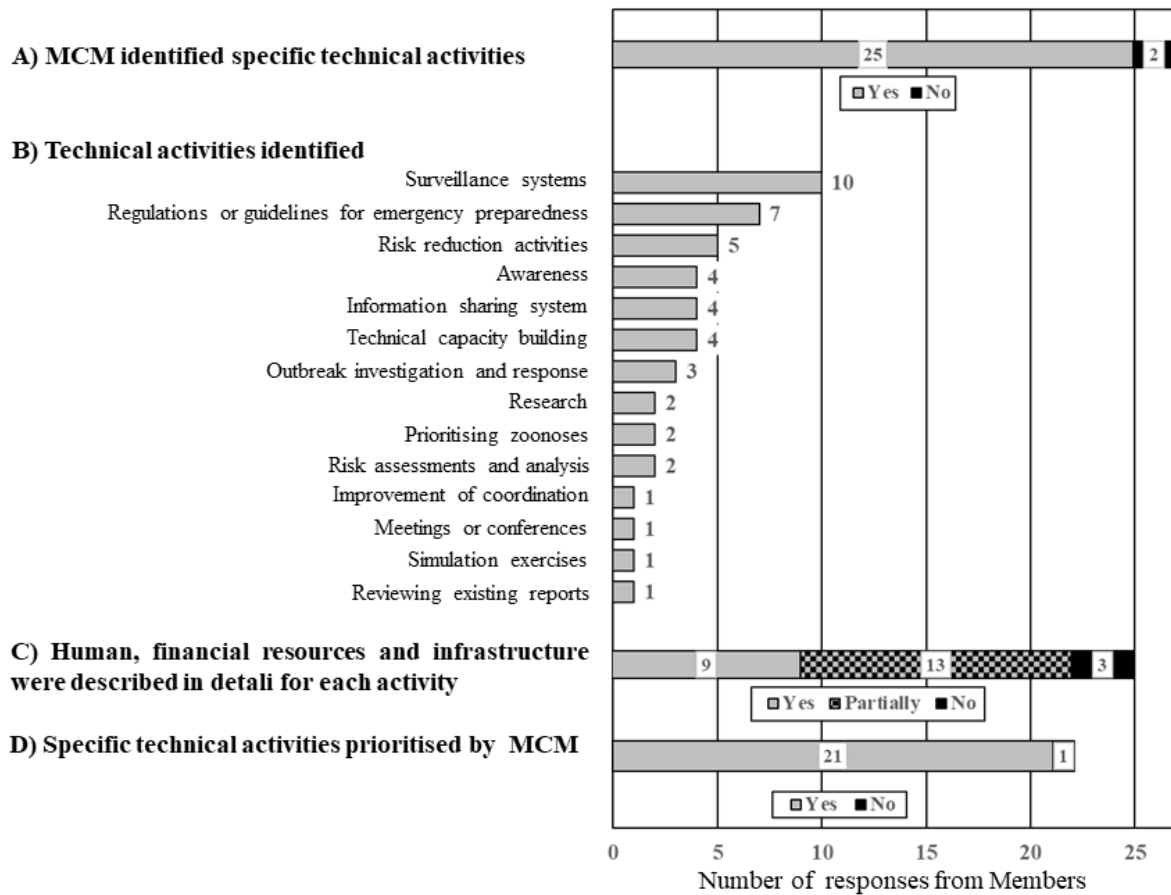


**C) Degree of funding for activities coming from the animal health sector**

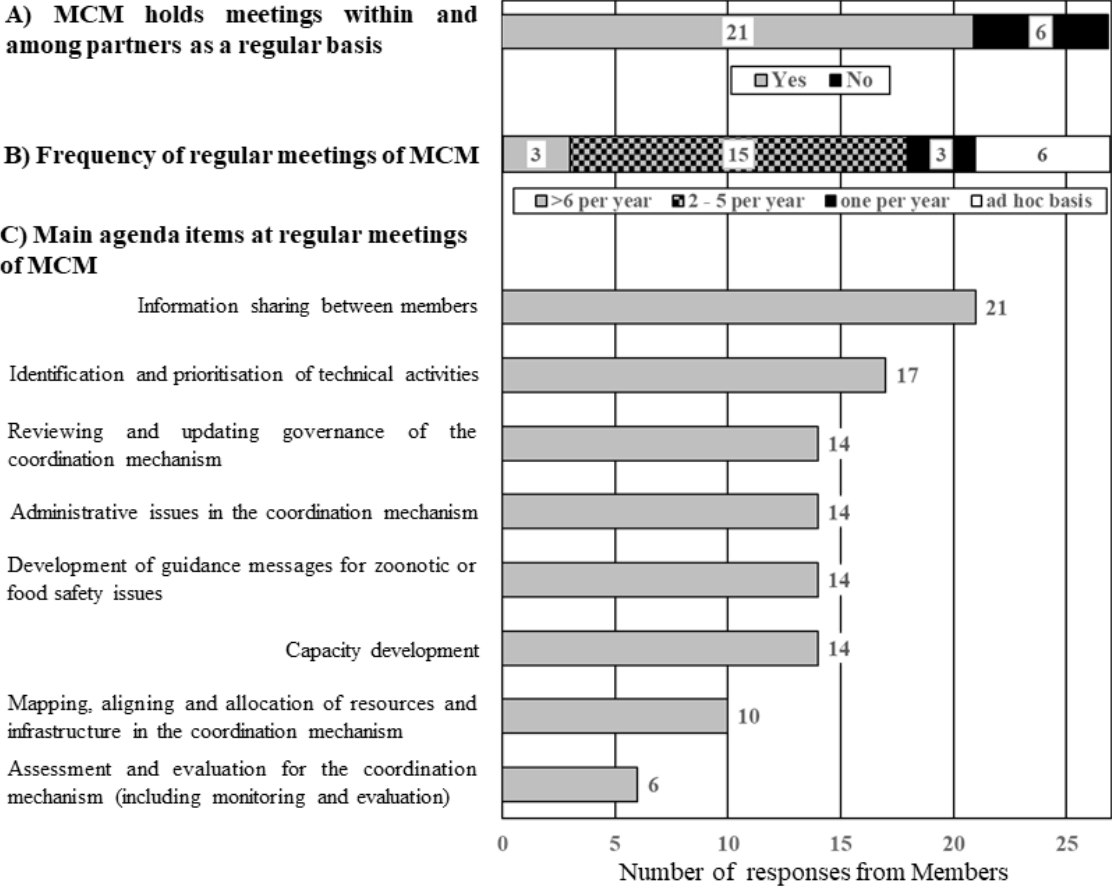




**Figure 5. Specific technical activities to be implemented by the multisectoral coordination mechanism for more effective control of zoonotic or food safety issues. Valid responses obtained from 27 Members are accounted for in each element or question. MCM: multisectoral coordination mechanism**



**Figure 6. Regular meetings of multisectoral coordination mechanisms. Valid responses obtained from 27 Members are accounted for in each element or question. MCM: multisectoral coordination mechanism**



**ANALYSIS OF THE ANIMAL HEALTH SITUATION  
IN MEMBERS IN THE REGION IN 2018 AND THE FIRST HALF OF 2019**

*(Update 11 June 2019)*

*World Animal Health Information and Analysis Department,  
Montserrat Arroyo Kuribreña, Peter Melens, Lina Mur, Paolo Tizzani and Paula Caceres*

This report is based on information obtained from six-monthly reports, annual reports, immediate notifications and follow-up reports submitted to the OIE through the World Animal Health Information System (WAHIS) by the 44 countries and territories<sup>1</sup> in the Asia, the Far East and Oceania region (hereafter referred to as 'AFEO Region' in this report), up to 11 June 2019. Special attention is given to the 2018 and early 2019 reporting period.

The first part of the report reviews the overall reporting performance of the AFEO Region, in comparison with the rest of the world, in terms of the transparency, timeliness and quality of reporting in recent years. The second part of the report provides a detailed analysis of selected diseases of critical importance, including the quality of their reporting, the surveillance methods applied, and the relevant control measures and diagnostic tests reported through WAHIS.

**OVERALL REPORTING PERFORMANCE OF THE AFEO REGION**

To analyse the overall reporting performance of the AFEO Region and compare it with that of the rest of the world, a set of performance indicators was devised and these were grouped into four categories: i) total number of reports submitted; ii) transparency of reporting (accuracy of the reports in reflecting the actual situation); iii) timeliness of reporting; and iv) quality of reporting. These indicators were calculated for the two main types of mandatory reports that concern animal health, namely exceptional reports (including immediate notifications and follow up reports) and six-monthly reports (for terrestrial and for aquatic animal diseases). For each category of indicators, the results for the AFEO Region reports were compared with the results for the rest of the world, firstly for immediate notifications and follow up reports and secondly for six-monthly reports. Considering that the statistic presented includes both OIE and non-OIE Members (with no reporting obligations), the overall idea of the comparison is not to derive any statistically significant difference between regions but only to describe the Region performances and compare it to the rest of the world, that acts as reference value.

**1. Total number of reports submitted**

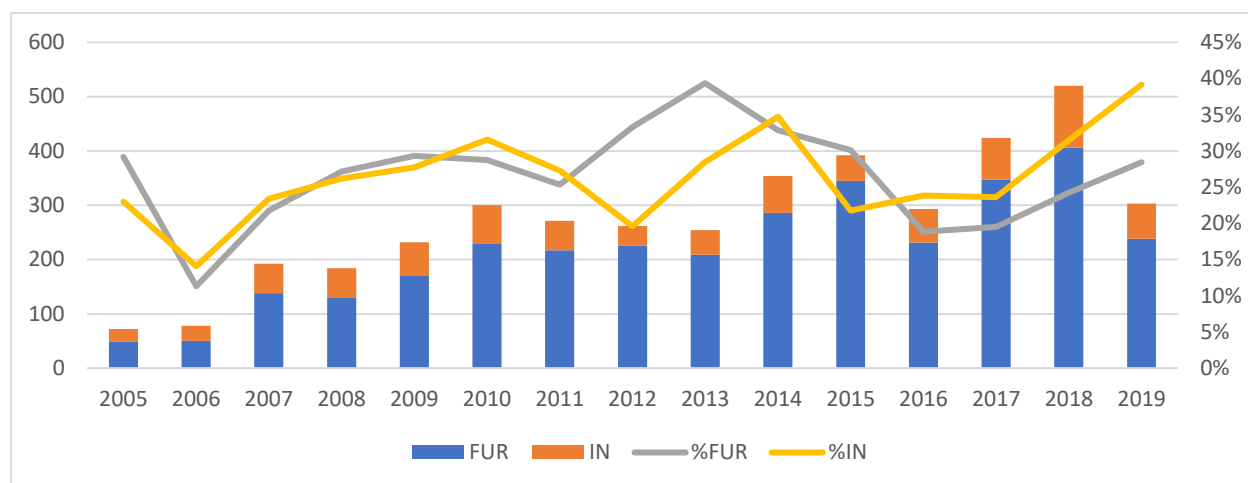
*1.1. Immediate notifications and follow up reports*

Between 1 January 2018 and 11 June 2019, 65 immediate notifications and 238 follow up reports were submitted by countries and territories of the AFEO Region. As shown in Figure 1, this follows the increasing trend in the number of notifications submitted by the AFEO Region since 2016. Furthermore, during the first months of 2019, the immediate notifications submitted by the Region represented 40% of the total number of immediate notifications submitted worldwide and 28% of the follow up reports. This trend of reporting was highly influenced by the animal health situation in the AFEO Region during the period of analysis, as almost 60% of the immediate notifications submitted were for African swine fever or for Highly pathogenic avian influenza (affecting poultry and wildlife).

---

<sup>1</sup> 36 Members of the OIE Regional Commission for AFEO, the Far East and Oceania, as well as Cook Islands, French Polynesia, Hong Kong (SAR-PRC), Kiribati, Marshall Islands, Palau, Samoa and Tonga

**Figure 1: Evolution in the annual number of immediate notifications (IN) and follow up reports (FUR) submitted by the AFEO Region over time (between 2005 and 11 June 2019) and the percentage of IN and FUR reports worldwide contributed by the AFEO Region**



### 1.2. Six-monthly reports

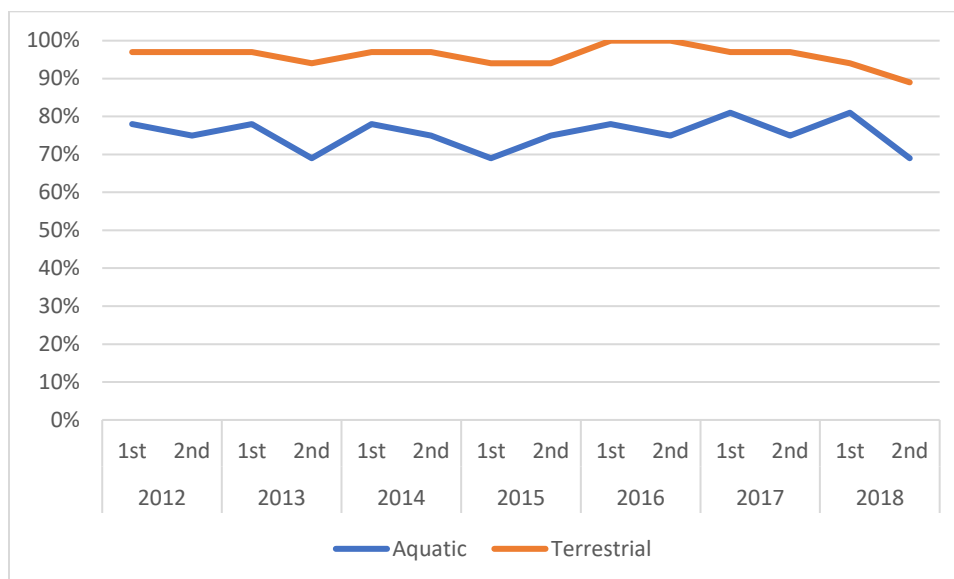
As of 11 June 2019, 95% (42/44) of countries and territories in the AFEO Region had submitted the first six-monthly report for 2018 on terrestrial animal diseases and 80% (35/44) had submitted both six-monthly reports. For the aquatic animal disease reports, the submission rates were slightly lower, as 82% (36/44) of the countries and territories in the Region had submitted the first six-monthly-report for 2018 and 68% (30/44) had submitted both six-monthly reports.

