Medical entomology, the Balkan Group

(Albania, Moldova, Montenegro, Serbia)

Overview of capacities (specificities, common capacities) and needs in the field on emerging viruses

In all four countries there is medical entomology unite with capacities to carry out required actions. Except in Moldova, where no control measures are taken in Albania, Montenegro and Serbia there are Intra Ministries Committees that are called up on assessment of emergency situation caused by viruses.

In each country decision makers in emergency situations are various and from different institutions/national level/bodies… Medical entomology expertise should be crucial in such situations.

List of different actors of the surveillance system for emerging viruses (zoonoses)

Public Health Institutes, Universities (Faculties, Medical and veterinary laboratories)
Local authorities
Foreign experts from international organizations (ECDC, WHO)
EU experts from relevant EU units (TAIEX, ECHA, BP)

Difficulties encountered in the different regions to implement a one health surveillance (is there interaction between different disciplines)

Poor communication between institutions for possible collaboration needed multidisciplinary approach and especially closer collaboration between medical doctors, medical entomologists and veterinarians.

List of good practices to address for better lab efficiency

Needed better record keeping of particular following up species composition and seasonal and dispersal activity. GIS and integrated data based system needed. Where possible on-line provided. Careful monitoring of new introduced of species. Unification / standardization of monitoring/surveillance methods.

List of priority emerging viruses in the region (incidence?)

Albania - West Nile Virus, Congo Crimean Hemorrhagic Fever, Adria Virus (Sand flies)
Moldova – for the current situation no data available
Montenegro - West Nile Virus
Serbia – West Nile Virus, Arboviruses

List of possible viral threats

Chicungunia Virus, Dangue Virus and recently registered Flavi viruses in the region

List of missing identification methods

Albania - Molecular identification; Moldova – partly molecular (DNA sequencing data); Montenegro - Molecular identification; Serbia – Molecular identification

List of missing biological material for identification implementation (positive controls, reference strains,…)

Not relevant for laboratories involved because none of them is using molecular methods for identification.
Moldova has no positive controls for species identifications by PCR technique.

Pathogens witch should be addressed for differential diagnosis

Not relevant for our laboratories

List if local contacts, is it available

No

Communication tools needed

Tools are not needed

Arboviruses in the Balkan region

	Viruses														
	WNV			CHICK			DEN			BAT			CCHF		
	present	emerging	suspected	present	emerging	suspected	present	emerging	suspected	present	emerging	suspected	present	emerging	suspected
Albania	X					X			X			X	X		
Moldova			X			X			X			X			X
MNE	X					X			X			X			X
Serbia	X					X			X			X			X

Laboratory and Epidemiological surveillance in the Balkan region					
	Laboratory surveillance	Epidemiological surveillance	Communication		
			PH	VET	MedEnto
Albania	X	X	X	X	X
Moldova	X	X	X		
Montenegro	X	X	X	X	X
Serbia	X	X	X	X	X

Mapping of the labs in the Balkan region					
	Identification methods used		Identification levels achieved	Good laboratory practices available	Biosafety practices
	morphological	molecular			
Albania	X		species	X	if needed
Moldova	X	X	species	X	if needed
MNE	X		species	X	if needed
Serbia	X		species	X	if needed

Strengths and needs of the labs in ALBANIA

STRENGTHS:

preparing, implementing **surveillance programs: mosquitoes, sand flies** and **ticks**.

Preparing and implementing **control programs** for mosquitoes in touristic and protected areas at the coast.

Collaboration with the neighboring countries (Greece, Italy, Montenegro, Serbia and Kosovo)

NEEDS: building capacities, trainings, technical support capacities. GIS and integrated data based system.

Strengths and needs of the labs in MOLDOVA

STRENGTHS:

preparing, implementing **surveillance programs: mosquitoes, sand flies** and **ticks**.

Collaboration with the neighboring countries (Romania, Ukraine)

NEEDS: building capacities, trainings, technical support capacities

Preparing and implementing **control programs** for mosquitoes in touristic and protected areas at the coast. GIS and integrated data based system.

Strengths and needs of the labs in MONTENEGRO

STRENGTHS:
preparing, implementing **surveillance programs: mosquitoes** and **sand flies**.
Collaboration with Serbia, Italy, Romania, Turkey

EMERGENCY NEEDS: building capacities, technical support. GIS and integrated data based system.

Preparing and implementing **control programs** for mosquitoes, especially vectors and invasive species.

Strengths and needs of the labs in SERBIA

STRENGTHS:

surveillance programs: mosquitoes, black flies, sand flies and ticks.

Control programs.

Collaboration with neighboring countries and Europe wide.

NEEDS: building capacities, technical support, innovative methods and tools in molecular diagnostic. GIS and integrated data based system.

Communication tools available

Tools are not needed