



Strengthening preparedness to **arbovirus infections** in Mediterranean and Black Sea Countries: the experience of multisectoral risk assessments.

Maria Grazia Dente, Flavia Riccardo and Silvia Declich
Istituto Superiore di Sanità, Rome- Italy
on behalf of MediLabSecure Network



Public Health Conference: Preparedness, Alert and Response ISCIII, Madrid – 15 June 2017



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



One Health Network



Institut Pasteur

Human
Virology



Public
Health

French National Research
Institute for Sustainable
Development



Medical
Entomology

MediLabSecure



Animal
Virology

The Network



- Project Partners
- MediLabSecure Network Partner countries



* This designation is without prejudice to position on status, and is in line with UN Security Council Resolution 1244/99 and the International Court of Justice Opinion on the Kosovo declaration of independence
** This designation does not entail any recognition of Palestine as a state and is without prejudice to positions on the recognition of Palestine as a state

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



Camille Escadafal¹, Lobna Gaayeb¹, Flavia Riccardo², Elisa Pérez-Ramírez³, Marie Picard⁵, Maria Grazia Dente², Jovita Fernández-Pinero³, Jean-Claude Manuguerra¹, Miguel-Ángel Jiménez-Clavero^{3,4}, Silvia Declich², Kathleen Victorir^{1*}  and Vincent Robert⁵

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



Public Health Group Aim

Public health activities reinforce the **preparedness** of MediLabSecure Network by strengthening:

integrated surveillance,

multisectoral risk assessment and

early case detection of arboviral diseases

in the framework of ***One Health.***



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 multisectoral 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)

MediLabSecure
 Mid Term meeting and Technical Workshop on Public Health
 Paris 15-17 December 2015

MULTISECTORAL EXERCISE ON RISK ASSESSMENT
 December 16th 2015



FACILITATOR'S GUIDE



MediLabSecure
 Regional meeting and Technical Workshop on Public Health
 Belgrade 15-17 November 2016

2nd MULTISECTORAL EXERCISE ON RISK ASSESSEMENT
 November 17th 2016



FACILITATOR'S GUIDE

3rd MULTISECTORAL EXERCISE ON RISK ASSESSEMENT
 MediLabSecure
 Regional meeting and Technical Workshop on Public Health
 Tunis 4-6 July 2017



Risk assessment exercises: 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

Risk assessment exercises: 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:

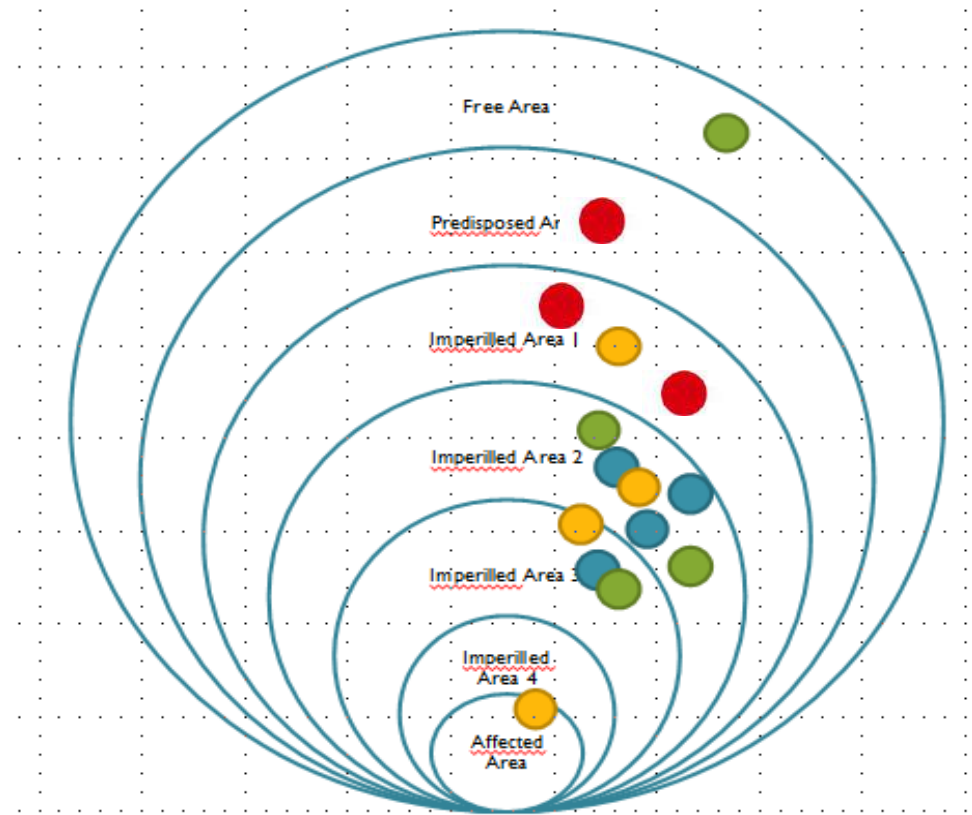
Corresponding risk area	Risk level	Description
Free area	0	No historical circulation of WNV
Predisposed area	1	Ecological conditions suitable for WNV circulation but no historical circulation of WNV
Imperilled	2	Past evidence of WNV circulation
	3a	Evidence of WNV circulation in mosquitoes or birds in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