When comparing the AFEO Region with the rest of the world, the submission rates for 2018 were higher in AFEO for every type of report except for the second six-monthly report on terrestrial animal diseases (AFEO Region 80% vs 83% in the rest of the world). This indicates that, for the year 2018, countries and territories of the AFEO Region had a very high rate of compliance with the requirements to submit information to the OIE, especially for the aquatic six-monthly reports, where the percentages of submission were much higher than for the rest of the world (e.g. 82% in AFEO vs 61% in the rest of the world for the first aquatic six-monthly report).

Considering the trend in the submission rate since 2012 (Figure 2), a stable trend in reporting compliance was observed. In particular, the submission rate for aquatic six-monthly reports was lower than the rate for terrestrial six-monthly reports (75% vs 96%) during the entire period. This difference is mainly the result of two countries having submitted no aquatic reports since 2005 and three others having submitted very few aquatic reports.

Countries and territories of the AFEO Region are encouraged to continue their efforts to achieve 100% submission rates for the years ahead.

**Figure 2: Trend in submission rates for six-monthly reports (terrestrial and aquatic) by OIE countries and territories in the AFEO Region during the period 2012 – 2018**



## 2. Transparency of reporting

Article 1.1.3. of the OIE *Terrestrial Animal Health Code* and *Aquatic Animal Health Code* (hereafter the OIE *Codes*) stipulates the situations in which immediate notifications should be submitted to report the occurrence of an exceptional event. However, sometimes countries and territories do not follow the instructions for timely submission of information on exceptional events, reporting instead through six-monthly reports. During the period of analysis, four cases were identified in the AFEO Region where the countries and territories concerned should have submitted an immediate notification but instead submitted this information through six-monthly reports (one for aquatic animal diseases, and three for terrestrial animal diseases). Failure to report exceptional events in a timely manner can have an impact on other countries by exposing them to a risk of which they are unaware given the absence of appropriate notifications. When these situations are detected, the World Animal Health Information and Analysis Department (WAHIAD) contacts the countries concerned to remind them of their obligations for timely reporting as stipulated in the OIE *Codes*. Compared to the rest of the world, transparency in the AFEO Region was slightly higher, with an average of 3.5 unreported events for every 100 reports in the AFEO Region, compared to 5.6 unreported events per 100 reports in the rest of the world. It is important to highlight that the main objective of the active search activity carried out by WAHIAD is to ensure that important events, identified as “exceptional” according to the criteria specified in the OIE *Codes*, are reported in a timely manner through immediate notifications, and not through the regular update on all OIE-listed diseases (i.e. the six-monthly reports).

Transparency of the AFEO Region was also evaluated through the active search for unofficial information conducted by WAHIAD. Currently, the active search system retrieves information from a variety of sources, using two platforms for automatic search (the International Biosecurity Intelligence System [IBIS]) managed by the government of Australia and Epidemic Intelligence from Open Sources [EIOS] managed by the World Health Organization [WHO]), as well as formal communications from the network of OIE Reference Laboratories and Collaborating Centres. The findings of this active search activity are compared with the information reported by OIE Members through WAHIS. During the period January 2018 to 11 June 2019, countries and territories in the AFEO Region were contacted on 54 different occasions to clarify rumours circulating on the Internet. As a result of the requests for clarification, in 57% of the cases where countries/territories in the Region were contacted, an immediate notification or follow up reports was subsequently submitted to the OIE. These results are in line with the results obtained considering all the other Regions, where approximately 54% of contacts with the countries concerned resulted in a positive response and the submission of a report. In 24% of the cases where countries/territories in the AFEO

Region were contacted, no answer to the OIE enquiries was provided, a result that is in line with the average in the rest of the world of 26%. This percentage of unanswered requests is not negligible and countries and territories are encouraged to follow-up on these requests, in their own interests.

### 3. Timeliness of reporting

#### 3.1. Immediate notifications and follow-up reports

Article 1.1.3. of the OIE Codes also stipulates the time within which OIE Members are required to submit an immediate notification to report an exceptional event involving an OIE-listed diseases (i.e. within 24 hours of event confirmation). In order to evaluate compliance with this requirement, the dates of the start of the event, event confirmation and reporting were analysed for all the immediate notifications submitted by the AFEO Region for the period January 2018 to 11 June 2019, by type of disease (aquatic vs terrestrial), and the results were compared to those for the rest of the world.

Table 1 shows that the average times for confirmation (i.e. from start of the first outbreak to confirmation of the event) and submission of the immediate notifications (from confirmation of the event to submission of the report to the OIE) were slightly longer in the AFEO Region than in the rest of the world for terrestrial animal diseases. This resulted in an average of 28 days from the start of first outbreak to the submission of the report in the AFEO Region, versus 23 days in the rest of the world.

These differences were even higher for the aquatic reports submitted during this period. The average time from start to confirmation of aquatic events was almost five months in the AFEO Region (versus an average of 17 days for the rest of the world). The time from confirmation to the notification of these events was also far longer, namely an average of 100 days in the AFEO Region, compared to 33 days in the rest of the world. As revealed by a previous analysis (as reported at the General Session of the OIE in May 2019), the reporting of aquatic animal diseases tends to suffer from more delays than that of terrestrial animal diseases. Difficulties in communication between the aquatic services and the veterinary services, where these are separate, were pointed out as a potential contributing factor to this delay<sup>2</sup>. Nevertheless, these differences were extremely high in the AFEO Region during the period of analysis. Although not many immediate notifications were received during this period, these figures are a cause for concern and should be discussed and explored to understand the factors influencing the delay in reporting of aquatic events in the AFEO Region.

**Table 1: Average number of days between the start of the outbreak, event confirmation and report submission for immediate notifications submitted by countries and territories of the AFEO Region vs the rest of the world, by type of disease (aquatic vs terrestrial) during the period January 2018 to 11 June 2019**

	Terrestrial		Aquatic	
	AFEO Region	Rest of world	AFEO Region	Rest of world
<b>Start to Confirmation</b>	13.6	11.9	148.5	17.3
<b>Confirmation to Submission</b>	14.5	11.3	100.4	33.3
<b>Start to Submission</b>	28.0	23.2	249	50.6

<sup>2</sup> OIE, 2019. World Animal Health Report presented during the General Session in May 2019

### 3.2. Six-monthly reports

The OIE *Codes* do not set any requirement for the timing of the submission of six-monthly reports. Nevertheless, during training of Notification Focal Points for Animal Disease Notification and through reminders to OIE Delegates, the WAHIAD recommends that these reports should be submitted as early as possible after the end of the relevant semester. On average, for the year 2018, the AFEO Region submitted the six-monthly reports approximately 10 days earlier than the rest of the world (Table 2). The only exception was for the aquatic reports for the second semester of 2018, which were submitted slightly later than those of the rest of the world. In addition, as pointed out in the World Animal Health Report presented during the General Session of the OIE in May 2019, the second semester reports (aquatic and terrestrial) were submitted much earlier than the first semester reports, most likely due to the additional efforts made to remind countries to submit their reports in preparation for the General Session.

**Table 2: Average time (in days) taken to submit aquatic and terrestrial six-monthly reports (SMR) for 2018, after the end of reporting period: comparison between the AFEO Region and the rest of the world**

SMR for 2018	AFEO Region	Rest of the world
Aquatic SMR 1	111.4	125.4
Aquatic SMR 2	70.6	63.2
Terrestrial SMR 1	116.0	131.4
Terrestrial SMR 2	58.1	68.3

## 4. Quality of reporting

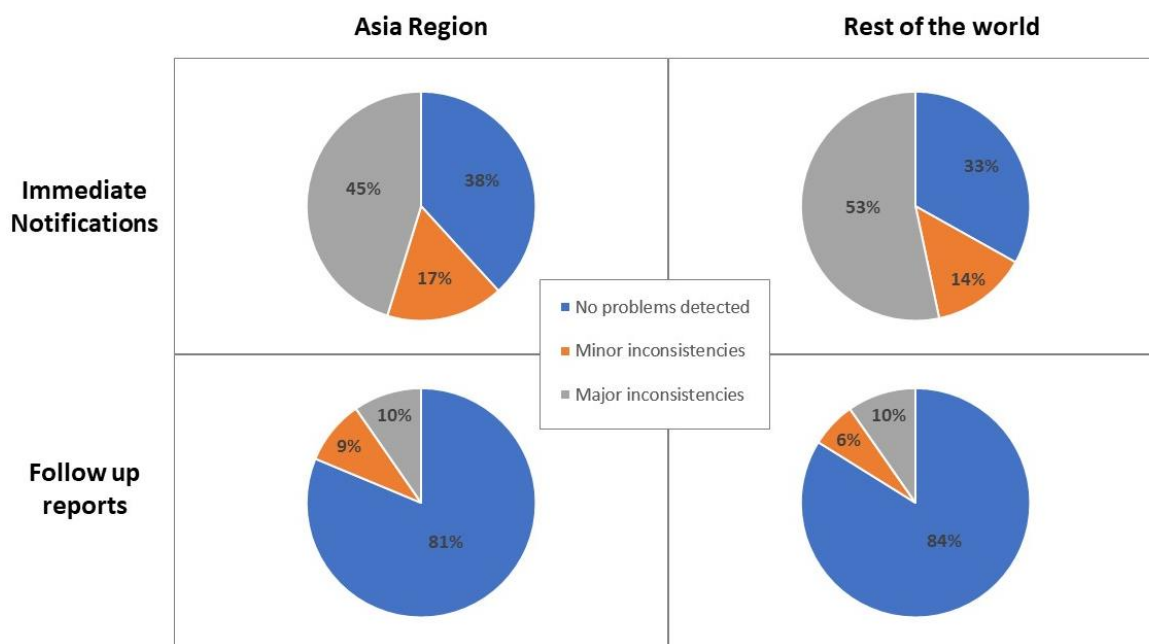
### 4.1. Immediate notifications and follow up reports

The quality of the exceptional reports (immediate notification and follow up reports) submitted by the AFEO Region was also evaluated, taking into account the existence of inconsistencies/problems in the reports submitted, the importance of those inconsistencies (classified as minor or major [i.e. requiring the country or territory to be contacted before the publication of the report]), their number and the most common types of inconsistencies detected by the OIE during the validation process.

Figure 3 shows that the detected inconsistencies were very different between the immediate notification (top row) and the follow up report (bottom row). Specifically, most of the follow up reports submitted in the AFEO Region and in the rest of the world did not present any problems (81% and 84%, respectively), while the immediate notifications not presenting any problems represents approximately one third of the total submitted. Immediate notifications have a much higher potential for errors and inconsistencies, and this is demonstrated by the fact that approximately half of the immediate notifications submitted (45% for the AFEO Region and 53% for the rest of the world) presented major inconsistencies that required the sender to be contacted, while 17% (AFEO Region) and 14% (rest of the world) presented some minor inconsistencies.

When comparing AFEO Region reports with those of the rest of the world, AFEO Region immediate notifications generally presented fewer inconsistencies, and if present they were more often minor, not requiring the country or territory concerned to be contacted. For FUR, the AFEO Region and the rest of the world presented very similar results.

**Figure 3: Analysis of inconsistencies found in immediate notifications and follow up reports submitted from the AFEO Region and from the rest of the world**

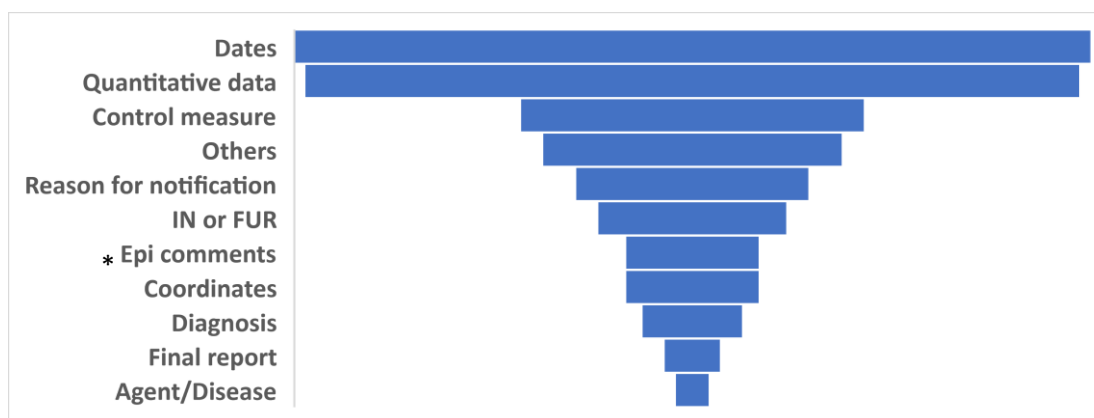


Generally, in reports where inconsistencies were detected, only one inconsistency was present per report. However, in the case of immediate notifications, up to 40% of the reports with inconsistencies presented two or more inconsistencies. These factors (more frequent inconsistencies, in a higher number and of more importance), make immediate notifications more difficult to process and they influence the efforts needed to validate them.

The type of inconsistency was evaluated for all immediate notifications and follow up reports in order to identify the most common inconsistencies and consequently address them in future training. The pattern observed in the AFEO Region was almost identical to that in the rest of the world in terms of the most common errors. Therefore, Figure 4 presents only the results for the AFEO Region. As shown in the graph, inconsistencies in dates (especially date of last occurrence) and in quantitative data (i.e. numbers of cases and culled animals not consistent with the control measures reported) were the two most common inconsistencies in both types of report. In terms of frequency, these two categories of inconsistencies were followed by inconsistencies in the control measures reported (e.g. the quantitative data indicate that stamping out has been carried out, but this measure was not selected as applied in the report) and a group of 'other reasons' which were very variable and difficult to classify in a single category. Exclusively for immediate notifications, inconsistencies relating to the 'wrong reason for notification' (i.e. recurrence vs first occurrence) were frequent, followed by 'the submission of an immediate notification instead of the corresponding follow up report'. The result of these last inconsistencies is a delay in publication of the immediate notification, which is contrary to the requirement in the OIE Codes for notification within 24 hours, and thus presenting a risk to trade and for the spread of diseases. Therefore, the OIE encourages the countries and territories always to evaluate if an immediate notification is needed and, if so, carefully study the appropriate reason for notification to be entered in the report. In addition, once the immediate notification has been submitted, national Focal Points for Animal Disease Notification to the OIE are encouraged to make themselves available (by telephone or email) during the following 24 hours to answer any potential queries or provide any necessary clarifications.



