OIE Observatory

Pilot phase

Prototype on African swine fever

December 2021

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Introduction to this prototype on African swine fever

The World Organisation for Animal Health (OIE) Observatory is concluding its pilot phase and initiating steps to consolidate ideas and focus on the next milestones. An important objective of the pilot phase has been the identification of relevant indicators from data accessible to the OIE to directly or indirectly monitor the implementation of OIE standards. Several prototypes were developed aiming at identifying and piloting the best indicators. This new prototype will build on lessons learnt from previous prototypes and prepare the ground for the implementation phase of the programme. While this was initially developed as an internal document (as were the previous prototypes), the Observatory Steering Committee decided to publish it in order to communicate with Members on the added value this work of the Observatory offers.

Objectives of this prototype

- To assess the value of the indicators used in previous prototypes and acknowledge their interests and limitations for the Observatory. This will help decision making about the selection of indicators among those that have been used so far. While many of these indicators will be kept as they are, some others will either need to be modified or be proposed as expendable.
- To continue building the monitoring framework to be used as a standard monitoring tool in the annual implementation review report.
- To prepare the first annual implementation review report, planned for publication at the end of 2022, and to be used as the basis for a standardised set of indicators and a repeatable methodology.
- To contribute to the progressive improvement of OIE activities with reflections, feedback and suggestions on the collected data, the gaps, and the information collection/storage processes.

Most of the data that the Observatory has collected and analysed, originate from OIE programmes and activities and from partner organisations such as the World Bank, WTO, FAO, etc. These data consist, therefore, of information that was already available and that had been collected for purposes other than those of the Observatory.

However, efforts have been made to identify the information that could assist the Observatory in directly or indirectly monitoring the implementation of OIE Standards by Members. To achieve this, the prototype will group indicators in nine sections and structure them as follows:

1. Introduction
2. Proposed indicators for this prototype
   2.1. Lessons learnt from previous prototypes and adjustments (if any) proposed for this prototype
   2.2. Data, data source and advantages/limitations of the data used
   2.3. Example of ways to visualise the indicator and analysis
3. Discussion and potential recommendations for improvements, if any
4. Discussion on the use of the indicators in the annual report

While a summary of the data and their interest/limitation is provided in part 2.2 for each group of indicators, more details can be found in the Indicator Matrix and Data Catalogue, available on the website. The indicators based on existing data sources are summarised in Table 1.
### Governance and Performance of Veterinary Services
- Engagement of OIE Members in PVS Pathway
- Performance of Veterinary Services for each of the 4 Fundamental Components

### Workforce and other resources
- Density of veterinarians and veterinary paraprofessionals
- Competency and education of veterinarians and veterinary paraprofessionals
- Relevant PVS CCs on other resources

### WTO notifications
- WTO notification
- WTO SPS annual report on regionalisation
- Specific trade concerns

### Detection, surveillance and diagnosis
- Diseases notifiable at national level
- Surveillance in place and diagnostic capacity available for diseases that are notifiable at national level
- Existence of National Reference Laboratories for ASF
- Proficiency testing organised by OIE Reference Laboratories
- PVS CC on surveillance

### Prevention and control measures
- Control at borders and movement control within the country – notification in OIE-WAHIS
- Relevant PVS CCs

### Transparency
- Quality of immediate notifications to OIE
- Confidential status of PVS reports
- PVS CC on transparency

### Emergency preparedness
- OIE Members that have shared their contingency plans with the OIE
- OIE Members that have reported simulation exercises to the OIE
- Cross-check with OIE Members that have self-declared ASF freedom
- Relevant PVS CC

### Disease-free status
- Self-declarations of freedom from ASF

### Zoning and compartmentalisation
- Notification in OIE-WAHIS (occurrence code and control measures)
- PVS CC
- Link with self-declarations
- Annual report on the implementation of Article 6 (regionalisation) of WTO SPS Agreement

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**Table 1: Indicators based on existing data sources**

A. Governance and Performance of Veterinary Services

1. Introduction

The OIE has established international standards on the quality of national Veterinary Services, which are detailed in Section 3. of the OIE Terrestrial Animal Health Code (Terrestrial Code). In parallel, the OIE Tool for the Evaluation of Performance of Veterinary Services (OIE PVS Tool) supports Members in assessing their compliance with international standards. The 2019 edition of the PVS Tool includes 45 Critical Competencies, which are systematically evaluated against five qualitatively graded levels of advancement. Additional information on the PVS Pathway can be found on the dedicated section of the OIE website.

Regarding terrestrial animal health activities, since the launch of the PVS Pathway, 136 Members have embarked on and undertaken at least one PVS Evaluation mission. In addition, six Members have requested missions that have not yet been undertaken. The PVS reports represent a wealth of information when assessing compliance of Veterinary Services with OIE standards.

2. Proposed indicators for this prototype

2.1. Lessons learnt from previous prototypes and adjustments (if any) proposed for this prototype

Previous prototypes developed by the Observatory during its pilot phase (unpublished) considered the following indicators as potentially relevant for the Observatory annual implementation review report:

1. Members’ engagement in the PVS Pathway: number of Members having undertaken a PVS Evaluation mission since 2006. Data were aggregated by year and region or by income level.

It is proposed to show this information in a different format:

- To show the large engagement of Members in the PVS Pathway:
  - number of PVS activities conducted by activity type and by region, and other factors such as by income level and agricultural gross domestic product (GDP).
  - evolution of Members’ interest in the PVS Pathway and activities, by showing the evolution over the years of the PVS activity missions.

1 Available at: https://www.oie.int/en/what-we-offer/improving-veterinary-services/pvs-pathway/ (accessed on 3 November 2021).

Dashboard page ‘PVS Pathway Engagement’

- To illustrate the continuous engagement in the PVS Pathway:
  - Members that have undertaken a PVS Evaluation or Follow-up mission in the past five years (and whose findings on Veterinary Services’ performance are therefore still considered valid and useable for further analyses);
  - Members that engaged in the PVS Pathway in the past but whose last PVS Evaluation or Follow-up was conducted more than five years ago (and is therefore considered outdated);
  - Members that have only engaged in one PVS activity (the PVS Evaluation) without continuing their engagement by undertaking any other PVS activity.

Dashboard page ‘PVS Pathway continuous engagement’
In previous prototypes, six selected Critical Competencies derived from Fundamental Component II (Technical Authority and Capability \(n=5\); \(N=13\) Critical Competencies in total)) and Fundamental Component IV (Access to Markets \(n=1\); \(N=7\)) were selected as indicators of Veterinary Services performance: quarantine and border security (II-3); passive surveillance and early detection (II-4A); active surveillance and monitoring (II-4B); emergency preparedness and response (II-5); disease prevention, control and eradication (II-6); and zoning (IV-6). These were displayed with a spider graph (distribution of the average level of competencies).

These six Critical Competencies were selected to give a broad overview of Veterinary Services performance. They identify some risk management functions, but modern analytical tools make it possible to propose an overview of all the Critical Competencies, which is relevant for the purposes of the Observatory.

Instead of the above, the Observatory suggests showing the situation of OIE Members by using:

- a spider graph representing each of the four Fundamental Components of the OIE PVS Tool and showing the mean of each Critical Competency in the selected Fundamental Component;
- the distribution of level of advancements for each of the Critical Competencies, by region;
- the proportion of Members complying/not complying with the minimal expectation for a given Critical Competency.

**Dashboard page ‘PVS LoA’**

Given the validity period of the PVS findings and recommendations, only missions conducted in the past five years are considered in this dashboard.

In addition, in other sections of this prototype, a selection of Critical Competencies will be considered and cross-checked against other OIE data when covering specific topics (e.g. surveillance, emergency preparedness, zoning).

### 2.2. Data, data source and advantages/limitations of the data used

The PVS Tool is an important tool to assess the compliance of Veterinary Services with OIE international standards; however, its limitations should be understood and acknowledged.

Several data are to be used:

- Members’ interest and engagement with the PVS Pathway: participation of Members as indicated in the PVS dataset managed by the Capacity Building Department;
- levels of advancement reported by PVS Evaluation/Follow-up missions: the Excel table manually compiled by the PVS Team, Capacity Building Department, with PVS Evaluation and Follow-up reports conducted since 2016.

<table>
<thead>
<tr>
<th><strong>ADVANTAGES</strong></th>
<th><strong>LIMITATIONS</strong></th>
</tr>
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<tbody>
<tr>
<td>PVS Critical Competencies and levels of advancement</td>
<td>• Voluntary missions (not undertaken by all OIE Members and with a potential bias as OIE Members from developing countries are more likely to undertake evaluations)</td>
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<tr>
<td></td>
<td>• Additional bias in the conducted missions as OIE funding partners often specify target geographical regions for funding eligibility</td>
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<td></td>
<td>• Limited number of Members undertaking these missions in a given period</td>
</tr>
<tr>
<td></td>
<td>• Limited validity of the assessment in time, generally considered to be five years. Therefore, analysis of the assessed situation should only include data from missions undertaken in the last five years</td>
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<td></td>
<td>• Not regularly repeated/followed up by Members</td>
</tr>
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<td></td>
<td>• As a consequence of the above, assessment of performance in a given period may not be representative of the global picture</td>
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<td></td>
<td>• Difficulties in the assessment of the data (reports are still in text format and extraction of data requires manual work)</td>
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<td></td>
<td>• The analysis of large amounts of qualitative data remains challenging until a database is developed</td>
</tr>
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<table>
<thead>
<tr>
<th><strong>PVS dataset (engagement)</strong></th>
<th><strong>LIMITATIONS</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Bias linked to the geographical preference of some donors</td>
</tr>
<tr>
<td></td>
<td>• Impossibility to conduct missions in some areas, or during certain periods (COVID)</td>
</tr>
</tbody>
</table>
A total of 147 Members undertook at least one PVS activity, for a total of 433 activities conducted since 2006.

Considering the cyclic nature of the PVS Pathway, it would have been expected that the number of PVS Evaluation, Follow-up and Gap Analysis missions had stayed stable or at least presented a cyclic trend. However, the evolution of PVS activities over time shows a significant undertaking of PVS activities at the beginning of the PVS Pathway with a first peak of PVS Evaluation missions and then a peak of PVS Gap Analysis missions. This lag between the two is normal considering the sequential approach of the PVS Pathway and the fact that PVS Gap Analysis missions are recommended three to five years after a PVS Evaluation/Follow-up mission. However, the PVS Evaluation missions have not always been tailed by the PVS Follow-ups, and the PVS Gap Analyses have not been repeated.

On the dashboard in Figure 2, the green colour represents Members that have recently (less than five years ago) conducted PVS Evaluation or Follow-up missions. Red represents Members that engaged in the PVS Pathway but have not undertaken a PVS Evaluation or Follow-up in the past five years. They may have conducted other PVS activities, but their last assessment with the PVS Tool is more than five years old. Those Members might contemplate asking for a PVS Follow-up mission to demonstrate the progress that may have been made, identify new/remaining gaps and seek fresh feedback/recommendations. Countries/territories depicted in white have never had a PVS Evaluation.

2.3. Example of ways to visualise the indicator and analysis & dashboard

The dashboard shown in Figure 1 illustrates OIE Members’ engagement with the PVS Pathway and its different activities, as well as its evolution over the years. Data are aggregated by region, PVS activities, World Bank income level and agricultural gross domestic product (GDP).
While showing OIE Members’ strong interest in the PVS Pathway, the map also underlines the fact that a limited number of PVS Evaluation/Follow-up reports (32%) are still valid (conducted in the past five years) and therefore have findings that can be included in the data analysis. The blue and red graphs (on the left of the map) aggregated this information by region. The black graph, in the bottom left corner of the dashboard, focuses on the Members that engaged in the PVS Pathway but conducted only one PVS activity, without further engaging in other activities, which account for 23%.

The dashboard in Figure 3 presents the levels of advancement scored by the PVS Evaluation and Follow-up missions. Any Critical Competency can be selected and further explored. However, as the data are extracted from the missions conducted in the past five years and some regions may have hosted a limited number of missions, the diagram segregating the information by region is not kept on the dashboard to be made public. This will prevent any risk of confidential data disclosure.
3. Discussion and potential recommendations for improvement, if any

- Data concerning the levels of advancement have been collected manually from the PVS reports completed since 2016. This data gathering has been feasible because it has been limited to the scores of levels of advancement; qualitative information has not been included. Further inclusion of elements from the wealth of qualitative information contained in the PVS reports will only be possible when the PVS Evaluation System is developed and available.

- The COVID-19 situation aside, as it prevented mission deployments for 18 months (from early 2020 to mid-2021) and has required the adjustment of some tools, there are still some indications that the number of Members undertaking PVS activities is decreasing. The PVS External Evaluation has provided some recommendations to be followed up.

Given its sequential and cyclical nature, it would have been expected that Members engaging in the PVS Pathway had undertaken several of the proposed missions/activities. It is recommended to explore the reasons why some Members have not maintained their engagement with the PVS Pathway.

Hypotheses include:

- lack of funding to support PVS missions in some regions;
- diversification of the PVS tools may have potentially led to a loss of the interest in ‘basic’ PVS activities and stimulated a focus on new activities;
- decreased interest from Members/tools not able to meet their needs. This has been confirmed for high-income countries with already developed Veterinary Services but should still be explored for middle/ lower-income countries;
- workload and budget required to host a PVS mission for national and local Veterinary Services.

In addition to the recommendations of the PVS External Evaluation, there may be value in discussing these points with the Members that have not continued along the PVS Pathway. As a result, some constructive changes to the PVS Tool and Pathway may be identified.

Broader reflections:

- Regarding the information requested from Members when preparing a PVS mission:
  - Part of the information required to prepare a PVS mission is already collected by the OIE (e.g. World Animal Health Information System [OIE-WAHIS] annual report for data on the animal population; the number of veterinarians/paraveterinarians/animal health professionals; laboratories present in the country/territory; data on the structure of the Veterinary Services collected by OIE Regional Representations, at least in Asia and the Pacific).
  - Some information may be very relevant for other OIE departments or the to-be-developed ‘Country Profile’.

The OIE should have a mechanism to optimise data collection and use and thus prevent double data collection, ensuring the accuracy of the information.

- There are some ongoing discussions on a communication strategy for the PVS Pathway. One of the main objectives is to increase Members’ engagement. It may be relevant to check the general capacity of the PVS Secretariat. While it is generally accepted that the PVS Team can manage up to 40 missions a year, the new conditions and the adaptation of tools to the COVID-19 situation have likely changed this. Empirical estimation suggests that managing virtual missions is more time-demanding for the PVS Team than field missions. Before running a communication campaign to encourage Members to request PVS missions, it would be appropriate to assess the impact that they would have on the OIE PVS Team. Alternatively, support from Regional and Sub-regional Representations (RR/SRR) could be sought.

- Following the COVID-19 pandemic, the PVS Secretariat had to adjust to the closure of international borders. Five tools have been adapted (Orientation, Gap Analysis, Sustainable Laboratories, Legislation Identification, PVS Self-evaluation). Blended PVS Evaluation is also being considered. Three of these ‘new tools’ have been piloted: Sustainable Laboratories and Legislation Identification in March 2021 and Gap Analysis in August 2021. A total of four missions, including those pilots, have been carried out since March 2021. The PVS tools are comprehensive, robust and rigorous, and adapting them to the new global context required time and effort.

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4. Discussion on the use of the indicators in the annual report

Dashboard ‘PVS Pathway Engagement’:

- Acknowledging the large amount of information presented in the dashboard, it is interesting to classify the data against various criteria and visualise them from different angles.

- It is interesting to visualise the evolution of the number of PVS missions (Evaluation/Follow-up and Gap Analysis) performed since 2006 to enable identification of the reason(s) Members have stopped undertaking OIE PVS activities and potentially take remedial action. Evolution of PVS aquatic activities will also be proposed in the annual implementation review report.

Dashboard ‘PVS Pathway continuous engagement’:

- The map has limited interest for analysis. However, it visually represents the considerable Member engagement with the PVS Pathway. Preparing one for the PVS aquatic animal health services would highlight differences with regard to terrestrial animals.