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

Risk assessment exercises: main results

1° exercise

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



example risk scoring result by regional group

Risk assessment exercises: main results

2° exercise - CCHF

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

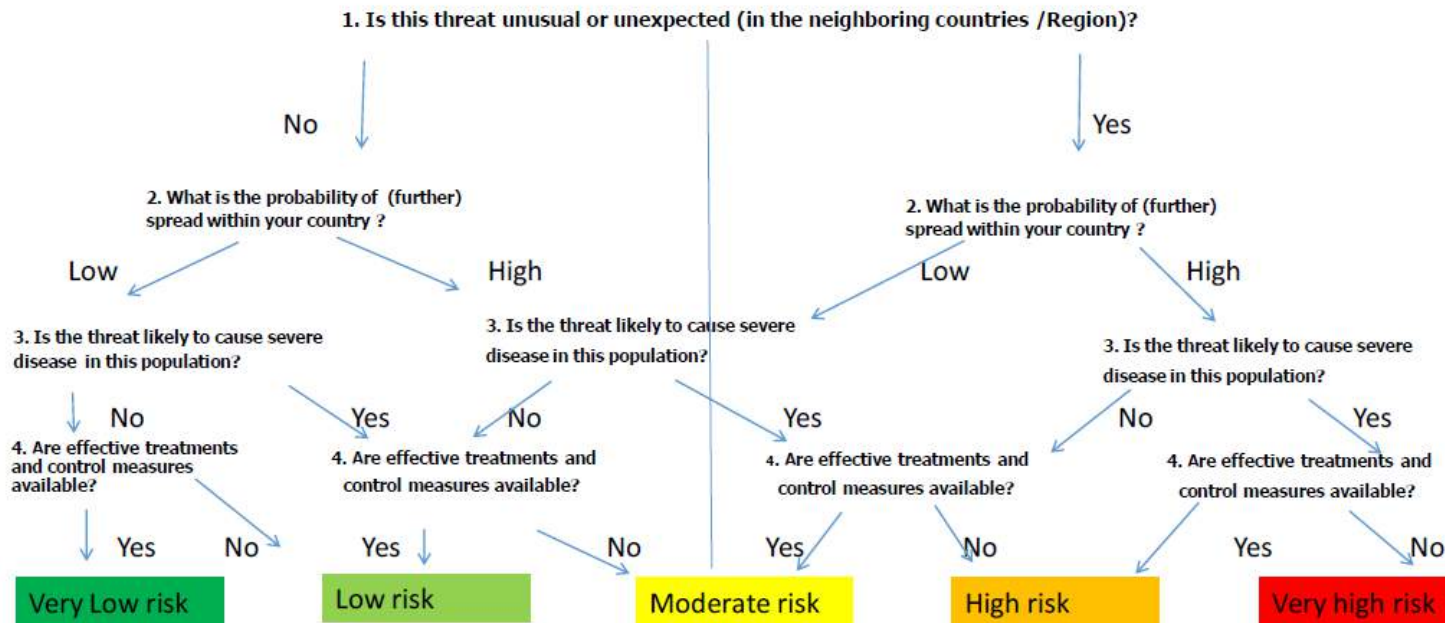
Groups	Group 1	Group 2	Group 3
N. Participants	18	15	9
Countries	Serbia Albania Former Yugoslav Republic of Macedonia	Georgia Armenia Moldova Kosovo Ukraine	Montenegro Turkey Bosnia and Herzegovina

Risk assessment exercises: main results

2° exercise - CCHF

Annex 3. Algorithm for RRA

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



Risk assessment exercises: 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

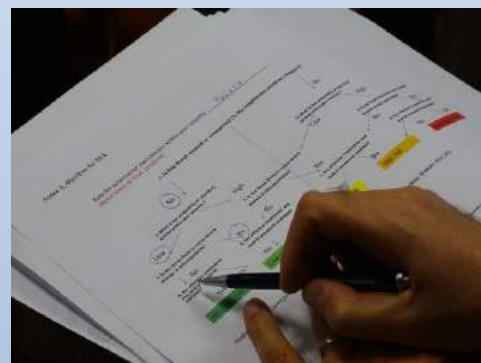
Group 2					
Low	high	high	high	high	high
Low/Moderate	high	high	medium	medium	high
Moderate	high	high	High	medium	high
Moderate/high	high	medium	high	high	high
Moderate/high	high	high	high	high	high

Group 3					
Low	high	high	high	medium	medium
Moderate	medium	medium	medium	high	high
Moderate	high	high	medium	high	high

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
- Multisectoral 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!



The MediLabSecure Project is supported by the European Commission
(DEVCO: IFS/21010/23/_194)