**Figure 4: Most frequent categories of inconsistencies observed in immediate notifications and follow up reports submitted by countries and territories of the AFEO Region between March 2018 and 11 June 2019**



\*\*"Epi comments": refers to incorrect information reported in the section "epidemiological comments", or either to inconsistencies between the epidemiological comments and the information reported in other sections of the report

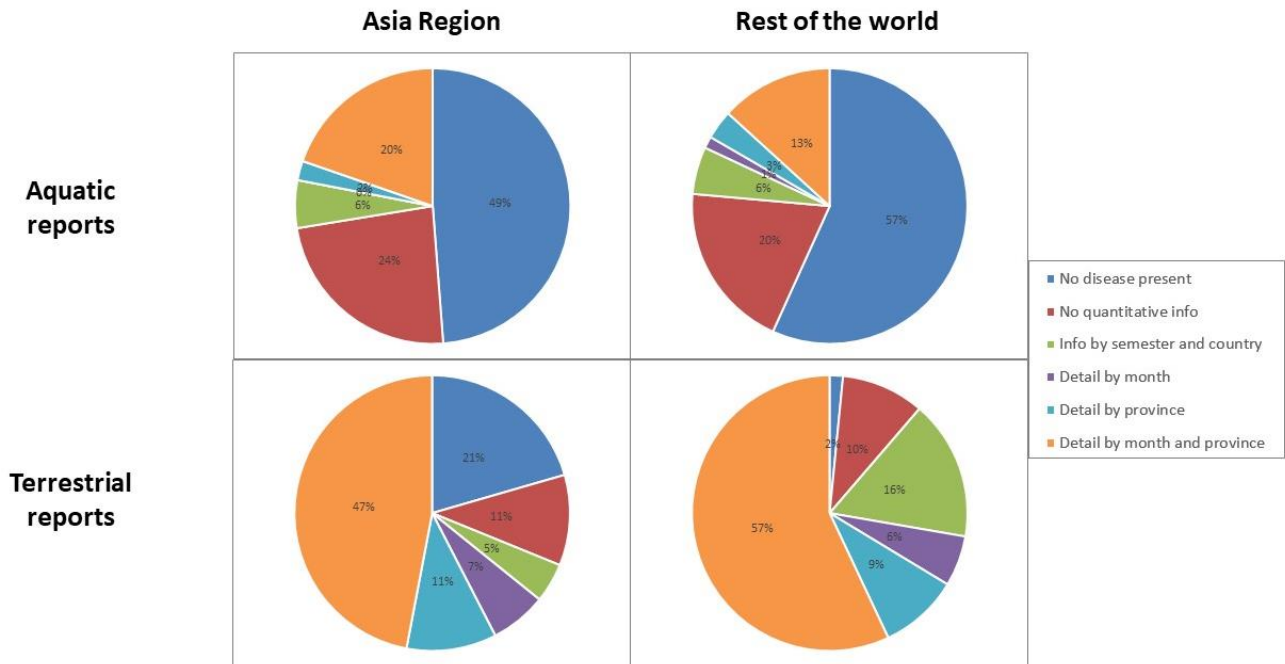
#### 4.2. Six-monthly reports

The quality of the six-monthly reports received was assessed differently from that of the immediate notifications/follow up reports, and the analysis took into account two main indicators: firstly, the number of diseases with the occurrence code 'no information' per report, and, secondly, the level of detail of any quantitative data provided, for the diseases reported as 'present'. The greater the quantity and detail of the information provided, the higher the quality of the report.

In their six-monthly reports for 2018, countries and territories of the AFEO Region provided information on an average of 82% of the terrestrial animal diseases and 77% of the aquatic animal diseases. This translates as an average of 17 (out of 96) terrestrial and seven (out of 29) aquatic animal diseases with the occurrence code 'no information' by report. No differences were observed between the reports from the AFEO Region and those from the rest of the world for this indicator. However, major differences were observed between the information provided for domestic animals and wild animals and between aquatic and terrestrial reports. Specifically, the terrestrial reports generally contained information on more diseases than the aquatic reports. In both types of reports (aquatic and terrestrial), countries and territories provided more information for domestic animals (88% of terrestrial animal diseases reported for domestic animals and 80% for farmed aquatic animals), while the percentages decreased to 77% for terrestrial wild animals and 74% for captured aquatic animals.

These results are positive and demonstrate that, in general, countries and territories in the AFEO Region are aware of their status in terms of OIE-listed diseases, especially in the case of domestic terrestrial animals. However, additional efforts should be made in the surveillance of wild animals and aquatic diseases in order to achieve a similar degree of report compliance.

**Figure 5: Level of detail provided for the OIE-listed diseases in the six-monthly reports for 2018, by type of report (aquatic vs terrestrial) and by region**



When analysing the content of the six-monthly reports and the level of detail of the quantitative information provided for the diseases reported as present, big differences were observed between aquatic and terrestrial animal diseases reports, while some minor differences were observed when comparing the AFEO Region with the rest of the world (Figure 5). In general, reports with ‘no disease present’, were much more common for aquatic reports than for terrestrial reports, representing up to 49% of the AFEO Region reports and more than 57% of the reports from the rest of the world. Reports of this type (i.e. with all diseases reported as absent or no information) accounted for 21% of the terrestrial reports from the AFEO Region, compared to only 2% for terrestrial reports from the rest of the world. This big difference should be evaluated cautiously, while also taking into account the existence of appropriate control measures, such as surveillance.

In addition, the proportion of reports with no quantitative information provided despite indicating some diseases as present, was much higher for aquatic reports than for terrestrial reports (20% vs 10%), and was also slightly higher for both aquatic and terrestrial reports in the AFEO Region than in the rest of the world. Finally, when quantitative data were provided, the most common template used was the most detailed one (by month and by administrative division), which is a good sign and an indication of progress in the accuracy and detail of the information provided.

Worldwide, 32% of the six-monthly reports received did not present any inconsistencies and were validated directly. The percentage for the AFEO Region reports was slightly higher than the percentage for the rest of the world (38% compared to 29% for the rest of the world). This reflects well on the training provided and demonstrates good compliance with procedures by Focal Points for Disease Notification to the OIE, which should be further encouraged.

- The submission rates for the six-monthly reports for 2018 were higher in the AFEO Region than in the rest of the world, especially for aquatic reports. Six-monthly reports were also submitted by countries and territories of the Region with shorter delays after the end of each semester.
- The transparency of the AFEO Region in submitting immediate notifications was higher than that of the rest of the world, while the percentage of positive feedback to OIE enquiries for unreported events detected through the active search activities is in line with the average behaviour at global level.
- The analysis identified slightly longer delays for the confirmation and submission of immediate notifications for exceptional events involving terrestrial animal diseases, but marked delays for events involving aquatic animal diseases, a situation that should be further reviewed to encourage improvement.
- The immediate notifications submitted by the AFEO Region presented fewer and comparatively less serious inconsistencies than those of immediate notifications submitted by the rest of the world. Nevertheless, special attention should be paid to the submission of immediate notifications as inconsistencies in the reports can lead to delays in their publication, hindering the transparency of information.
- Worldwide, aquatic six-monthly reports contained less information and less detailed quantitative data than the corresponding terrestrial reports. These differences were smaller for the AFEO Region. However, a considerable proportion of terrestrial six-monthly reports from the AFEO Region did not report any disease as present, a situation that should be treated with caution and viewed in parallel with the control measures put in place.

Therefore, countries and territories of the AFEO Region are strongly encouraged to continue their efforts to submit timely, complete and accurate information in their reports.

## **SELECTED ANIMAL DISEASES**

In this second part of the report, we provide a detailed analysis of some groups of animal diseases, including the situation in the AFEO Region (disease distribution and reports received), the control measures applied and diagnostic capacity, as reported to the OIE during the period January 2018 to 11 June 2019

### **a. Avian diseases**

#### *Disease situation and reporting*

Four OIE-listed diseases of birds were selected in this section: infection with avian influenza viruses of both high and low pathogenicity (HPAI and LPAI) in poultry; infection with influenza A viruses of high pathogenicity in birds other than poultry, including wild birds (HPAI wild); and infection with Newcastle disease virus (NCD). These diseases were selected in view of the importance of avian production in the AFEO Region, and the significant economic consequences of their occurrence and spread in the Region. According to FAO<sup>3</sup> data, in 2017 AFEO accounted for 35% of chicken meat production in the world (37.6 million tonnes out of a total of 109 million)<sup>4</sup>, and for 65% of egg production (1.03 billion out of a total of 1.6 billion).

In the AFEO Region, avian influenza viruses (both HPAI and LPAI) are the pathogens with the highest impact in terms of animal losses and movement restrictions on animals and animal products in the poultry sector, while NCD is the disease of birds with the widest distribution, in terms of the number of countries and territories affected. HPAI (in poultry) was reported through immediate notifications by 15 countries and

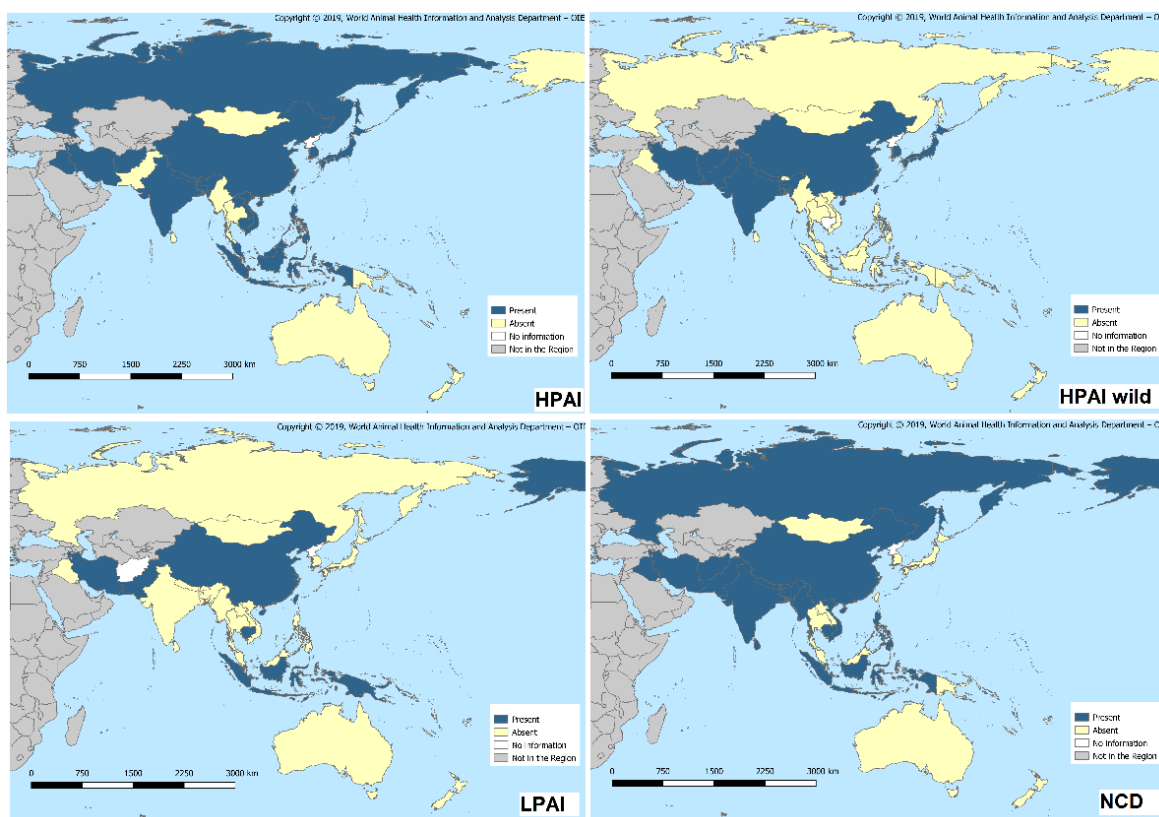
<sup>3</sup> FAO: Food and Agriculture Organization of the United Nations

<sup>4</sup> FAO - <http://www.fao.org/faostat/en>

territories in the Region, followed by HPAI (in birds other than poultry, including wild birds) (9 countries and territories) and LPAI and NCD (2 countries each). Among the selected avian diseases, during the period of analysis NCD was reported as present by 20 countries and territories<sup>5</sup>, followed by HPAI (in poultry) reported by 19 countries and territories<sup>6</sup>, HPAI in non-poultry including wild birds (11 countries and territories)<sup>7</sup>, and LPAI (9 countries and territories)<sup>8</sup> (as of 11 June 2019).

During the period of analysis, 61% of the countries and territories in the AFEO Region (27 out of 44) were affected by at least one of the four selected diseases, 4.5% of them (2/44) were affected by all four diseases, 20% (9/44) were affected by three diseases, 18% (8/44) by two diseases and 18% (8/44) by one disease only (mainly NCD). The distribution of the selected diseases is reported in Figure 6.

**Figure 6. Distribution of HPAI, HPAI wild, LPAI and NCD in countries and territories in the AFEO Region during the period January 2018 to 11 June 2019: information is displayed at country level**



<sup>5</sup> Afghanistan, Bangladesh, Bhutan, Cambodia, China (People's Republic of), Hong Kong (SARC), India, Indonesia, Iran, Iraq, Myanmar, Nepal, Pakistan, Philippines, Russia, Singapore, Sri Lanka, Timor-Leste, United States of America and Vietnam.

<sup>6</sup> Afghanistan, Bangladesh, Bhutan, Cambodia, China (People's Rep. of), Chinese Taipei, Hong Kong (SARC-PRC), India, Indonesia, Iran, Iraq, Japan, Korea (Rep. of), Laos, Malaysia, Nepal, Philippines, Russia and Vietnam

<sup>7</sup> Afghanistan, Bangladesh, China (People's Rep. of), Chinese Taipei, Hong Kong (SARC-PRC), India, Iran, Japan, Korea (Rep. of), Nepal and Pakistan

<sup>8</sup> Cambodia, China (People's Rep. of), Chinese Taipei, Indonesia, Iran, Pakistan, Papua New Guinea, Samoa and United States of America

HPAI was reported through immediate notifications by all the affected countries and territories in the AFEO Region, except for Indonesia, where the disease is considered stable and is therefore reported through six-monthly reports only. In particular, 45 immediate notifications were submitted for HPAI (in poultry). The most common serotype was H5N1, reported by 10 countries, followed by H5N6 (7 countries), H5N8 (5 countries and territories), H5N2 (2 countries) and H7N9 (1 country). Two countries and territories provided information only on the haemagglutinin type (H5). Most of the countries and territories notified the recurrence of the disease, while Afghanistan reported the first occurrence of the disease in a zone (H5 serotype) and Chinese Taipei reported the occurrence of a new strain (H5N6).

