Organisation Mondiale de la Santé Animale
World Organisation for Animal Health
Organización Mundial de Sanidad Animal

Original: English
April 2020

MEETING OF THE OIE AD HOC GROUP ON SUSTAINABLE LABORTORIES

April and May 2020

Video Conference Meeting

The OIE *ad hoc* Group on Sustainable Laboratories met for its second meeting in April and May 2020 (27, 29, 30 April and 27 May 2020). Due to COVID-19 severely limiting international travel, it was not possible to meet face to face, so Zoom video conference was the preferred option. Given the Group's membership and distribution across the globe, four two-hour meetings were held to cover the agenda items as originally proposed. Additional zoom meetings will be convened on a regular basis to further develop the action items of the meeting.

Welcoming remarks and background
Dr Keith Hamilton, Head of the Preparedness and Resilience Department of the OIE, welcomed the participants on behalf of the OIE and underlined the importance of ensuring that the outcomes of the meeting are focused on the end users—OIE Member Countries—and are user friendly, adaptable, not a burden to their everyday work, and help them to better manage their laboratory system.

New Group members introduced themselves and Dr Ana Maria Nicola resumed the chairperson role and Dr Andre do Oliveira Mendonça acted as vice chairperson. Mrs Barbara Martin and Mr David Korcal, along with OIE staff, acted as rapporteurs. The adopted Agenda and List of Participants are presented in Annexes I and II of this report, respectively.

Presentations on the objectives, deliverables, and the advancements made since the last Group meeting, considerations were pre-recorded and provided one week prior to the meeting.

Meeting Objectives and Deliverables
Ms Jennifer Lasley, OIE Sustainable Laboratories Programme Manager, reviewed the objectives to brief on work done since last meeting on improving the PVS Laboratory tools, to review existing PVS Laboratory tools one-by-one and challenges encountered for each, and to take decisions on streamlining and enhancing each tool.

Advancements made since the previous meeting
Ms Lasley presented the advancements made since the last meeting of the Group.

- Design, development, and testing of a relational database model had been completed
- Legacy data from the past 16 PVS Laboratory Missions had been migrated into the relational database model for cleaning and analysis, in order to learn lessons from the data and inform the enhancement of the tools.
- New Data Analyst has begun work to advance the analysis of the legacy dataset.
- Streamlined Demand Tool was beta tested during the Uzbekistan Mission (Nov 2019) and used to visualize data for the closing meeting of the mission and for the Mission Report.
- Integration of the modified Demand Tool with the Calculation Tool.
- Call for proposals for "Economic expertise on investing in sustainable laboratory biosafety and biosecurity" launched. The team with the selected proposal will assist with the in-depth analysis

of the financial data and advise on the integration of economic indicators into the documentation and outputs of the mission.

- The Biological Standards Commission was briefed on the progress of the Group's work, and a meeting with Chatham House was held on the linkages of the Group's work on the PVS Sustainable Laboratories Tool and the equipment management survey.

Impact of COVID 19 on the outcomes of the Group and the enhancement of the PVS Sustainable Laboratories Tool

The arrival of the COVID-19 pandemic in France, resulting in the lockdown of France and the European Union in mid-March 2020, heavily disrupted all work of the OIE with the closing of OIE's office in Paris and all staff working from home. A majority of OIE staff are still working from home, as of this report. Two PVS Sustainable Laboratories missions and future face-to-face Group meetings, and the PVS Sustainable Laboratories expert training are at risk of not being implemented. The Group brainstormed different delivery modalities to keep their work on track until the pandemic has passed.

The Group considered "virtual" PVS Sustainable Laboratories missions and testing transferring the PVS Sustainable Laboratories mission data entry, calculations, visualisations, and tools to an online delivery. This modality could allow improved access to the outputs of the missions and approach. A virtual tool increases access for end users in remote areas or in areas which were difficult access for security, geographical, physical, or health-related reasons, and would reduce cost related to travel and accommodation of experts, and overcome hurdles with visas etc.

This innovative delivery approach—where as much as possible is done through direct, online data entry and exchange between Members and PVS Laboratory experts—contributes to security objectives. Laboratories are often located in remote or dangerous areas, and "teleconsultation" to the extent possible allows for safer access to laboratories in such locations. This kind of adaptation offer a forward-thinking solution to interact with laboratories in countries where security, environmental, or sanitary concerns may limit travel and face to face interactions. The current COVID-19 pandemic has illustrated even more the need for such an approach.

