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The OIE Laboratory Twinning Program Opportunities for a One Health Approach

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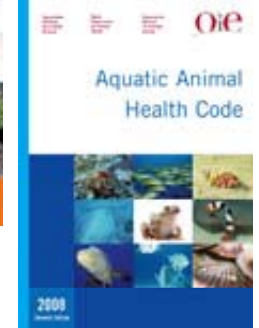
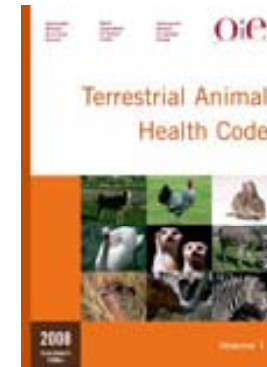
USDA ARS 1st International Biosafety and Biocontainment Symposium
Baltimore, 6-9 February 2011



OIE International Standards

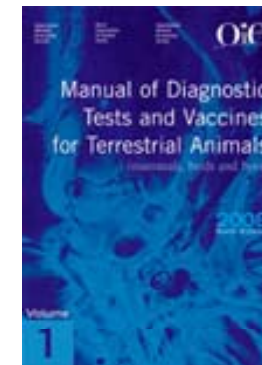
Terrestrial Animal Health Code – mammals, birds and bees

Aquatic Animal Health Code – amphibians, crustaceans, fish and molluscs



Manual of Diagnostic Tests and Vaccines for Terrestrial Animals

Manual of Diagnostic Tests for Aquatic Animals



Quality Standard & Guidelines for Veterinary Laboratories: Infectious Diseases



Definitions

- OIE Manual of Diagnostic Tests and Vaccines for Terrestrial Animals / Aquatic Animals

“Laboratory work of the type described in this Terrestrial Manual should be carried out with...

- **minimum of risk to the health of the staff** (biosafety), and
- **minimum of risk to the environment** (biocontainment).”

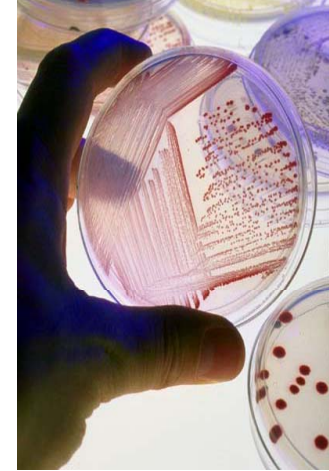
CURRENT NETWORK OF EXPERTISE

OIE Reference Laboratories and Collaborating Centres

A network supporting animal disease
detection, surveillance, and control
world wide

OIE Reference Laboratories and Collaborating Centres

- Reference Laboratories
 - 190 laboratories in 36 Member Countries or Territories
 - Expertise on 100 OIE listed disease(s)
 - Identified international expert
- Collaborating Centres
 - 37 centres from 20 Member Countries or Territories on 35 topics
 - Expertise in a specific designated sphere of competence (epidemiology, risk analysis)