The same reporting behaviour was observed for HPAI in birds other than poultry, including wild birds, where all the affected countries and territories reported the disease exclusively through immediate notifications. Specifically, 14 immediate notifications were submitted during the period. In this case the most frequently reported serotype was H5N6 (4 countries and territories), followed by H5N1 (3 countries), H5N8 (2 countries), H5N2 and H7N9 (1 country each). Two countries and territories provided information only on the haemagglutinin type (H5). Most of the countries reported the recurrence of the disease, China (People's Rep. of) reported the first occurrence of serotype H7N9 in a zone, and Iran and Pakistan reported the first occurrence of a new strain in the country (respectively H5N6 and H5N8).

LPAI was reported through immediate notifications by only three countries and territories. In particular, Cambodia reported the occurrence of three new strains (H5N6, H7N4 and H7N7), while Chinese Taipei and the United States of America reported the recurrence of the disease (respectively serotypes H5N2 in Chinese Taipei, and H5N2, H7N1, H7N3 in the United States of America). The most common serotype in this case was H5N2, reported by two countries. All the other serotypes (H5, H5N6, H7N1, H7N3, H7N4, H7N7) were reported by only one country or territory each. It is worth highlighting the fact that 67% of the countries and territories declaring the disease present (i.e. 6 out of 9) did not provide information about the serotype circulating.

Finally, NCD was reported mainly through six-monthly reports, meaning that the disease is considered stable in the countries and territories concerned. Only three countries reported the recurrence of the disease in the country through immediate notifications: Cambodia, Russia and the United States of America.

Regarding the accuracy of the information provided, in general very detailed information was submitted by countries and territories notifying the presence of HPAI (whether in poultry or in birds other than poultry, including wild birds) with 100% of the countries and territories providing quantitative details (Table 3). For LPAI, quantitative information was submitted by approximately 67% of the affected countries and territories, and for NCD by 80% of the affected countries and territories.

**Table 3: Status of avian diseases in the AFEO Region, and the format used by countries and territories to report each disease present (by immediate notifications/follow up reports (IN/FUR) or by providing quantitative information in six-monthly reports) (as of 11 June 2019)**

	No. countries/territories reporting disease present				ABSENT	NO INFO
	Total	IN/FUR	Quant. info	No quant. info		
<b>HPAI</b>	19	18	1	1	23	2
<b>*HPAI in wild birds</b>	11	11	0	0	28	5
<b>LPAI</b>	9	3	3	3	32	3
<b>NCD</b>	20	3	13	4	20	4

**\* HPAI (in birds other than poultry, including wild birds)**

Preventive and control measures reported

Based on the information reported by the countries and territories of the AFEO Region in their six-monthly reports, HPAI (in poultry) and NCD are the diseases with the highest proportion of countries and territories declaring at least one control measure in place: 73% (32 out of the 44 countries and territories in the Region). HPAI in birds other than poultry, including wild birds is the disease for which the lowest proportion of countries and territories declared having some control measures in place: 61% (27 out of 44) (Table 4).

Of the four avian diseases considered, NCD and HPAI were the ones most frequently reported as being 'notifiable': in 64% of countries and territories (28 out of 44).

The reported level of surveillance is quite high for HPAI (in poultry) and NCD (declared by respectively 31 and 30 countries and territories), and lower for HPAI in birds other than poultry, including wild birds and LP AI. In particular, for HPAI in birds other than poultry, including wild birds, surveillance activities were reported by only 26 countries and territories. Finally, very few countries reported routine vaccination for avian influenza viruses (i.e. 3 for HPAI, 1 for HPAI in birds other than poultry, including wild birds and 3 for LP AI) while, as expected for this type of disease, this measure is extensively applied for NCD (15 countries and territories).

**Table 4: Number of countries and territories in the AFEO Region applying control measures for four selected avian diseases, as indicated in their six-monthly reports**

	Reporting at least one control measure	Notifiable disease	Surveillance*	Routine vaccination (Vaccination prohibited)
<b>HPAI</b>	32	26	31	3 (20)
<b>**HPAI in wild birds</b>	27	20	26	1 (11)
<b>LP AI</b>	29	23	28	3 (14)
<b>NCD</b>	32	28	30	15 (2)

\*Surveillance: any type of surveillance was considered, including general surveillance, targeted surveillance, monitoring and screening. If the country/territory reported the application of at least one of these measures, it was considered to apply surveillance of some kind.

\*\* HPAI (in birds other than poultry, including wild birds)

Diagnostic capacities of countries and territories in the AFEO Region

The diagnostic capacities of countries and territories in the AFEO Region were assessed for each of the selected avian diseases, based on the laboratory and diagnostic test information submitted in the annual reports for 2017 and 2018 (“National reference laboratory” and “Diagnostic tests” sections). The 2017 annual reports were included in the analysis as approximately 30% of countries and territories in the AFEO Region had not yet submitted their 2018 annual report. The information provided in immediate notifications and follow up reports on the diagnostic laboratories and tests used in connection with the exceptional events reported in 2018 and 2019 was also considered in the analysis (Table 5). Information on HPAI in poultry and HPAI in birds other than poultry, including wild birds was grouped together as it is the same disease.

Around 70% of the countries and territories in the Region reported having diagnostic capacities for HPAI, and a total of 64 laboratories were reported in the whole Region. Surprisingly, only nine countries in the Region reported the presence of laboratory capacities for LP AI. Considering that the same diagnostic techniques can be used for the detection of both HPAI and LP AI, this result could be interpreted as an inconsistency in the information reported by countries. Regarding NCD, despite the disease being stable in the affected countries and territories in the Region, only 60% of them reported having diagnostic capacities. Although the diagnostic capacity reported in the annual reports was quite high for HPAI and NCD, there were nevertheless numerous laboratories (and up to 6 countries/territories in the case of HPAI) reported in the immediate notifications / follow up reports that had not been reported before in the annual reports. Countries and territories are encouraged to report their updated and most complete diagnostic capacities in the annual reports. Providing accurate information on diagnostic capacities enables an evaluation to be made of Regional performance in terms of proper surveillance, and early detection of diseases.

**Table 5: Diagnostic capacity in the AFEO Region for selected avian diseases as reported in the annual report (AR) and the immediate notification and follow-up reports (IN/FUR). Shown in parentheses are the number of countries and laboratories reporting diagnostics in the IN/FUR that are not included in the AR**

	No. of countries and territories in the Region with diagnostic capacity		No. of laboratories in the Region with diagnostic capacity	
	AR	IN/FUR (not in AR)	AR	IN/FUR (not in AR)
<b>HPAI</b>	24	16 (6)	33	47 (31)
<b>LP AI</b>	6	4 (3)	6	9 (8)
<b>NCD</b>	24	3 (2)	36	7 (6)

- All the selected avian diseases are quite widespread in the AFEO Region, but with considerable differences in epidemiological status. HPAI in poultry and HPAI in birds other than poultry, including wild birds are both reported by almost half of the countries and territories in the Region, and mainly through immediate notifications and follow up reports, indicating that the occurrence of these diseases is still considered as an exceptional event in the country. Only one country in the Region considers the disease as stable and reports its occurrence through the six-monthly report. The situation of NCD in the Region is similar in terms of its distribution and the number of countries affected, but NCD is considered as stable in most of the Region, with very few countries and territories reporting it through the early warning system. Finally, LP AI has a limited distribution in the Region, but most of the countries reporting the disease present consider it to be stable.
- The level and accuracy of reporting and the details provided by the countries and territories declaring the diseases present are satisfactory, allowing an acceptably accurate overview of the Regional situation of these diseases from a geographical perspective (administrative divisions affected) and in terms of their impact (number of cases and losses).
- The satisfactory quality of reporting is confirmed by the preventive and control measures reported to be in place in countries and territories in the AFEO Region. All these diseases are reported to be “notifiable”, and some minimal surveillance activity is reported in around 60% of the countries and territories. On the other hand, vaccination is used as control measure for NCD only. The reported control measures reflect the different epidemiological situation of the selected diseases in the Region, and these are controlled through vaccination, where the disease situation is stable, and through various other preventive and control measures when the disease occurrence is exceptional.
- The diagnostic capacity of the countries and territories, as reported in the immediate notifications, follow up reports and annual reports, shows a good level in the Region, although some countries need to make extra efforts to update the information on their diagnostic capacities in the annual report.

The OIE highlights the exceptional performance of the Region in its reporting and detection capacities for avian diseases. Member Countries are recommended to keep the current level of quality of the information provided and in particular to maintain the good level of surveillance that allows an early detection and rapid response to potential animal health threats. On behalf of international solidarity, one of pillars of the OIE, countries and territories of the AFEO Region with optimal diagnostic capacities are encouraged to provide assistance to other countries, both within and beyond the Region, that have a lower level of resources.



## **b. Swine diseases**

### *Disease distribution and reporting*

Three diseases of swine, African swine fever (ASF), classical swine fever (CSF) and porcine reproductive and respiratory syndrome (PRRS), were selected for further analysis due to their wide spread distribution in the AFEO Region and the important consequences that are associated, as 58% of the global swine produced comes from this Region<sup>9</sup>

As shown by the maps in Figure 7, during the period of analysis (January 2018 to 11 June 2019), CSF and PRRS were the two most widely distributed in the AFEO Region, affecting 12<sup>10</sup> and 13<sup>11</sup> countries and territories, respectively. However, this period was characterised by a major spread of ASF in the Region (until August 2018, Russia was the only country in the AFEO Region that had ever registered ASF cases). As of 11 June 2019, seven<sup>12</sup> Members in the Region were affected.

---

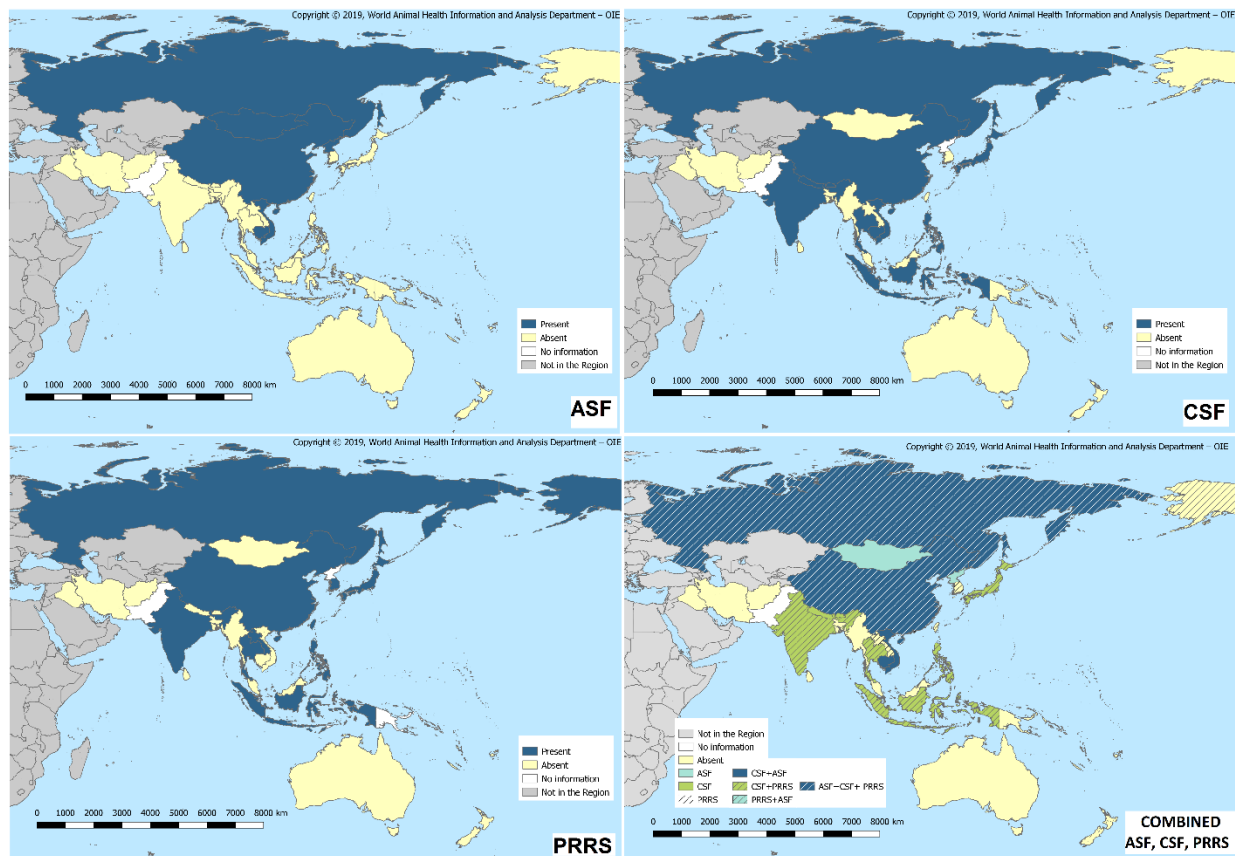
<sup>9</sup> Sources: FAOSTAT 2019 - <http://www.fao.org/faostat/en>

<sup>10</sup> Bhutan, Cambodia, China (People's Rep. of), India, Indonesia, Japan, Nepal, Philippines, Russia, Thailand, Timor-Leste and Vietnam.

<sup>11</sup> China (People's Rep. of), Chinese Taipei, French Polynesia, Hong Kong (SAR-PRC), India, Indonesia, Japan, Korea (Rep. of), Laos, Philippines, Russian, Thailand and United States of America.

<sup>12</sup> Cambodia, China (People's Rep. of), Hong Kong (SAR-PRC), Korea (Dem. People's Rep. of), Mongolia, Russian and Vietnam.

**Figure 7: Distribution of ASF, CSF and PRRS in countries and territories in the AFEO Region, during the period January 2018 to 11 June 2019: information is displayed at country level**



As of 11 June 2019, almost half of the countries and territories in the AFEO Region (20 out of 44) reported at least one of the three selected diseases: 7% reported the presence of all three diseases (3 out of 44) and 18% (8 out of 44) presented two of the diseases (one reported ASF/PRRS, two presented ASF/CSF and five presented CSF/PRRS). As can be seen in Figure 7, the distribution of PRRS and CSF was very similar, with eight countries affected by each disease, especially in South East Asia. While the first outbreaks of ASF in the Region were restricted to China (People's Rep. of), the disease is progressively spreading southwards. The co-occurrence of several swine diseases in many of the Region's countries could pose difficulties, not only for differential diagnosis, but also for the allocation of resources for the control of these diseases.

