

Promoting and supporting laboratory scientific excellence in the Middle East region

Jennifer Lasley

Senior Programme Coordinator, PVS Pathway and WHO/IHR connections
Capacity Building Department

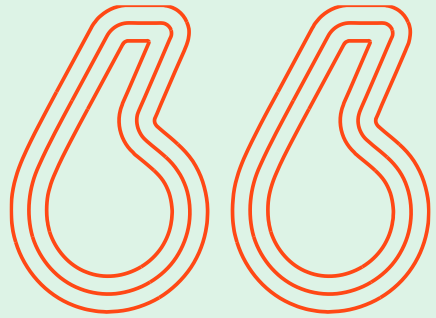
5 October 2023



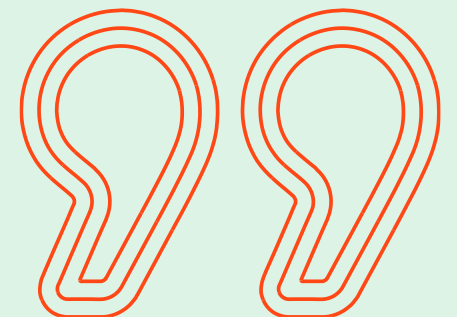
World
Organisation
for Animal
Health

Organisation
mondiale
de la santé
animale

Organización
Mundial
de Sanidad
Animal

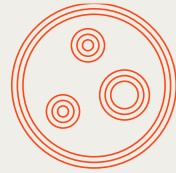


What does it mean to « promote and support laboratory scientific excellence »?





Keys to promoting and supporting laboratory scientific excellence



Know your Standards



Nurture and grow expertise and talent



Understand and use your national laboratory network



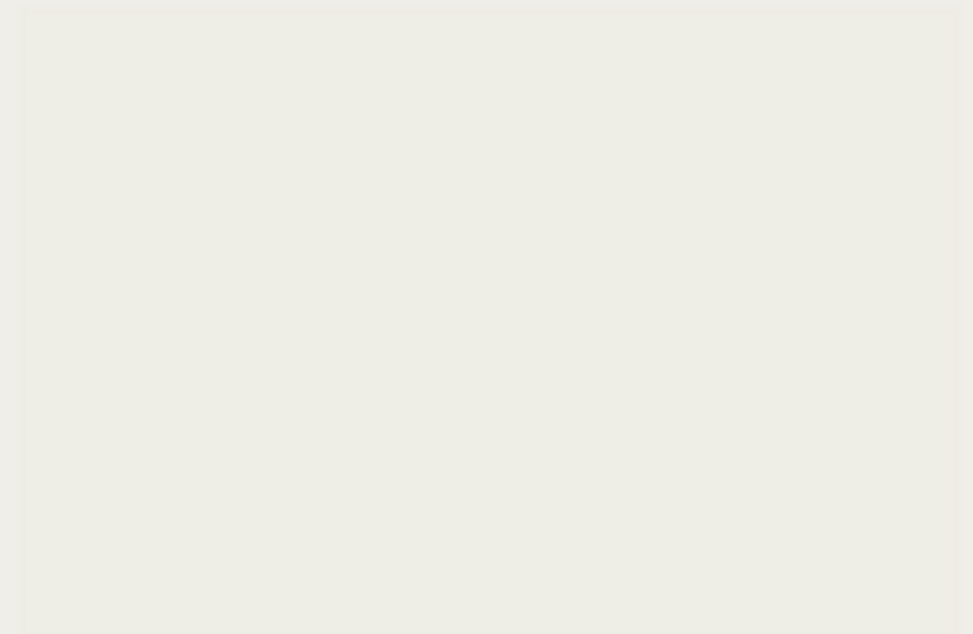
Look beyond your borders to share expertise



Choose a topic unique to you and perfect your skill



Set objectives and stick to them



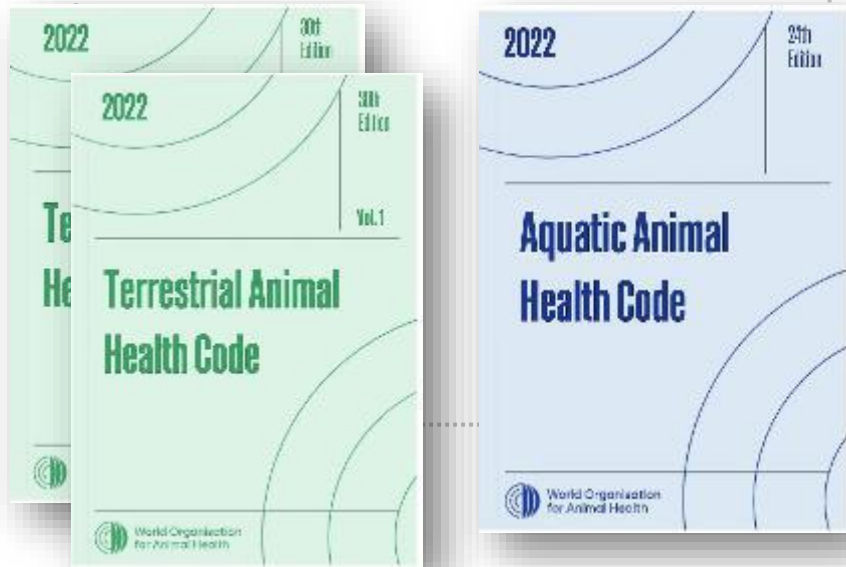


Knowing your Standards

WOAH Manuals for Diagnostic Tests and Vaccines for Terrestrial and Aquatic Animals