● <http://photos.news.wisc.edu>

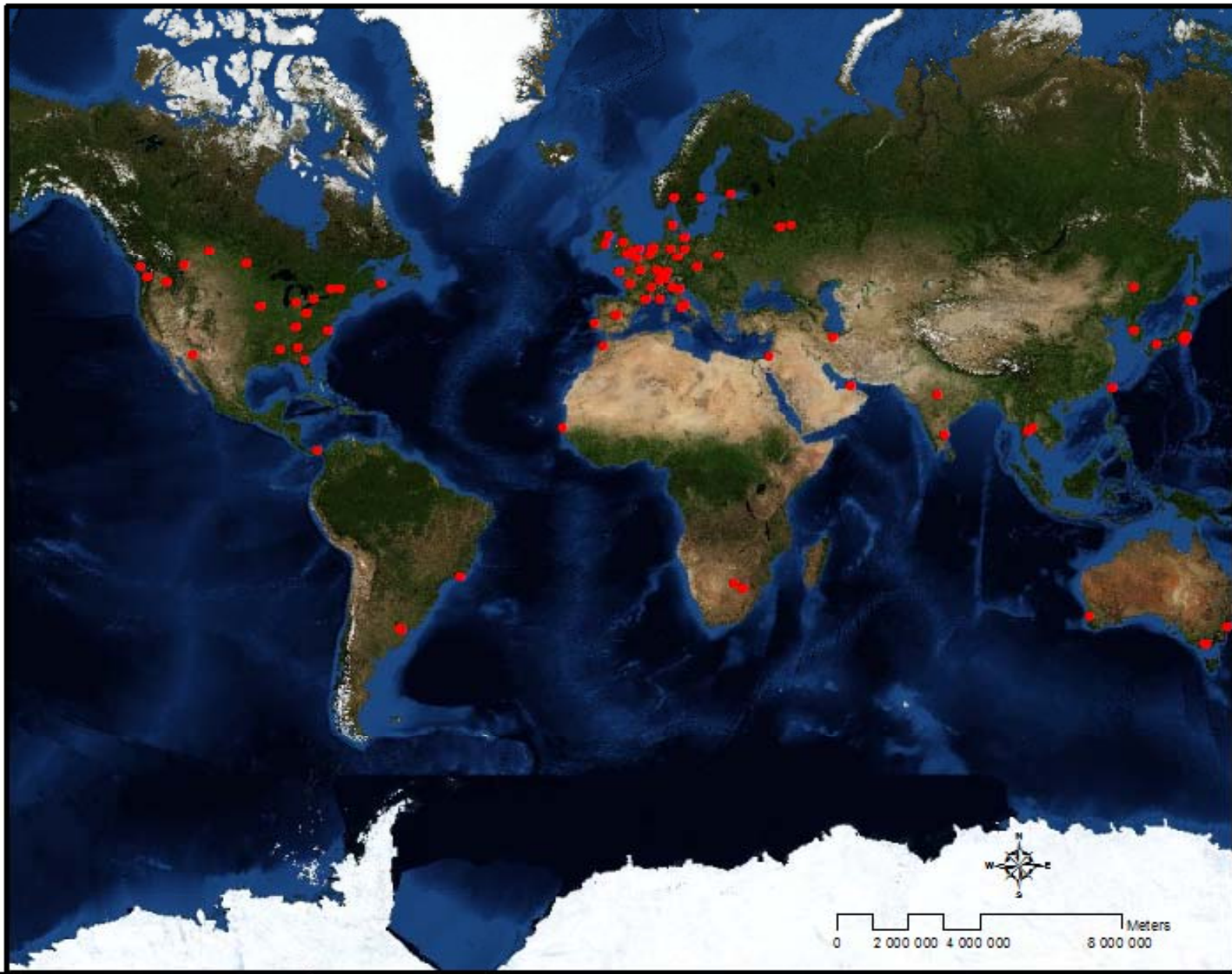


● <http://www.oie.int>

Mandate of an OIE Reference Laboratory (disease based)

- Centre of expertise and standardisation
- Provide technical advice, diagnostic services, and training
- Report positive findings to OIE
- Develop new diagnostic tests
- Publish and disseminate useful information
- Place expert consultants at the disposal of OIE

