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ASSET

share and move to face nasty bugs

MediLabSecure

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The ASSET FINAL EVENT

Share and move for mobilization and mutual learning at local, national and international levels on Science in Society related issues in epidemics and pandemics

Rome, 30-31.10.2017

co-funded by the EU. GA: 612236

MediLabSecure aims at increasing the health security in the Mediterranean and Black Sea Regions by enhancing and strengthening the ***preparedness*** to common health threats.

Cluster 1: Emerging viruses with vector transmission

Cluster 2: Emerging respiratory viruses with possible animal transmission

WP4 Medical Entomology

WP2 Animal virology

WP3 Human Virology and Biosafety

WP 5 Public Health

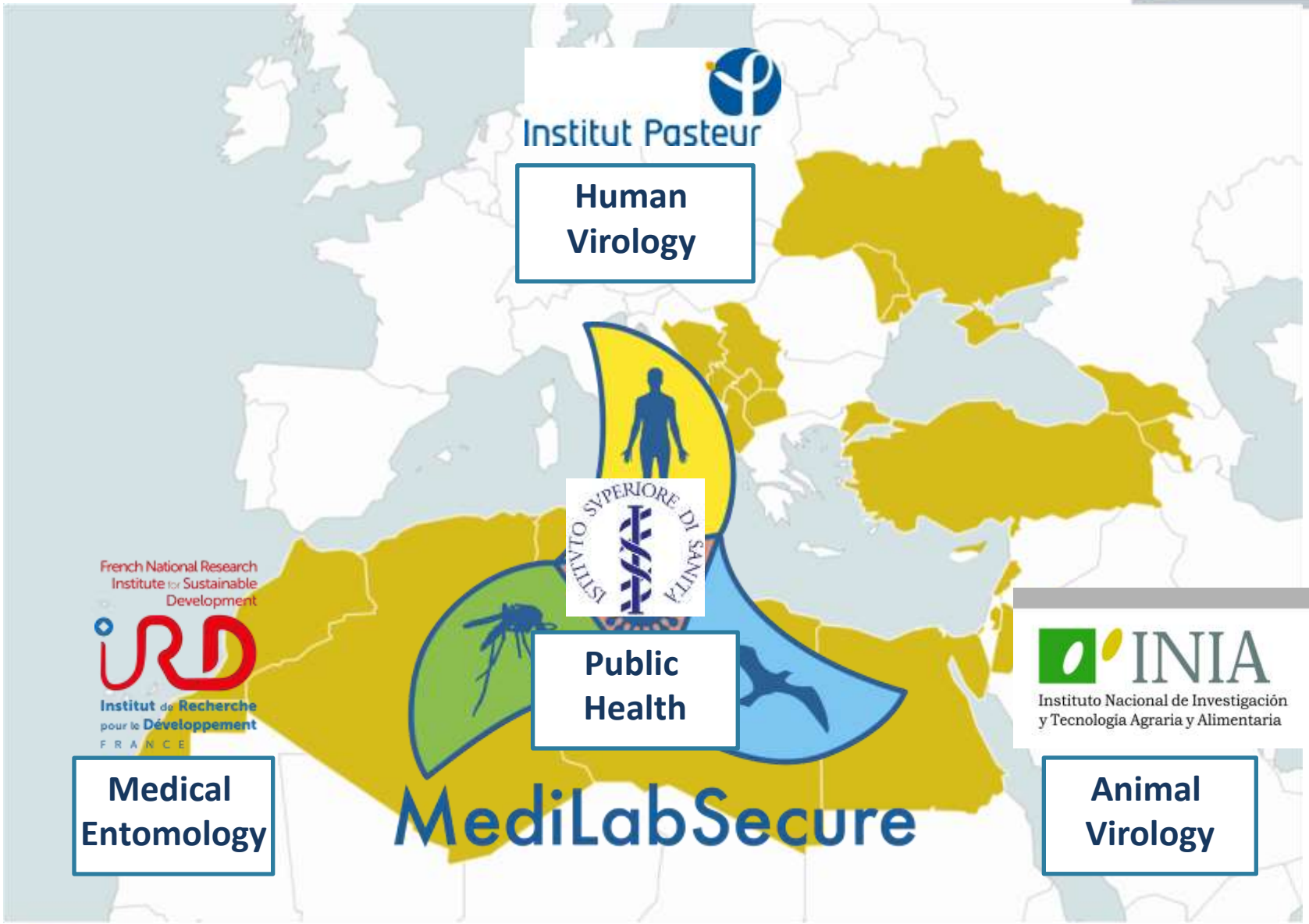
IRD Institut de recherche pour le développement