CODES



MANUALS

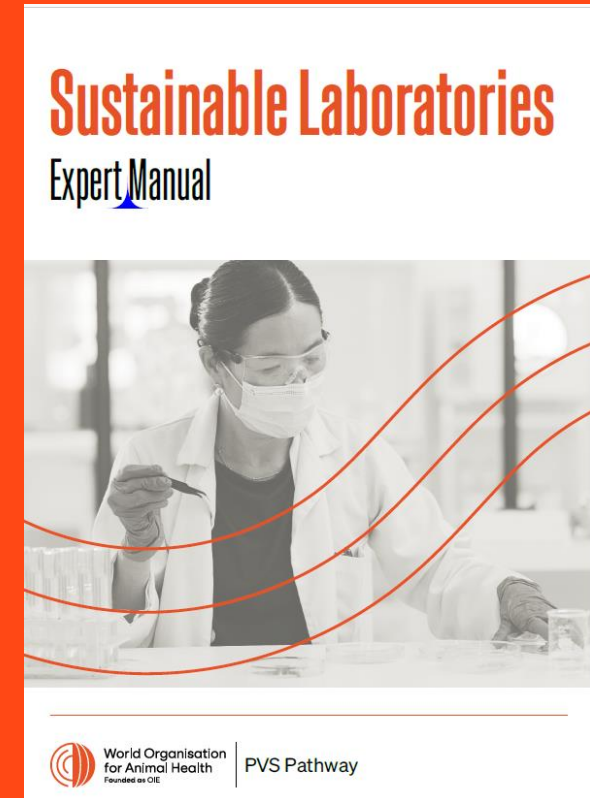


Knowing and implementing the standards in the *Manuals* will build the essential and stable foundation for promoting and supporting laboratory scientific expertise



Understanding and using your national laboratory network

PVS Sustainable Laboratories missions

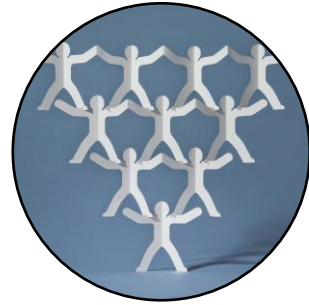




The primary product of a laboratory is its results



Accurate



Reliable



Timely



What is a sustainable laboratory network?

A system made up of specialized facilities capable of converting financial, human, and material resources (public and/or private) into specialized outputs in an efficient, timely, accurate, consistent, secure, and safe manner, in line with international standards, at an acceptable cost, responding to clients' needs across sectors, and for the benefit of the health system



4 Sustainable Laboratory System

Network of laboratories focusing on service delivery and sustained quality of outputs, fulfilling optimal capacity over time, implementing a business model that relies less on external support and more on cultivating client relationships

3

Functioning Laboratory System

Laboratories working together, thanks to external support aiming to improve networking, throughput and capacity, through short-term technical support projects, failing to address chronic challenges to sustainability

2

Operational Laboratories

While a laboratory benefits from short-term and project-based external support for benchtop activities and can function day-to-day, they are working independently from each other and lack understanding of local clients' needs

1

'Black Box' Laboratories

Laboratories producing results without regards to the conditions under which tests are conducted, with insufficient resources



Biosecurity

Biosafety

Quality

Preparedness

Business Continuity

Resources

Money, people, time

Every year & all year

Peace time & emergency



THE GRASS
IS GREENER
WHERE YOU
WATER IT

Supporting Laboratory Leadership

- Provide leaders with information that will provide
 - Realistic, defensible estimates of budgetary needs
 - Understanding of the costs related to specific projects or programs
 - Data to advocate for their budgetary needs
 - Tools needed to adapt or change projects and understand the budgetary impacts
-

Sustainable Laboratories

Expert Manual



World Organisation
for Animal Health
Founded as OIE

PVS Pathway

[Codes and Manuals](#)[Publications](#)[Documentary Portal](#)[Training Platform](#)[Bookshop](#)[EN](#) [FR](#) [ES](#)

World Organisation
for Animal Health
Founded as OIE

[Animal Diseases](#)[Monkeypox](#)[COVID-19](#)[SEARCH](#)[WHO WE ARE](#) ▾[WHAT WE DO](#) ▾[WHAT WE OFFER](#) ▾[MEDIA](#) ▾[WAHIS](#) ↗

PVS Sustainable Laboratory Cohort Analysis



This Dashboard helps stakeholders to visualise resource and management insight on the challenges to sustainability faced by veterinary laboratory networks.

WOAH is leveraging PVS Pathway data to highlight areas where investment is needed, and building agency for sustainable financing.