Dashboard ‘PVS LoA’ (on levels of advancement):

- The spider graphs representing the distribution of the levels of advancement for each PVS Fundamental Component are not a real indicator per se, but they give a general view of the performance of Veterinary Services.

- The three graphs go deeper into the understanding of the situation by providing the global picture for each of the Critical Competencies. It is interesting to monitor compliance and performance of Veterinary Services in specific domains, even if interpretation should consider the limitations of PVS data. As mentioned above, to protect the confidentiality of the assessed levels of advancement, the graph segregating the information will not be disclosed by region as it would lead to the disclosure of some confidential information.

- This dashboard is very important for the annual report of the Observatory. If the future PVS database includes data from missions conducted since 2006, it may be interesting to also check the global evolution of OIE Members’ compliance/performance with these Critical Competencies.
B. Workforce and resources

1. Introduction

Hypothesis: Compliance with OIE international standards is more effective in countries/territories where Veterinary Services have the capacity in terms of human and financial resources to carry out their activities.

Section 3 of the *Terrestrial Code* provides the standards to assist Veterinary Services ‘in meeting their objectives of improving terrestrial animal health, welfare and veterinary public health, as well as in establishing and maintaining confidence in their international veterinary certificates’ (Article 3.1.1.).

In Chapter 3.2. on Quality of Veterinary Services, Article 3.2.4. on personnel and resources specifies that ‘Veterinary Services should be appropriately staffed’ and should comprise ‘a core of full-time civil service employees including qualified and sufficient veterinarians and veterinary paraprofessionals’.

The same article recommends that Veterinary Services ‘have functional and well-maintained physical resources, adequate operational resources for their ongoing and planned activities, and access to extraordinary resources to respond effectively to emergency situations or new emerging issues’. This should include access to suitable physical resources and to sufficient operational resources.

The workforce and resources devoted to Veterinary Services are therefore likely to be useful indicators to look into countries’ inputs. In this regard, the OIE has two sets of data from which information can be retrieved:

- the rate of veterinarians and paraveterinarians reported with respect to the animal population (both pieces of information are submitted by Members in the OIE-WAHIS annual report). It would be even more relevant to see the workforce against the animal biomass (as estimated by the OIE Antimicrobial Resistance and Veterinary Products [AMR VP] Department).
- the PVS Evaluation and Follow-up mission reports, where several Critical Competencies are of interest.

2. Proposed indicators for this prototype

2.1. Lessons learnt from previous prototypes and adjustments (if any) proposed for this prototype

1. Ratio of the number of veterinarians and veterinary professionals to the animal population (animal biomass)

The number of professionals against the animal population or the human inhabitants has been used in previous prototypes, where it has been aggregated by country income level (from the World Bank categorisation).

The number of veterinary professionals is an important input indicator for the OIE that shows, indirectly, the resources assigned to Veterinary Services, and specifically their human resource capacity to deliver their activities.

It is proposed to report these data against the animal biomass (rather than the human inhabitants or the animal population – where a chicken or a buffalo equally counts as one animal) and to aggregate them by additional factors:

- agricultural GDP
- exporting/importing status of the countries/territories
- in the future, the number of OIE listed diseases declared as notifiable at national level could be added here to explore the links between the available workforce and the number of prioritised diseases at national level.

However, number/density of veterinary professionals is not sufficient to assess Members’ compliance with OIE standards in terms of ‘sufficient and qualified’ workforce.

---

1 *Terrestrial Code*, Article 3.2.4. Personnel and resources.
Capacity of veterinarians and paraveterinarians
In the PVS Tool, four Critical Competencies are directly related to the Veterinary Services workforce:

- I-1 A: Professional and technical staffing of the Veterinary Services – Veterinary and other professionals (university qualified)
- I-1 B: Professional and technical staffing of the Veterinary Services – Veterinary paraprofessionals
- I-2 A: Competency and education of veterinarians and veterinary paraprofessionals – Veterinarians
- I-2 B: Competency and education of veterinarians and veterinary paraprofessionals – Veterinary paraprofessionals.

Three additional Critical Competencies provide information on the resources specified in Article 3.2.4.:

- I-7 Physical resources and capital investment
- I-8 Operational funding
- I-9 Emergency funding.

Following the mean of Members’ level of advancement for these seven Critical Competencies would be interesting.

2.2. Data, data source and advantages/limitations of the data used
Several data are used:

- for number of veterinarians/paraveterinarians: OIE-WAHIS annual report;
- for the animal biomass: the database developed by the AMR VP Department to estimate the animal biomass per country/territory and per species. The biomass of terrestrial animals (excluding bees, dogs and cats) is considered;
- for countries’ income level, agricultural GDP and exporting/importing status: data from the World Bank;
- for number of notifiable diseases at national level: the OIE-WAHIS six-monthly reports;
- for the seven Critical Competencies: level of advancement from the PVS reports (from the PVS database).
<table>
<thead>
<tr>
<th>ADVANTAGES</th>
<th>LIMITATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of veterinarians/paraveterinarians</td>
<td></td>
</tr>
<tr>
<td>• Standardised categories</td>
<td>• Not collected these past years due to the new OIE-WAHIS</td>
</tr>
<tr>
<td>• Collected once a year</td>
<td>• Probably not regularly updated by countries/territories</td>
</tr>
<tr>
<td>• Requested from all OIE Members</td>
<td>• Not enough to monitor the capability of the Veterinary Services workforce</td>
</tr>
<tr>
<td>• Official data provided under the supervision of the OIE Delegate</td>
<td>• No distinction either between the professionals working on pets versus production animals or between species (pigs vs poultry vs ruminants). Data interpretation should consider this when using the data for disease-specific analysis</td>
</tr>
<tr>
<td>• Already organised in a database</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Animal biomass</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Last year available: 2018</td>
</tr>
<tr>
<td></td>
<td>• Country/territory biomass not yet validated by Members even if already used for the Annual Report on Antimicrobial Agents Intended for Use in Animals</td>
</tr>
<tr>
<td></td>
<td>• Errors in some data have been identified</td>
</tr>
<tr>
<td>• Based on animal population data from the OIE-WAHIS annual report; calculated by the AMR-VP Department for its purpose</td>
<td></td>
</tr>
<tr>
<td>• Methodology recognised(^4)</td>
<td></td>
</tr>
<tr>
<td>• Limits bias linked to the size/value of the animals</td>
<td></td>
</tr>
<tr>
<td>• Already developed internally and revised every year</td>
<td></td>
</tr>
<tr>
<td>• Available by species and country/territory</td>
<td></td>
</tr>
<tr>
<td>• Can be aggregated as needed</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Countries’ income level, agricultural GDP and exporting/importing status</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Need to rely on regular extraction but direct connection (API?) into the World Bank database might be explored in the future</td>
</tr>
<tr>
<td>• Well-recognised and reliable source</td>
<td></td>
</tr>
<tr>
<td>• Easy to download</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Levels of advancement of Critical Competencies I-1 A&amp;B, I-2 A&amp;B, as well as I-7, I-8 and I-9 from PVS reports</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Standardised tool and methodology</td>
<td>• Voluntary missions (not undertaken by all OIE Members)</td>
</tr>
<tr>
<td>• Performed by external experts and validated by the Member</td>
<td>• Limited number of OIE Members undertaking these missions in a given period</td>
</tr>
<tr>
<td>• Wide coverage among OIE Members</td>
<td>• Analysis limited to missions undertaken in the last five years owing to the validity of data</td>
</tr>
<tr>
<td>• Comprehensive and detailed information</td>
<td>• Difficult assessment of the data (reports are still in text format and extraction of data requires manual work)</td>
</tr>
<tr>
<td>• Wealth of qualitative information (not easy to analyse) and some quantitative information</td>
<td>• Difficult to analyse large amounts of qualitative data until an automated database has been developed. Therefore, in the absence of the PVS Evaluation System (database), the use is limited to the quantitative level of advancement</td>
</tr>
<tr>
<td>• Assessment of compliance with OIE standards</td>
<td></td>
</tr>
</tbody>
</table>

2.3. Example of ways to visualise the indicator and descriptive analysis

a) Number of veterinarians and veterinary professionals reported against the animal population (animal biomass)

Figure 4 provides the absolute numbers of veterinarians and paraveterinarians, as well as the ratio of this workforce to the animal biomass. Fifteen million veterinarians and paraveterinarians reported to the OIE. Based on the reported animal population, the OIE has estimated the animal biomass to be 1,032,489 million kilograms. The ratio of workforce to animal biomass for the world is 1:71163 million with heterogeneity between countries/territories and regions.

b) Compliance of the workforce with the international requirements – PVS Workforce and resources indicators

To go into more detail and identify the main gaps, the level of advancement of each Member and Critical Competency is needed. A level of advancement of 3 corresponds to compliance with the minimal recommendations, 1 or 2 indicates lack of compliance, and 5 denotes full compliance.

Figure 5 represents the distribution of levels of advancement for each Critical Competency. The percentages of Members that have been assessed with a level of advancement of 1 or 2 is displayed numerically to give an at-a-glance view of the Members that do not reach minimal compliance.

![Figure 4: Screenshot of the interactive dashboard on Workforce (reported to the animal biomass)](image)

![Figure 5: Distribution of the 40 Members that have undertaken a PVS Evaluation or Follow-up mission in the past five years per their assessed level of advancement (LoA) for the seven identified Critical Competencies](image)
Figure 5 shows that 50% of the Members were assessed as not having the minimal capacity in terms of staff numbers of veterinarians and other professionals, 33% were found not to have minimal competencies of veterinary paraprofessionals, and up to 58% lacked the minimal physical resources and operational funding.

It is interesting to note that nearly half of the concerned Members do not comply with the minimal requirements regarding competencies of veterinarians (Critical Competency I-2A), including Members whose staffing (Critical Competency I-1A) is considered compliant. This highlights the importance of not checking the number of staff without also considering their capacity.

3. Discussion and potential recommendations for improvement (if any)

- As the numbers of veterinarians and veterinary paraprofessionals are not specific to any diseases or species, careful attention should be given to their interpretation when using them for disease-specific analysis.

- It may be relevant to consider the need to distinguish the animal health professional workforces dedicated to pets and to production animals and to collect data in the OIE-WAHIS annual report accordingly. This could be discussed as part of the overall discussion on the OIE-WAHIS annual report.

- These data are also used by the Global Burden of Animal Diseases programme and identified synergies should be formalised in the management/cleaning/description of these data.

Broader reflections:

- It would be interesting to go a step further than the visualisation/description of these two datasets (from OIE-WAHIS and from PVS) on the same dashboard: correlation between the human resources indicated in OIE-WAHIS and the level of advancement of Critical Competencies I-1 A&B could be looked at. Potentially, an indicative benchmark might be identified.

- Data on the annual budget allocated to Veterinary Services are collected during PVS Evaluation, Follow-up and Gap Analysis missions. This is part of the critical information that the PVS Evaluation System should collect and store in a way that could allow further analysis. Such an analysis would need to ensure the confidentiality of information. An indicative benchmark could then be explored.

- The OIE Capacity Building Department and Regional/Sub-Regional Representations might consider a specific strategy for Members that have the relevant staffing (Critical Competencies I-1. A&B) but with insufficient competencies (Critical Competencies I-2. A&B).

More concerning, Table 2 notes that only 25% of OIE Members that have undertaken a PVS Evaluation or Follow-up mission in the past five years were considered as having the minimal resources capacity.

Table 2: Percentage of Members that reached minimal compliance for the seven Critical Competencies selected for workforce and resources

<table>
<thead>
<tr>
<th>40 Members</th>
<th>Only 8 of them (20%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>have undertaken a PVS Evaluation or Follow-up mission in the past five years</td>
<td></td>
</tr>
<tr>
<td>were assessed with a level of advancement of 3 or more for the seven pre-selected Critical Competencies and therefore considered as having the minimal resources capacity</td>
<td></td>
</tr>
</tbody>
</table>

4. Discussion on the use of the indicators in the annual report

- These indicators are interesting to monitor countries’ inputs and should be kept in the annual report.

- Consider reporting the number of veterinarians/veterinary paraprofessionals to the number of herds.

- Need a dashboard to assist in the visualisation of this information in the most user-friendly way; additional factors/criteria could be identified and added in the future.

- Keep the dashboard with these two sets of indicators.
C. World Trade Organization notifications

1. Introduction

The WTO Agreement on the Application of Sanitary and Phytosanitary Measures (SPS Agreement) sets out the basic rules for the application of food safety and animal and plant health measures in international trade. Member countries are encouraged to use international standards, guidelines and recommendations where they exist.

The SPS Agreement recognises the OIE as the reference organisation for international standards concerning animal health and zoonoses.

The OIE Observatory has identified some information that the WTO routinely collects and publishes on its website that could be used as indicators to determine whether OIE Members adhere to certain standards of the OIE Aquatic Code and Terrestrial Code, especially as the vast majority of WTO Members are OIE Members and vice versa.

Under Article 7 and Annex B of the SPS Agreement, Members are required to notify the WTO of new or modified sanitary legislation that may have a significant effect on the trade of other WTO Members when:

• an international standard, guideline or recommendation does not exist;

• the content of proposed sanitary legislation is not the same as the content of an international standard, guideline or recommendation.

Members are also encouraged to notify the WTO of all new or modified legislation that is based on, conforms to, or is substantially similar to an international standard, guideline or recommendation, if it is expected to have an effect on the trade of other Members.

These notifications can be accessed through the new ePing SPS&TBT Platform (as well as through the WTO Documents Online application).

2. Proposed indicators for this prototype

2.1. Lessons learnt from previous prototypes and adjustments (if any) proposed for this prototype

Previous prototypes of the OIE Observatory have used the following data, publicly available on the WTO website, as indicators to assess whether OIE standards are observed by Members.

a) Notification of sanitary measures having an effect on trade

Previous prototypes have counted the number of countries submitting emergency or regular notifications to the WTO each year for the period studied.

While recognising that ‘notifications’ to the WTO could potentially be a useful indicator to assess compliance with OIE standards, it is proposed that the African swine fever (ASF) prototype enhance this information analysis, breaking down the territories filing notifications by:

• importing/exporting country

• level of income

• OIE region.
b) WTO SPS Committee, annual report on the implementation of Article 6 (on regionalisation) of SPS Agreement

For analysis of this information, please consider Section H of this prototype on zoning and compartmentalisation.

c) ASF-related trade issues as reported to the WTO

Based on learnings from previous prototypes, two WTO sources are interesting to explore:

• WTO SPS Committee, annual report on the procedure to monitor the process of international harmonisation

Monitoring harmonisation and the use of international standards is provided for in Articles 3.5 and 12.4 of the SPS Agreement, and further developed by the SPS Committee, through a specific agenda item and the production of annual reports, following the procedure to monitor the process of international harmonisation and the use of international standards, guidelines or recommendations, contained in document G/SPS/11/Rev.1.

2.2. African swine fever-related issues from WTO SPS Committee

It is proposed to list and categorise the ASF-related issues reported in the annual report of the WTO SPS Committee. This study will present the ASF-related issues that members have raised in the areas of data, data source and advantages/limitations of the data used.

Notifications to WTO:

A search through the SPSIMS (now called ePing) was applied to identify regular and emergency notifications of new/revised legislation on ASF over the period 2006–20 by applying two criteria:

• Keywords: African swine fever
• Objective and rationale: ‘animal health’

The notifications filed by WTO Members were then crossed against OIE regions and the following parameters obtained from the World Bank:

(i) country income data

(ii) Members that are importing/exporting territories of pork products (worldbank.org)

Procedure to monitor the process of international harmonisation:

All the WTO reports can be found under the section ‘International Harmonization’ at the following link of the WTO website: https://www.wto.org/english/tratop_e/spse/work_and_doc_e.htm. Then, a search with the words ‘African swine fever’ in each of the reports provides the number of times that ASF has been mentioned in these reports.