INIA Instituto Nacional de Investigación y Tecnología Agraria y Alimentaria

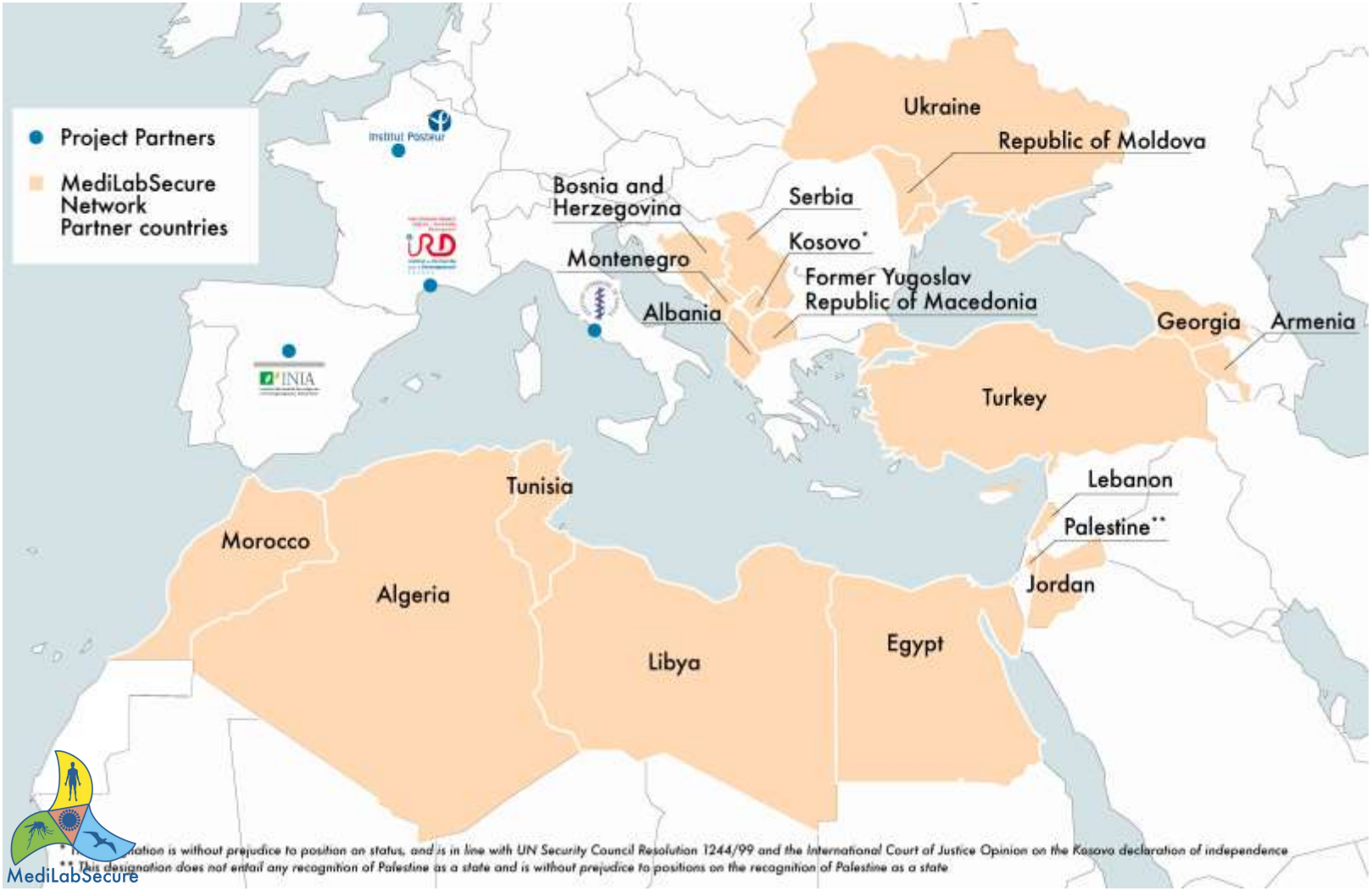
Institut Pasteur

Istituto Superiore di Sanità

One Health Network



The Network



The network comprises 55 laboratories and 19 public health institutions/ministries of health (EpiSouth Network) of 19 non-EU countries in the Mediterranean and Black Sea regions.