**Table 6: Status of swine diseases in the AFEO Region, and the format used by countries and territories to report each disease present (by immediate notifications/follow up reports (IN/FUR) or by providing quantitative information in six-monthly reports) (as of 11 June 2019)**

	PRESENT				ABSENT	NO INFO
	Total present	IN/FUR	Quant. info	No quant. info		
<b>ASF</b>	7	7	-	0	35	2
<b>CSF</b>	12	1	7	4	29	3
<b>PRRS</b>	13	1	7	5	26	5

As expected, all the countries newly affected by ASF submitted information through immediate notifications and follow up reports. For the other two diseases, most of the countries and territories that reported them present did so using the six-monthly reports as they consider the disease situation to be sufficiently stable (Table 6). For those two diseases (PRRS and CSF), only two countries and one country, respectively, submitted immediate notifications. Some affected countries (4 with CSF and 5 with PRRS) did not provide any information about the disease situation. Even though both these diseases are considered stable in the AFEO Region, it is important to continue submitting quantitative information through six-monthly reports to provide information about their presence and distribution.

During this period (January 2018 to 11 June 2019), 52 immediate notifications for ASF were submitted from the AFEO Region. Six of them referred to the first occurrence of ASF in the country (Cambodia, China (People's Rep. of), Hong Kong (SAR-PRC), Dem. People's Rep. of Korea, Mongolia and Vietnam<sup>13</sup>). China (People's Rep. of) reported through 33 immediate notifications the first occurrence of the disease in different provinces of the country; 12 immediate notifications were submitted by Russia, China (People's Rep. of) and Hong Kong (SAR-PRC) to report a recurrence of the disease in a previously affected area.

Four immediate notifications were submitted on CSF, including three by Russia to report the recurrence of the disease. In September 2018, Japan submitted an immediate notification to report the recurrence of CSF (first occurrence in the country since 1992). Since then, the country has reported 528 outbreaks affecting domestic pigs and wild boar. Oral vaccine has been applied to control the disease in two affected prefectures, but vaccination is prohibited in domestic swine. As of 11 June 2019, the event was still open.

A single immediate notification was reported for PRRS in the Region and related to the recurrence of the disease in Laos in January 2019 (first occurrence in the country since 2010).

#### Preventive and control measures reported

Based on the information contained in the six-monthly reports, among the three selected swine diseases, CSF was the one for which the highest proportion of countries and territories reported applying some type of control measure (63%, 23 out of 44) (see Table 7). Interestingly, no major differences were observed between the number of countries and territories considering ASF/CSF and PRRS notifiable and those that do not, as approximately half of the countries and territories in the Region did not report these diseases as notifiable (slightly higher for PRRS).

Some type of surveillance was applied in 63% of the countries and territories for CSF and in 50% of the countries and territories for ASF and PRRS. Considering the important negative consequences of ASF and its spread in the Region, the fact that half of the countries and territories in the Region do not apply any type of surveillance for ASF seems insufficient for the early detection and effective control of the disease. Specifically, 15 countries and territories that reported ASF as 'absent' did not report having implemented

<sup>13</sup> Laos reported the first occurrence of ASF on 20 June 2019.

any surveillance activity. However, this should be considered in the context of the pig populations present in each country. Finally, routine vaccination was reported as being applied in 18% of countries and territories for CSF (8 out of 44) and only 7% for PRRS, which seems a low figure considering that PRRS vaccine is very commonly used in pig farms. At the same time, some countries reported that vaccination prohibited; being a common practice in CSF to prohibit vaccination for certain populations (i.e. domestic pigs) and allow vaccination in wild boar.

**Table 7: Number of countries and territories in the AFEO Region applying control measures for three selected swine diseases, as indicated in their six-monthly reports**

	Reporting at least one control measure	Notifiable disease	Surveillance*	Routine vaccination (Vaccination prohibited)
<b>ASF</b>	26	21	22	NA
<b>CSF</b>	28	24	28	8 (6)
<b>PRRS</b>	25	19	22	3 (3)

\*Surveillance: any type of surveillance was considered, including general surveillance, targeted surveillance, monitoring and screening. If the country/territory reported the application of at least one of these measures, it was considered to have applied surveillance of some kind.

Diagnostic capacities of countries and territories in the AFEO Region

The analysis revealed that, based on the information reported in the annual reports for 2017 and 2018, the highest level of diagnostic capacity in the Region was for CSF, followed by PRRS and lastly ASF. However, the analysis of information submitted in immediate notifications / follow up reports during the period January 2018 to 11 June 2019 showed that the number of countries and laboratories in the Region able to perform ASF diagnosis is in fact much higher, reaching the level of diagnostic capacities for PRRS, with 10 countries and territories with the capacity to diagnose ASF (Table 8). Interestingly, some of these countries have large networks of regional laboratories at national level (i.e. Russia reported 25 different ASF laboratories, China [People's Rep. of] reported 23 ASF laboratories and Japan reported 6 CSF laboratories).

**Table 8: Diagnostic capacity in the AFEO Region for the three selected swine diseases as reported in the annual report (AR) in comparison with the information submitted in the immediate notifications and follow up reports (IN/FUR). Shown in parentheses are the number of countries and laboratories reporting diagnostics in the IN/FUR that are not included in the AR**

	No. of countries and territories in the Region with diagnostic capacity		No. of laboratories in the Region with diagnostic capacity	
	AR	IN/FUR (not in AR)	AR	IN/FUR (not in AR)
<b>ASF</b>	5	7 (5)	6	53 (51)
<b>CSF</b>	17	2 (1)	25	9 (8)
<b>PRRS</b>	10	2 (0)	13	2 (1)

This could indicate that, for the diseases absent in the Region (as was the case with ASF before 2018 except for Russia), the laboratory capacity reported in the annual report is less complete than for the diseases reported as stable.

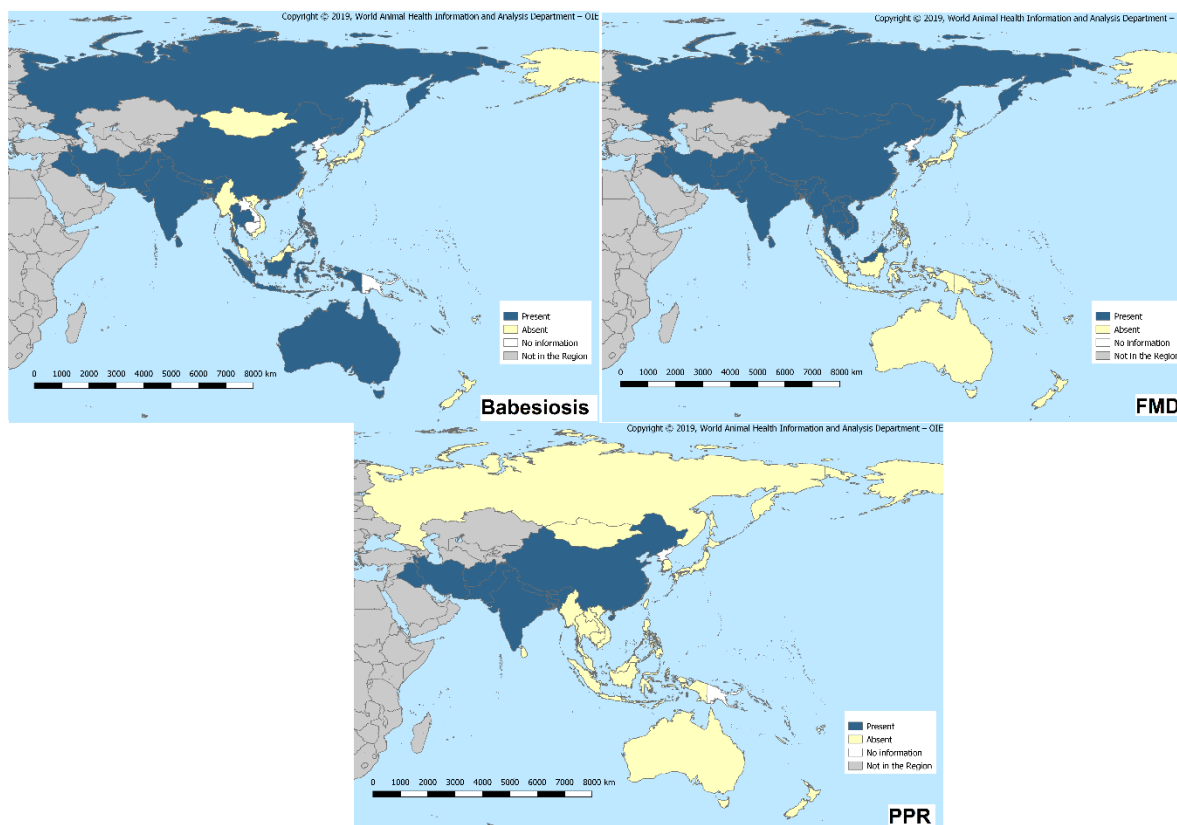
- The concomitant presence of two or more of these swine diseases in 25% of countries and territories of the Region could pose some difficulties not only for the differential diagnosis, but also for the notification and control of the diseases.
- The quality of information on the disease situation for the selected swine diseases was quite good, especially for ASF, for which numerous immediate notifications were submitted from the Region. However, there are still some countries and territories that do not provide any detailed information on disease location or evolution for diseases considered stable (e.g. CSF and PRRS). This lack of information can pose a risk to other countries, which remain unaware of the true disease distribution and incidence.
- The analysis of the control measures revealed that in half of the countries and territories of the Region these diseases are not notifiable and no surveillance activities have been reported. This should be addressed to confirm whether countries and territories are not implementing effective surveillance activities or simply not reporting them. Whatever the case, countries and territories are encouraged to review the control measures reported for these diseases in their next six-monthly reports.
- Another gap was identified between the diagnostic capacity information reported in the annual reports and the information provided in immediate notifications, especially for emerging diseases such as ASF. Countries and territories are encouraged to review and update the diagnostic capacity information they include in their next annual report, as this section will be used in the new OIE-WAHIS to support countries and territories in the AFEO Region with their diagnostic requirements.

### **c. Ruminant diseases**

#### *Diseases distribution and reporting*

Another group of diseases selected for this analysis included several diseases that affect ruminant hosts such as bovine, ovine and caprine species, among others (e.g. FMD in swine). Three diseases were chosen in order to compare the reporting performance of countries and territories in the AFEO Region regarding different types of diseases. Firstly, FMD was chosen as a transboundary animal disease with a high impact on international trade, and one that is widespread in AFEO, especially in the Centre of the Region (see Figure 8). Secondly, PPR was selected as an example of a disease limited to Central Asia and one for which a global eradication programme is in progress. Finally, bovine babesiosis was selected as an endemic disease of cattle that is widely distributed in the Region, for which no global eradication strategy exists, and no international trade barriers are generally imposed.

**Figure 8: Distribution of bovine babesiosis, FMD and PPR in countries and territories in the AFEO Region, during the period January 2018 to 11 June 2019: information is displayed at country level**



As illustrated in Figure 8, FMD affected almost half of the countries and territories of AFEO during the period of analysis (20<sup>14</sup>/44). In most of these countries and territories the disease is reported to be present and stable, only five countries or territories having submitted an immediate notification during this period. Fourteen countries and territories reported quantitative information through their six-monthly reports (Table 9). It is important to highlight that the quality of information available for FMD was much better than that for the other two diseases; for example, only one country reported FMD as present without providing any additional quantitative information. It is also one of the diseases for which the number of immediate notifications was highest in this Region, especially due to the spread of serotype O (17 immediate notifications), compared with only two reports for serotype A and one for Asia 1.

Bovine babesiosis, on the other hand, is an example of a disease that is widely distributed in the Region (it was reported to be present in 17<sup>15</sup> countries and territories), but with only a limited amount of information being reported. Specifically, half of the affected countries and territories did not provide any quantitative information on the location or scale of the disease. As expected, the reporting of bovine babesiosis was done mainly through six-monthly reports, and just one 'exceptional event', in New Caledonia, has continued to be open since 2008. No immediate notifications were submitted during the period of analysis.

<sup>14</sup> Afghanistan, Bangladesh, Bhutan, Cambodia, China (People's Rep. of), Hong Kong (SAR-PRC), India, Iran, Iraq, Korea (Rep. of) Laos, Malaysia, Mongolia, Myanmar, Nepal, Pakistan, Russian, Sr Lanka, Thailand and Vietnam.

<sup>15</sup> Afghanistan, Australia, Bangladesh, China (People's Rep. of), French Polynesia, India, Indonesia, Iran, Iraq, Nepal, New Caledonia, Pakistan, Philippines, Russia, Sri Lanka, Thailand and Vietnam.

During the period of analysis, PPR was reported present in nine<sup>16</sup> countries and territories. Only one immediate notification was submitted, and most of the affected countries and territories (66%) reported quantitative information through their six-monthly reports. However, despite the existence of a global eradication programme, two countries still reported the disease as present without providing any quantitative information.

**Table 9: Status of three selected ruminant diseases in the AFEO Region and the format used by countries and territories to report each disease present (by immediate notifications/follow up reports (IN/FUR) or by providing quantitative information in the six-monthly reports [SMR])**

	PRESENT				ABSENT	NO INFO
	Total present	IN/FUR	Quant. info SMR	No quant. info		
<b>FMD</b>	20	5	14	1	22	2
<b>PPR</b>	9	1	6	2	32	3
<b>Bovine babesiosis</b>	17	1	9	7	22	5

Five different countries submitted a total of 20 immediate notifications relating to FMD during the period of analysis. China (People's Rep. of) submitted 13 immediate notifications: one for the first occurrence of serotype O and three relating to the new strain of serotype O; the remaining nine immediate notifications related to the recurrence of FMD, eight for serotype O and one for serotype A.

Korea (Rep. of) submitted two immediate notifications for FMD, one for the recurrence of serotype A and another for the recurrence of serotype O. Myanmar reported the recurrence of serotype O and Nepal submitted two immediate notifications reporting the recurrence of serotype AFEO 1. Russia submitted three immediate notifications for the recurrence of serotype O.

For PPR, only one immediate notification was submitted in the AFEO Region. This was for the recurrence of the disease in Bhutan in 2018. This event was declared closed in August of the same year. No immediate notifications were submitted for bovine babesiosis.