A sustainable laboratory network is a system made up of specialised facilities capable of converting financial, human, & material resources into specialised outputs in an efficient, timely, accurate, consistent, secure & safe manner, in line with international standards, at an acceptable cost, responding to clients' needs across sectors, & for the benefit of the health system

[Click the buttons below to view more](#)



**Diagnostic
Capacity**



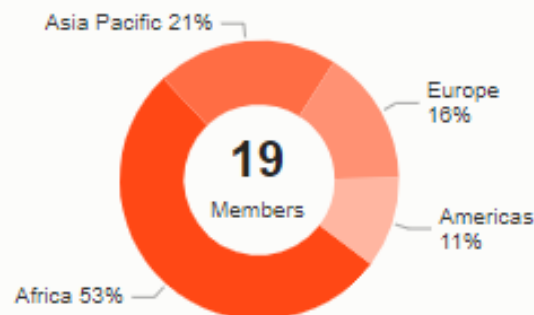
**Clients &
Revenue**



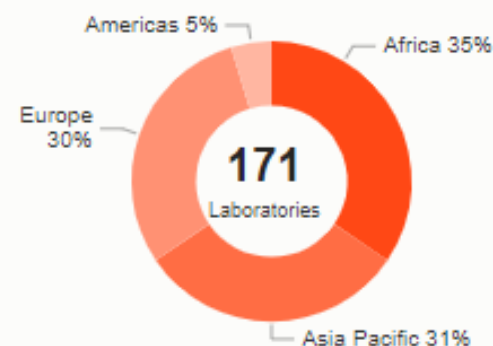
**Cost of
Analysis**

Data Sources:
PVS Sustainable Laboratories Database, WAHIS, World Bank, Global Health Security Index, PVS Pathway

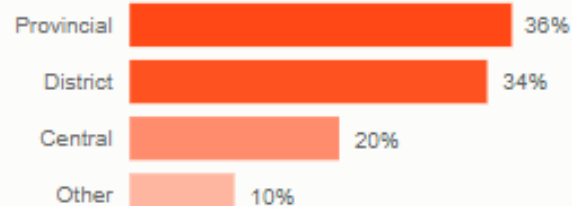
Members, by Region



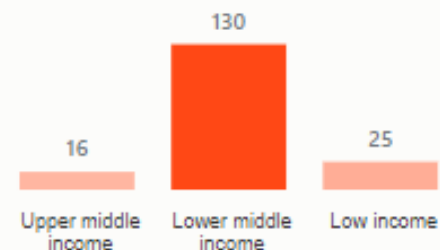
Laboratories, by Region



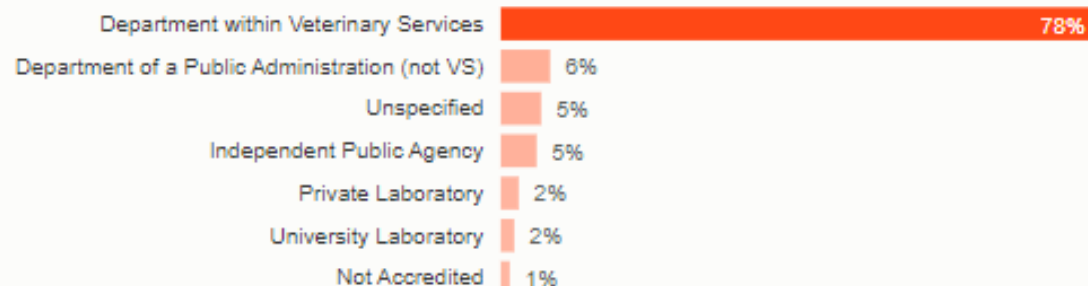
Laboratories, by laboratory network level



Laboratories, by World Bank Income Level



Laboratories, by affiliation



[Codes and Manuals](#)[Publications](#)[Documentary Portal](#)[Training Platform](#)[Bookshop](#)[EN](#) [FR](#) [ES](#)

World Organisation
for Animal Health
Founded as OIE

[Animal Diseases](#)[Monkeypox](#)[COVID-19](#)[SEARCH](#)[WHO WE ARE](#) ▾[WHAT WE DO](#) ▾[WHAT WE OFFER](#) ▾[MEDIA](#) ▾[WAHIS](#) ↗