OIE REFERENCE LABORATORIES *



Legend

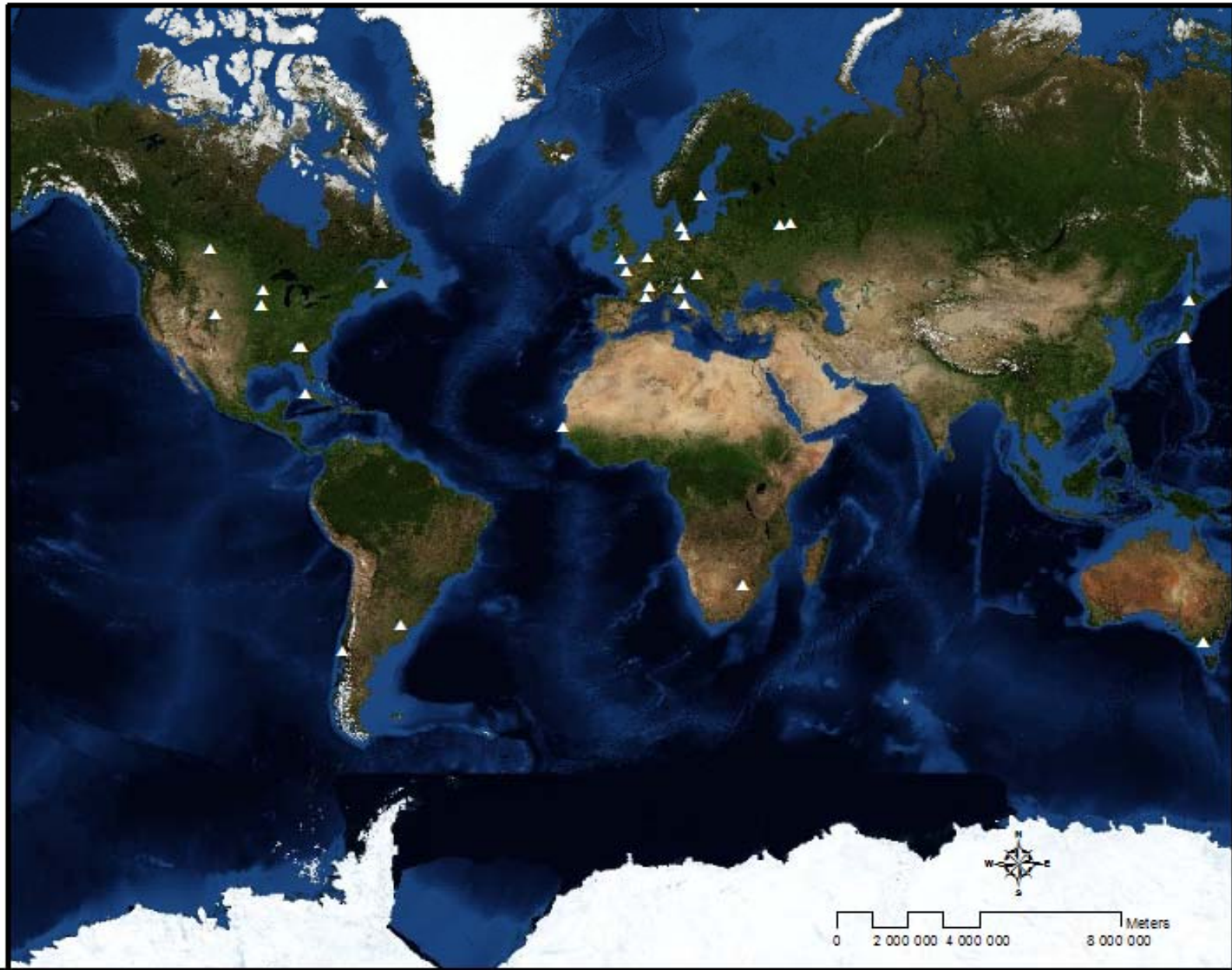
- OIE Reference Laboratories

* As of May 2010

Mandate of an OIE Collaborating Centre (competence based)

- Centre of research, expertise, standardisation and dissemination of techniques
- Provide technical advice and training
- Develop new techniques and procedures
- Publish and disseminate useful information
- Place expert consultants at the disposal of OIE

OIE COLLABORATING CENTERS *



Legend

▲ OIE collaborating centers

* As of May 2010

OIE Laboratory Twinning Programme

The CONCEPT

Sustainable enhancement of
capacity and expertise by supporting
a link between
an OIE Reference Laboratory or Collaborating
Centre (parent) and
a national laboratory (candidate)