Specific trade concerns:

A search through the SPSIMS (now called ePing) was applied to STCs on ASF over the period 1995–2021 by applying two criteria:

• Keywords: African swine fever
• Objective and rationale: ‘animal health’

This process has evolved. Initially, Members used the procedure to identify international standards that had a major trade impact, either because they were not being used, or they did not exist, or were out-dated. The Three Sisters provided updates at SPS Committee meetings, e.g. if they began work on a missing standard, or if they updated one that had been found problematic.

More recently, the SPS Committee has not been closely following the procedure, and Members have used the agenda item to raise concerns with the non-use of certain international standards. The WTO Secretariat prepares an annual report for consideration by the Committee, and this report is also brought to the attention of the Three Sisters.

• WTO SPS Committee, specific trade concerns (STCs)

Through the procedure of raising STCs to the SPS Committee, WTO Members can highlight trade concerns related to the domestic measures of other Members and potential inconsistencies between these national measures and the international standards.

5 https://epingalert.org/
The vast majority of OIE and WTO Members are the same
Standardised format
Reference made to OIE standards
Claims of compliance/ non-compliance with OIE standards made

The information is collected for purposes others than those of the OIE Observatory and thus its analysis must be interpreted with caution
The information is self-declared by WTO Members
Notification to WTO is only required when a standard does not exist or when the legislation proposed deviates from it. If compliant, the notifications are only ‘encouraged’
WTO validation of these notifications is limited to the completeness of all sections
Some Members file one single notification that affects multiple countries, whereas other Members file a single notification for each one of the countries that are affected by it. This uneven way of reporting requires significant data-cleaning work to limit biases in the data analysis

Information publicly available on the WTO website
The information is extracted from the summary reports of the SPS Committee meetings
The profile of Members that express issues in this forum might not be representative of all WTO Members. Exporters of agri-products are more likely to engage

Relevant information that can be linked to OIE standards
These interventions/concerns by WTO Members are self-declared by Members and not verified by the WTO

WTO SPS Committee, annual report on the procedure to monitor the process of international harmonisation

ADVANTAGES

- Notification of sanitary measures having an effect on trade

LIMITATIONS

- The vast majority of OIE and WTO Members are the same
- Standardised format
- Reference made to OIE standards
- Claims of compliance/ non-compliance with OIE standards made

- The information is collected for purposes others than those of the OIE Observatory and thus its analysis must be interpreted with caution
- The information is self-declared by WTO Members
- Notification to WTO is only required when a standard does not exist or when the legislation proposed deviates from it. If compliant, the notifications are only ‘encouraged’
- WTO validation of these notifications is limited to the completeness of all sections
- Some Members file one single notification that affects multiple countries, whereas other Members file a single notification for each one of the countries that are affected by it. This uneven way of reporting requires significant data-cleaning work to limit biases in the data analysis

WTO SPS Committee, STCs

- Relevant information that can be linked to OIE standards

2.3. Example of ways to visualise the indicators and descriptive analysis of indicators’ visualisation, analysis and discussion

a) WTO notifications

As presented in Figure 6, there were 131 ASF-related notifications submitted between 2007 and 2020 by 19 WTO Members, and 39 countries were affected by them. This means that only 19 WTO Members filed notifications regarding new or revised ASF-related regulations for that period. Considering the global spread of ASF and increasing concern it is generating, this finding puts the spotlight on the numerous Members that may have reviewed or developed regulation on ASF but did not report it to the WTO.

In addition, 76% of these notifications were filed by just four members that each contributed 35%, 17%, 14% and 10%. The first two members, responsible of 52% of the notifications, are in Asia. As a consequence, the data from WTO SPS notifications cannot be considered representative of the global situation.

Among the 131 notified measures related to ASF that could have an impact on trade, nearly 83% (108) were emergency notifications versus 23 regular notifications. As shown in Figure 7, most of these notifications originated from exporting countries, which demonstrated a remarkable increase in notifications in 2019 and 2020.

Figure 6: Screenshot of the interactive dashboard on WTO notifications
Considering that WTO emergency notifications may be a direct consequence of a change in the animal health situation in the exporting country, the link between notifications to WTO and immediate notifications of ASF to the OIE was explored. As shown in Figure 8, 16% of the notifications to WTO were not linked to any immediate ASF notification to the OIE. In Asia, 19% of WTO notifications followed this pattern, as did 14% and 9% for the Americas and Europe, respectively.

A majority (84%) of the notifications followed the publication of an immediate notification of ASF by the OIE; 91% of the WTO reports originating from Europe came after an immediate ASF notification, whereas this was the case for 86% and 81% of reports in the Americas and Asia, respectively.

However, and as shown in the bottom graph of the dashboard, the vast majority of the WTO notifications were sent more than 30 days after the disease had been reported to the OIE. It is interesting that 36 notifications took place within a week of ASF being recorded by the OIE, which suggests high sensibility to the disease in these countries due to their swift reaction time.

It is key to explain that the figures of this graph add up more than the number of WTO notifications (131). This is because one single notification can affect several WTO Members. The data has been analysed bearing in mind the number of countries or territories that were affected by these notifications - also acknowledging that one country may be affected by multiple WTO notifications.
The Members that have sent notifications to the WTO have been aggregated by groups of countries based on level of income and on importance of export and import. Most of the notifications – 78 out of 131 (60%) – originated from countries with an upper-middle income, as displayed in Figure 9.

Medium and high importers of pork products accounted for nearly 60% of the WTO notifications. This may suggest that due to the volume of imports, these countries have a stronger desire to ensure a higher level of protection against ASF. Medium exporting countries were responsible for 41% of notifications to the WTO. This finding is coherent in that these countries wish to protect their pork markets. However, the fact that only 2% of the notifications were filed by high exporting countries is difficult to explain. In any case, keeping in mind that 76% of the notifications were sent by only four countries, making a coherent interpretation is challenging.

This analysis suggests that most OIE Members reporting to the WTO do take into account the OIE Codes when they amend their legislative framework or introduce new legislation with regard to ASF. However, numerous Members that report the existence of OIE standards relevant to the legislation they are proposing mention Chapter 15.1. on ASF but do not specify the articles they are referring to, which may cast doubt on the reliability of the information provided.
c) Zoning and regionalisation

These notifications also mention whether the measures they propose will affect a whole country, a zone or an administrative region. In Article 5.3.7. of the Terrestrial Code, the terms ‘zone’ has the same meaning as ‘region’ in the WTO SPS Agreement; by extrapolation ‘zoning’ would equate to ‘regionalisation’. Out of the 131 notifications, 92% (120) were said to affect the whole country (several countries can be affected by one single notification) whereas 8% (11) were reported to affect an administrative region or zone (Fig. 11).

This analysis seems to suggest either that Members affected by ASF are not applying zoning in their territories or that although they are applying zoning, it is not recognised by the WTO Members filing the notifications. In any case, Members could make more frequent use of this tool, which is intended to reduce impediments to trade.

d) Main trade-related issues reported to WTO

The European Union (EU) has been the only WTO Member making use of the procedure to monitor the process of international harmonisation to raise inconsistencies in the application of OIE international standards related to ASF. These grievances, which have been filed in each of the last three years, refer to the lack of recognition of disease-free zones and failure to accept heat-treated products (Table 3). This complaint is coherent with Figure 11, which makes clear that most notifications affect entire countries.

Similarly, analysis of the STCs filed by WTO Members since 1995 revealed that ASF-related restrictions have been raised 28 times since 2013. Resembling the annual reports on harmonisation, ‘heat treatment of products’ and ‘regionalisation’ were the only types of issues registered by Members. ‘Heat treatment of products’ was mentioned on two occasions, whereas ‘regionalisation’ was referred to in 26 instances (Fig. 12).

This finding should be read in combination with Section H covering zoning and compartmentalisation as it makes similar remarks.

Table 3: Issues raised by WTO members with regards to harmonisation of international standards

<table>
<thead>
<tr>
<th>Year</th>
<th>Reference of the report</th>
<th>WTO Members raising and supporting the issue</th>
<th>Nature of the issues related to the non-use of OIE Standards</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018</td>
<td>G/SPS/GEN/1710</td>
<td>European Union</td>
<td>Country-wide bans: disease-free zones not recognised</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Non-acceptance of identified, heat-treated products</td>
</tr>
<tr>
<td>2019</td>
<td>G/SPS/GEN/1710</td>
<td>European Union</td>
<td>Country-wide bans: disease-free zones not recognised</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Non-acceptance of identified, heat-treated products</td>
</tr>
<tr>
<td>2020</td>
<td>G/SPS/GEN/1710</td>
<td>European Union</td>
<td>Country-wide bans: disease-free zones not recognised</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Non-acceptance of identified, heat-treated products</td>
</tr>
</tbody>
</table>

Figure 11: Distribution of countries or administrative regions affected by WTO notifications

Figure 12: Specific trade concerns raised by WTO Members since 1995
3. Discussion and potential recommendations for improvement (if any)

- As the data used in this section come from the WTO website, it would be enriching to further discuss them with the WTO Secretariat to gain a better understanding of the system. It would also be an opportunity to share with the Secretariat how the OIE Observatory is planning to regularly use WTO SPS data related to OIE standards.
- The fact that regionalisation is not widely recognised brings into question the understanding and trust that Members have in this concept.

These findings are similar to those presented in the section devoted to zoning and compartmentalisation.

4. Discussion on the use of the indicators in the annual report

- The data regarding compliance with international standards had to be manually extracted from the notifications. This is one of the limitations that must be accepted in order to use this important source of information.
- In general terms, only a very reduced number of Members raise any points in WTO forums. Therefore, it is hard to extrapolate this analysis to the global picture.

- This prototype has focused on ASF, an animal disease that has had a very important impact on trade in the past years. However, the analysis of the data related to notifications is considered to be distorted due to the very limited number of Members that reported their changes in the regulations to the WTO (19 Members in total, and 76% of the notifications submitted by four of them). This might also be the case for other diseases, which means that findings will have to be interpreted very carefully.
- The fact that regionalisation is not widely recognised brings into question the understanding and trust that Members have in this concept.
D. Detection, surveillance and diagnosis

1. Introduction

Access to information about disease outbreaks in real time is essential for Veterinary Services to be able to take timely actions that limit their spread.

According to Chapter 1.1. of the Terrestrial Code, OIE Members have the obligation to notify to the OIE on all listed and emerging diseases. To do so, they must notify any exceptional event within 24 hours, as required by Article 1.1.3., and provide information about all the OIE-listed diseases in the six-monthly reports.

Diseases concerned by these notification rules, of which there are around 120, are listed in Chapter 1.3. of the Terrestrial Code. However, it is acknowledged that many of the OIE Members do not give the same priority to all these diseases, depending on their epidemiology, national resources and capacity.

Information on animal health situation is available in immediate notifications and follow-up reports (for exceptional events) or in six-monthly reports for all OIE-listed diseases.

2. Proposed indicators for this prototype

2.1. Lessons learnt from previous prototypes and adjustments (if any) proposed for this prototype

Previous prototypes explored the evolution of the number of outbreaks reported in the world, as it may reflect the impact of a given disease. However, the number of declared outbreaks is affected by many factors, such as the level of surveillance and the Members’ transparency level. Other elements such as the quality/quantity of the information provided by Members and the impact of the control measures should also be taken into account.

In this prototype, it is proposed to study how OIE Members comply with OIE notification requirements.

Hypothesis 1: African swine fever is a major transboundary animal disease for which the OIE, jointly with FAO, has developed a Global Initiative under the umbrella of the Global Framework for the Progressive Control of Transboundary Animal Diseases (GF-TADs). While it is acknowledged that all OIE-listed diseases may not be notifiable in all countries/territories due to prioritisation needs and limited resources, ASF is expected to be notifiable at national level in all OIE Members.

Hypothesis 2: When a Member indicates that a disease is notifiable at national level, a surveillance programme and reliable diagnostic capacity are expected to be in place.

The following points are suggested to be checked:

- a. how many OIE Members have ASF as a disease notifiable by law at national level;
- b. how many have a surveillance system in place;
- c. how many have reported a National Reference Laboratory for ASF;
- d. how many have reported a National Reference Laboratory for ASF;
- e. compliance of these National Reference Laboratories with the OIE Manual requirements;
- f. evolution of the number of proficiency tests conducted for ASF diagnosis and participating laboratories; from the information collected in the annual reports of the OIE Reference Laboratories;
- g. compliance of OIE Members with the PVS Critical Competencies directly relevant to surveillance;
- h. how OIE Members comply with their notification obligations for exceptional events (by considering the time elapsed between the disease confirmation and its official report to the OIE through an immediate notification).

As this indicator reflects both the Members’ capacity and their willingness to report exceptional events to the OIE in a timely fashion, it has been included in the ‘Transparency’ section.
2.2. Data, data source and advantages/limitations of the data used

The following data and data sources have been used:

- Control measures as submitted in the most recent available OIE-WAHIS six-monthly reports:
  - OIE Members reporting ASF as a notifiable disease
  - Control measures related to disease surveillance in place – countries/territories that have reported at least one of the following measures for ASF: general surveillance, targeted surveillance, monitoring or screening.

- Disease situation in the OIE-WAHIS six-monthly reports: occurrence codes related to disease status (disease present, absent, suspected, no information available) – most recent year available.

- Presence of a National Reference Laboratory for ASF: from the national laboratories section of the OIE-WAHIS annual reports – most recent year available. For this assessment, the criterion would be the reporting of a National Reference Laboratory with diagnostic capacity for ASF (with any test, not necessarily the test described in OIE standards).

- Proficiency tests: the OIE does not routinely ask its Members to report on the performance of their laboratories. The annual report asks for the tests performed by the laboratories but does not require data about participation in (or success of) international proficiency tests or ISO accreditation.

However, as part of their mandate, OIE Reference Laboratories are encouraged/requested to organise proficiency tests for countries/laboratories outside the network of OIE Reference Laboratories. When they organise such tests, they should report them in their annual report under Question 23. This question is not very specific and does not require information on the countries and laboratories that have participated, nor any information on the results to the proficiency test.

- Performance of Veterinary Services on surveillance: the PVS Tool has six Critical Competencies directly related to surveillance (below). Levels of advancement from the dataset compiled and provided by the PVS Secretariat, Capacity Building Department:

  II-1.A. Access to veterinary laboratory diagnosis
  II-1.B. Suitability of national laboratory infrastructures
  II-2. Laboratory quality assurance
  II-5.A. Passive epidemiological surveillance
  II-5.B. Active epidemiological surveillance
  II-8.B. Ante and post-mortem inspection.
### ADVANTAGES

**Disease situation (occurrence codes) and control measures reported**

- Standardised information
- Collected twice a year for all OIE-listed diseases
- Requested to all OIE Members
- Official data provided under the supervision of the OIE Delegate
- Already organised in a database

### LIMITATIONS

- Disease situation and control measures are self-declared by the country/territory and cannot be certified by the OIE
- The data on control measures is prepopulated in the OIE-WAHIS system (from the previous report) and some OIE Members may not update it routinely
- Due to the transition phase to the new OIE-WAHIS, very few reports have been received recently (2020 and 2021). The most recent reports will be considered for this prototype

### Presence of a National Reference Laboratory for ASF

- Standardised information
- Collected twice a year for all OIE-listed diseases
- Requested to all OIE Members
- Official data provided under the supervision of the OIE Delegate
- Already organised in a database

- Outdated information (2019), as annual reports have not been requested since the launch of the new OIE-WAHIS
- The automatic processing of the laboratory-related information in OIE-WAHIS from one year to the next means some Members may not revise it regularly
- Known gaps in the quality of laboratory data collected through OIE-WAHIS, inherent to the reporting process (focal points entering the data are not usually the main owners of this topic in their countries/territories)
- No information about the participation of these laboratories in proficiency tests or any compliance checks with OIE/ISO requirements

### Organisation of proficiency tests

- As part of their mandate, OIE Reference Laboratories are encouraged/requested to organise proficiency tests for countries/laboratories outside the network of OIE Reference Laboratories
- They should annually report on the diagnostic test that was checked, the number of labs that participated and their region

- The annual report of OIE Reference Laboratories does not collect information either on the results of these proficiency tests or on the countries/territories that participated
- The minimum to collect would be the number of Members (and their region) that have participated and the number of them that were fully successful/compliant

### PVS Critical Competencies ► see Section A on governance and performance of Veterinary Services

Note: In addition to the above-mentioned limitations, it is important to note that this analysis is based on the most recent six-monthly reports and the most recent annual reports. However, the period covered by the six-monthly and annual reports may not be aligned, potentially resulting in a small bias.
2.3. Examples of ways to visualise the indicators and analysis

a) OIE Members that have reported ASF as a disease notifiable by law at national level

African swine fever is reported as a notifiable disease by a large majority of Members. However, 28 of them (15%) still do not report the disease as notifiable despite the deteriorating epidemiological situation worldwide and the OIE/FAO Global Initiative (Table 4).