Laboratory Equipment Management and Sustainability



68,455

Pieces of laboratory equipment reported

Equipment reported, by network level

- Central 77.12%
- Provincial 17.23%
- District 4.44%
- Other 1.21%



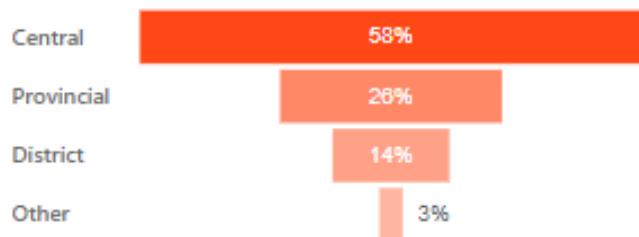
€ 264.4M

Estimated value of laboratory equipment reported

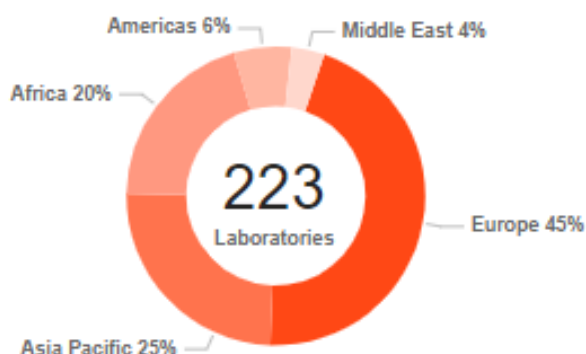


Next page

Participating laboratories, by laboratory network level



Participating laboratories, by Region



93%

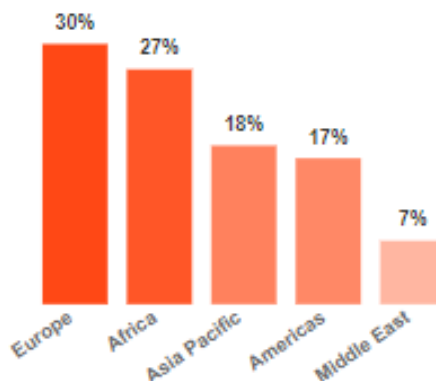
of respondents work in a laboratory



136

participating Members

Participating Members, by Region



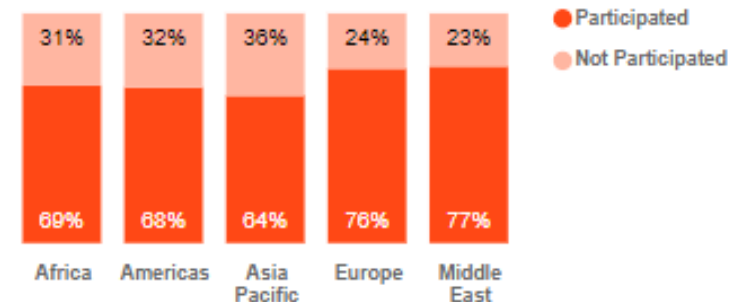
75%

of Members participated

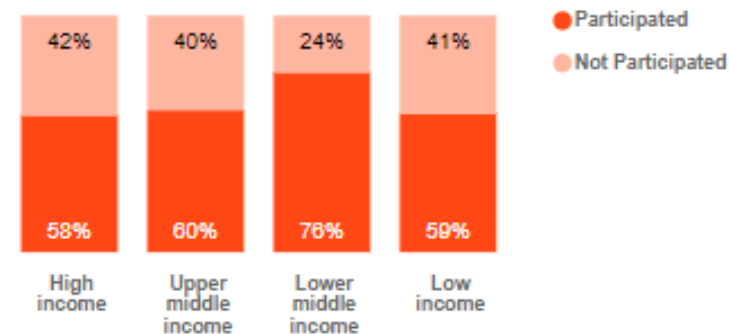
182

Members

Proportion of participating Members, by Region



Proportion of participating Members, by World Bank Income Level





Choosing a topic unique to you and perfecting your skill

Laboratory Twinning Programme



WOAH Laboratory Twinning projects in the Middle East Region

Past projects

- Afghanistan and UK (2012-2019, Brucella and Mycoplasma)
- Iran and Italy, (2012-2015, Avian Influenza and Newcastle disease)
- Lebanon and Italy (2013-2017, Epidemiology)
- Saudi Arabia and USA (2016-2021, shrimp diseases)
- UAE and Germany (2011-2016 , Brucella)
- UAE and Italy (2015-2020, camel diseases) – ADAFSA designated as WOAHC!

Ongoing projects

- Oman and UK, Avian Influenza (2023-2025)
- Saudi Arabia and Italy, Epidemiology and Risk assessment (2019-2023)

Future projects

- Jordan (Q2 2024, FMD)
- Saudi Arabia and Italy (Q2 2024, fish diseases)

WOAH Laboratory Twinning Projects in the Middle East Region

Successes

- Good alignment of projects with national priorities and WOAH Global Strategies
- Strong support from governments to maintain and build on capacities acquired during the projects
- Potential for new WOAH Reference Centers in the near future

Challenges

Adjusting communication styles and expectations regarding timelines

Thank you to the 3 people from the Middle East region who participated in the Lab Twinning Programme Evaluation Survey!

The outcomes of the Programme Evaluation will be shared in 2025.