…….the desired impact of the One Health approach expected through intersectoral integration can only be achieved if also the capacities of each involved sector are sufficiently strong and developed (Häsler B, Gilbert W, Jones BA, Pfeiffer DU, Rushton J, Otte MJ. The economic value of One Health in relation to the mitigation of zoonotic disease risks. Curr Top Microbiol Immunol. 2012;365:127–51).

MedilabSecure is working with a comprehensive strategy addressing both the capacity of the single sector and the intersectoral integration.

Escadafal *et al. BMC Public Health* (2016) 16:1219
DOI 10.1186/s12889-016-3831-1

BMC Public Health

CORRESPONDENCE Open Access

Risk of Zika virus transmission in the Euro-Mediterranean area and the added value of building preparedness to arboviral threats from a One Health perspective

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ASSET

Main activities

Workshops (lab+field) (10)

- Molecular and serological diagnostic tools for the detection of arboviruses
- Molec. analysis of zoonotic arboviruses
- Capacity building in mosquito vectors of arboviruses
- Vector-borne viruses multisectoral risk assessment and integrated surveillance
- Biorisk management and infectious substances shipment

- 159 participants
- 68 training staff
- 302 hours theoretical and practical training

Qualitative study

Situation analysis on integrated surveillance of arboviruses in the Mediterranean and Black Sea regions

Online atlas

Interactive key for mosquitoes identification

EQAs

PCR (WNV, ChikV)
Serology (WNV, RVFV, ChikV)
Mosquitoes identification

Networking: 14 meetings

- **Coordination meetings**
- **General meetings**
  - Kick-off
  - Heads of laboratories
  - Mid-term meeting
  - 2 regional meetings

Experts visits

Dissemination: > 35 actions

- 1 scientific paper
- 1 position paper
- 1 travelling exhibition
- 27 presentations at conferences (oral and poster)
- 6 Participation to other project meetings (WHO, ECDC, etc)
- One Health day labelling

co-funded by the EU. GA: 612236

Public Health Group
Aim

Public health activities reinforce the preparedness of MediLabSecure Network by strengthening:
integrated surveillance,
multisector risk assessment and
early case detection of arboviral diseases
in the framework of ***One Health***.

Public Health Group Activities

❖ Integrated Surveillance

To identify criteria to define integrated surveillance and to compare different systems:

- A Scoping Review
- A Survey with Medilabsecure members
- A Situation analysis in the Mediterranean and Black Sea Regions