The majority of the Members that do not report the disease as notifiable are in Africa (Northern Africa) and the Middle East (Fig. 13), likely related to the low importance of the porcine sector in these areas. Still, around 20% of Members from the Asia and the Pacific region do not report ASF as notifiable at national level. In contrast, the Americas and Europe have a high percentage of Members reporting ASF as notifiable (96%).

Table 4: Percentage of OIE Members that have reported ASF as notifiable at national level in their OIE-WAHIS six-monthly reports

<table>
<thead>
<tr>
<th>Region</th>
<th>ASF is notifiable</th>
<th>ASF is not notifiable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Africa</td>
<td>85%</td>
<td>15%</td>
</tr>
<tr>
<td>Americas</td>
<td>96%</td>
<td>4%</td>
</tr>
<tr>
<td>Asia-Pacific</td>
<td>93%</td>
<td>7%</td>
</tr>
<tr>
<td>Europe</td>
<td>96%</td>
<td>4%</td>
</tr>
<tr>
<td>Middle East</td>
<td>93%</td>
<td>7%</td>
</tr>
</tbody>
</table>

For 15% of OIE Members ASF is not yet notifiable at national level.

b) Members for which ASF is notifiable that have a surveillance system in place

It is interesting to note that, out of the 28 OIE Members that do not report ASF as notifiable, 11 apply surveillance in domestic animals and 5 in wildlife (Table 5).

As many as 126 (82%) of the 154 Members indicating ASF as notifiable also report having surveillance in place for domestic animals, whereas this number is reduced to 77 (50%) for wildlife.

Table 5: Number and percentage of OIE Members applying surveillance in domestic/wild animals depending on whether they report ASF as notifiable at national level

<table>
<thead>
<tr>
<th>ASF is notifiable</th>
<th>ASF is not notifiable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Domestic animals</td>
<td>126 (82%)</td>
</tr>
<tr>
<td>Wildlife</td>
<td>77 (50%)</td>
</tr>
<tr>
<td>Domestic animals</td>
<td>11 (39%)</td>
</tr>
<tr>
<td>Wildlife</td>
<td>5 (18%)</td>
</tr>
</tbody>
</table>

0% 20% 40% 60% 80% 100%

Africa Americas Asia-Pacific Europe Middle East

Figure 13: Percentage of Members, by region, that have reported ASF as a notifiable disease
c) Members in which ASF is notifiable that have also reported a National Reference Laboratory for ASF

Reports confirm the presence of a National Reference Laboratory for ASF in 51% of all Members that have indicated the disease as notifiable (Table 6). This percentage goes up to 60% for Members in which the disease has been detected and falls to 36% where the disease has not been detected since 2006 (Table 7).

Table 6: Percentage of Members in which ASF is notifiable that have also reported a National Reference Laboratory for ASF

<table>
<thead>
<tr>
<th>Out of the 154 OIE Members reporting ASF as notifiable at national level.</th>
<th>49% do not report a National Reference Laboratory for ASF to help diagnose the disease.</th>
</tr>
</thead>
</table>

Table 7: Number and percentage of Members that have (not) reported a National Reference Laboratory for ASF and whether ASF is present/absent in the territory

<table>
<thead>
<tr>
<th>OIE Members that have reported ASF presence, at least once, since 2006</th>
<th>OIE Members that have not reported ASF presence, at least once, since 2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>37 (50%)</td>
<td>35 (36%)</td>
</tr>
<tr>
<td>25 (40%)</td>
<td>63 (64%)</td>
</tr>
</tbody>
</table>

Among the Members that have not reported having a National Reference Laboratory for ASF, we can identify:

- two Members that do have a recently accredited OIE Reference Laboratory for this disease;
- others that are likely to have a National Reference Laboratory but have not reported it.

These inconsistencies might be attributed to the year when this information was last collected but more likely are due to the quality of the information submitted. The fact that this information is compiled and reported by national focal points on notification who may not have this specific information on laboratories may be an explanation — see limitations expressed in Section 2.2 above.

Associating these three indicators reveals that only 43 OIE Members have reported ASF in OIE-WAHIS as a notifiable disease at national level for which they have some surveillance in place and a dedicated National Reference Laboratory.

Despite data limitations, this analysis reveals weaknesses in the diagnostic capacity of many Members, including those where ASF is notifiable and where ASF has already been detected. Building laboratory capacity would be critical both for Members where the disease has been reported and for those where it has not been detected. In the first case, it would allow them to better monitor the evolution of the disease, and potentially facilitate commodity-based trade. In the second case, it would prepare them for early detection and response should the pathogen be introduced into their swine population.
d) Proficiency tests organised by OIE Reference Laboratories for ASF

While an increase in the number of laboratories participating in proficiency tests can be seen in Figure 14, the distribution of these laboratories and whether they are National Reference Laboratories is unknown.

In addition, the OIE does not collect the results of the proficiency tests and has no means to know the proportion of National Reference Laboratories that are compliant with the international standards described in the OIE Manual of Diagnostic Tests and Vaccines for Terrestrial Animals.

![Figure 14: Evolution of the number of proficiency tests (PTs) organised by OIE Reference Laboratories and number of laboratories that have participated in them](image)

e) Compliance of OIE Members with the PVS Critical Competencies directly relevant to surveillance

There are 40 OIE Members that have undertaken a PVS Evaluation or Follow-up mission since 2016 (in the past five years). Their assessed performance is displayed in Figure 15.

More than half of these Members obtained a level of advancement of 3 or more for their access to veterinary laboratory diagnosis and the suitability of the national laboratory infrastructure. However, for the other four Critical Competencies, less than half reached a level of advancement of 3.

In fact, only 6 OIE Members out of the 40 considered (15%) were compliant (reaching at least a level of advancement of 3) with all six Critical Competencies related to surveillance.

![Figure 15: Compliance of OIE Members with the PVS Critical Competencies directly relevant to surveillance – PVS missions conducted in the last five years](image)
3. Discussion and potential recommendations for improvement (if any)

African swine fever has had a massive impact on animal health and the economies of infected countries/territories, which has led to the adoption of a Global Initiative for the control of ASF (under GF-TADs) by OIE Members. Despite this, 15% of OIE Members still do not report ASF as a notifiable disease at national level.

Among the Members reporting ASF as notifiable, 18% do not report any surveillance activities in domestic pigs and 50% do not do so for wildlife. Further, 49% do not report having a National Reference Laboratory for ASF and consequently do not have the capacity to properly detect ASF. Only 43 OIE Members (24%) combine the three criteria: reporting ASF as notifiable, having at least one surveillance measure in place for ASF and having a National Reference Laboratory for ASF.

Data limitations, especially the year when information was last collected, should be taken into account. This is particularly relevant in the case of ASF owing to its dynamic pathogenesis and transmission.

4. Discussion on the use of the indicators in the annual report

These indicators are interesting to monitor. It is proposed to include them in the annual implementation review report for all diseases for which the OIE has a global strategy/initiative: ASF, foot and mouth disease (FMD), peste des petits ruminants (PPR) and rabies. While they could potentially be extended to other diseases, proposing them for all OIE-listed diseases may not be very relevant. Avian influenza could be added, as could some particularly relevant aquatic diseases.

This could be presented in a dashboard where the selection of the relevant diseases would be interactive.

Depending on future discussions and decisions related to the to-be-collected information on proficiency test data and National Reference Laboratories, these indicators will (or will not) be included in this section.

In addition, the low quality of the information collected on National Reference Laboratories could bring into question the continuous collection of this information.

Broader reflections:
• Assessing Members’ capacity to diagnose diseases is not currently possible via the data routinely collected by the OIE.
• The reporting of the presence of a National Reference Laboratory, although not a negligible indicator, does not guarantee good diagnostic performance, not to mention the low quality of this specific information. Internal discussions should be led to explore the value and cost/benefit of collecting information about National Reference Laboratories, including on their performance.
• Information on improved quality may help the OIE (ASF team, RR/SRR) and GF-TADs to identify National Reference Laboratories or OIE Members with specific needs and then organise tailored capacity-building activities.

E. Transparency

1. Introduction

By becoming OIE Members, countries and territories commit to notify their animal health situation to the OIE and the international community. Access to real-time and good-quality information about worldwide disease events is essential for Veterinary Services to take timely actions that limit the diseases’ spread. In accordance with Chapter 1.1. of the Terrestrial Code, OIE Members ‘shall make available to other Member Countries, through the OIE, whatever information is necessary to minimise the spread of important animal diseases, and their pathogenic agents, and to assist in achieving better worldwide control of these diseases’ and shall comply with the notification requirements defined in the chapter. Article 1.1.3. lists situations and reports that Members must send to the OIE:

- immediate notification to be sent within 24 hours after the confirmation of an exceptional event, and then follow-up reports on a weekly basis;
- six-monthly reports providing sanitary information on the OIE-listed diseases;
- annual reports providing other information relevant to animal health and Veterinary Services, such as the animal population or the existence of National Reference Laboratories.

For this section of the prototype, the Observatory focuses on the immediate notifications and more specifically on the time elapsed between the confirmation of a disease and its notification to the OIE.

2. Proposed indicators for this prototype

2.1. Lessons learnt from previous prototypes and adjustments (if any) proposed for this prototype

The lag time (in days) between disease confirmation and the submission of an immediate notification to the OIE has been used as a transparency indicator in preceding prototypes. It has been presented by using a histogram showing the elapsed time per year during the period studied. This is a very valuable indicator that is proposed to be kept.

- Confidentiality status of the PVS mission reports: when the PVS Pathway mission reports are finalised, Delegates have the possibility to publish them on the OIE website, make them available to OIE partners and donors only, or keep them confidential. This information has not been analysed in previous prototypes. This prototype intends to scrutinise the level of access to PVS reports granted by the Delegates. For the annual report, this indicator could contribute to indicate the level of openness of OIE Members, and hence, it could be visualised in a transparency dashboard.

- PVS Critical Competency dedicated to transparency (Critical Competency IV-6): the level of advancement given to the OIE Members that have undertaken a PVS Evaluation/Follow-up mission in the past five years. This information would be obtained from the dataset compiled and provided by the PVS Secretariat, in the Capacity Building Department.

2.2. Data, data source and advantages/limitations of the data used

The following data and data sources have been used:

- Immediate notification from OIE-WAHIS: time between the date of confirmation of the disease and the date the immediate notification was sent to the OIE. The analysis was first run for all the countries/territories that had submitted at least one immediate notification for ASF since 2005. For each Member, only the first immediate notification submitted was considered for this analysis.
- This was then replicated for all the diseases for the years 2020 and 2021 in order to anticipate the work required for the annual implementation review report.

- Confidentiality status of the PVS mission reports: PVS dataset provided by the Capacity Building Department, indicating whether each report is entirely confidential, accessible to only OIE Partners and Donors or publicly available.
- PVS Critical Competency IV-6 on transparency: database developed manually by the Capacity Building Department, in the absence of the PVS IT System, to be developed.
ADVANTAGES

Immediate notification from OIE-WAHIS (date of confirmation of the disease versus date of report submission to the OIE)

- Standardised information
- Requested to all OIE Members when an exceptional event occurs
- Official data provided under the supervision of the OIE Delegate
- Already organised in a database
- By taking the confirmation dates, the bias related to the detection and diagnosis capacity is reduced (e.g. as opposed to taking the starting date of the outbreak)

LIMITATIONS

- Good indicator only if the Member notifies the event via an immediate notification. However, this indicator will miss countries/territories that (i) do not use the immediate notification system but favour reporting via the six-monthly report; (ii) do not report at all
- A prolonged time gap between confirmation of a disease and its notification may not be attributable only to transparency issues. Other factors such as access to OIE-WAHIS and capacity of the focal point may influence the timely reporting of disease events
- Only applicable to countries/territories that reported the specific disease through immediate notifications

Confidentiality status of the PVS mission reports – See Section A on governance and PVS

PVS Critical Competency (IV-4 Transparency)

See Section A on governance and PVS

See Section A on governance and PVS

- Direct and important link between the level of advancement for this Critical Competency and the submission of regular animal health information reports to the OIE – lack of independence between these two indicators, even if the Critical Competency also considers other elements

2.3. Example of ways to visualise the indicators and descriptive analysis of indicators’ visualisation,

a) Lag between confirmation of ASF/all diseases and their immediate notification to the OIE

Table 8 and Figure 16 show the values of the reporting time after confirmation of ASF distributed by world region. This time ranged from 0 to 96 days.

This analysis was only applicable to countries/territories that reported ASF through immediate notifications and must be interpreted carefully, especially for regions in which few Members reported the presence of ASF, such as the Americas and Oceania.

<table>
<thead>
<tr>
<th></th>
<th>For ASF since 2005</th>
<th>For all diseases in 2020 and 2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average time between confirmation and reporting of the disease to the OIE</td>
<td>15.5 days</td>
<td>15.5 days</td>
</tr>
<tr>
<td>Minimum</td>
<td>0 days</td>
<td>0 days</td>
</tr>
<tr>
<td>Maximum</td>
<td>96 days</td>
<td>96 days</td>
</tr>
</tbody>
</table>

Table 8: Lag between confirmation and immediate notification to the OIE-WAHIS of exceptional events

Figure 16: Time gap (in days) between the confirmation of ASF and its notification to the OIE by world region
Figure 17 and Tables 8 and 9 also show this information for all diseases (not limited to ASF) for 2020 and 2021.

In Table 8, the average time between confirmation and reporting for all diseases during 2020 and 2021 is 15.5 days, with values ranging from 0 to 243 days. There is considerable variability in this time lag between OIE regions, which is 10.5 days for Europe, 32.1 days for the Americas, 19.8 for Africa, 26.8 for Asia and 20.4 for the Middle East (Table 9).

The strip chart in Figure 17 depicts this high variability of confirmation time among OIE regions. Asia and Africa display higher variability, whereas Europe tends to concentrate the values in the lower part of the scale. Since there are only a few values for the Middle East, these data are not representative enough to draw conclusions for this region.

Table 9. Average time between confirmation and immediate notification of diseases in 2020 and 2021 (in days) per region

<table>
<thead>
<tr>
<th>Region</th>
<th>Average time between confirmation and reporting (in days)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Africa</td>
<td>19.8</td>
</tr>
<tr>
<td>Americas</td>
<td>32.1</td>
</tr>
<tr>
<td>Asia</td>
<td>26.8</td>
</tr>
<tr>
<td>Europe</td>
<td>10.5</td>
</tr>
<tr>
<td>Middle East</td>
<td>20.4</td>
</tr>
</tbody>
</table>

These findings reveal that Europe typically takes less time to report not only ASF but all diseases (statistically significant differences confirmed by Kruskal-Wallis chi-squared test).

b) Confidentiality status of PVS reports – evolution between the first PVS Evaluation and Follow-up and Gap Analysis missions

Table 10 shows the number and percentage of reports that were made publicly available, those that were made accessible only to OIE partners and donors and those that have remained confidential since 2006. From this, the number and percentage of reports that were available to OIE partners and donors was calculated by adding those publicly available and those accessible only to partners and donors.