Mission Outputs: Mission Report

Ms Martin and Ms Lasley presented the main mission output: The Mission Report. The Group discussed how modifications could be made to improve the impact of the PVS Laboratory reports. The Group reviewed, discussed, and finalized a new report outline (See Appendix 3). The report outline would directly inform the revision of the report template for use in upcoming missions. Key points and suggestions raised during the discussion included:

- The proposed outline, through data visualisation, will make the data more consumable and easier to interpret, which is a main objective of the streamlining exercise.
- The executive summary should include visualizations and should be able to stand alone for use by those stakeholders who need a synthesised summary of the mission outputs (secondary audience).
- The report outline will be provided to an economist team for their further inputs.
- Using visualizations in the right way will be more powerful than words and may not necessarily increase the length of the report.
- Standardized visualizations should be considered.
- The report should include major risks and threats to the operations of the laboratory. This should include service vulnerabilities as well as sustainability and resilience in responding to emergencies and crisis (at surge capacity) and any work disruptions.
- An explanation of key matrices should be included to allow Member Countries to follow progress of or impact of the transformation of the laboratory network.

- The Mission Report should not be the only output of the mission, although it is the main one right now. Other outputs should be produced for other audiences in other formats (outside of the mission report) to assist in the improved sustainability of laboratories.
- A searchable web-based dashboard of the material should be considered for the future.
- Interactive tables should be considered as a tool to show the impact of incremental increases and decreases of key performance indicators. This may be out of scope for the current timeframe but should be a future target.
- The Options (simulations) add value to the mission methodology and report and should be maintained. The status quo option demonstrates the consequences of no changes. The other options show potential gains related to changes. Other recommendations related to options included the following:
    - The Group will further discuss on how many scenarios are valuable to present in the report, and find other ways to present others that do not make it into the final mission report (online tools, appendices, etc.), with advice provided by the economist team.
    - The actions related to biosafety (and biosecurity) required according to the current and future demand should be included in the options.
    - It is important to consider options that optimize use of existing resources.
    - The Group will consider how to provide successful examples of how an option has been implemented in another laboratory.

Mission Outputs: Calculation and Demand Tools

Mr Korcal presented the Calculation Tool improvement process, and its streamlining and enhancement objectives. The Group's recommendations from the first meeting on data collection and management were implemented and integrated into a beta version of an integrated Demand/Calculation Tool which was demonstrated to the Group. The demonstration emphasized:

- A reduction of data entry and elimination of data manipulation
- Dropdown pick lists where possible
- Realtime visualization of laboratory data.

Following the presentation and demonstration, the Group discussed next steps and made the following recommendations:

- Internal and external validation of all calculations in the new integrated Demand/Calculation Tool is needed
- Function testing the tool with previous mission data, given no missions are planned in the foreseeable future
- Testing during a PVS Sustainable Laboratories mission, remotely if possible, in the short term
- Add unit costs and standard values for additional methods
- Form subcommittees to review current standard values
    - Budget alignment between the Calculation and Supply Tools
    - Unit Costs in the Demand Tool
    - Standardize values in the Calculation Tool
    - Point values in the Calculation Tool

Mission Inputs: Supply Tool

Observations on the completeness and quality of the Supply Tool data were presented by Mr Michael Jacobs and Mr Duncan Millard (CLODE Consultants) to the Group. The observations largely validated the decisions taken by the Group to train those providing data for the mission through various methods (videos, webinars, instructions, and videoconferences pre-mission) and to streamline and integrate the Demand/Calculation Tool. The Group was pleased to have a broader evidence base for these actions and looks forward to seeing further analysis of the legacy data that will continue to inform decision making on the enhancement of the Tools in the future.

The Group participated in a breakout session to rank variables in the Supply Tool. Variables were ranked based on importance to the performance of the mission and generation of the mission report. The small groups also were asked to consider how data collection could be improved, what variables could be added, and when and how could the data be collected.

Following the breakout session, the Group discussed the challenges faced in ranking the variables and their focus on the need to improve clarity and how data was collected. Following the breakout session, each group provided a short summary of what they had learned. The following feedback was received:

- Ensure data collection is straightforward.
- Clarify language to ensure understanding by those completing any of the tools.
- Examine the Supply Tool instructions and see how they can be integrated into the Supply Tool file itself.
- Variables that have an impact on cost are always important.
- PVS Laboratory missions aim to determine the real cost of laboratory analysis.
- Determine the level of granularity needed.
- Use the background documents to specify what data are needed and when so expectations are clear.
- Remove data that are collected during a mission from the Supply Tool.
- Develop effective data entry guide, interview guides, and templates.
- Develop the intake interview to set the tone, objectives, and scope of the mission.
- Ensure the laboratory/country is clear on when, where, why, how what, data are needed in the Supply Tool (laboratory providing data remotely to the extent possible was recommended).
- Ensure that data requests are for reasonable amounts of related data and that data entry modules include training and guidance.