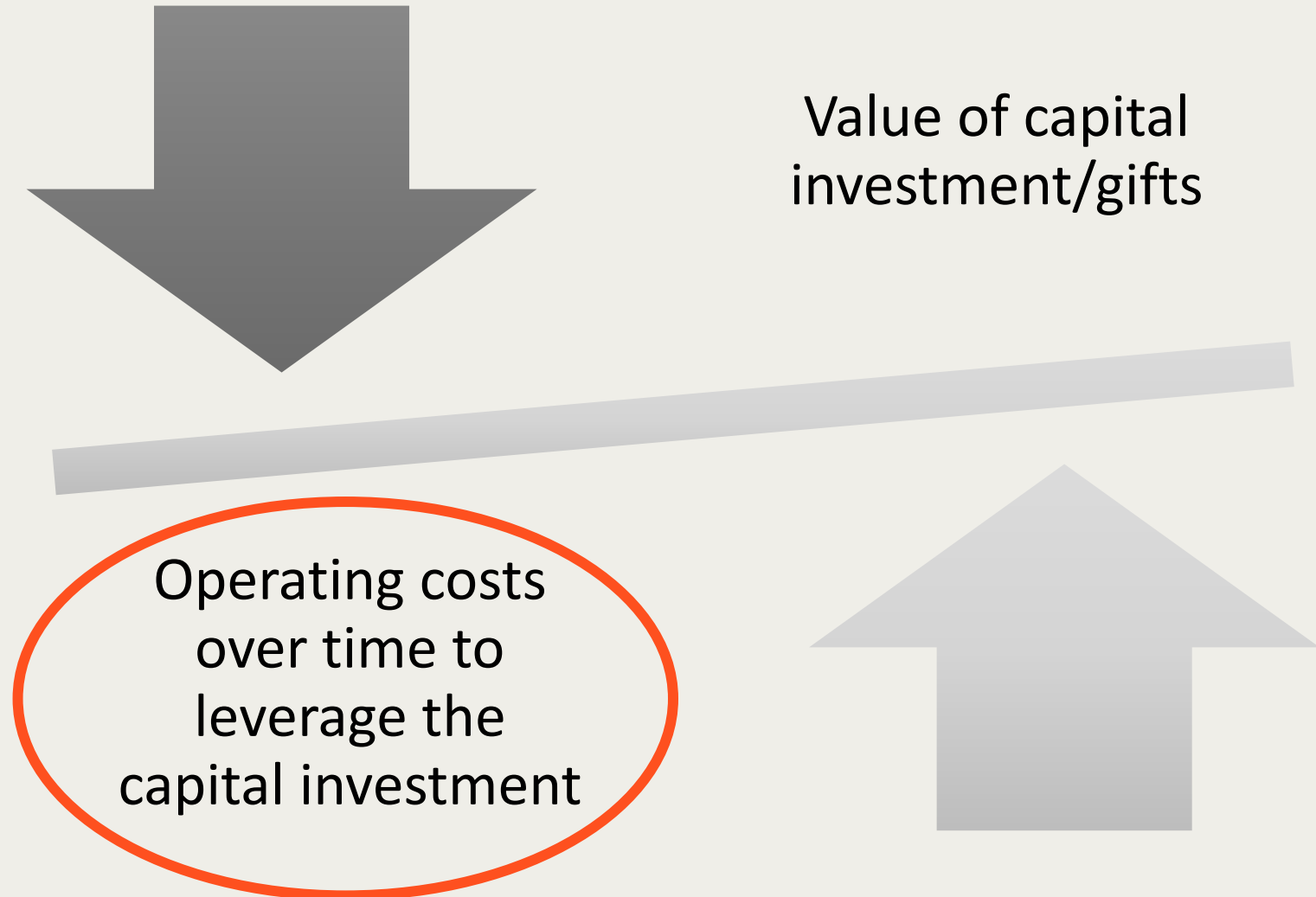


Setting objectives and sticking to them

Investing to grow and sustain
Leveraging capacity built



Setting objectives requires commitment and investment, in the beginning and until the objective is achieved, and beyond...



Source of Resources: Governments, Partners, and...Revenue?

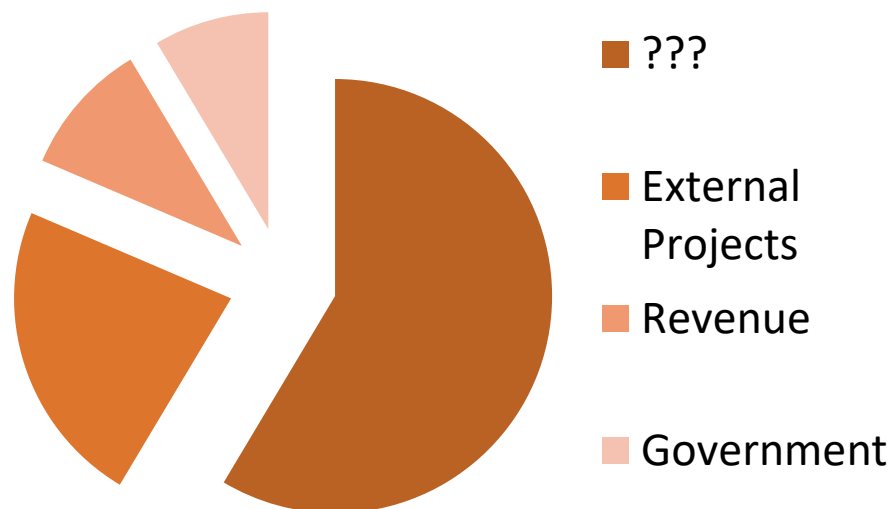
- Government agencies typically base budgets on previous allocations
- Any increase must be justifiable
- Laboratories are frequently asked to expand services without budgetary changes
- Potential donors frequently approach laboratories with a set amount of funding for a specific project, regardless of needs or operating costs
- Revenue is a challenging and diverse subject for veterinary laboratory networks around the world with varied business models



**How can we
achieve our goals,
and convince
others to invest...**



Total Resources



Known Costs



Real Costs = ?