As shown in Figure 18, a higher proportion of Members decided to make their reports available online for their PVS Follow-up missions (and even for their PVS Gap Analysis, to a lesser extent), in comparison to their initial PVS Evaluation. However, the proportion of Members keeping their reports confidential has also increased, leading to a relative decrease in reports available to OIE partners and donors. This trend is particularly clear for PVS Gap Analysis reports, which are often considered to contain more sensitive information.
c) Confidentiality status of PVS reports – evolution in the last three five-year periods

To further analyse this trend, only the PVS Evaluation and Follow-up reports were looked at, focusing on five-year periods. A similar trend (an increase in both ‘publicly available’ and ‘confidential’ reports, leading to a decrease in reports available to partners and donors) was observed between 2006 and 2010 and between 2011 and 2015 (Table 11, Figure 19). However, while the proportion of reports made publicly available continued to increase in 2016–20, the proportion of reports that stayed confidential decreased with regards to the previous period, with an overall slight increase since 2006–10. This is a trend leading to more than half of the reports being made publicly available and those kept confidential being only a fifth. This trend will have to be monitored in the coming years.

Table 11: Confidential status of PVS Evaluation and Follow-up over time

<table>
<thead>
<tr>
<th>Availability of the reports</th>
<th>PVS Evaluation</th>
<th>PVS Follow-up</th>
<th>PVS Gap Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Published online</td>
<td>35 (26%)</td>
<td>31 (53%)</td>
<td>31 (31%)</td>
</tr>
<tr>
<td>Only accessible to partners and donors</td>
<td>75 (55%)</td>
<td>15 (26%)</td>
<td>43 (43%)</td>
</tr>
<tr>
<td>Confidential</td>
<td>26 (19%)</td>
<td>12 (21%)</td>
<td>27 (27%)</td>
</tr>
<tr>
<td>Total reports available to partners and donors</td>
<td>110 (81%)</td>
<td>46 (79%)</td>
<td>74 (73%)</td>
</tr>
</tbody>
</table>

Figure 18: Confidentiality status of PVS reports on first PVS Evaluation, Follow-up missions and Gap Analysis missions

Figure 19: Evolution of confidentiality status of PVS reports (Evaluation and Follow-up, excluding Gap Analysis missions) for the last three five-year periods

d) Compliance with minimal requirements related to transparency, as assessed by the PVS Tool, in the past five years

Most of the Members that have undertaken a PVS Evaluation or Follow-up mission in the past five years were assessed with at least a level of advancement of 3 (Fig. 20), meaning they have made notifications ‘in compliance with the procedures established by the OIE, WTO, trading partners and other relevant organisations’. One of the elements examined, with support from the OIE World Animal Health Information and Analysis Department (WAHIAD), by PVS mission experts is the regular reporting to OIE-WAHIS. Therefore, this apparently positive finding is interesting in a context where underreporting is known to occur regularly.
3. Recommendations for improvement

In the future, interoperability and direct plug-in with OIE-WAHIS will allow for automated use and analysis of the data. While OIE Members have positively responded to the strong encouragement and campaign from the OIE PVS Secretariat to make their PVS reports publicly available, at least for PVS Evaluation and Follow-ups, the number of reports that are still kept confidential is concerning. The intermediate status that allows these reports to be shared within the OIE and with partners and donors should be promoted. The level of advancement of Members for the transparency Critical Competency is an interesting indicator as well.

However, the positive results presented for this Critical Competency in this prototype could be deemed ‘overrated’. This could be due to the fact that just conforming with the minimal requirement for disease notification (as per Chapter 1.1.) grants a score of ‘compliance with the procedures’ (assessed by a level of advancement ≥ 3); while this demonstrates regular disease notification, it is not enough to demonstrate transparency. Most OIE Members send their six-monthly reports to the OIE, but the quality of the information provided and the submission of immediate notification in a timely and thorough manner should likely be given greater weight in the overall assessment.

4. Proposed use of indicators for the annual report

The three indicators used in this section on transparency are proposed to be kept in the annual implementation review report:

- time lag between the date of confirmation of a disease and its immediate notification to the OIE. This is a good indicator of countries’ capacity and willingness to timely report exceptional animal health events to the OIE;
- confidentiality status of PVS reports;
- the PVS Critical Competency on transparency.

In addition, insights from the OIE team responsible for actively searching for unofficial information (or rumour tracking), to increase the sensibility of its surveillance system and to support and encourage its Members to submit all relevant sanitary notifications, could be considered. Records from this activity could also be particularly interesting to further define the transparency profile of OIE Members.

Additional indicators could be considered in the annual report:

- number of immediate notifications submitted as a direct result of active search activity;
- number of countries/territories that reported exceptional events in the six-monthly reports rather that in an immediate notification (delaying the notification of the disease and avoiding an alert message being sent to the OIE mailing list – as done for all immediate notification of exceptional events).

In the annual implementation review report, a dashboard will show the indicators for all diseases, split by terrestrial/aquatic animal diseases and for selected diseases (official strategy, official status). They can also be potentially aggregated by OIE region (and not world region or continent), level of income, agricultural GDP and exporting/importing status of Members.
F. Prevention and control measures: movement control inside the country/territory and precautions at border

1. Introduction

Chapter 1.1. of the *Terrestrial Code* specifies, ‘In addition to notifying [disease occurrence] Member Countries shall also provide information on the measures taken to prevent the spread of diseases. Information shall include biosecurity and sanitary measures, including restrictions applied to the movement of animals, animal products […] which could by their nature be responsible for the transmission of diseases’. Measures are collected in two different reports: in immediate notifications of exceptional events (and their follow-up reports) and in six-monthly reports for all OIE-listed diseases. As they are collected for all countries/territories independently of the presence or absence of the disease, the information from six-monthly reports is interesting to consider when assessing the global situation.

Twenty prevention or control measures are proposed for reporting in OIE-WAHIS six-monthly reports:

<table>
<thead>
<tr>
<th>1. Disease notification</th>
<th>11. Selective killing and disposal</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Precautions at the borders</td>
<td>12. Zoning</td>
</tr>
<tr>
<td>4. Screening</td>
<td>14. Vaccination prohibition</td>
</tr>
<tr>
<td>5. General surveillance</td>
<td>15. Official vaccination</td>
</tr>
<tr>
<td>6. Targeted surveillance</td>
<td>16. Treatment</td>
</tr>
<tr>
<td>7. Movement control inside the country</td>
<td>17. Inactivation of agent</td>
</tr>
<tr>
<td>8. Slaughter</td>
<td>18. Control of wildlife reservoirs</td>
</tr>
<tr>
<td>10. Stamping out</td>
<td>20. Vector surveillance</td>
</tr>
</tbody>
</table>

The *Terrestrial Code* is not intended to be a practical handbook providing ready-made fit-for-all solutions. Rather, it outlines principles to follow when combating transmissible animal diseases. Each Member is to adjust its prevention or control strategy depending on the epidemiological situation, as well as on other factors such as its resources.

Chapter 4.19 provides clear recommendations on measures to prevent introduction and spread of diseases, such as legal framework, surveillance, slaughter of animals and disposal, biosecurity and disinfection, movement control, zoning, vaccination and treatment, communication and emergency preparedness.

Table 12 associates the measures proposed for reporting in OIE-WAHIS with the relevant references in Chapter 4.19 and other chapters of the *Terrestrial Code*. 

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### Table 12: Table associating the preventive and control measures proposed in OIE-WAHIS six-monthly reports and in the OIE Terrestrial Code – references to OIE standards not exhaustive

<table>
<thead>
<tr>
<th>WAHIS measures</th>
<th>Recommendations in Chapter 4.19. Official control programmes for listed and emerging diseases</th>
<th>Other relevant standards in the Terrestrial Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disease notification</td>
<td>Article 4.19.2. Legal framework and regulatory environment</td>
<td>Chapter 3.2, Quality of Veterinary Services</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Chapter 3.3, Evaluation of Veterinary Services</td>
</tr>
<tr>
<td>Movement control inside the country</td>
<td>Article 4.19.7. Movement control</td>
<td>Section 5 – Trade measures, import/export procedures and veterinary certification</td>
</tr>
<tr>
<td>Precautions at the borders</td>
<td>Article 4.19.5. General considerations for outbreak management</td>
<td>Disease-specific chapters (e.g. Article 15.1.17. Recommendations for the importation of meat products of pigs)</td>
</tr>
<tr>
<td>Slaughter</td>
<td>Article 4.19.6. Selective killing and disposal of dead animals and other potentially contaminated commodities</td>
<td>Chapter 4.2, General principles on identification and traceability of live animals</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Chapter 4.3, Design and implementation of identification systems to achieve animal traceability</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Chapter 7.5, Slaughter of animals</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Chapter 7.6, Killing of animals for disease control purposes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Chapter 4.13, Disposal of dead animals</td>
</tr>
<tr>
<td>Zoning</td>
<td>Article 4.19.8. Zoning</td>
<td>Chapter 4.4, Zoning and compartmentalisation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Chapter 4.5, Application of compartmentalisation</td>
</tr>
<tr>
<td>Biosecurity</td>
<td>Article 4.19.9. Biosecurity</td>
<td>Chapter 4.14, for disinfection and disinsection</td>
</tr>
<tr>
<td>Official vaccination</td>
<td>Article 4.19.10. Vaccination and treatment</td>
<td>Disease-specific chapters on disease freedom (e.g. Article 9.8.2, FMD free country or zone where vaccination is not practised)</td>
</tr>
<tr>
<td>Vaccination prohibition</td>
<td></td>
<td>Disease-specific chapters on the inactivation of the pathogenic agent or the processing of commodities (e.g. Article 15.1.23, Procedures for the inactivation of ASFV in meat)</td>
</tr>
<tr>
<td>Treatment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inactivation of agent</td>
<td>Article 4.19.5. General considerations for outbreak management</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Article 4.19.6. Selective killing and disposal of dead animals and other potentially contaminated commodities</td>
<td></td>
</tr>
<tr>
<td>Control of wildlife reservoirs</td>
<td></td>
<td>Disease-specific chapters (e.g. Article 15.1.3, General criteria for the determination of the ASF status Point 7 &amp; Article 12.1.10, Protecting animals from Culicoides attacks)</td>
</tr>
<tr>
<td></td>
<td>Article 4.19.5. General considerations for outbreak management</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Article 4.19.6. Selective killing and disposal of dead animals and other potentially contaminated commodities</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Article 4.19.9. Biosecurity</td>
<td></td>
</tr>
</tbody>
</table>

2. Proposed indicators for this prototype

2.1. Lessons learnt from previous prototypes and adjustments (if any) proposed for this prototype

Previous prototypes assessed the notification of control measures in OIE-WAHIS six-monthly reports, mainly by checking how the reporting of these control measures evolved over the years. The automatic processing of the control measures data in OIE-WAHIS from one semester to the next means that some countries/territories may not regularly revise the control measures reported to the OIE and stop reporting measures that are no longer implemented. While displaying this evolution may still have certain relevance for some high-profile control measures, e.g. zoning and compartmentalisation, it is not seen as a helpful indicator of all the proposed control measures. Rather than analysing them all, it is proposed for this prototype to select only a few measures. Some measures, such as surveillance, zoning and compartmentalisation, have already been treated in other sections of the prototype. In addition, this section will focus on precaution at borders and movement control inside the country. As for other measures, these two will be assessed on their own and associated with other indicators as follows:

- number of countries/territories declaring in OIE-WAHIS six-monthly reports that they conduct movement control inside the country and/or have precautions at borders for ASF;
- Members’ capacity to implement these measures in accordance with international standards as assessed by the PVS Tool (II-4: Quarantine and border security and II-12A: Animal identification and movement control);
- more specifically, and associating the two previous indicators, the capacity of those Members that report these measures in OIE-WAHIS to implement them.

PVS Tool Critical Competencies II-4 and II-12A assess Members’ compliance with standards relevant to quarantine and border security and animal identification and movement control, respectively. However, they do not directly assess the performance or level of implementation of the control measures reported in OIE-WAHIS for ASF. Still, they are considered a good proxy to check the general capacity of Members in implementing the measures.

2.2. Data, data source and advantages/limitations of the data used

The following data and data sources have been used:

- Control measures from the OIE-WAHIS six-monthly reports: among the proposed control measures to select, there are ‘movement control inside the country’ and ‘precautions at borders’. Owing to the transition to the new OIE-WAHIS, there are not enough reports available for 2020 and 2021; therefore, only reports from 2019 have been considered in this analysis.

- PVS Critical Competencies (II-4: Quarantine and border security and II-12A: animal identification and movement control): levels of advancement reported by PVS Evaluation/Follow-up missions extracted from the Excel table manually compiled by the PVS Team, Capacity Building Department, with PVS Evaluation and Follow-up reports conducted since 2016.

Not published – OIE internal documents.
2.3. Example of ways to visualise the indicators and analysis

a) Countries/territories that report having movement control inside their territory and taking precautions at borders in OIE-WAHIS six-monthly reports

Of the 110 countries/territories that declared having movement control within their territory or precautions at the border, just under half had both those measures in place, closely followed by those with only border precautions (Table 13).

Table 13: Countries/territories that reported having movement control inside their territory and taking precautions at borders in OIE-WAHIS six-monthly reports

| 110 countries/territories declared having movement control inside their territory or precautions at the borders in their OIE-WAHIS six-monthly reports |
|---|---|---|
| 48 have precautions at border (but no movement control inside the country) | 52 have both precautions at border and movement control inside the country | 10 have movement control (within the country (without precautions at the border)) |

Of the 110 countries/territories that declared having movement control within their territory or precautions at the border, just under half had both those measures in place, closely followed by those with only border precautions (Table 13).

Table 13: Countries/territories that reported having movement control inside their territory and taking precautions at borders in OIE-WAHIS six-monthly reports

b) Members’ capacity to implement movement control within the country and at the border as assessed by the PVS Tool

Of the 40 Members that have undertaken a PVS Evaluation or have produced a PVS Follow-up report since 2016 (in the past five years), 50% reached minimal compliance (level of advancement of 3 or above) for Critical Competency II-4 (quarantine and border security). For Critical Competency II-12.A (animal identification and movement control), 38% reached minimal compliance (Fig. 21).

Of the 24 countries/territories that have reported precautions at the borders and that have undertaken a recent PVS Evaluation or Follow-up mission, 46% were considered compliant with the minimal requirement for quarantine and border security (right part of Fig. 21).

Of the 19 countries/territories that indicated implementing movement control inside the country and having undertaken a recent PVS Evaluation or Follow-up mission, 21% were considered compliant with the minimal requirement for animal identification and movement control (right part of Fig. 21).
Of the 16 Members that reported implementing both measures and having undertaken a recent PVS Evaluation or Follow-up mission, 25% were considered compliant with the minimal requirement for both Critical Competencies (Fig. 22).

In summary, 46% of the Members implementing precautions at the borders for ASF have been assessed as compliant with this Critical Competency, and only 21% of the Members claiming to implement movement control inside their country/territory comply with the minimum requirements for this Critical Competency. When considering both measures, only 25% of the Members reporting applying them both are assessed as reaching minimal compliance.

Subsequently, these figures concerning the capacity of Members to implement OIE recommendations on animal identification, movement control, quarantine and border security encourage careful consideration of the reporting of movement control and security at borders as control measures in OIE-WAHIS.
3. Discussion and potential recommendations for improvement, if any

- The vast majority of the Members who undertook a PVS Evaluation or Follow-up mission in the past five years were assessed as not having the capability to implement measures such as border protection and movement control within their country/territory, including those that reported applying these measures in their OIE-WAHIS six-monthly reports.

- This is in line with analysis conducted in other sections of this report on other control measures. It highlights that declaration in OIE-WAHIS six-monthly reports should be examined and interpreted carefully.

Broader reflection:

- The quality of the reporting of control measures in the OIE-WAHIS six-monthly reports has been questioned several times in this prototype. The OIE and the OIE-WAHIS Key Users Group should engage in a broader discussion to improve this notification. Steps could include a clarification of the links between the OIE-WAHIS measures and the OIE Terrestrial Code.