❖ Integrated Risk Assessments

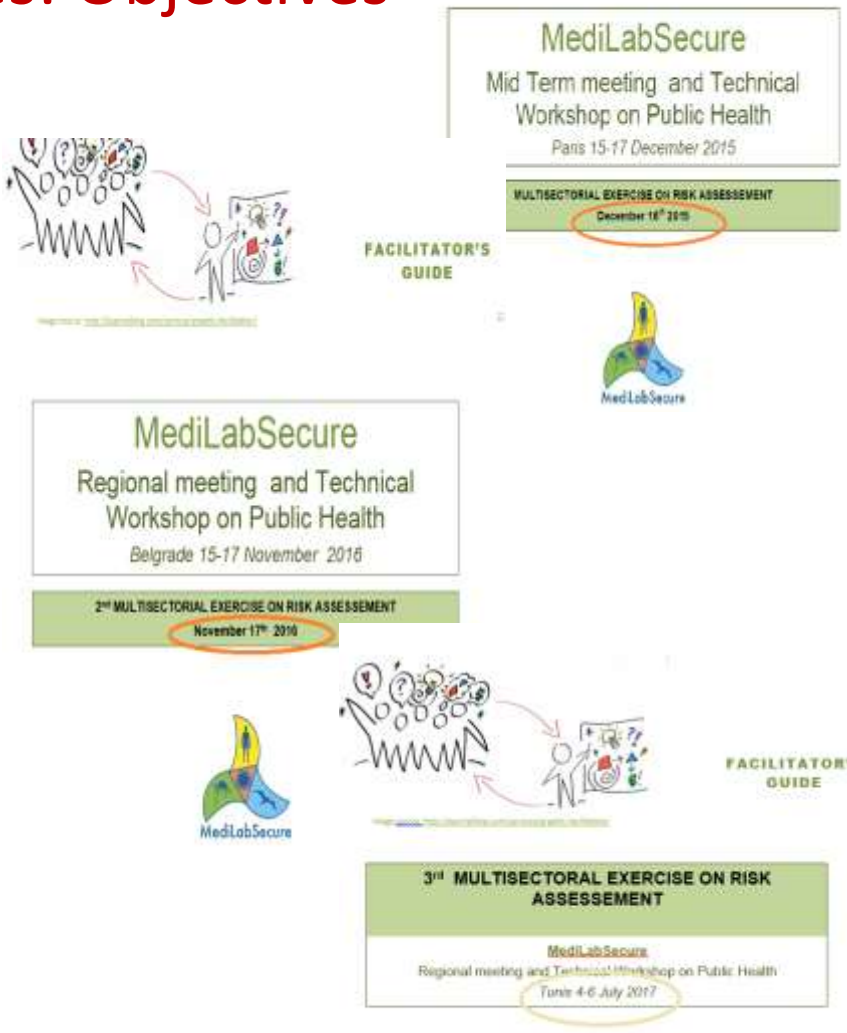
Risk assessment exercises: Objectives

- To foster small group discussion on the status of priorities arboviruses in the region and to assess level of risks at country level

- To enhance knowledge on multisector Risk Assessment (RA) for:

- West Nile Virus disease (1st exercise, Paris 2015)
- Crimean-Congo Haemorrhagic Fever (2nd exercise, Belgrade 2016)
- Rift Valley Fever (3rd exercise, Tunis 2017)

- To make the participants aware of available RA methodologies and tools:
  - the ECDC Tool for RA for WNV (1st exercise, Paris 2015)
  - the ECDC guidance on Rapid RA (2nd exercise, Belgrade 2016)
  - FAO RA methodology (3rd exercise, Tunis 2017)



main results: 1° exercise - WNV

The exercise involved 73 participants divided in 6 small groups by country according to regional proximity:

Groups	Group 1	Group 2	Group 3	Group 4	Group 5	Group 6
Name	Black Sea 1	Black sea 2	North Africa	Balkans 1	Balkans 2	Middle East
N. Participants	9	8	14	11	14	17
Countries	Moldova, Ukraine	Armenia, Georgia	Algeria, Morocco, Tunisia, Egypt	Albania, Bosnia-Herzegovina, Kosovo	Montenegro, Serbia, R. Macedonia	Palestine, Turkey, Jordan, Lebanon

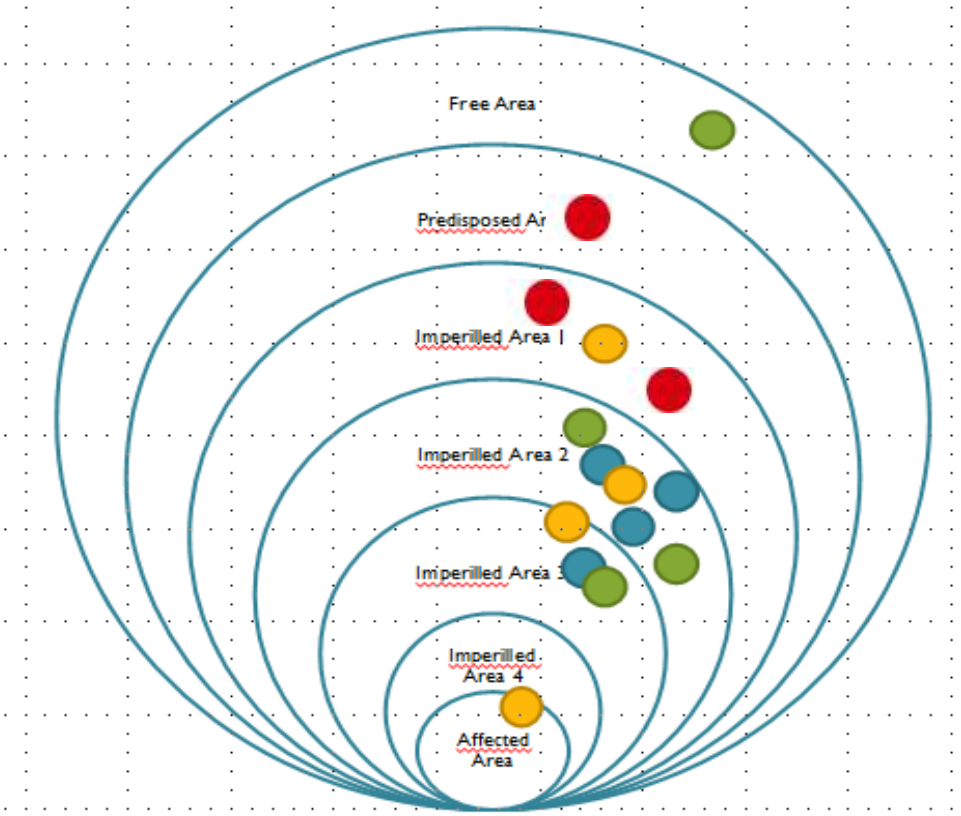
main results: 1° exercise - WNV

Each participant was asked to identify the risk area that is mostly representative of his/her country on a wall poster using sticky dots (dots' colour according to the sector) using the following table from the ECDC tool:

Corresponding risk area	Risk level	Description
Free area	0	No historical circulation of WNV
Predisposed area	1	Ecological conditions suitable for WNV circulation but no historical circulation of WNV
Imperilled	2	Past evidence of WNV circulation
	3a	Evidence of WNV circulation in mosquitoes or birds in the second part of the current season (August-September-October)
	3b	Evidence of WNV circulation in mosquitoes or birds in the first part of the current season (May-June-July)
	4	WNV-specific IgM detected in local non-vaccinated horse(s) or WNV isolated from a local horse.
Affected	5	Detection of at least one human case according to the EU case definition.

Seasonal risk levels of WNV transmission to humans (ECDC Tool)

main results: 1° exercise - WNV



Colour	Sector
yellow	Human virology
blue	Animal virology
green	Medical Entomology
red	Public Health

example risk scoring result by regional group

main results: 2° exercise - CCHF

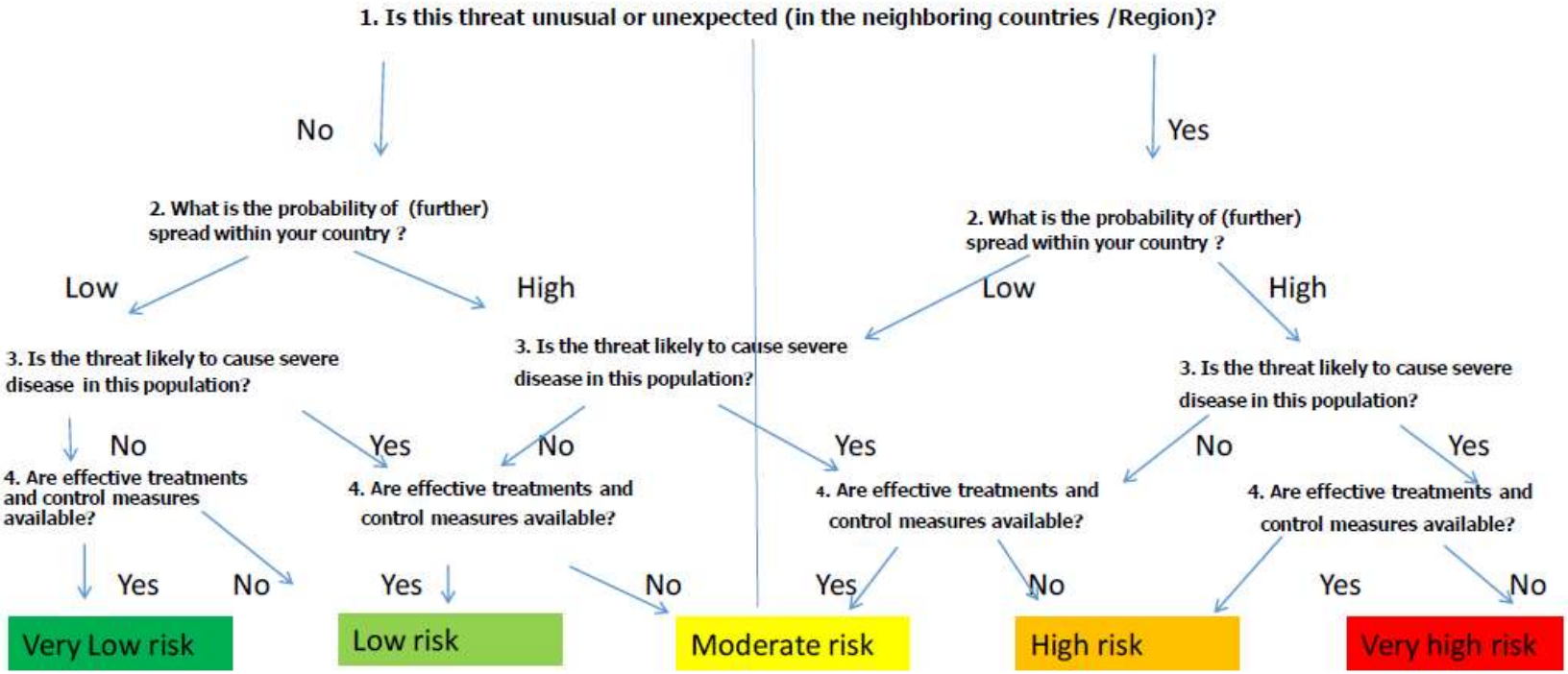
The exercise involved 42 participants divided in 3 small groups by country :