As discussed in the first meeting, the Group reiterated the need to - improve documentation on the premise for improved sustainable laboratory biosafety and biosecurity, to provide training on how to complete the Supply Tool, and to develop mission evaluation and follow-up action components. In addition, the Group reiterated the importance to integrate where possible, streamline, and enhance existing tools and improve data visualization.

Ms Martin then provided a short presentation of the subcommittees that have been identified to review and propose a process for reviewing standard values which form the basis of critical calculations within the Calculation and Demand Tool including Calculation Tool budget, points and standardized values and Demand Tool unit values. Each subcommittee will utilise a spreadsheet which will help them evaluate changes made to the standard values. The product of each subcommittee will include:

- Proposed standard value changes
- Definition of process used to review values
- Proposed frequency of future review

The subcommittees will provide the results of their work to the Group for review and finalization.

The recommendations from the Group's first meeting determined the goals for continued work of the Group and are being implemented and manifested through the development of the beta version of the integrated Demand/Calculation Tool and the new data entry tools under development. Several of the recommendations require input from the economist team, that will commence its study of the tools in June 2020.

Next Steps

The next meeting of the *ad hoc* Group is targeted to be held in October 2020, if face-to-face meetings are feasible either at the OIE or another location at that time. If not, the zoom video conferencing will be used again to continue advancing the terms of reference of the Group.

Organisation Mondiale de la Santé Animale | World Organisation for Animal Health | Organización Mundial de Sanidad Animal

Appendix 1:

List of Participants of the MEETING OF THE OIE *AD HOC* GROUP ON SUSTAINABLE LABORATORIES

MEMBERS

Dr Ana Maria Nicola (Chair)
SENASA
Talcahuano 1660
Código Postal 1640
Martinez
Buenos Aires
ARGENTINA
anicola@senasa.gob.ar

Dr Gemma Carlile
CSIRO Australian Animal Health Laboratory
PMB 24 Geelong 3220
AUSTRALIA
gemma.carlile@csiro.au

Dr Alfonso Clavijo
Director
National Bio and Agro-Defense Facility (NBAF)
USDA, Agricultural Research Service
1880 Kimball Ave, Suite 300
Manhattan, KS 66502
alfonso.clavijo@usda.gov

Prof David Harper
Senior Consulting Fellow
Centre on Global Health Security
Chatham House
david@harperpublichealth.com

Dr Andre de Oliveira Mendonça
Coordenador
Laboratório Federal de Defesa Agropecuária – LFDA/SP
Rua Raul Ferrari S/n, Jardim Santa Marcelina, Campinas-SP,
BRAZIL
andre.mendonca@agricultura.gov.br

Dr Salama Almuhairi
Director of Veterinary Laboratories Division
Animal Wealth Sector
Abu Dhabi Agriculture and Food Safety Authority
52150, AD
UNITED ARAB EMIRATES
salama.almuhairi@adafsa.gov.ae

Dr Nick Nwankpa
Director
Pan African Veterinary Vaccine Center - African Union Commission
P. O. Box 1746,
Debre Zeit
ETHIOPIA
NickN@Africa-union.org

Dr Heather Sheeley
Workplace Health and Safety Lead
Public Health England
UNITED KINGDOM
Heather.Sheeley@phe.gov.uk

OBSERVERS

Dr Virginie Dolmazon
Laboratory Strengthening & Surveillance
WHO Lyon Office / Bureau OMS de Lyon
Immeuble Tony Garnier
24 rue Jean Baldassini
69007 Lyon, France
dolmazonv@who.int

Ms Beatrice Mouillé
EMPRES Laboratory Unit Deputy Coordinator
Animal Health Services (AGAH)
Emergency Centre for Transboundary Animal Diseases (ECTAD)
Viale delle Terme di Caracalla
00153 Rome, ITALY
Beatrice.Mouille@fao.org

CONSULTANTS

Mrs Barbara Martin
Executive Director
World Association of Veterinary Laboratory Diagnosticians
2503 Eisenhower Ave Iowa 50010
Martin.barbara.m@gmail.com

Mr David Korcal
Quality and Risk Management Administrator
Michigan State University
Veterinary Diagnostic Laboratory
4125 Beaumont Rd.
Lansing, Michigan 48910
UNITED STATES OF AMERICA
korcal61@gmail.com

OIE STAFF

Ms Jennifer Lasley
Preparedness and Resilience Department
12 rue de Prony
75017 Paris
FRANCE
j.lasley@oie.int