4. Discussion on the use of the indicators in the annual report

Control measures in OIE-WAHIS are provided by disease, whereas the PVS Critical Competencies are assessed at the level of Veterinary Services. This being said, the levels of advancement scored to these two Critical Competencies are an interesting proxy to assess the capacity of the Members to actually implement these control measures for ASF. These indicators (‘precaution at the borders’ and ‘movement control inside the country’) are therefore interesting to keep both on their own and combined. On the one hand, the control measures are essential to prevent, contain, control and eradicate a disease; on the other hand, the association of the two indicators provides a deep understanding of the level of compliance with the international standards. They will be kept in the annual implementation review report.
G. Self-declarations

1. Introduction

In accordance with the provisions of Chapter 1.6. of the Terrestrial Code, OIE Members may wish to self-declare the ‘animal health status’ of their territory (country, zone or compartment) from a disease. The OIE offers Members the possibility to publish these self-declarations on its website\(^\text{12}\) to increase their visibility. This is an open and voluntary service whereby Members share information to support a claim of freedom from a given OIE-listed disease or another animal disease, excluding the six diseases subject to OIE official status recognition. Each individual Member holds responsibility for the data it has submitted.

A Member wishing to self-declare disease freedom must provide evidence of compliance with the provisions of the relevant chapters of the OIE Terrestrial Code, namely:

- evidence that the disease is a notifiable disease in the entire country;
- history of absence or eradication of the disease in the country, zone or compartment;
- surveillance in accordance with the relevant provisions of the Terrestrial Code, including an early warning system for all relevant species in the country, zone or compartment;
- measures implemented to maintain freedom in the country, zone or compartment.

Publications of self-declaration of animal health status are governed by an OIE standard operating procedure.\(^\text{13}\)

2. Proposed indicators for this prototype

2.1. Lessons learnt from previous prototypes and adjustments (if any) proposed for this prototype

Previous studies have used the time evolution of the number of self-declarations to claim disease freedom (by year of publication on the OIE website and by region) as an indicator of Members’ interest in the publication of their animal health status. While recognising the value of knowing the number of self-declarations of ASF per year and region, the prototype could benefit from carrying out a more in-depth analysis of the data and from cross-referencing with other parameters.

This ASF prototype will therefore also take into account the following elements:

- evolution of the ASF situation over time, by considering the self-declarations that remain active and comparing them to the Members reporting ASF being absent in OIE-WAHIS;
- follow-up of self-declarations that were inactivated to ascertain whether the Member self-declared recovery or zonal freedom;
- classification of the self-declarations by whole country, compartment or zone, information that will be useful to prepare the next section related to zoning and compartmentalisation as part of access to trade.

2.2. Data, data source and advantages/limitations of the data used

The following data and data sources have been used:

- The self-declared animal health status of Members was obtained from the two datasets published by the OIE.
- The information related to the value of imports/exports of pork products is publicly available on the World Bank website. The designation of ‘importing’ or ‘exporting’ country/territory has been given based on that data.

The data have been treated using Excel and Power BI.

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### Advantages
- Standardised information
- Collected twice a year for all OIE-listed diseases
- Requested to all OIE Members
- Official data provided under the supervision of the OIE Delegate
- Already organised in a database

### Limitations
- Self-declaration from the country/territory
- Depends on surveillance
- Only indicates the absence of detection; does not provide any element on whether the territory is compliant with all the Terrestrial Code’s requirements to claim freedom

#### Self-declarations
- Voluntary
- Follow a Standard Operating Procedure
- Provide elements regarding the Member’s compliance with the Terrestrial Code’s requirements to claim freedom
- Under the responsibility of the Delegate
- Increase visibility of self-declared freedom

- Voluntary and limited awareness – limited number of Members making use of this service
- Potential bias as Members making use of this service might be representative of just a specific profile (e.g., exporters willing to increase the visibility of their claimed free status and facilitate trade)
- Self-declaration – no technical check/verification of compliance with OIE requirements
- Two different tables (up to 2017 and from 2018) available with different information
- Dates of inactivation are not easily accessible
- No clear and automated process to ensure that all past self-declarations are still active

### Importing/exporting countries from the World Bank
- Well-recognised and reliable source
- Easy to download

- Need to rely on regular extraction, but plug-in directly on the World Bank database might be explored in the future

### 2.3. Example of ways to visualise the indicators and analysis

Table 14 provides a breakdown of the territories that have reported absence of ASF in OIE-WAHIS by those that have an active ASF self-declaration or have declared an ASF-free zone or compartment.

**Table 14: Number of Members reporting absence of ASF in OIE-WAHIS versus Members that have self-declared ASF freedom**

<table>
<thead>
<tr>
<th>Period</th>
<th>Members reporting absence of ASF in OIE-WAHIS</th>
<th>Members with active ASF self-declaration</th>
<th>Members with self-declared freedom from ASF in a zone</th>
<th>Members with declared a compartment free from ASF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jul–Dec 2019</td>
<td>98 territories</td>
<td>22</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

Over the period 2007–20, OIE Members submitted 32 self-declarations to claim freedom from ASF, 91% of them from the European region (Fig. 23). The year 2007 counted the highest number of self-declarations (Fig. 24), which may be attributed to the fact that ASF made its way into Europe and countries in the region might have wanted to demonstrate freedom from the disease. In fact, most of the self-declarations from the European region are first-time submissions (Fig. 25).
In July and September 2021, the Dominican Republic and Haiti, respectively, reported ASF to the OIE. It would be reasonable to expect a number of self-declarations on ASF freedom from Members of the Americas by the end of 2021 and throughout 2022. In fact, a self-declaration of historical freedom from ASF by the United States of America and the establishment of a Protection Zone for United States territories in the Caribbean was filed in October 2021. Other Members from this part of the world should be encouraged to use the self-declaration service that the OIE offers to increase visibility of their disease freedom.

Figure 27 shows that 10 Members, out of the 32 that submitted a self-declaration to the OIE, have subsequently had ASF cases and thus have lost their ASF-free status. Only three of these territories claimed the recovery of their previously lost free status. To further illustrate these findings, Figure 28 shows how the number of active ASF self-declarations has fluctuated in time when adding new self-reports and deducting territories where ASF status has been lost.
As previously reported,\textsuperscript{14} ‘zoning’ or ‘compartmentalisation’ are mechanisms to control the disease and facilitate trade, providing an assurance as to the safety of such trade, by applying measures to separate animal subpopulations with different health statuses. The same study concludes that these concepts are especially useful in large countries, where guaranteeing the absence of disease in the entire territory is challenging. Further, the EU has used zoning as a risk management strategy for achieving the progressive control and eradication of diseases, and for providing guarantees for international trade, as WTO annual reports on international harmonisation suggest. This contrasts with the results of the analysis of the ASF self-declarations that the OIE received from 2007 to 2020. It is noteworthy that only one territory self-declared zonal freedom from ASF (Fig. 29).

The relation between the self-declarations and the importing or exporting value of pork products was explored. For this purpose, Members were classified into high exporting countries of pork products if the total value of exports was above US$ 10 million a year, medium exporting countries for values between US$ 1 million and US$ 10 million, and low exporting countries for less than US$ 1 million. For imports, an analogous classification was carried out.

As Figure 30 shows, approximately half of self-declared animal health statuses originate from low exporting or medium importing countries. These are followed by high exporting countries and low importing countries. This analysis may suggest that low exporting countries, possibly with exporting potential, are the most interested in using this OIE tool to increase the visibility of their animal health status and thus boost pork trade. On the other hand, high exporting countries could be using self-declarations to protect access to already established markets.

The main conclusions that can be drawn from the analysis of self-declarations can be summarised as follows:

- The use of self-declarations is not widely spread across the globe. Out of all the OIE Members, only 32 had sent an ASF self-declaration by 2020, and these Members were mostly concentrated in the European region.

Currently, while 98 OIE Members have reported the absence of the disease in their territory, 24 Members have an active self-declaration published on the OIE website.

- Members are not taking advantage of self-declaring ASF freedom in zones/compartments.

3. Discussion and potential recommendations for improvement, if any

- Further scrutiny is recommended to find out why the submission of self-declarations for ASF is so reduced, especially given the impact on trade that this disease entails and the fact that FAO and the OIE have launched a Global Initiative. As this self-declaration service offered by the OIE is resource demanding, it seems essential to elucidate the reasons for its poor use. It could be due to the value Members attribute to the self-declaration publication, the workload needed on their side to submit the documents and provide all the requested information, the visibility of the procedure, the lack of awareness of this OIE service or the lack of surveillance or preparation of OIE Members. This may lead to a discussion on a possible adjustment of the self-declaration service to better address needs and constraints.

- Equally, it could be interesting to understand why Members are not making use of the possibility of self-reporting disease freedom for zones or compartments within their territory, as this could potentially limit the economic impact of import restrictions. In the EU region, following discussion with some representatives, several elements were identified:
  - the limited impact of self-declaration of ASF freedom on trade (self-declarations are more impactful for avian influenza);
  - the workload to draft the self-declaration and the timeline before its publication;
  - the dynamism of the EU regionalisation approach, which is not compatible with the previous point.

- Awareness raising and capacity building on self-declaration should be strengthened, possibly with the support of RR/SRR, and involve all sectors (terrestrial including bees, aquatic animals, etc.). Involvement of the private sector and awareness-raising activities aiming to improve businesses’ understanding of self-declarations and their potential benefits may foster private–public sector collaboration for self-declaring disease freedom.

- At the moment, there are two datasets of self-declarations (since 2018 and archives of the older ones). It would be useful if they could be merged to ensure all the information has the same format and allow a direct plug-in for repeatable analysis.

- In the near future, the disease codification system should be considered in order to facilitate self-declarations and their storage and analysis.
Indicators regarding self-declarations by Members are meant to be kept for the annual implementation review report. These indicators may not be helpful to demonstrate Members’ compliance with standards as such, but they are valuable to monitor how Members make use of this OIE service.

The Observatory intends to take into account the global count of self-declarations for all diseases and break them down into terrestrial and aquatic diseases. Information can also be presented for a selection of diseases (proposal: ASF, avian influenza and rabies, plus one or two aquatic animal diseases to be identified).

The time evolution of these self-declarations will be examined and compared against countries’ agricultural GDP.

Particular attention will be given to the cases where the self-declared free status has been lost and recovered for the whole country, a compartment or a zone.

This regular monitoring should help in understanding how OIE Members perceive self-declarations as a service offered by the OIE and adjusting strategy accordingly.

The OIE issued ASF compartmentalisation guidelines in 2021. It would be interesting to continue monitoring this in the coming years to see if these guidelines assist with the uptake of the concept for ASF.
H. Zoning and compartmentalisation

1. Introduction

Outbreaks of animal diseases can have negative implications for international trade of animals and animal products. Zoning and compartmentalisation allow progressive animal disease control while limiting disruption of international/regional trade in case of the introduction of a disease in a given territory. These zones and compartments may be recognised through bilateral agreements between trading partners for the purpose of international trade.

The objective of this section is to assess to what degree zoning/compartmentalisation-related standards are implemented or adhered to by Members. Zoning and compartmentalisation are quite recent concepts that were included in the *Terrestrial Code* in 1993 and 2003, respectively. Chapter 4.4, *Zoning and compartmentalisation*, was first adopted in 1998 and most recently updated in 2021. It specifically describes a free zone (Article 4.4.4.), infected zone (Article 4.4.5.), protection zone (Article 4.4.6.) and containment zone (Article 4.4.7.), while acknowledging that other types of zones may be established.

Chapter 4.5., *Application of compartmentalisation*, was first adopted in 2008 and updated in 2012. More recently, dedicated *Compartmentalisation Guidelines for ASF* were developed and published in 2021.

Zoning is recognised in Article 6 of the WTO SPS Agreement. For terminology, the SPS Agreement uses ‘disease-free area’ to describe a disease-free zone. The SPS Committee monitors the implementation of regionalisation under the standing agenda item at its regular meetings. In this regard, Members are encouraged to inform the Committee when:

- a) a request for recognition of disease-free area or area of low disease prevalence is made;
- b) a determination on whether to recognise (a) disease-free area(s) or area(s) of low disease prevalence is made.

Based on the information provided by WTO Members on their experiences in the implementation of regionalisation, the Secretariat of the SPS Committee prepares an annual report on implementation of regionalisation.

2. Proposed indicators for this prototype

2.1. Lessons learnt from previous prototypes and adjustments (if any) proposed for this prototype

Previous prototypes (mainly those for FMD and avian influenza) assessed the use of zoning and compartmentalisation through the notification of control measures in the OIE-WAHIS six-monthly reports. They also referred to WTO annual reports.

*Since data from the OIE-WAHIS six-monthly reports are standardised and regularly collected, these are interesting to monitor to identify trends. However, the data should be interpreted with care (see Section 3.1 on advantages/limitations of these data). Note that at the time when this prototype was developed the definitions of zoning and compartmentalisation in the guidelines for OIE-WAHIS six-monthly reports (Table 15) were not identical to those of the OIE Codes. Discussion was ongoing for their harmonisation.*

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Table 15: Comparison of the definitions for zoning and compartmentalisation in OIE-WAHIS and the Terrestrial Code

<table>
<thead>
<tr>
<th>Definition in OIE-WAHIS guidelines</th>
<th>Definition in the Glossary of the Terrestrial Code</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Zoning:</strong> Delineation (by regulatory means) of part of a country/territory containing an animal subpopulation with a distinct health status or risk with respect to a specific disease, infection or infestation for which required surveillance, control and biosecurity measures have been applied for the purpose of international trade</td>
<td><strong>Zone:</strong> A part of a country defined by the Veterinary Authority, containing an animal population or subpopulation with a specific animal health status with respect to an infection or infestation for the purposes of international trade or disease prevention or control</td>
</tr>
<tr>
<td><strong>Compartmentalisation:</strong> Procedure implemented by a Member Country under the provisions of Chapter 4.3.* with a view to defining subpopulations of distinct health status within its territory for the purpose of disease control or international trade</td>
<td><strong>Compartment:</strong> An animal subpopulation contained in one or more establishments, separated from other susceptible populations by a common biosecurity management system, and with a specific animal health status with respect to one or more infections or infestations for which the necessary surveillance, biosecurity and control measures have been applied for the purposes of international trade or disease prevention and control in a country or zone</td>
</tr>
</tbody>
</table>

*Now Chapter 4.4.

To mitigate the identified limitations of these data, additional data sources are proposed to gauge the implementation of zoning/compartmentalisation-related standards by Members:

- self-declarations of ASF-free zones and compartments. Further details on self-declaration can be found in Section ‘G’ (Self-declarations);
- PVS Critical Competencies on zoning (CC IV-6) and compartmentalisation (CC IV-7), whereby the capacity of Veterinary Services to comply with the OIE requirements for zoning and compartmentalisation and their level of implementation are assessed;
- annual reports of the WTO SPS Committee on the implementation of Article 6 (on disease-free areas) of the SPS Agreement.

These different data provide complementary information but also present limitations. While it may be difficult to correlate information between them, presenting them in the same section will facilitate understanding of the information. It will also assist the monitoring of Members’ implementation of the OIE standards and recommendations for zoning and compartmentalisation.