Groups	Group 1	Group 2	Group 3
N. Participants	18	15	9
Countries	Serbia Albania Former Yugoslav Republic of Macedonia	Georgia Armenia Moldova Kosovo Ukraine	Montenegro Turkey Bosnia and Herzegovina

main results: 2° exercise - CCHF

Annex 3. Algorithm for RRA

Rate the potential for transmission within your country:_____
(INSERT NAME OF YOUR COUNTRY) .



Modified from European Centre for Disease Prevention and Control. Operational guidance on rapid risk assessment methodology. Stockholm: ECDC; 2011.

main results: 2° exercise - CCHF

Level of risk assessed (Low/medium/high)	Added value of multi-sector approach for each of the questions of the assessment (Low/medium/high)				
	1. Is this threat unusual or unexpected? (high 10/11)	2. What is the potential for transmission within your country? (high 9/11)	3. Is it likely to cause severe disease in the population? (high 6/11)	4. Are effective treatments and control measures available? (high 5/11)	5. Are there contextual factors that may affect the risk assessment? (high 10/11)
Group 1					
Low	high	high	medium	low	high
Moderate	high	high	high	low	high
Moderate	high	high	medium	low	high
Group 2					
Low	high	high	high	high	high
Low/Moderate	high	high	medium	medium	high
Moderate	high	high	High	medium	high
Moderate/high	high	medium	high	high	high
Moderate/high	high	high	high	high	high
Group 3					
Low	high	high	high	medium	medium
Moderate	medium	medium	medium	high	high
Moderate	high	high	medium	high	high

main results: 3° exercise - RVF

The exercise involved 44 participants divided in 3 small groups by country :

Groups	Group 1	Group 2	Group 3
N. Participants (excluding facilitators)	13	15	16
Countries	Morocco Algeria Tunisia	Libya Egypt Tunisia	Jordan Lebanon Palestine Tunisia

[1] Being the Meeting in Tunisia, Tunisia was "over represented" in the groups. In fact 19 Tunisian referents were involved in the Exercise out of the 44 total participants

main results: 3° exercise - RVF

Risk Assessment Questions:

Q.1.a Which risk factors affect the occurrence, persistence and spread of RVF infection in Africa and other ***areas with a history of RVF infection or outbreak?***

Q.1.b Which risk factors affect the spread of RVF infection into ***new areas***?

Q.2 Which ***preparedness measures*** could be put in place to reduce the risk of RVF virus infection in Africa and other at risk areas?

Q.3 Which **prevention and control options** can be put in place to reduce the impact of RVF spreading?

Q.4.a What is the risk of RVF virus infection ***introduction to*** your country in the next 3–5 years?

Q.4.b What is the risk of the RVF virus ***persisting and spreading*** once introduced into your country ?

main results: 3° exercise - RVF

Added value of the multisector approach:

Almost all the countries considered that doing the assessment with a multisector approach had a high added value for the questions 1 (a. and b.), 2, and 3. In other words, the replies to the question 1, 2 and, 3, were highly facilitated by the concomitant presence of different sectors (human, animal and entomological) at the assessment. This has ensured a comprehensive discussion aimed at filling gaps and decreasing uncertainty.

Q.1.a Which risk factors affect the occurrence, persistence and spread of RVF infection in Africa and other ***areas with a history of RVF infection or outbreak?***
Q.1.b Which risk factors affect the spread of RVF infection into ***new areas***?
Q.2 Which ***preparedness measures*** could be put in place to reduce the risk of RVF virus infection in Africa and other at risk areas?
Q.3 Which **prevention and control options** can be put in place to reduce the impact of RVF spreading?

Risk assessment exercises: lessons learned

- Valorisation, dissemination and utilisation of available methodologies and tools on RA should be promoted at national level also to evaluate the appropriateness of these methodologies and tools in national contexts
- Multisector RA fosters discussion between the different sectors involved in the surveillance of arboviruses and enhances awareness on reciprocal roles, expertise and procedures
- Sectors coordination/collaboration contributes to the assessment of the risks especially in case of lack of relevant documentation and updated information

Thanks for your attention!

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