#### Preventive and control measures reported

The analysis of reported preventive and control measures revealed a globally higher level of reporting for this group of diseases than for the other groups studied, such as swine diseases. Specifically, FMD was the analysed disease most frequently notifiable in the Region (in 73% of countries and territories) and the one for which surveillance was applied most often; it was also one of the three diseases with the highest number of countries and territories reporting the application of at least one measure (together with HPAI and NCD). This reveals that, despite being present and stable in many countries and territories of the Region, FMD is still considered a high priority, and this is reflected in their reporting. Based on the reported information, 70% of the affected countries and territories apply routine vaccination. Therefore, the appropriate matching of vaccines with the circulating strains is crucially important for the control of the disease in the AFEO Region.

<sup>16</sup> Afghanistan, Bangladesh, Bhutan, China (People's Rep. of), India, Iran, Iraq, Nepal and Pakistan.

In view of the existence of a global PPR eradication programme, it is important to note that only 55% of countries and territories in the Region reported that the disease was notifiable and only 65% reported applying surveillance. Vaccination is routinely applied in most of the affected countries, whereas it is prohibited in all OIE Members having an officially recognised PPR-free status<sup>17</sup> (i.e. this is one of the requirements for obtaining PPR-free status) as well as in two other OIE Members that have not yet achieved PPR-free status.

Interestingly, bovine babesiosis was reported to be a notifiable disease in almost the same number of countries and territories in the Region as PPR. Surveillance for bovine babesiosis is less frequently applied, however, and vaccination is very rare. This information corresponds perfectly to the characteristics of an endemic disease in the Region.

**Table 10: Number of countries and territories in the AFEO Region applying control measures for three selected ruminant diseases, as indicated in their six-monthly reports**

	Reporting at least one control measure	Notifiable disease	Surveillance*	Routine vaccination (Vaccination prohibited)
<b>FMD</b>	32	30	32	14 (10)
<b>PPR</b>	30	24	29	7 (11)
<b>Bovine babesiosis</b>	26	22	25	1 (2)

\*Surveillance: any type of surveillance was considered, including general surveillance, targeted surveillance, monitoring and screening. If the country/territory reported the application of at least one of these measures, it was considered to have applied surveillance of some kind.

Diagnostic capacities of countries and territories in the AFEO Region

As shown in Table 11, diagnostic capacity for FMD in the Region was very high, and it was similar to the diagnostic capacity for other transboundary animal diseases analysed in this report, such as HPAI. It is a very good indicator that, for most countries and territories and most laboratories, details of their diagnostic capabilities for FMD were provided in the annual report, and in only very few cases was this information available only in immediate notifications. This finding supports previous results on the good level of reporting for FMD in comparison with other diseases and demonstrates that it is possible to achieve this level of reporting.

Interestingly, very few countries and laboratories were reported to be able to perform PPR diagnostics, even fewer than the number of countries currently affected in the Region. The information currently available is potentially not complete, however. Therefore, countries and territories are encouraged to complete this section in their next annual reports in order to provide a good picture of the diagnostic capacity in the Region, as this is an essential component of the eradication programme.

Finally, almost no data were reported regarding laboratory diagnosis of bovine babesiosis.

<sup>17</sup> Australia, Chinese Taipei, Korea (Rep. of), New Caledonia, New Zealand, Philippines, Singapore, Thailand and United States of America.



**Table 11: Diagnostic capacity in the AFEO Region for the selected ruminant diseases, as reported in the annual report (AR) in comparison with the information submitted in the IN and FUR (IN/FUR). Shown in parentheses are the number of countries and laboratories reporting diagnostics in the IN/FUR that are not included in the AR**

	No. of countries and territories in the Region with diagnostic capacity		No. of laboratories in the Region with diagnostic capacity	
	AR	IN/FUR (not in AR)	AR	IN/FUR (not in AR)
<b>FMD</b>	23	4 (3)	29	6 (5)
<b>PPR</b>	6	1 (1)	8	1 (1)
<b>Bovine babesiosis</b>	7	-	7	-

- FMD is widely distributed in the Region, with three circulating serotypes (O, A and Asia 1), though most of the events reported during the period of analysis were caused by serotype O. Very good quality information was available for FMD distribution, quantitative data and control measures applied. Of the three diseases analysed in this section, FMD is the one most frequently reported as notifiable and with the highest level of reporting for the control measures applied. The diagnostic capacity for FMD in the Region is also very high and is very accurately reported in the annual reports.
- PPR distribution is limited in Central AFEO, and nine OIE Members are recognised as free from the disease. However, considering that a global eradication programme is in progress, the level of reporting for this disease is not ideal, as some affected countries or territories have not provided any detailed information. The overall level of information reported on the control measures applied and on laboratory diagnostic capacity for the disease in the Region remains insufficient.
- For bovine babesiosis, which is present and stable in most of the Region, the quality of information available is not very good. However, the disease was reported to be notifiable in half of the countries and territories in the Region.

In view of the above results, countries and territories are encouraged to continue their efforts on reporting the FMD situation and the control measures applied, and to improve the reporting of PPR-related information in order to support the global eradication programme. Additional efforts should be made to improve the quality of reporting on stable diseases such as bovine babesiosis.

#### **d. Rabies**

##### *Disease distribution and reporting in the AFEO Region*

The main reason driving the selection of this disease for analysis in this report was its inclusion among the diseases selected in the context of the Regional Work Plan Framework<sup>18</sup>. One of the main objectives of this Plan is to improve disease notification. Moreover, the evaluation of the rabies situation in the AFEO Region is very important in the framework of the Region's contribution to rabies control. Among the points highlighted at the Conference of the OIE Regional Commission for Asia, the Far East and Oceania, held in Malaysia in 2017, were the following: 1) the need for the Region to actively engage in "Zero by 30: The

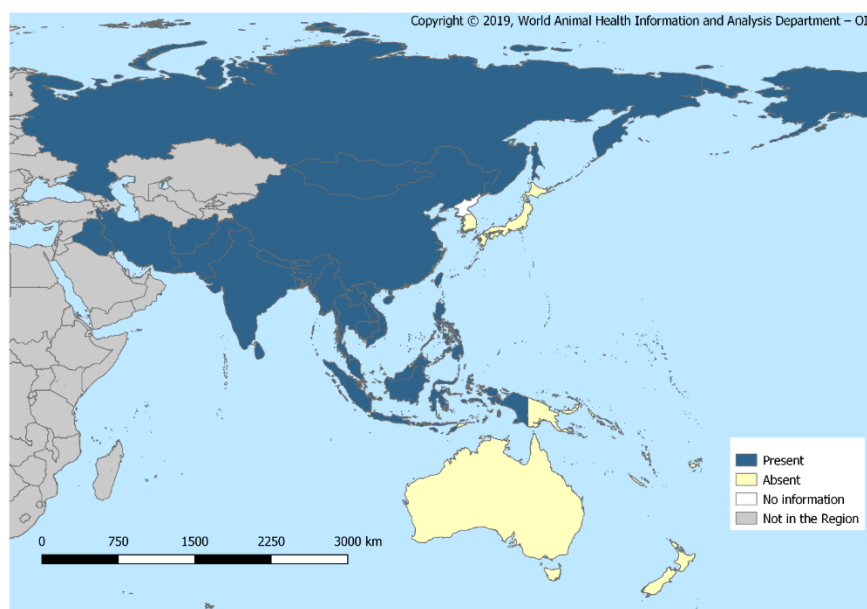
<sup>18</sup> Second Regional Work Plan Framework 2016-2020. Adopted by the Regional Commission Members at the 29th Conference of the OIE Regional Commission for AFEO, the Far East and Oceania (Ulaanbaatar, Mongolia, September 2015). Updated 21 May 2018

Global Strategic Plan to Prevent Human Deaths from Dog-mediated Rabies by 2030<sup>19</sup>, developed jointly by WHO, OIE, FAO and the Global Alliance for Rabies Control (GARC), and contribute to the elimination of dog-mediated human rabies in the region by 2030; 2) the feasibility of ending human deaths from dog-mediated rabies through the availability of relevant knowledge, technologies and vaccines; and 3) the benefits of using barrier or ring vaccination to protect dog and human populations, as long as such vaccination extends a sufficient distance from infected cases or areas and provides sufficient vaccination coverage (at least 70%)<sup>20</sup>.

For this reason, an update on the status of the disease in the AFEO Region, the reporting behaviour of the countries and territories, the preventive and control measures in place and the Region's diagnostic capacity is considered of pivotal importance to understand the level of compliance with the Global Strategic Plan.

During this period (January 2018 to 11 June 2019) rabies was reported as present by 50% of countries and territories in the Region (22<sup>21</sup>/44). Most of these countries and territories reported the disease present only in domestic animals (14/22), seven reported the disease present in both domestic animals and wildlife and one country reported the disease present only in wildlife. During this period, only Malaysia reported the presence of the disease through an immediate notification. The event in Malaysia started in July 2017 in Sarawak administrative division and then spread to Kedah, Perak and Perlis administrative divisions. Three hundred and fifty-five outbreaks have been reported through WAHIS with 361 cases reported (in cats and dogs). As of 11 June 2019, the event is still ongoing. The current distribution of rabies in the AFEO Region is shown in Figure 9.

**Figure 9. Distribution of rabies in countries and territories in the AFEO Region during the period January 2018 to 11 June 2019: information is displayed at country level**



<sup>19</sup> [http://www.oie.int/fileadmin/Home/eng/Media\\_Center/docs/Zero\\_by\\_30\\_FINAL\\_online\\_version.pdf](http://www.oie.int/fileadmin/Home/eng/Media_Center/docs/Zero_by_30_FINAL_online_version.pdf)

<sup>20</sup> World Health Organization. WHO Expert Consultation on Rabies. Second report. Geneva WHO technical report series; no. 982; 2013 [cited July 17, 2017]. At: [http://apps.who.int/iris/bitstream/10665/85346/1/9789240690943\\_eng.pdf](http://apps.who.int/iris/bitstream/10665/85346/1/9789240690943_eng.pdf)

<sup>21</sup> Afghanistan, Bangladesh, Bhutan, Cambodia, China (People's Rep. of), Chinese Taipei, India, Indonesia, Iran, Iraq, Laos, Malaysia, Mongolia, Nepal, Pakistan, Philippines, Russia, Sri Lanka, Thailand, United States of America and Vietnam.

As already mentioned, rabies was reported through immediate notification by only one country, while all the other 21 countries and territories that reported the disease present did so through their six-monthly reports, indicating that they considered the disease situation to be stable.

Regarding the accuracy of the information provided, the level of detail reported by countries and territories was generally satisfactory, with 86% of them reporting complete quantitative details. Only three countries reporting the disease present did not provide quantitative data, and only two countries in the Region did not provide any information about the status of the disease. The majority of countries reported quantitative information using the highest level of spatial accuracy (by administrative division) (Table 12).

**Table 12: Status of rabies in the AFEO Region and the format used by countries and territories to report the disease present (by immediate notifications/follow up reports (IN/FUR) or by providing quantitative information in the six-monthly reports [SMR])**

	PRESENT				ABSENT	NO INFO
	Total present	IN/FUR	Quant. info SMR	No quant. info		
Rabies	22	1	18	3	20	2

Preventive and control measures reported

Based on the information reported in their six-monthly reports, around 70% of countries and territories in the AFEO Region reported applying at least one control measure for rabies. The same percentage of countries and territories reported the disease as being notifiable.

The level of surveillance reported was lower, with only 63% of countries and territories reporting disease surveillance (general surveillance, targeted surveillance, monitoring or screening). Finally, very few countries and territories reported routine vaccination for rabies prevention and control (41%). This result is quite surprising, considering the large number of countries reporting the disease present and the ongoing eradication project.

**Table 13: Number of countries and territories in the AFEO Region applying control measures for rabies, as indicated in their six-monthly reports**

	Reporting at least one control measure	Notifiable disease	Surveillance*	Routine vaccination (Vaccination prohibited)
Rabies	31	31	28	18 (3)

\*Surveillance: any type of surveillance was considered, including general surveillance, targeted surveillance, monitoring and screening. If the country/territory reported the application of at least one of these measures, it was considered to have applied surveillance of some kind.

Diagnostic capacities of countries and territories in the AFEO Region

The low level of rabies surveillance, as highlighted in the previous section, is also confirmed by the information that countries and territories provided in their annual reports, immediate notifications and FUR. Based on these reports, only 29% of the countries that submitted information for 2017 and 2018 reported having some diagnostic capacity for rabies, with a total of only 27 laboratories reported for the whole Region (Table 14). These figures are much lower than those for FMD or HPAI, for which more than half of the countries and territories reported having diagnostic capabilities.

**Table 14: Diagnostic capacity in the AFEO Region for rabies, as reported in the annual report (AR) in comparison with the information submitted in the immediate notifications and follow up reports (IN/FUR). Shown in parentheses are the number of countries and laboratories reporting diagnostics in the IN/FUR that are not included in the AR**

	No. of countries and territories in the Region with diagnostic capacity		No. of laboratories in the Region with diagnostic capacity	
	AR	IN/FUR (not in AR)	AR	IN/FUR (not in AR)
<b>Rabies</b>	12	1 (1)	21	6 (6)

- Rabies continues to be one of the most widespread OIE-listed diseases in the Asia, the Far East and Oceania Region. Only one country reported the presence of the disease through an immediate notification; all other affected countries and territories reported it in their six-monthly reports, confirming that the disease is considered to be stable in most of the affected countries.
- The level and accuracy of reporting and the details provided on the disease situation are very satisfactory, with most of the countries and territories reporting quantitative data with a high degree of spatial accuracy.
- However, a low level of implementation of preventive and control measures was observed in the reports, as in a large proportion of the Region there is neither surveillance nor the application of official vaccination in place. On the one hand, this information highlights the risk of potential underreporting of the real distribution of rabies, and, on the other hand, that countries and territories in the AFEO Region should improve their efforts in terms of rabies eradication and control.
- Finally, limited diagnostic capacities for rabies were reported in the Region.

Based on these findings, the OIE highlights the good level of reporting on the rabies situation in the Region and the good quality of the information provided, but at the same time the OIE recommends that its Members strengthen their engagement in “Zero by 30: The Global Strategic Plan to Prevent Human Deaths from Dog-Transmitted Rabies by 2030”, in particular by improving rabies surveillance capacities in the Region, and improving vaccination coverage to reduce the spread of the disease.