**...if we don't know the real costs of a
sustainable laboratory network?**

Outputs of the Sustainable Laboratories approach

- Laboratories can use the cost estimates presented in the Sustainable Laboratories Report to:
- Project the cost of participating in the project and determine if the project is economically feasible in the mid- and long-term
- Project of cost of maintenance and calibration of donated equipment
- Advocate for additional resources from partners and government alike
- Actual costs can be reviewed over time to increase accuracy of the cost estimate
- Cost estimates can be used to advocate for resources based on data

Understanding the real costs of service delivery can ensure more sustainable diagnostic laboratory services



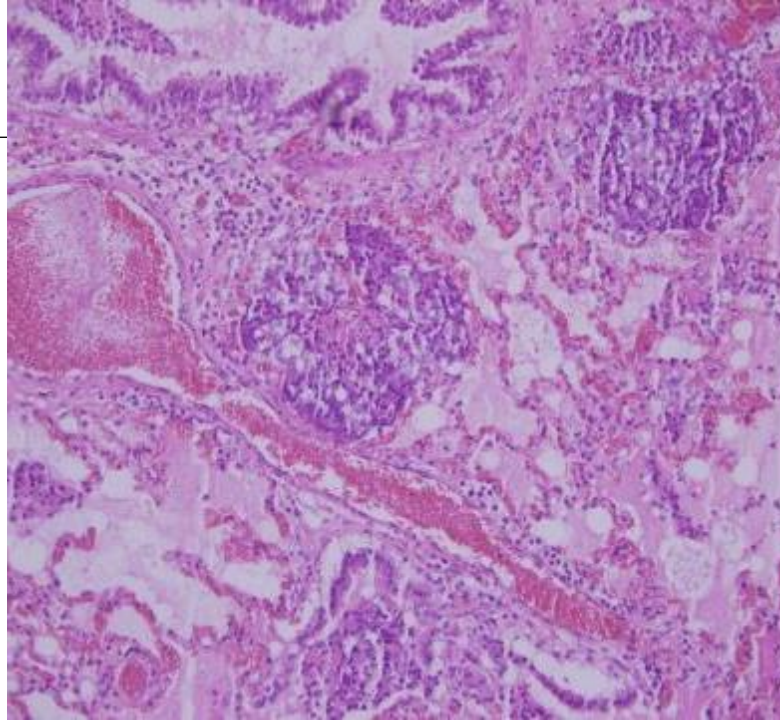
Success Story: UAE

Develop services to support underserved industries

- **Opportunity** : Aquaculture has expanded and the existing testing capacity for related diseases is limited

Diversification of economic resources

- **Opportunity:** Histopathology slides currently used for personnel training





Nurturing and growing expertise and talent

Global Laboratory Leadership
Programme (GLLP)
Academic writing
International participation & engagement
Succession planning



Training content (18 of 24 months)

- Interactive didactic sessions
- Practical, mentored laboratory experience and small projects between sessions support learning



Mentorship (24 months)

- Mentorship at regular intervals throughout the programme duration to support learning and professional development
- In-person or through a relationship such as a twinning



Projects: support learning and national needs (24 months)

- Small projects (complete during first 18 months of programme)
- Capstone project (complete during last 6 months of programme)



Community building (24+ months)

- Community building activities within and between cohorts and over time, between cohorts from other areas (regional)
- Network building and creation of a community of practice