Mr Emmanuel Appiah
Preparedness and Resilience Department
12 rue de Prony
75017 Paris
FRANCE
e.appiah@oie.int

Dr Valentyna Sharandak
Capacity Building Department
12 rue de Prony
75017 Paris
FRANCE
v.sharandak@oie.int

Appendix 2: Agenda

27 April 2020: 14:00-16:00

- Questions about "Objectives and Deliverables" (Pre-recorded presentation)
- Questions about "Advancements made to date" (Pre-recorded presentation)
- Review of action items from last meeting (A Nicola)

Item 2 Mission Outputs: Report / report template

- Questions about "Mission report: Part 1" (Pre-recorded presentation)
- Presentation: Potential New Report Outline (Part 2)
- Discussion questions:
    - What questions should the Report answer?
    - Can « advantages and disadvantages » be changed to « risks and benefits » or should a separate section on « benefits » be added?
    - Proposed additions to the outline: Client Chapter; Reform of Options: Status Quo, Opportunity, Rationalised, Compromise, Other; Roadmap (from Part 1 slides)
    - What do the Options do in the report? How do they relate to the Roadmap? Could we do this mission without the Options? What value added do the Options bring?
    - What visualizations and tables are essential for the report?
    - How can we improve to the reporting process?
- Decisions/Outcomes
    - Revised report outline (decision to use revised report outline for next mission and comment back to AHG)
    - How can we represent a roadmap that would work for any scenario selected?
- Summary/Actions for 30/04/20

28 April 2020: 14:00-16:00

Item 3 Mission Outputs: Calculation Tool

- Questions about "Calculation Tool challenges encountered" (Pre-recorded presentation)
- Discussion
    - Standard relative values and budget renewal rates
    - Proportions of share of cost between equipment, reagents, & staff
    - FOB/CIF
    - Budget
    - How to make current/real vs simulated and prospective options?
    - What are we missing?
    - Data visualisations: which are needed?
- Calculation tool (Progress demo)

30 April 2020: 14:00-16:00

- Outcomes from previous calls
- Supply Tool discussion preparation
    - Data aggregation: high level observations to inform next AHG meeting call
    - Discussion and experts' impressions
- Next meetings (2-4 needed)
- Path forward and Action Items

Appendix 3: Outline of PVS Sustainable Laboratories Mission Report

Executive Summary

Acknowledgements

Acronyms and Abbreviations

Report

I. **Introduction**
   1. Scope and objectives of the mission (Appendix 1 & 2)
   2. Context of the mission (Appendix 3, 4, 5)

II. Current Demand for Laboratory Services
   1. Market Analysis (Appendix 6)
   2. Analysis of Clients of the National Laboratory System
      i. Client profiles (existing and potential)
      ii. Services each client needs
      iii. Neglected areas of investment (determination of Roadmap)

III. Analysis of the Supply of Veterinary Laboratory Analysis Appendix 7)
   1. Current capacity (summary) of the national veterinary laboratory network
      i. Human, Physical, Financial resources
      ii. Testing conducted in the network
      iii. National budget: Capital and operational investments

IV. **Possible Options for improved sustainability of the National Veterinary Laboratory Network**
   1. Limitations/Constraints
   2. Options
   3. Risks (considerations, challenges, weaknesses, deficiencies, lack of confidence) and benefits (charts)
      i. Comparative budgeting of proposed Options (Appendix 8)

V. **Roadmap towards the sustainability of the national laboratory system**
   1. Strategy for investment in neglected areas
   2. Implement official Animal Health programmes
   3. Optimize quality management system
   4. Establish and maintain biosafety and biosecurity programs
   5. Ensure relevant data management
   6. Establish tariff processes and accounting of costs
   7. Analyse existing and new project opportunities
   8. Institute efficient human resources management programs

VI. **Conclusions**
   1. Take-away messages/Argument relating to Options
   2. Take-away messages/Argument for the immediate implementation of the roadmap

Appendices

Appendix 1: Mission Method
Appendix 2: Tools Used
Appendix 3: Country NVS with diagram, How the lab function within the VS, Farming systems, Animal populations, VS organization chart, Laboratory organization and reporting chains, Priority diseases, National animal health programs, Testing fee structure

Appendix 4: Extracts from previous PVS Pathway reports
Appendix 5: Mission Timetable and People Met
Appendix 6: Detailed Laboratory Management benchmarks/indicators by area of the Supply Tool (per tab) for National Lab network (systematic summary, same for all reports)
Appendix 7: Capacity of other laboratories/List of all labs in country (private and public)
Appendix 8: Options' details