#### **e. Aquatic animal diseases**

##### *Disease distribution and reporting*

Two aquatic diseases of importance for the Region, infection with white spot syndrome virus (WSS) and infection with koi herpesvirus (KH), were selected based on the OIE-listed aquatic diseases most frequently reported in 2018 through immediate notifications, follow up reports and six-monthly reports. Aquatic diseases are of particular importance considering the role that aquatic animal production plays in this Region. Based on FAO data<sup>22</sup>, in 2017 the AFEO Region accounted for 87% of world fish production and 90% of world crustacean production.

<sup>22</sup> <http://www.fao.org/faostat/en/#data/QA>

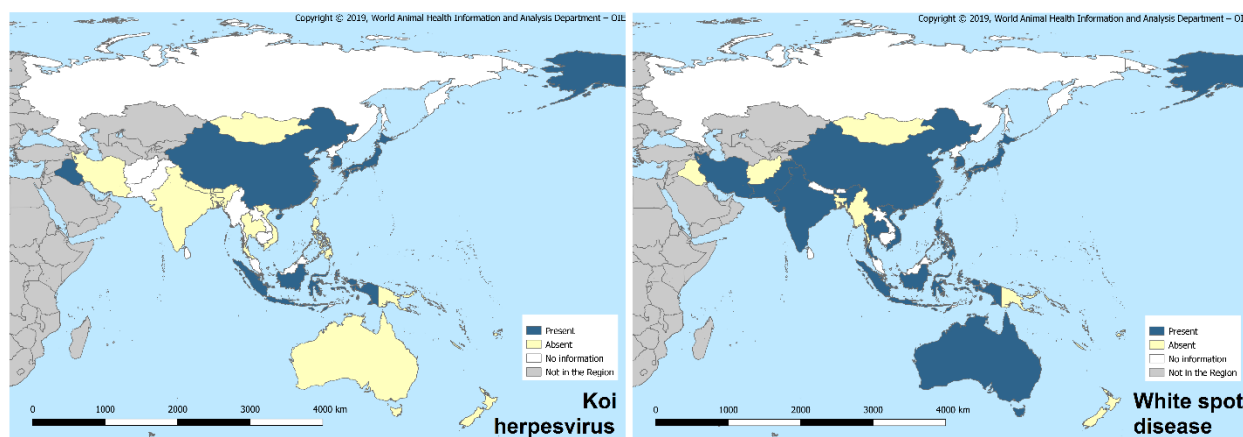
During the period of analysis (January 2018 to 11 June 2019), WSS was reported present by 32% of the countries and territories in the AFEO Region (14<sup>23</sup>/44), while KH disease was reported present by 16% of countries and territories (7<sup>24</sup>/44).

During this period, Iraq was the only country that reported KH through immediate notifications; all the other affected countries and territories reported the presence of the disease in their six-monthly reports. In November 2018, Iraq reported the first occurrence of the disease in the country, in four different administrative divisions. The disease then spread to four other administrative divisions. More than 2.5 million cases were reported and, as of 11 June 2019, the event is still ongoing.

No immediate notifications were submitted for WSS during the period of analysis. All the affected countries and territories reported the presence of the disease in their six-monthly reports.

The current distribution of KH and WSS in the Region is shown in Figure 10.

**Figure 10. Distribution of KHV and WSS in countries and territories in the AFEO Region during the period January 2018 to 11 June 2019: information is displayed at country level**



As already highlighted, countries and territories reporting the presence of either of these diseases did so mainly through their six-monthly reports, indicating that they considered the disease situation to be stable.

Regarding the accuracy of the information provided, the average quality of reporting was significantly lower than that observed for the terrestrial animal diseases. In the case of KH, 71% of the countries and territories reporting the disease present provided detailed quantitative information, whereas in the case of WSS the percentage was 64%. Moreover, around 25% of the countries and territories in the Region did not report any information at all on the status of either disease, indicating a serious gap in knowledge about the real distribution of these diseases.

<sup>23</sup> Australia, China (People's Rep. of), Chinese Taipei, India, Indonesia, Iran, Japan, Korea (Rep. of), Pakistan, Philippines, Singapore, Thailand, United States of America and Vietnam.

<sup>24</sup> China (People's Rep. of), Indonesia, Iraq, Japan, Korea, Singapore and United States of America.

**Table 15: Status of two selected aquatic animal diseases in the AFEO Region and the format used by countries and territories to report each disease present (by immediate notifications/follow up reports (IN/FUR) or by providing quantitative information in six-monthly reports)**

	PRESENT				ABSENT	NO INFO
	Total present	IN/FUR	Quant. info SMR	No quant. info		
Koi herpesvirus disease	7	1	4	2	26	11
White spot disease	14	0	9	5	20	10

*Preventive and control measures reported*

Based on the information reported in their six-monthly reports, fewer than 50% of the countries and territories in the Region reported applying preventive and control measures for these two diseases. An even lower percentage (less than 30%) of countries and territories reported that the disease is notifiable in the country. Also, the level of surveillance reported by the countries and territories of the Region for these two diseases is in line with the apparent low level of attention they are accorded in the Region; fewer than 50% of countries and territories declared any kind of surveillance activity in place. No countries or territories reported applying routine vaccination for disease prevention control and purposes, which is understandable given that no safe and effective vaccine is currently widely available.

**Table 16: Number of countries and territories in the AFEO Region applying control measures for the two selected aquatic animal diseases, as indicated in their six-monthly reports**

	Reporting at least one control measure	Notifiable disease	Surveillance*	Routine vaccination (Vaccination prohibited)
<b>Koi herpesvirus</b>	21	17	19	0 (2)
<b>White spot disease</b>	22	15	21	0 (0)

\*Surveillance: any type of surveillance was considered, including general surveillance, targeted surveillance, monitoring and screening. If the country/territory reported the application of at least one of these measures, it was considered to have applied surveillance of some kind.

*Diagnostic capacities of countries and territories in the AFEO Region*

The information provided by countries and territories through their annual reports, immediate notifications and follow up reports highlights the very limited diagnostic capabilities for these diseases in the Region. Only 18% of the countries that submitted information for 2017 and 2018 declared some diagnostic capacity for KH and only 23% for WSS, with a total of only 14 and 11 laboratories reported for the whole Region for KH and WSS, respectively (Table 17).

**Table 17: Diagnostic capacity in the AFEO Region for the selected aquatic animal diseases, as reported in the annual report (AR) in comparison with the information submitted in the immediate notifications and follow up reports (IN/FUR). Shown in parentheses are the number of countries and laboratories reporting diagnostics in the IN/FUR that are not included in the AR**

	No. of countries and territories in the Region with diagnostic capacity		No. of laboratories in the Region with diagnostic capacity	
	AR	IN/FUR (not in AR)	AR	IN/FUR (not in AR)
<b>Koi herpesvirus</b>	7	1 (1)	11	3 (3)
<b>White spot disease</b>	10	-	11	-

- Our analysis of these two aquatic animal diseases highlights the fact that information on their epidemiology and distribution in the Region is very limited. Very few countries or territories reported the disease through immediate notifications, most doing so through their six-monthly reports. Importantly, a significant number of countries and territories have not reported any information on the status of these diseases.
- The level and accuracy of reporting, and the level of detail regarding the disease situation in countries reporting the diseases present, is in each case very low. In view of the limited information reported, in terms of disease distribution and quantitative data, it is difficult to obtain a complete picture of the epidemiological situation of these two diseases and their distribution at country level.
- The limited information on the epidemiological situation of these diseases is compounded by the low level of preventive and control measure implemented, with, in particular, more than 50% of the countries and territories in the Region not declaring any surveillance activity in place.
- This lack of surveillance for the selected diseases is also confirmed by the information reported on the laboratories, which depicts an almost total absence of diagnostic capacity for the detection of KS and WSS in the Region.

Taking into account the importance of aquatic animal production for the Region and the information provided in this section, the OIE recommends that OIE Members improve the quality of their reporting for aquatic animal diseases to ensure transparent and timely notifications, which are crucial for avoiding disease spread. The OIE helps its Members to fulfil their reporting obligations by encouraging the nomination of national Focal Points for Aquatic Animals, and by giving Focal Points access to WAHIS and providing them with regular dedicated training.

**TECHNICAL ITEM II:  
STRENGTHENING THE COOPERATION ON AFRICAN SWINE FEVER PREVENTION AND  
CONTROL IN THE ASIA-PACIFIC REGION**

Dr Wantanee Kalpravidh  
ECTAD Project Regional Manager, FAO Regional Office for Asia and the Pacific  
[Wantanee.Kalpravidh@fao.org](mailto:Wantanee.Kalpravidh@fao.org)

Dr Caitlin Holley  
Regional Project Coordinator, OIE Regional Representation for Asia and the Pacific  
[c.holley@oie.int](mailto:c.holley@oie.int)

## **Introduction**

The ongoing epidemic of African swine fever (ASF) in Asia has affected global pig production and the supply of pig meat. The epidemiological features of the disease are complex and are influenced by the nature of the virus, production and market systems, and the capacities of the authorities to contain outbreaks.

The African swine fever virus is relatively stable and is highly resistant. Pigs are the only known natural non-arthropod host and the virus may be transmitted directly by direct contact with infected pigs, or indirectly through contaminated products such as swill or fomites or by certain soft tick vectors (not known to be present in Asia). The virus is not likely to mutate or infect other types of animals, and there is therefore no risk to human health. While this can be seen as positive, it also creates some challenges to controlling the disease given that contaminated pig meat can be transported and consumed with no impact on human health. When the price of pig meat rises and demand for meat is high, there is an economic incentive to sell potentially contaminated meat and risk further spread of the disease. When disposal of carcasses and disinfection are not carried out strictly, to effectively inactivate the virus, there is also the potential for long-term contamination of the environment. The virus could then be maintained in the environment and infect scavenger or wild pigs or re-infect a farm after restocking of domestic pigs.

As there is no vaccine available to protect pig populations from ASF virus (ASFv), all production systems are vulnerable to infection. Implementation of strict biosecurity measures is the only way to protect animal populations. However, as there is no zero risk, constant vigilance and awareness raising are needed to ensure the implementation of biosecurity measures and effective outbreak management, such as movement restriction, culling and carcass disposal. It will be essential to look at social and cultural practices, including the movements of certain ethnic groups across land borders and between islands, as well as the economic drivers that may influence further spread of ASFv beyond any expected natural local spread of the disease.



## **Role of the OIE and FAO and alignment with their respective strategic objectives**

The World Organisation for Animal Health (OIE) and the Food and Agriculture Organization of the United Nations (FAO) are recognised by national authorities and the international community as the key global organisations responsible for supporting their member countries in areas such as safeguarding livestock production, promoting safe trade in animals and animal products, protecting animal health, ensuring food safety and public health with regard to animals and animal products and also improving food security and economic growth relevant to livestock production.

The OIE and FAO have global and regional roles in ensuring that accurate and timely information is shared and in providing a platform where open discussion is encouraged and measured guidance can be provided with support from technical experts in the relevant fields. The animal disease situation is constantly evolving, and it is important to have regular discussions between international experts and the countries and territories preparing for or already experiencing outbreaks.

The OIE's Sixth Strategic Plan comprises three strategic objectives, all of which are highly relevant to the current challenges posed by ASFv:

### *1. Securing animal health and welfare by appropriate risk management*

- Sections 1-5 of the OIE **Terrestrial Animal Health Code** provide general information useful for disease prevention and control and safe trade of animals and animal products. By following the principles set out in these sections, the national Veterinary Services will be in the best position to reduce the risks of any introduction of ASF virus and to be adequately prepared should this occur.
- Chapter 15.1. of the **Terrestrial Animal Health Code**, entitled 'Infection with African swine fever virus', provides general information on the disease as well as details on conducting surveillance for ASF, how to inactivate the virus and recommendations for safe trade of pigs and pig products. The recommendations given in this chapter are based on the scientific information known about the virus.
- Chapter 7.6. of the **Terrestrial Animal Health Code** covers welfare considerations for the killing of animals for disease control purposes and includes biosecurity considerations. Following these recommendations will ensure the most humane methods are used when a decision to slaughter for disease control is made.
- Chapter 3.8.1. of the OIE **Manual of Diagnostic Tests and Vaccines for Terrestrial Animals** gives detailed scientific information about ASFv and the recommended diagnostic techniques.

The Terrestrial Animal Health Code and the Manual of Diagnostic Tests and Vaccines for Terrestrial Animals provide internationally agreed standards and can be used by all OIE Members to inform national policies for disease prevention and control and manage the risk of entry and spread of ASFv.

### *2. Establishing trust through transparency and communication*

- All OIE Members have an obligation to report disease outbreaks to the OIE when they occur. This information is then made publicly available through the OIE World Animal Health Information System (WAHIS). New and ongoing outbreaks of ASF can be monitored by anyone through WAHIS and with the smartphone application it is possible to receive notifications for reported disease events.
- The OIE also maintains a network of Reference Laboratories and technical experts to provide up to date information, advice and support to its Members. For ASF, there are currently three OIE Reference Laboratories, in Spain, the United Kingdom and South Africa. There are also several recognised international experts and institutes working on African swine fever providing support to countries and conducting research.

- The OIE has produced a range of communication tools designed specifically for awareness raising and these are available in the OIE's three working languages, English, French and Spanish, as well as in Chinese and Russian. They have also been adapted and translated into local languages with support from OIE and other partners.

### 3. *Ensuring the capacity and sustainability of Veterinary Services*

- The OIE Performance of Veterinary Services Pathway – the PVS Pathway – has been supporting OIE Members for many years and serves to strengthen the Veterinary Services through a comprehensive independent evaluation that identifies their strengths as well as any gaps where more resources are needed. Trained and certified PVS Pathway experts can give recommendations and assist the Veterinary Services to target critical areas and advocate for allocation of resources where they are most needed.
- The PVS Pathway mission reports have also been used retrospectively regarding ASF in South-East Asia to assess the level of preparedness and identify risk hotspots for introduction and spread of the disease.

FAO has identified five key priorities in which it can best apply and leverage its knowledge, expertise and experience. Strategic Objectives are the main areas of FAO's work to address the priority areas to achieve a world without hunger, malnutrition and poverty in a sustainable manner, thereby contributing to the implementation of the United Nations' 2030 Agenda for Sustainable Development.

Managing ASF significantly contributes to at least two of FAO's Strategic Objectives, as follows:

#### 1. *Increasing the resilience of livelihoods to threats and crises*

It is clear that ASF has led to the culling of millions of pigs in the Asia-Pacific region, posing a serious threat to the livelihoods and food security of large numbers of people reliant on the production and processing of pigs. For example, pig meat accounts for almost half of the quantity of meat produced in the East and South-East Asia sub-region and is a key source of animal protein and income. The continuing spread of ASF will lead to an increase in pig prices due to supply shortages. The disease is having a significant impact on global markets, not only for pig meat and products but also for animal feed, veterinary medicinal products and other related business.