Step-wise progression of GLLP learning

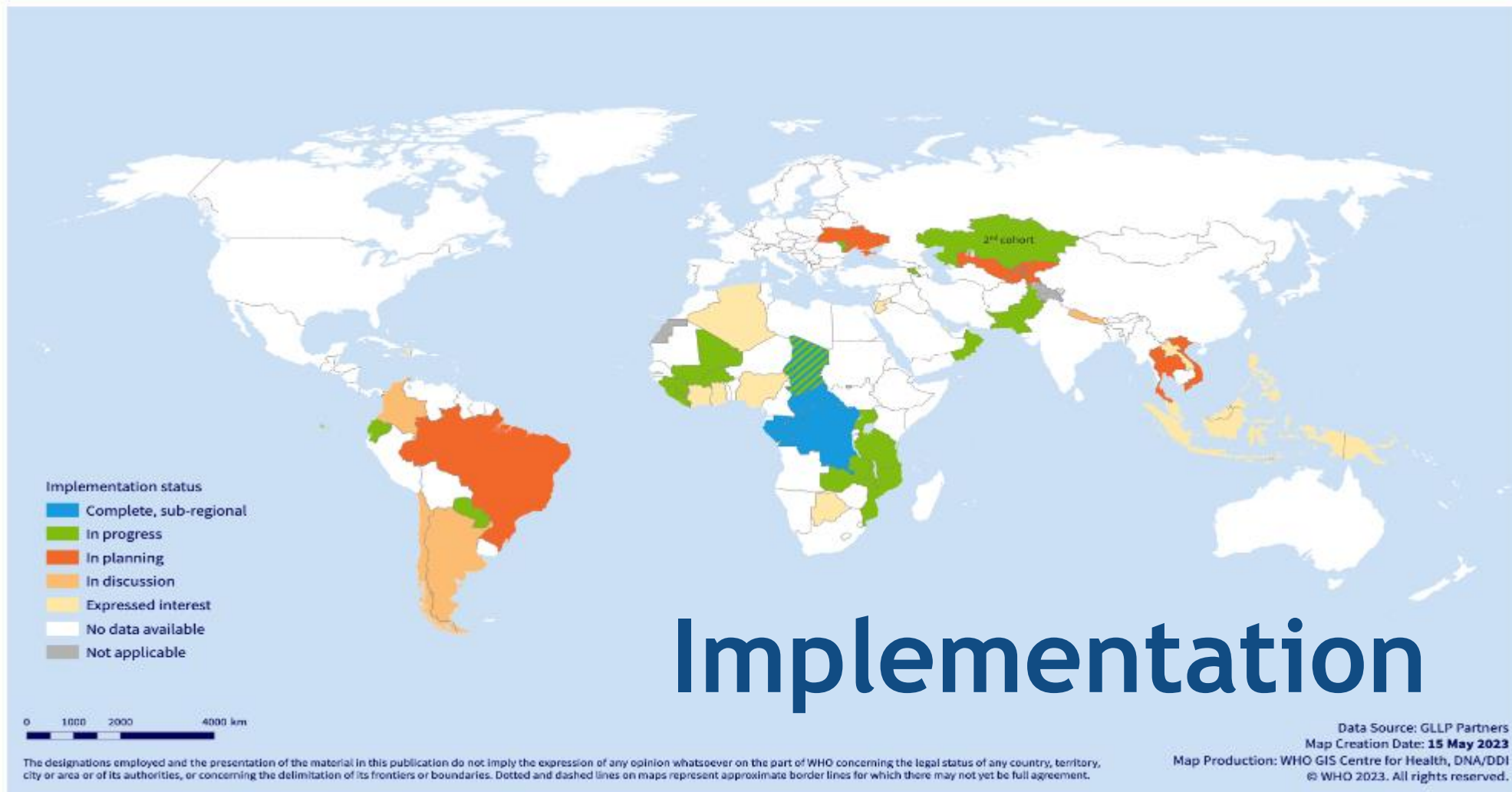


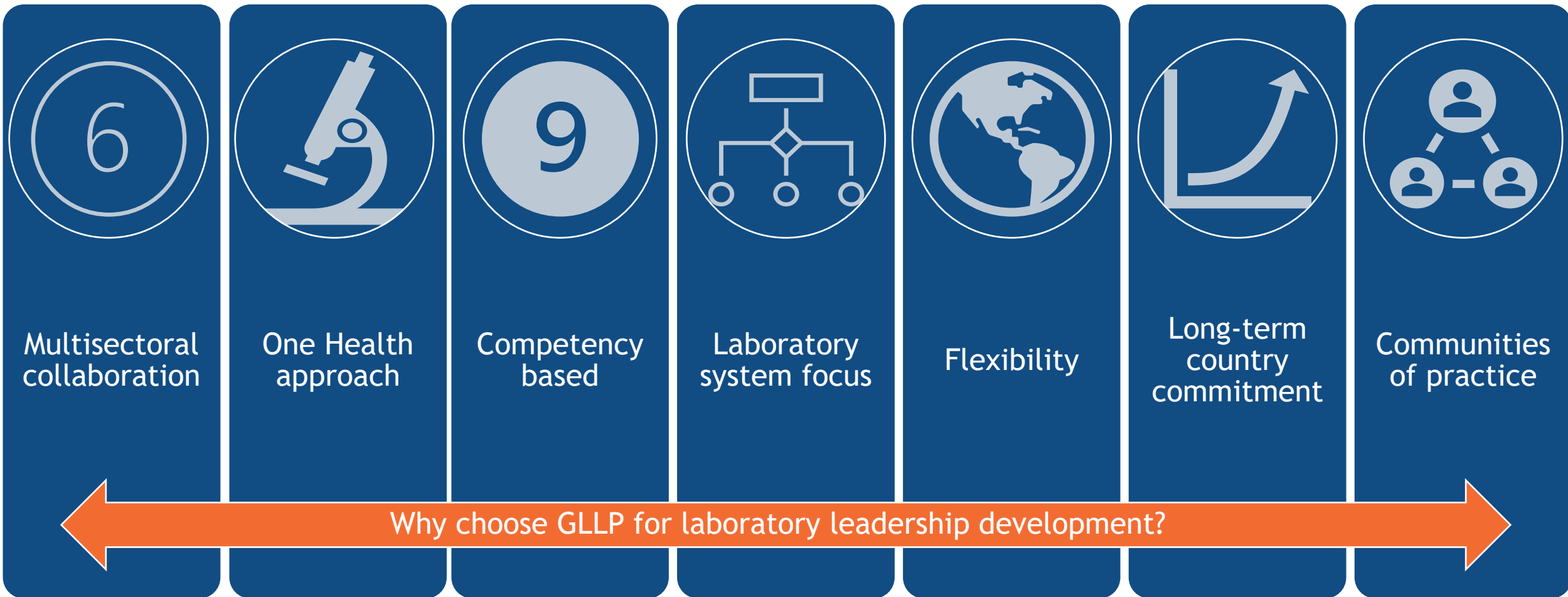
	Introduction to laboratory systems provides knowledge necessary to evaluate a laboratory system	Principles of laboratory management during routine & emergency situations	Leadership skills needed for laboratory and laboratory systems management	Consolidate learning for development of laboratory systems building action plan	Knowledge into practice to build laboratory system	
4	Sections	1. Introduction	2. Laboratory Management	3. Laboratory Leadership	4. Laboratory Systems	5. Capstone project
13	Units	1.A Global Laboratory Leadership Programme: An Introduction 1.B Introduction to laboratory systems	2.A. General management 2.B. Quality management 2.C Safety 2.D Laboratory role in Disease Surveillance 2.E Managing emergencies	3.A. General leadership 3.B. Communication 3.C Research	4.A. Model laboratory systems 4.B. Laboratory system essentials 4.C Case study 4.D Developing laboratory systems	Capstone project to address components of laboratory systems action plan