2.2. Data, data source and advantages/limitations of the data used

The following data and data sources are to be used:

- Control measures from the OIE-WAHIS six-monthly reports: among the proposed control measures to select, there are ‘zoning’, ‘movement control within the country’ and ‘compartmentalisation’. Because of the transition to the new OIE-WAHIS, there are not enough reports available for 2020 and 2021. Therefore, except when evolution over years/semesters is sought, only reports from 2019 have been considered.
- Occurrence codes from the OIE-WAHIS six-monthly reports: when reporting the presence or absence of each of the OIE-listed diseases, countries/territories select their situation from a list of different occurrence codes, including the presence of the disease or infection limited to one or more zones.
- Self-declaration (list of Members having self-declared freedom from ASF in a zone or compartment).
- PVS Critical Competencies (IV-6 Zoning and IV-7 Compartmentalisation).
- WTO: annual reports on regionalisation from the SPS Committee meetings. A search of the term ‘African swine fever’ in each of the reports will provide the number of times that this disease has been the object of mention in the ‘regionalisation’ standard agenda item.
## ADVANTAGES

<table>
<thead>
<tr>
<th>OIE-WAHIS occurrence codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Standardised information</td>
</tr>
<tr>
<td>• Collected twice a year for all OIE-listed diseases</td>
</tr>
<tr>
<td>• Requested to all OIE Members</td>
</tr>
<tr>
<td>• Official data provided under the supervision of the OIE Delegate</td>
</tr>
<tr>
<td>• Already organised in a database</td>
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## LIMITATIONS

<table>
<thead>
<tr>
<th>OIE-WAHIS occurrence codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Information self-declared by the country/territory; therefore interpretation may vary between countries/territories</td>
</tr>
<tr>
<td>• Cannot be considered as an indicator for zoning on its own, but associated with other measures, could help in getting the overall picture</td>
</tr>
<tr>
<td>• Although the definition of ‘disease limited to one or more zones’ refers to zones and compartments in the OIE-WAHIS guidelines, it is in practice frequently used for diseases limited to certain areas of the countries (not necessarily zones as defined by OIE)</td>
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## OIE-WAHIS control measures

<table>
<thead>
<tr>
<th>OIE-WAHIS control measures</th>
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<tbody>
<tr>
<td>• See Section D on detection, surveillance and diagnosis</td>
</tr>
<tr>
<td>• See Section D on detection, surveillance and diagnosis</td>
</tr>
<tr>
<td>• Self-declaration from the country/territory without evidence of implementation and compliance with the OIE definition of zoning or compartmentalisation</td>
</tr>
<tr>
<td>• Uncertainties about the level of understanding of zoning or compartmentalisation as per OIE standards</td>
</tr>
<tr>
<td>• Compartmentalisation has been proposed as a control measure in OIE-WAHIS six-monthly reports only since 2017</td>
</tr>
</tbody>
</table>

## Self-declaration (list of Members having self-declared freedom from ASF in a zone or compartment)

<table>
<thead>
<tr>
<th>See Section A on governance and PVS</th>
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<tbody>
<tr>
<td>• See Section A on governance and PVS</td>
</tr>
<tr>
<td>• Among the Members that have undertaken a PVS Evaluation or Follow-up mission since 2016 (in the past five years), only 29 were assessed for zoning and 20 for compartmentalisation. This reduces the data available for this indicator</td>
</tr>
</tbody>
</table>

## WTO – annual reports on regionalisation from the SPS Committee meetings

<table>
<thead>
<tr>
<th>WTO – annual reports on regionalisation from the SPS Committee meetings</th>
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<tbody>
<tr>
<td>• The vast majority of OIE and WTO Members are the same</td>
</tr>
<tr>
<td>• Information filed by WTO Members regularly</td>
</tr>
<tr>
<td>• Standard formatting as this is checked by the WTO Secretariat</td>
</tr>
<tr>
<td>• Significant amount of qualitative and quantitative information</td>
</tr>
<tr>
<td>• The information is manually extracted from the minutes of the SPS Committee meetings, in which regionalisation is a standard agenda item</td>
</tr>
<tr>
<td>• The information is collected for purposes other than the OIE Observatory and thus its analysis must be interpreted with caution</td>
</tr>
<tr>
<td>• The profile of Members that intervene in the WTO SPS Committee meetings on regionalisation might not be representative of all WTO Members</td>
</tr>
<tr>
<td>• Not all the regionalisation-related information at country level is mentioned in this forum</td>
</tr>
</tbody>
</table>

### General comments:

- The Codes describe several types of zones defined by their purpose and sanitary status, such as free zone, protection zone and containment zone. Some are intended for disease control or surveillance, whereas others aim for trade facilitation. This distinction is not made in most of the different indicators this prototype has used, such as OIE-WAHIS occurrence codes or control measures, level of advancement of PVS Critical Competencies or WTO reports.

- It could potentially be found in self-declarations as well as dossiers of official status and PVS qualitative information.

- There is no regular collection of information about whether a compartment has been recognised by trading partners. Reporting in OIE-WAHIS or even self-declarations consist of information that is essentially statements from reporting countries/territories.
2.3. Example of ways to visualise the indicators and analysis

a) Countries/territories that reported ‘zoning/compartmentalisation’ as part of the control measures for ASF in their OIE-WAHIS six-monthly reports (from 2005 to 2019)

The general trend has been a slow but progressive increase in the number of countries/territories reporting zoning for ASF (Figs 31 and 32), driven mainly by efforts in Europe, followed by Africa and Asia.

Figure 33 presents this information with regard to the number of countries/territories per region, illustrating that 42% of Members from the European region reported zoning among control measures, as did 22%, 19% and 6% of the Members in Asia and the Pacific, Africa and the Americas, respectively. The total number of countries/territories reporting implementation of zoning for ASF is only around one-third of the total number of countries/territories sending their six-monthly reports to OIE-WAHIS.
Since 2018, there seems to have been a decrease in the number of European countries reporting zoning. This might be due to delays in submitting their six-monthly reports (potentially linked to the development of the new OIE-WAHIS). In contrast, the number of Asian Members reporting zoning has slightly increased since 2018, coinciding with the introduction of ASF in China (and subsequently to a number of other Asian Members).

Figure 34 shows that most Members reporting zoning as a control measure for ASF in 2019 are still free from the disease in domestic pigs. Nine Members have reported the disease as present but limited to one or more zones (and therefore the application of a zoning approach reported in the control measures makes good sense) and eight Members reported the disease as present in domestic pigs.

Reporting on the implementation of compartmentalisation as a control measure in the OIE-WAHIS six-monthly reports was only offered to OIE Members in 2017. No Members reported it that year, whereas three Members reported this measure in 2018 and two other Members did in 2019. It is worth noting that two of the three Members that reported compartmentalisation in 2018 removed this information from their 2019 reports; the third one has not yet submitted its report for 2019.

b) Members reporting the presence of ASF disease/infection limited to one or more zones in OIE-WAHIS six-monthly reports

Members that report the presence or suspicion of ASF in their territory (in domestic or wild animals) can potentially be considered as having at least one zone where the disease is absent.

Since 2017, Chapter 15.1. of the Terrestrial Code has provided recommendations not only to declare freedom from ASF for all susceptible species but also to declare freedom from ASF in domestic and captive wild pigs (i.e., free in domestic but present in wild animals).

According to Table 16, 20 Members can potentially be considered as having at least one zone where the disease is absent, including 14 in all species and 6 in domestic and captive wild pigs.

Table 16: Number of OIE Members that have reported the presence of ASF disease/infection limited to one or more zones during the second semester of 2019

<table>
<thead>
<tr>
<th>42 Members reported the presence of ASF disease/infection</th>
<th>8 for both domestic and wild</th>
<th>These 14 Members can be considered as having at least one zone where the disease is absent</th>
</tr>
</thead>
<tbody>
<tr>
<td>20 of them reported its presence as limited to one or more zones</td>
<td>3 for wild (and absent in domestic)</td>
<td>Can potentially be considered as having at least one zone where the disease is absent in domestic and captive wild pigs</td>
</tr>
<tr>
<td>3 for domestic (and absent in wild)</td>
<td>6 in domestic (but present in wild or without information)</td>
<td></td>
</tr>
</tbody>
</table>
c) Members that have reported the presence (and thereby absence) of the disease in at least one zone, that apply key control measures and that have self-declared an ASF-free zone/compartment

It is interesting to note that all 20 Members that reported the presence (and therefore the absence) of ASF disease/infection in at least one zone (Table 16) reported implementing at least one of the control measures key to the zoning concept: zoning itself and movement control within the country (Fig. 35).

However, only four of these Members reported implementing both measures. Only one requested that the OIE publish a self-declaration of zonal freedom (Table 17). It is worth noting that this sanitary situation is reflected in its OIE-WAHIS six-monthly reports (relevant occurrence code and relevant control measures).

<table>
<thead>
<tr>
<th>OIE-WAHIS (2019) reports</th>
<th>Self-declaration</th>
</tr>
</thead>
<tbody>
<tr>
<td>20 Members reported the presence of ASF disease/infection limited to one or more zones</td>
<td>8 of them reported implementing both movement control and zoning</td>
</tr>
<tr>
<td>1 Member (3 in 2018) mentioned compartmentalisation among its control measures</td>
<td>No self-declaration for ASF compartments received/published by the OIE</td>
</tr>
</tbody>
</table>

NB: the second Member reporting compartmentalisation for ASF in 2019 has reported the absence of the disease

Only two Members reported compartmentalisation as part of their ASF measures in 2019. Three different Members did so in 2018. None of them requested that the OIE publish the self-declaration of the establishment of a compartment.

In addition, one Member where ASF is still absent has self-declared disease freedom. It established a protection zone, free from ASF, separate from the rest of the country/territory so that if ever the disease was introduced in the protection zone, the rest of the country/territory would still be considered as free.
d) Members’ capacity to implement zoning/compartmentalisation as assessed by the PVS Tool

Of the 40 Members that have undertaken a PVS Evaluation or Follow-up mission since 2016 (in the past five years), only 29 were assessed for zoning and 20 for compartmentalisation. A level of advancement of 3 (compliance with minimal recommendations) was scored by four Members for zoning and one Member for compartmentalisation. A level of advancement of 4 or 5 was reached by six and three Members for zoning and compartmentalisation, respectively (Fig. 36).

Note that for Critical Competency IV-6 on zoning, a level of advancement of 4 indicates that the ‘Veterinary Services have established at least one disease free zone […]’, while a level of 5 denotes a recognition of this disease-free zone by the OIE and/or trading partners. These levels are not specific to ASF but reflect the Veterinary Services’ capacity to implement a zoning approach.

Of the Members that have undertaken a PVS Evaluation/Follow-up mission in the past five years, 13 have reported zoning in the control measures for ASF. Only nine of them were assessed for Critical Competency IV-6 on zoning (when not relevant for assessed Members that do not implement zoning, a decision can be jointly made not to assess this Critical Competency). Figure 37 describes the distribution of the level of advancement for zoning in these nine Members. Only three Members were assessed as having the minimal capacity to implement zoning (level of advancement of 3 or more).

e) WTO SPS Committee – annual report on the implementation of Article 6 (regionalisation) of SPS Agreement

The WTO Secretariat prepares an annual report to the SPS Committee on implementation of Article 6 based on the information provided by Members concerning:

- requests for recognition of pest- or disease-free areas or areas of low pest or disease prevalence;
- determinations on whether to recognise a pest- or disease-free area or area of low pest or disease prevalence;
- Members’ experiences in the implementation of Article 6 and the provision of relevant background information by Members on their decisions to other interested Members.

Between 2012 and 2021 there were 11 accounts related to the implementation of regionalisation in the WTO annual reports, with ASF mentioned in 9 of them.

As shown in Table 18, eight WTO Members declared having experiences with regard to ASF-related regionalisation. The nature of all of them was an objection to other Members not adhering to OIE standards and not recognising their ASF-free zones. One Member requested recognition of pest- or disease-free areas or areas of low pest or disease prevalence (for ASF). However, this Member did not actually intend to ask for recognition of an ASF-free zone or area within its territory as the record of this agenda item of the SPS meeting suggests. The request for recognition was simply to bring awareness to the WTO Members of the self-declaration of ASF country freedom that had been published on the OIE website. In other words, the Member informed the rest of the world about its country/territory’s animal health status with regard to ASF.
3. Discussion and potential recommendations for improvement, if any

None of the indicators used above is a good indicator to directly monitor the appropriate implementation of OIE standards on zoning and compartmentalisation. However, when considered together, they can provide an overall useful picture of the situation.

For zoning:

- There is an increase in ‘zoning’ as part of the control measures reported for ASF in OIE-WAHIS. However, this is not systematically linked to ‘movement control within the country’ (which was expected as movement control is a prerequisite to zoning). Similarly, it was expected that the selection of the occurrence codes ‘presence (…) limited to one or more zones’ would have been closely linked to the selection of ‘zoning’ and ‘movement control within the country’ as control measures. While it is interesting and important that Members implement and report zoning as a control measure in OIE-WAHIS, this might be excessive and not fully in line with the OIE concept.

- Despite the considerable training and resources available for focal points for disease notification, there might still be a lack of understanding of (and a need to clarify) the occurrence codes and the control measures proposed in OIE-WAHIS. Currently, the system does not allow the following distinctions:

  - in countries/territories where the disease is present: a distinction between zoning applied around outbreaks for surveillance/containment purposes and the establishment of free zones for disease control/trade purposes;
  - in countries/territories where the disease is absent: a distinction between zoning currently applied (e.g. protection zone) and zoning as planned in the emergency response;
  - in any case, when zoning is applied, a distinction between the measures conducted in the different zones (e.g. one may practise vaccination, another may ban it).

- WTO reports on regionalisation list the complaints of Members that do not see their regionalisation accepted. However, they have not yet recorded a single recognition of regionalisation. They are only based on country reporting in the WTO forum but are not representative of the real implementation and recognition of zoning.
For compartmentalisation:
• The first reports of compartmentalisation as a control measure (2018) may reflect Members’ interest in implementing this concept. However, the fact that two of these three first Members did not maintain this measure in 2019 is concerning and may bring into question their understanding of compartmentalisation. It might be interesting to individually follow up with these identified Members to determine why they reported compartmentalisation in 2018 and not in 2019 (probably by the ASF team and the RR/SRR).

For both zoning and compartmentalisation:
• Findings from the PVS Evaluation and Follow-up missions conducted in the past five years confirm that many Members do not reach compliance with the minimal capacity expected for the implementation of zoning and compartmentalisation. While the PVS Tool is not specific to ASF, it provides useful insights into Veterinary Services’ capacity.
• Ongoing discussion on the harmonisation of zoning and compartmentalisation as proposed control measures in the OIE-WAHIS six-monthly reports with the definitions of the OIE Codes is critical.
• The need to improve capacity and raise awareness of zoning and compartmentalisation is apparent. There might also be a need to further explore what the barriers to implement zoning/regionalisation are, as well as to find out the potential incentives for their recognition.

4. Discussion on the use of the indicators in the annual report

These indicators have limited value if checked on their own. However, when considered together, they provide a reasonable picture of the situation. It will be interesting to monitor them annually as part of the Standard Monitoring Framework.

The limitations of the figures extracted from the WTO SPS report on regionalisation suggest that the Observatory will not be able to make use of this information for its annual report.

A dashboard will be developed for these indicators. Additional factors can also be included in the dashboard when displaying the profiles of Members that implement (or do not implement) these standards. They include:
• level of country development
• agricultural GDP
• type/size of the pig industry
• export profile.

Officially recognised status for disease-free zones (for African horse sickness [AHS], bovine spongiform encephalopathy [BSE], classical swine fever [CSF], contagious bovine pleuropneumonia [CBPP], FMD or PPR) or an official control programme endorsed by the OIE (CBPP, FMD, PPR or rabies) can be good sources of information of the implementation of the OIE standards on zoning. As this is not relevant for ASF, it was not tested with this prototype, but it will be considered in the annual implementation review report.
I. Emergency preparedness

1. Introduction

When animal health and welfare emergencies or disasters occur, rapid, appropriate and effective response depends on the level of preparedness of the Veterinary Authorities and relevant stakeholders.

In the Terrestrial Code, Article 4.19.3. of Chapter 4.19., Official control programmes for emerging and listed diseases, provides the horizontal international standards for emergency preparedness. Other horizontal chapters also refer to preparedness, such as:

- **Chapter 3.2. Quality of Veterinary Services**, stating, in point 4 of Article 3.2.7., that Veterinary Services should be prepared to respond effectively to sanitary emergencies; it specifically mentions ‘emergency management, including preparedness and response planning, a legal framework, and access to the human, physical and financial resources to respond rapidly to sanitary emergencies in a well-coordinated manner’.

- **Chapter 1.4. on surveillance** (Article 1.4.5. on early warning systems).