Thus, FAO seeks to strengthen the resilience of pig-production-based livelihoods to ASF. This involves: supporting governments and communities to prepare for, mitigate and address ASF threats; monitoring risks and strengthening early warning systems at global, national and local levels, linking these to preventative action; actively working with communities to reduce risks and vulnerability; and providing immediate support to FAO Member Countries and laying the foundations for a more resilient future.

#### 2. *Enable inclusive and efficient agriculture and food systems*

The pig value chain from production through to processing and sales is now highly concentrated, integrated and globalised. This poses a huge challenge for smallholder farmers in many developing countries as they can easily be excluded from important parts of the value chain, while they may also play an important role in the spread of ASF within and between countries due to their potentially lower level of biosecurity. Increasing their participation is critical to achieving ASF prevention and control and contributing to FAO's goal of a world without hunger.

## **Global Framework for the Progressive Control of Transboundary Animal Diseases (GF-TADs) – a platform for OIE and FAO Collaboration on ASF**

In 2004, the OIE and FAO launched and implemented a joint initiative – the Global Framework for the Progressive Control of Transboundary Animal Diseases (GF-TADs). The initiative combines the strengths of both organisations to achieve commonly agreed objectives and serves as a facilitating mechanism to empower regional alliances in the fight against transboundary animal diseases (TADs). The successful eradication of rinderpest was a key achievement which demanded great efforts through a coordinated and targeted approach. There are several other diseases of global importance where it has been shown that, through a coordinated and sustained effort, control or even eradication of a disease is possible.

Given the complicated epidemiological features of ASF, which recently spread in various countries in East and South-East Asia, the disease requires even greater coordination, using a multisectoral, multidisciplinary and multilateral approach. The control of the disease is a shared interest and must be considered a shared responsibility.

There has been a long collaboration on swine diseases between the OIE and FAO in the Asia-Pacific region, which has been supported by the People's Republic of China and has involved countries and territories where there is significant pig production and pig meat consumption. Before the introduction of ASF into the region, several other high-impact swine TADs, such as classical swine fever, porcine reproductive and respiratory syndrome, porcine circovirus, porcine epidemic diarrhoea, and foot and mouth disease, were circulating and causing significant losses to the swine industry in the region. The complex and interconnected pig value chains operating across national borders in Asia have necessitated a regional approach to swine diseases. FAO and the OIE have been organising regular regional workshops to share information, discuss these swine diseases and develop regional strategies since 2010, at a time when highly pathogenic PRRS was spreading across Asia. The continued spread of ASF across Europe in recent years, and particularly in 2017 when the disease was reported in Eastern Russia, caused great concern for East Asia.

### **Global and regional strategy for ASF prevention and control**

As the occurrence of ASF is not limited to Asia and has implications at a global level, it is crucial to harmonise all regional strategic initiatives and intersectoral collaboration at national, regional and global levels. To address this global threat, the World Assembly of Delegates of the OIE passed a resolution (Resolution No. 33<sup>1</sup>) at the 87th General Session of the OIE calling for the establishment of a global initiative to control ASF.

This global initiative is being developed jointly between the OIE and FAO within the framework of GF-TADs, and will have a science-based approach considering, among others, ASF epidemiology, pig production practices, socio-economic factors, environmental aspects of each region or sub-region, the capacities of governments, public and private sectors, relevant OIE standards and guidelines, as well as recent lessons learnt among the regions in controlling ASF.

The initiative will put forward actions to strengthen Members' capability to control ASF, harmonise partnerships and coordination at national, regional and international levels, and minimise the impact of ASF through business continuity. FAO and the OIE would be tasked with providing support through activities such as the development of specific technical guidelines, support for research alliances, establishment of an ASF Reference Laboratory network, and working with development partners to promote investment for global control of ASF.

---

<sup>1</sup> [https://www.oie.int/fileadmin/Home/eng/About\\_us/docs/pdf/Session/2019/A\\_RESO\\_2019.pdf](https://www.oie.int/fileadmin/Home/eng/About_us/docs/pdf/Session/2019/A_RESO_2019.pdf)

In South-East Asia, a regional strategy for the control of priority pig diseases, including ASF, is being developed by the Association of Southeast Asian Nations (ASEAN) Working Group on Livestock with support from FAO and the OIE. The strategy follows three principles: 1) strengthening capacities required for preparedness, prevention, detection and response; 2) advocacy and awareness raising among the key stakeholders to promote better practices and cooperation on disease control; and 3) multidisciplinary, multisectoral and multilateral collaboration, cooperation and coordination to promote not only specific disease control but also overall pig herd health management; both at country and at transboundary levels.

### **Regional collaboration in Asia-Pacific on ASF**

Since the first outbreaks of ASF in Asia (August 2018), the disease has progressively spread in both Europe and Asia. The challenges associated with this disease have shown that its control cannot be achieved if national Veterinary Services work alone.

Under the GF-TADs umbrella, FAO and the OIE in the Asia-Pacific region have been collaborating closely with the Europe region since early 2018, learning from their experiences at dealing with ASF at a technical level and in terms of policy. The Europe region established a Standing Group of Experts on ASF in Europe, under the GF-TADs umbrella, to facilitate coordination and information sharing among infected and at-risk countries.

Learning from the European experience and using the existing collaboration with the OIE and FAO on swine diseases, a formalised Standing Group of Experts on ASF for Asia has been established to institutionalise and strengthen coordination.

The Standing Group of Experts on ASF (SGE-ASF) for Asia was launched in April 2019 to build closer cooperation among countries to address ASF in a more collaborative and harmonised manner across Asia. The SGE-ASF promotes the regular exchange of information and best-practices among risk managers and international and national experts with a view to coordinating disease control policies and building science-based national control strategies. It is considered to be a unique opportunity to engage affected countries in a fruitful regional dialogue and increase transparency and trust. So far, there have been two SGE-ASF meetings, organised to discuss recommended actions for early detection, surveillance, biosecurity and border control.

Several priority topics have been identified for discussion and to develop recommendations based on existing knowledge and adapted to the situation in Asia-Pacific. These recommendations are intended to be practical and feasible to implement across a wide range of production systems. They take into account best practices and include measures that can be implemented in the short, medium and long term.

### **Priority topics**

- ASF epidemiology, including risk-based surveillance
- Prevention and control strategies
- ASF laboratory diagnostics and potential research programmes including ASF vaccine development
- Biosecurity
- Wild boar – distribution, ecology, management and epidemiological role in swine disease in domestic pigs
- ASF risk communication
- Outbreak management
- The use of zoning and compartmentalisation
- Border control measures
- Socio-economics

As is the case with the Standing Group of Experts on ASF in Europe, it was agreed that each meeting of the ASF-SGE for Asia would focus on a specific topic to allow for in-depth discussion in that area, with the topic for the following meeting being confirmed at the close of each meeting.

So far, there have been two meetings of the SGE-ASF for Asia, organised to discuss recommended actions for early detection, surveillance, biosecurity and border control. Presentations and recommendations from these two meetings can be accessed at <https://rr-asia.oie.int/activities/regional-activities/gf-tads-framework/standing-group-of-experts-on-asf>

Risk communication will be the next topic for discussion at the 3rd Meeting of the SGE-ASF for Asia, to be held later in 2019.

### **Future actions needed**

As a consequence of ASF, farming, trading, consumption, social and cultural practices in many countries and territories will need some major changes and adjustments if swine production is to survive in Asia.

There have been large losses already, particularly in the smaller farms with low biosecurity, where the human practices associated with keeping pigs are a major risk factor for the entry and spread of ASF virus. Changes will need to be made along the whole value chain for pig production systems for the sector to be able to survive and eventually recover. The Veterinary Services will need to work in collaboration with the private sector to build trust and understanding and enable an environment where control policies can be effectively implemented. While large-scale commercial farming has been increasing in Asia, there are many areas where the majority of pig farming is still on a small scale. These farms, with low biosecurity and often little engagement with veterinary professionals, present a high risk for the spread of ASF once it has been introduced. Partnerships between the public and private commercial sector to address this issue should be considered using the OIE guidelines for public-private partnerships in the veterinary domain – The OIE PPP Handbook ([https://www.oie.int/fileadmin/Home/eng/Media\\_Center/docs/pdf/PPP/oie\\_ppp\\_handbook-20190419\\_ENint\\_BD.pdf](https://www.oie.int/fileadmin/Home/eng/Media_Center/docs/pdf/PPP/oie_ppp_handbook-20190419_ENint_BD.pdf)).

The ASF virus is resilient and resistant in the environment and, with no cure or vaccine available, a clear understanding of the routes of transmission and communication of this information are extremely important. If there is to be effective control, all persons involved in the pig value chains, as well as members of the general public who may transport, use or consume pig products, need to understand the nature of the virus, how it is transmitted and how it can be effectively inactivated.

High-level political support is needed at national level among ministers and other politicians and at regional level with trade and economic groups, such as ASEAN, Asia-Pacific Economic Cooperation (APEC) and the G20, to raise understanding of the importance and impact of the disease. In the absence of a suitable level of understanding among the population and adequate resources to implement change, the disease will continue to spread via human activities. FAO will be working closely with Member Countries on evidence-based planning to identify policy options that ensure the reduction of viral load, minimisation of economic losses and the maintenance of food security in the short, medium and longer term.

The level of preparedness and readiness to prevent and control ASF is very heterogeneous in Asia. Despite communication and prevention campaigns, many farmers, traders, veterinarians, and veterinary paraprofessionals still have only a limited knowledge of this disease and its specific epidemiology and they are not well prepared for management and control if there is an incursion of ASF virus. Recognising that relevant and practical information on the key activities to prevent, prepare for and control ASF outbreaks needed to be urgently provided on a large scale, the OIE Sub-Regional Representation for South-East Asia (SRR-SEA) has been developing a series of webinars on ASF-related topics. These webinars are intended to provide scientific information and share experience, tips and options for countries in South-East Asia. The webinars aim to reach a wide audience, including key staff of the Veterinary Services and pig industry professionals who may not be able to physically attend workshops during this crisis period. The first webinar was conducted in April 2019 and to date nine different topics have been covered: early detection and response; biosecurity in small-scale farms; biosecurity in large-scale farms; culling and safe disposal of carcasses; border control; treatment of swill; risk communication; role of wildlife; and the situation regarding soft ticks.

Other topics are planned, such as ASF-related welfare issues and solutions; establishment of pig compartments; biosecurity in markets and slaughterhouses; and sample collection.

The webinars have been recorded and are available along with the presentations at: <https://rr-asia.oie.int/disease-info/african-swine-fever/african-swine-fever-in-asia/asf-related-webinars/>

While several studies have been conducted in South-East Asia on large ruminant value chains, including movement studies or risk assessments related to FMD spread, only a few studies have included pig production systems and pig diseases. This is an important area on which information should be collected to better understand the spread and assess the risk of ASF in Asian countries. To address this, the OIE SRR-SEA in coordination with FAO plans to conduct a series of activities at sub-regional level to better understand the situation.

### **Sustainability of ASF control rests at country and local levels**

Sustainable disease control should be the sum of risk-based measures taken at the national and local levels by all relevant stakeholders under the overall management and quality assurance provided by the national Veterinary Authority. Unfortunately, it has to be admitted that many countries do not fulfil these criteria, and at local level livelihoods remain affected and producers may not receive adequate institutional support to allow them to protect their assets with feasible options.

At present, the situation in the majority of affected countries remains highly dynamic. The national policies implemented to control ASF have not always proved effective, partly because they are not evidence-based with regard to the disease ecology, and partly due to a lack of technical or financial capacities. As the disease continues to expand into new territories, preparedness and control activities need to be constantly adjusted to adapt to situations observed in the field where the disease may behave differently to what has been previously observed and described in scientific literature and guidelines. Due to such complex situations and challenges faced by the national Veterinary Services, regional and international support will continue to be needed to fill gaps in the capacity required for ASF control as well as to facilitate dialogue among the key stakeholders.

Strong Veterinary Services give confidence to private sector investment, leading to improved national economies and livelihoods. Engaging public and private funding partners through effective advocacy and demonstrating the value of ASF control will encourage sustainable investment and create an enabling policy context for ASF control.

## Conclusions

The key areas that will be critical for the long-term control of ASF in the Asia-Pacific region include:

1. Transparency and sharing of information at district, national and regional level about the disease situation and challenges. This will lead to a better understanding of the epidemiology of ASF in the region.
2. A better understanding of the pig value chains and the drivers that influence movement of pigs and products, particularly the informal or unregulated movement pathways. For early detection and rapid management of outbreaks, a good knowledge of the risk pathways and risk hotspots is essential, which means there must be a comprehensive understanding of the value chains.
3. Multisectoral collaboration to implement the improvements in biosecurity and farming practices and control plans – particularly between the public sector and the private sector (including both the commercial and smallholder production systems) – will make plans more effective.
4. Looking towards longer term control, it may become important to include the wildlife/environment sector in any plans to better understand the role of wild boar.
5. Public awareness and fostering a sense of shared responsibility in the community to control ASF. Since ASF is spread mostly by human activities, there is a need to engage the general public in sharing the responsibility for preventing further spread.
6. Political support from governments and international organisations involved in farming, animal health and transportation to assist national Veterinary Services.

Having in mind the possible global socio-economic impact of ASF, the control of the disease is a shared interest and must be considered a shared responsibility. Political support is crucial to ensure a whole-of-society approach, with sufficient resources to enable all sectors concerned to assume responsibility for their respective fields. The Veterinary Services – including their public and private components – of both affected and unaffected countries have a mandate to safeguard animal health and welfare and should take the lead in implementing effective coordinated countermeasures to minimise the global impact of the disease. In the medium to longer term, good animal husbandry practices need to be promoted to ensure safer production of livestock along the market chains and it will be the responsibility of the pig producers to ensure their compliance. This will not only reduce the burden of ASF but will also contribute to alleviating poverty by improving the livelihoods of pig producers in low- and middle-income countries, protect free countries and ensure safe international trade of pigs and their products. Achieving such efforts would therefore contribute to the Sustainable Development Goals, in particular Goals 1 (no poverty) and 2 (zero hunger)<sup>2</sup>.

---

<sup>2</sup> <https://sustainabledevelopment.un.org>