43 modules

Success Story: Oman & Jordan

Global Laboratory Leadership Programme implementation status







Success Story: UAE

Ensure the sustainability of a competent laboratory workforce

- Develop mentoring program
- Assess the expertise available
- Determine training needs
- Establish training program across disciplines

Opportunities to broaden scope of influence by leveraging strengths

- Competent and professional staff
- Governmental support for services
- Strong quality assurance program
- Accreditation of multiple tests at key laboratories
- Multi-sectoral early warning system
- WOAHA Reference Laboratories and Collaborating Centres
- Interlaboratory comparison panel program
- Broad range of well-maintained equipment
- Broad level of stakeholder support across network



ISWAVLD 2023

International Symposium of the World Association of Veterinary Laboratory Diagnosticians

29 JUNE-1 JULY 2023
Congress Centre
Lyon

Towards
the veterinary
diagnostics
of the
future

Main topic : One Health

The Role of Veterinary Laboratories - Abu Dhabi Agriculture and Food Safety Authority (VLD-ADAFSA) in COVID-19 Pandemic in the United Arab Emirates

ABDI MOHAMMED A. 1

¹ Abu Dhabi Agriculture and Food Safety Authority, Abu Dhabi, United Arab Emirates: Veterinary Laboratories, Abu Dhabi, United Arab Emirates

Title: The Role of Veterinary Laboratories - Abu Dhabi Agriculture and Food Safety Authority (VLD-ADAFSA) in COVID-19 Pandemic in the United Arab Emirates

Main Author: Asma Abdi Mohammed Shah*

Co-authors: Shameem Habeeba, Hassan Zackaria Ali Ishag, Zulaikha Al Hammadi, and VLD staff.

*Corresponding author: asma.mohammed@ADAFSA.GOV.AE

Veterinary Laboratories, Abu Dhabi Agriculture and Food Safety Authority (ADAFSA), United Arab Emirates



Article

A Clinical, Pathological, Epidemiological and Molecular Investigation of Recent Outbreaks of Peste des Petits Ruminants Virus in Domestic and Wild Small Ruminants in the Abu Dhabi Emirate, United Arab Emirates

Hassan Zackaria Ali Ishag ^{1,*}, Abdelnasir Mohammed Adam Terab ¹, Yassir Mohammed Eltahir ², El Tigani Ahmed El Tigani-Asil ¹, Nasereldien Altaib Hussein Khalil ¹, Esamt Faisal Malik Gasim ¹, Mohd Farouk Yuosf ¹, Saeed Mohamed Saeed Al Yammahi ¹, Asma Mohammed Amer Al Mansoori ¹, Salama Suhail Mohammed Al Muhairi ³, Zulaikha Mohamed Abdel Hameed Al Hammadi ¹, Asma Abdi Mohamed Shah ¹, Majd Mohamed Azmi Naser Alherbawi ⁴, Mervat Mari Hassan Al Nuaimat ⁴, Oum Keltoum Bensalah ² and Abdelmalik Ibrahim Khalafalla ¹



Looking beyond your borders to share expertise

WOAH Network of Expertise / Reference
Centres

Success Story: UAE

- PVS Sustainable Laboratories mission in August 2022
- Presented results at PVS Orientation in Abu Dhabi in Sept 2022
- Trained as PVS Laboratory Expert in Paris, France in March 2023
- Presented progress at ISWAVLD 2023 in Lyon France in June 2023



2 WOAAH Collaborating Centres in 1 Institute

WOAH Reference Centres

Network of Expertise

Quality Management Systems

Abu Dhabi Agriculture and Food Safety Authority

PO Box 52150
Mohammed Bin Zayed City
Capital Mall
Abu Dhabi
UNITED ARAB EMIRATES

Camel Diseases

10 WOAAH Reference Laboratories spread over 3 Institutes and 3 Experts

Avian mycoplasmosis (*Mycoplasma gallisepticum*)

Dr. Umit Ozdemir

Pendik Veterinary Control Institute
Bati Mahallesi
Erol Kaya Caddesi 134890
İstanbul
TURKEY

Sheep pox and goat pox

Dr. Hamid Reza Varshovi

RAZI Vaccine & Serum Research Institute
P.O. Box 31975/148
Hessarak
Karaj
Teheran
IRAN

Brucellosis (*Brucella abortus*)

Prof. Ulrich Wernery

Central Veterinary Research Laboratory
P.O. Box 597
Dubai
UNITED ARAB EMIRATES

Avian mycoplasmosis (*Mycoplasma synoviae*)

Contagious caprine pleuropneumonia

Middle East respiratory syndrome

Camelpox

Brucellosis (*Brucella melitensis*)

Brucellosis (*Brucella canis*)

Glanders

Scientific Networks and networking

CAMENET



**Aquatic Middle East
Network**





*you Need to Nourish
to Flourish...*

Thank you

12, rue de Prony, 75017 Paris, France
T. +33 (0)1 44 15 19 49
F. +33 (0)1 42 67 09 87

woah@woah.org
www.woah.org

[Facebook](#)
[Twitter](#)
[Instagram](#)
[LinkedIn](#)
[YouTube](#)
[Flickr](#)



World
Organisation
for Animal
Health

Organisation
mondiale
de la santé
animale

Organización
Mundial
de Sanidad
Animal