- Chapters 1.7. to 1.12. requiring Members that submit a dossier for official status recognition to annex the contingency plan and share any information related to simulation exercises.

Some disease-specific chapters also require specific contingency plans (e.g. Chapter 8.8. on FMD).

Since 2002, the OIE has offered to report and publish the simulation exercises Members conduct. **Guidelines for Simulation Exercises** were developed in 2020 to provide more guidance for OIE Members to prepare, deliver and learn from exercises.

In 2018, the OIE conducted a one-off survey to explore whether OIE Members had contingency plans and for which diseases/disasters. Ninety percent of OIE Members answered and declared having at least one contingency plan in place, and 39 of them claimed to have a plan that covered ASF specifically. Some of them granted permission to publish them on the OIE website on the principles of solidarity (and transparency) in order to share their experience and support other Members willing to develop/revise their own contingency plans.

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2. Proposed indicators for this prototype

2.1. Lessons learnt from previous prototypes and adjustments (if any) proposed for this prototype

Previous prototypes considered the number of simulation exercises per year and OIE region as a potentially relevant indicator for the Observatory annual report.

This is indeed an interesting indicator to monitor annually. However, because simulation exercises are submitted to the OIE voluntarily, this indicator may only reflect a portion of the simulation exercises conducted.

While keeping this indicator, it is proposed to associate it with others. They would then be presented in a broader ‘emergency preparedness’ dashboard (to be developed for the annual report). This includes:

- OIE Members having declared the existence of a contingency plan covering ASF in the 2018 study.
- Comparison of the number of Members that carried out a simulation exercise on ASF with those that reported having a contingency plan on ASF.
- Having contingency plans is a requirement for Members having an officially recognised free status (for AHS, BSE, CSF, CBPP, FMD or PPR) or an official control programme endorsed by the OIE (CBPP, FMD, PPR or rabies). This information should be available at the Status Department, albeit not easily accessible. The link between Members with officially recognised disease status or an endorsed official control programme will not be explored in this prototype (as ASF is not among the diseases for which the OIE has a procedure for official recognition).

However, it might be included in the annual report if and only if the information is easily accessible from the Status Department. It may need to wait for the development of the Status Digital System.

- While there is no explicit requirement for sharing contingency plan/simulation exercises with the self-declaration, it could be assumed that Members self-declaring freedom have a system to prevent the introduction of the pathogen, and therefore potentially a contingency plan tested via simulation exercises. This hypothesis will be tested in this prototype.

- Finally, several Critical Competencies of the PVS Tool are related to emergency preparedness. In a past review, \(^{19} \) 14 were identified as relevant to this topic. However, this prototype will focus specifically on two Critical Competencies that are directly related to emergency preparedness:
  - Critical Competency I-9: Emergency funding
  - Critical Competency II-5: Emergency preparedness and response.

It would be interesting to have an idea of the general compliance of OIE Members with these two Critical Competencies.

2.2. Data, data source and advantages/limitations of the data used

The data to be used originate from different sources and have limitations to be aware of:

- list of Members reporting simulation exercises to the OIE available online,\(^{20} \) and compiled in a table format by the WAHIAD;
- list of Members that reported to the OIE having a contingency plan in 2018: dataset provided by the Preparedness and Resilience Department;
- list of Members that self-declared an ASF-free status: dataset provided by the Status Department and displayed on the webpage;\(^{21} \)

- Performance of Veterinary Services on emergency preparedness: the PVS Tool has two Critical Competencies, I-9 and II-5; levels of advancement from the dataset compiled and provided by the PVS Secretariat, Capacity Building Department.


\(^{21} \) https://www.oie.int/en/what-we-offer/self-declared-disease-status/
ADVANTAGES

List of Members reporting simulation exercises

- Easy for Members to report
- Dataset quite easy to manage and information readily available

LIMITATIONS

- Voluntary reporting and therefore not representative of all Members
- Underreported
- Some simulation exercises are conducted for several diseases

List of Members that reported/shared a contingency plan with the OIE

- Exhaustive study conducted in 2018
- All OIE Members were given the opportunity to contribute; the response rate was higher than 90%
- The information includes contingency plans for OIE-listed diseases, non-OIE-listed diseases and any veterinary

LIMITATIONS

- One-off survey, which has not been updated since 2018
- The database compiled in 2018 has the list of Members that reported contingency plans but does not clearly identify those Members that agreed to share them on the OIE website
- As far as ASF is concerned, and with the recent spread of the disease in Asia and in the Americas, the list of Members is likely to be outdated
- The current system consists of uploading links to plans in the OIE website where permission has been granted by the OIE Delegate; however, links to plans frequently change and the webpage has been having issues since the website migration
- Having a plan does not necessarily equate to being prepared, as many Members do not have the resources to implement the plan or the plan is not based on local risk
- Some Members may have not an ASF-specific contingency plan but a rather generic plan that aims to cover all emergencies. It is not confirmed by Members if the generic plan would specifically cover ASF

List of Members having self-declared ASF-free status

- See Section G on self-declarations

LIMITATIONS

- See Section G on self-declarations
- No specific requirement for sharing contingency plans/simulation exercises but assumption that Members self-declaring freedom have a contingency plan tested via simulation exercises
- Some declarations may be old and there is no guarantee that the measures described in the document are still implemented

PVS Critical Competencies (I-9 and II-5) ➤ See Section A on governance and PVS

For this group of indicators, the following assumptions were made:

- Members performing simulation exercises would, in principle, have an emergency/contingency plan (to be tested during the simulation exercise).
- Members that self-declared freedom from ASF should have a system in place to prevent the introduction of the pathogen as well as an emergency/contingency plan.

They may also be interested in reporting their simulation exercises to the OIE.

- Reported simulation exercises may cover several diseases. For the purpose of this prototype, simulation exercises have been considered when covering ASF specifically or when the exercises were related to swine diseases, without excluding ASF. For simplification, reference will be made to simulation exercises on ASF.
2.3. Example of ways to visualise the indicator and analysis

a) Number of simulation exercises on ASF per year and OIE region

Figure 38 illustrates an increasing tendency to report ASF simulation exercises, until an abrupt reduction in 2020, very likely owing to the COVID-19 pandemic. The first ASF simulation exercise reported to the OIE was in 2006, in the Americas. One year later, ASF was introduced in Europe, leading to a first wave of simulation exercises on ASF between 2008 and 2014, with a peak in 2011.

This first wave mainly concerned American and European Members (Fig. 39). A second wave began in 2017, preceding the introduction of ASF in Asia in 2018.

From 2018, Members from the Asia and the Pacific region began to report simulation exercises, with the exception of one country that reported one in 2008.

The ASF simulation exercises reported to the OIE were mainly conducted in Europe (52%), the Americas (33%) and Asia (15%) (Fig. 40). It is important to note that ASF is endemic on most of the African continent and that there is extremely limited production of pigs in the Middle East.
Figure 41 shows the percentage of simulation exercises conducted for ASF, in relation to all the simulation exercises notified to the OIE from 2002 to 2021. It reflects a relative increasing interest in ASF by Members. As the graph shows, from 2002 to 2005, none of the simulation exercises reported by OIE Members covered ASF; in 2006, 5% of them were ASF-related, as were around 25% in 2018–19 and 50% in 2021. The COVID-19 pandemic has also impacted the organisation and reporting of ASF simulation exercises; however, it seems that Members have reacted and organised simulation exercises for this disease in 2021, likely in response to the concerning spread of ASF around the globe.

Figure 41: Percentage and linear trendline of ASF-related simulation exercises reported to the OIE, with respect to all the simulation exercises, per year, since 2002 and linear trendline

Figure 40: Regional distribution (number and percentage) of simulation exercises on ASF reported since 2002

b) Number of Members that reported having a contingency plan for ASF in 2018, by region

With the growing global concern regarding the impact of ASF (also demonstrated by Fig. 41) and the spread into Asia in 2018 and into the Americas in 2021, the number of OIE Members with a contingency plan covering ASF, as shown in Table 19 and Fig. 42, has likely and hopefully increased, especially in Asia and the Americas. It is likely that the limited pig production in the Middle East explains the absence of reporting of ASF contingency plans in this region in 2018.

Table 19: Number of Members that declared having a contingency plan for ASF in 2018

<table>
<thead>
<tr>
<th>Region</th>
<th>Members Declared</th>
<th>Shared with OIE</th>
<th>Allowed OIE to Publish</th>
</tr>
</thead>
<tbody>
<tr>
<td>Americas</td>
<td>8</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Asia-Pacific</td>
<td>18</td>
<td>10</td>
<td>6</td>
</tr>
<tr>
<td>Europe</td>
<td>14</td>
<td>8</td>
<td>6</td>
</tr>
<tr>
<td>Africa</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Middle East</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Table 19: Number of Members that declared having a contingency plan for ASF in 2018

Figure 42: Regional distribution of Members that declared having a contingency plan for ASF in 2018, by region

https://www.oie.int/en/what-we-offer/emergency-and-resilience/
c) Proportion of Members that have indicated having a contingency plan for ASF and reported a simulation exercise

The hypothesis is double: first Members that have a contingency plan for a disease are expected to run simulation exercises for this disease (to test and adjust their plan and preparedness); then, Members that have reported having a contingency plan for ASF to the OIE would be inclined to also report on their simulation exercises.

Table 20 highlights that only 50% of the OIE Members that declared having a contingency plan covering ASF in 2018 had reported a simulation exercise on this disease since 2002. That may be linked to the voluntary nature of reporting and therefore may challenge the reliability of this information.

Table 20: Proportion of Members that indicated having an ASF contingency plan in 2018 and have reported at least one simulation exercise since 2002

<table>
<thead>
<tr>
<th>40 Members indicated having an ASF contingency plan in 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>20 (50%) have reported a simulation exercise on ASF (or on generic swine diseases) since 2002</td>
</tr>
<tr>
<td>12 additional Members reported having conducted a simulation exercise but did not inform the OIE that they have a contingency/preparedness plan</td>
</tr>
</tbody>
</table>

Table 21: Proportion of Members that self-declared ASF freedom and reported having a contingency plan for ASF and/or a simulation exercise

<table>
<thead>
<tr>
<th>Of the 28 Members that requested the OIE publish their self-declared animal health status for ASF</th>
<th>Reporting a simulation exercise on ASF (or on generic swine diseases) since 2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indicating the existence of a contingency plan for ASF in 2018</td>
<td>Yes</td>
</tr>
<tr>
<td>Yes</td>
<td>11</td>
</tr>
<tr>
<td>No</td>
<td>6</td>
</tr>
</tbody>
</table>

d) Proportion of Members that requested the OIE publish their self-declaration of freedom from ASF and that have (i) shared their ASF contingency plan and (ii) reported a simulation exercise

The hypothesis is that OIE Members that have self-declared ASF freedom by using this OIE service would have in place the measures to prevent the introduction of the pathogen and to respond to potential incursions of the disease. Therefore, they would likely have a contingency plan and run simulation exercises regularly.

Of the 28 Members that have self-declared ASF freedom, 11 of them reported having a contingency plan and having conducted a simulation exercise for the disease (Table 21). Two of the 28 Members have reported neither. While it is surprising not to see a stronger link between these activities, the fact that the three sets of data are based on voluntary reporting has probably biased the picture.

e) Compliance with minimal requirements related to emergency response and emergency funding, as assessed by the PVS Tool for the past five years

PVS Evaluation and Follow-up missions undertaken since 2016 highlight limited compliance with the two PVS Critical Competencies related to emergency preparedness, with only 37% of Members reaching the minimal level of compliance for both Critical Competencies (Figs 43 and 44).
3. Discussion and potential recommendations for improvement, if any

The three lists (contingency plans, simulation exercises and self-declarations) are stored in datasets that are not very easy to manage, understand or analyse. An improved way to collect and store this information should include a clean dataset available on the website allowing filters for at least disease/country/region/year. For self-declarations, it should allow a breakdown into country/zone/compartment and active/inactive self-declarations.

Broader reflection:
- There is a need to reflect on the data the OIE should (or should not) collect on emergency preparedness.

Currently, simulation exercises (and self-declarations) are collected and published on a voluntary basis, and information on the existence of contingency plans has only been collected once without further update. Should contingency plans be collected more regularly? If so, under what conditions?
- Reflections could include how information on contingency plans could be linked to simulation exercises and/or self-declarations/official status.

4. Discussion on the use of the indicators in the annual report

Carrying out this analysis for all diseases may be too demanding and not relevant for all of them, but focusing on some well-identified diseases could be pertinent. In that case, diseases to concentrate on could be those for which the OIE officially recognises Members’ free status or endorses an official control programme (AHS, BSE, CSF, CBPP, FMD, PPR and rabies) and those for which the OIE has a Global Strategy/Initiative (avian influenza and ASF).

Attention is raised that indicators related to contingency plans will only be kept if data can be more routinely collected.

Other indicators may be explored in the future by interlinking those already proposed, e.g. analysing the compliance with minimal emergency preparedness requirements (as assessed by PVS Tool) for Members that obtained an official status or filed a self-declaration.

Increasing the number of PVS Critical Competencies could be considered. It could potentially be extended to the 14 Critical Competencies mentioned above, especially once a dashboard is developed.

Other indicators could be identified among those collected as part of the rinderpest post-eradication strategy or as part of agrocrime/agroterrorism activities.
J. General conclusion

While specific conclusions have been offered for each group of indicators in this ASF study, this section aims to conclude these series of prototypes and to prepare the implementation phase. It covers three areas: the indicators considered in these prototypes and others that need to be included in the future, the data catalogue and the format of the annual implementation review report.

Indicators

Most of the prototypes developed during the pilot phase of the Observatory have been focused on a specific disease (FMD, avian influenza, ASF). The indicators used in these studies that are relevant for the annual report have now been identified.

For some specific areas, there might be a need to be more selective in order to choose the best indicators among all those that have been piloted. For example, there are 75 entries in the indicator matrix of the ASF prototype but some of them are more relevant than others. Consequently, some indicators will be discarded in the annual report, and some others will need to be matured and will be dependent on additional analysis and reflection, internal decisions and the evolution of some processes within the OIE.

Other areas have not yet been covered or must be examined very succinctly, e.g. antimicrobial resistance, animal welfare (covered in the specific context of stray dog population control, as a priority topic by the OIE Platform on Animal Welfare for Europe). The Observatory will work with the relevant teams and stakeholders to identify the most pertinent indicators to monitor the implementation of the relevant OIE standards in the first semester of 2022. The non-exhaustive list below includes topics that can be the focus of the Observatory in the near future:

- aquatic animal health (with similar indicators to those used for terrestrial animal health, when available)
- wildlife
- animal welfare
- antimicrobial use and antimicrobial resistance.

The OIE’s global strategies/major programmes will be closely studied to find commonalities with the indicator sets that they use and to identify areas that can benefit from our mutual support.

The data catalogue is still in development. The one proposed here is still a working document, which will be progressively completed in terms of new data and data sources as well as the metadata to take into account. This will be done in parallel to work of a similar nature carried out by other OIE departments and in coordination with the internal OIE Data Management Work Group.

Format of the annual implementation review report

This last prototype has explored three different ways to present the information: i) a comprehensive document, ii) a set of one-page summaries for each of the different sections and iii) dashboards. However, further reflection is needed to define the format of the future annual implementation review report.

The three piloted formats propose interesting approaches; however, none of them is a standalone document that could be used without the others. The table below aims to summarise the main advantages and limitations of each piloted format.
Thinking ahead, various options can be considered:

- Keeping a comprehensive document that includes just the sections 1, 2.3. and 3 of the present document:
  - Introduction of the group of indicators
  - Visualisation and analysis of the indicators
  - Conclusions.

- Developing a new document in a hybrid format between the static one-page summary and the dashboard that could be a standalone document for most of our stakeholders.

Further consideration, as well as collaboration with relevant colleagues (in data analysis, communication, etc.) will be needed to mature this proposal and to identify the best approach to follow for the 2022 implementation review report.

Feedback received on this prototype will be crucial for planning future work.
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