Aims and Objectives - Expertise

- To build scientific communities and improve compliance with OIE standards (surveillance and control)
- Improved access to high quality diagnostics and technical assistance for more OIE Members
- Eventually for some Candidates to apply for 'reference' status
- To help countries to enter scientific debate on an equal footing with others

Aims and Objectives - Networking

- Extend the OIE network of expertise to provide better global geographical coverage for priority diseases in priority areas
- To form long and lasting links between the institutes
- Strengthen global disease surveillance networks
- To strengthen national scientific networks
- Create collaborative research opportunities, improve sharing, and advance science

Scope

- Project length is 1-3 years
- For OIE listed diseases or related topics
- All include essential generic topics such as bioethics, biosafety, biocontainment, and quality assurance
- Ultimate aim to reach OIE reference status
- To support the link, but not to buy equipment

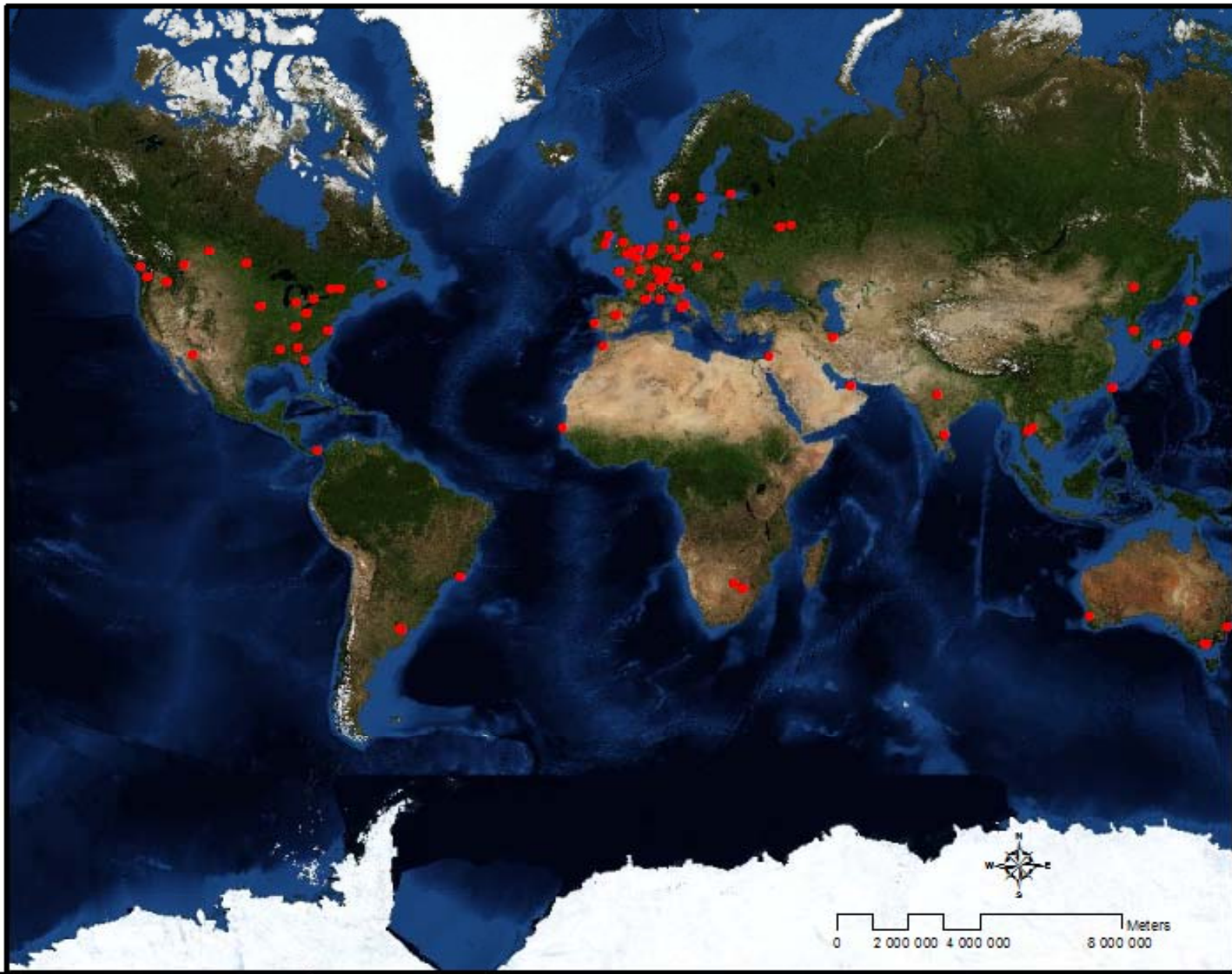
Steps after Twinning

- Engaging with the international scientific community
- Joining disease networks
- Joint research opportunities
- Applying for OIE Reference Laboratory status

Outputs from the Twinning Programme

- Stronger global disease surveillance
- Improved access for OIE Members to rapid and accurate detection and characterisation of pathogens
- Improved biosafety, biosecurity, and bioethics
- Stronger scientific networks
- **Improved capability to prevent, detect, and respond to disease events whatever the source**

OIE REFERENCE LABORATORIES *

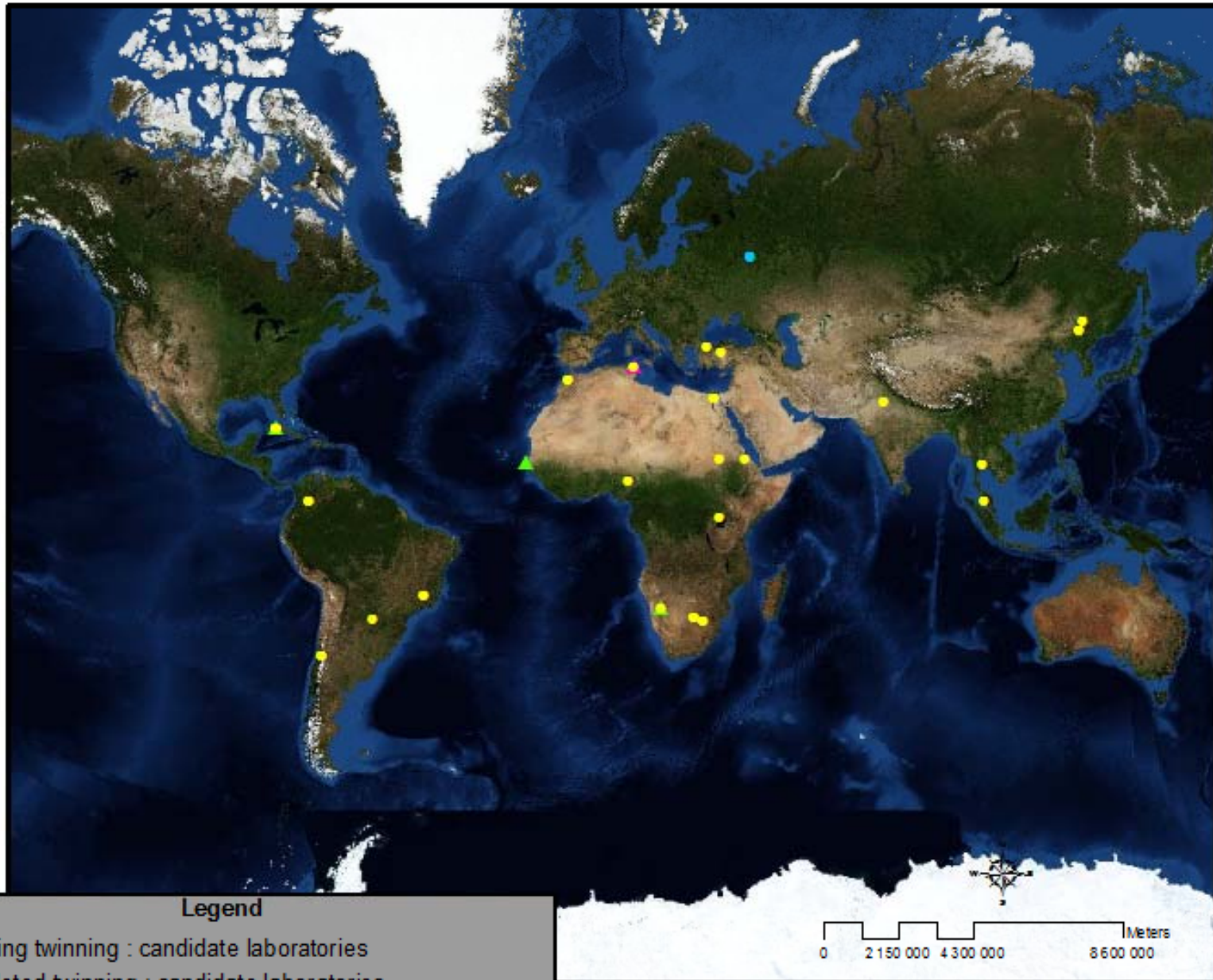


Legend

- OIE Reference Laboratories

* As of May 2010

TWINNING : CANDIDATE LABORATORIES AND COLLABORATING CENTERS



Legend

- On going twinning : candidate laboratories
- Completed twinning : candidate laboratories
- ▲ On going twinning : candidate collaborating centers
- ▲ Due to commence twinning : candidate collaborating centers

OIE Twinning and a One Health Approach

Opportunities to incorporate collaboration between animal health and public health sectors into Twinning Projects

OIE List of diseases (May 2010)

Diseases for which there is no OIE Reference Laboratory

Multiple species diseases

- Epizootic haemorrhagic disease
- Japanese encephalitis
- Old world screwworm (*Chrysomya bezziana*)
- Q fever

Cattle diseases

- Bovine anaplasmosis
- Haemorrhagic septicaemia
- Trichomonosis

Sheep and goat diseases

- Nairobi sheep disease

Swine diseases

- Porcine cysticercosis

Avian diseases

- Avian infectious bronchitis
- Avian infectious laryngotracheitis
- Duck virus hepatitis
- Fowl cholera
- Fowl typhoid
- Pullorum disease

Lagomorph diseases

- Myxomatosis

Other diseases

- Leishmaniosis

Potential Options for “One Health” Twinning Project

- Parent laboratories from PH institutions partnering with candidate laboratories from VS
- Collaboration activities defined in twinning project with PH partners in candidate laboratory’s country – e.g., harmonizing methods used in PH and VS used in country
- Joint training activities for VS and PH laboratory scientists within twinning project

Special Considerations – One Health (beyond Twinning Projects)

- Partnerships with public health laboratories and expertise in public health
 - Access to equipment / methods potentially not available in veterinary laboratories
 - Need for understanding of different methods and approaches
 - MOU/MOA or other agreements
 - Collaborative partnership
 - Reporting of results
 - Prioritization of specimen testing (during or outside of outbreaks)

Special Considerations – One Health Biosafety Issues

- Emerging animal disease investigations and surveillance – zoonotic implications
 - Interest in identifying potential human health threats in animals before human cases occur
 - Veterinary laboratories testing specimens with unknown zoonotic potential
 - Need to ensure that diagnostic methodologies implemented are consistent with the existing facilities and staff capabilities in a sustainable manner

Thank you for your attention

<http://www.oie.int/support-to-oie-members/laboratory-twinning/>



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