

SEARCH



ARBO-ZOONET WORKSHOPS

ARBO-ZOONET MEETINGS

RELATED PROJECTS &
EVENTS

ARBOZONET ANNUAL MEETING 2010

The annual meeting 2010 of Arbo-zoonet project was held from November 22 to 24 in Rabat, Morocco.

The purpose of this meeting was to review the activities carried out on Rift Valley fever virus, West Nile virus, Crimean-Congo hemorrhagic fever virus and related viruses and to link with other networks and International organisations. Thus participants from OIE, eCDC and WHO as well as representatives from other scientific networks, such as EpiSouth, EDENext and EuroWestNile attended the meeting.

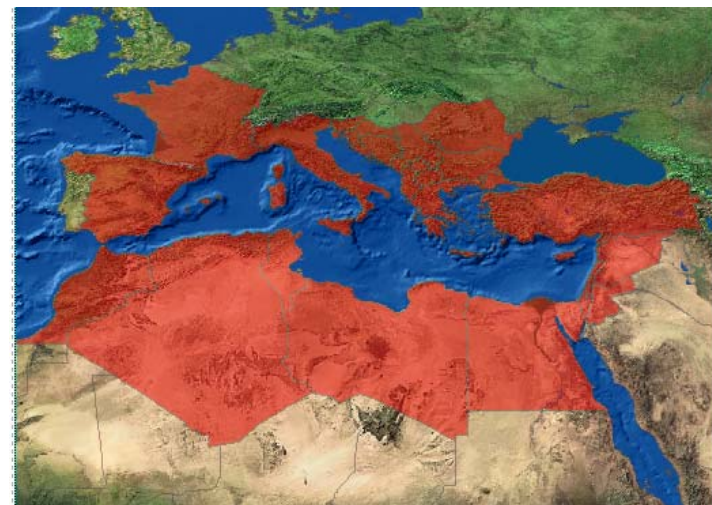
The two-and-half day meeting was devoted to presentations and discussions on presentations by the participants of Arbo-zoonet and to opened discussions with our colleagues from International organisations and other networks. Young researchers were encouraged to present their work. Intensive discussions on current scientific developments took place during the meeting in Rabat.

Please go to the [download section](#) to get the abstract booklet and the presentations from the meeting.



Practical illustration Epidemic intelligence and cross border

CCFF and West Nile

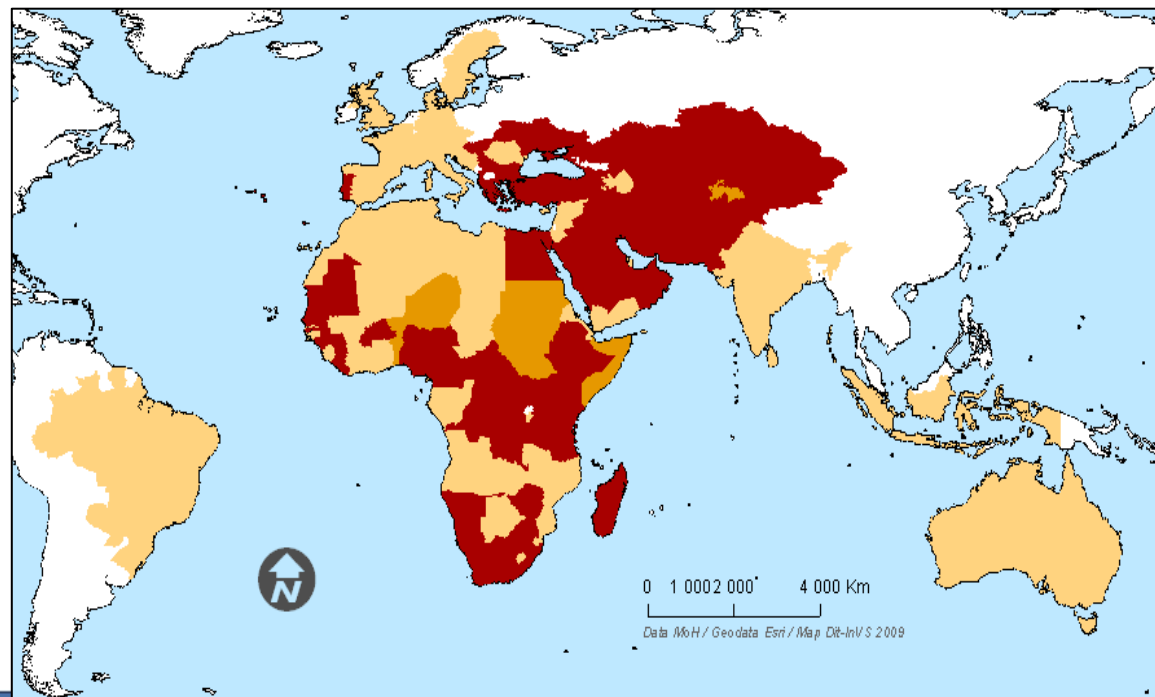
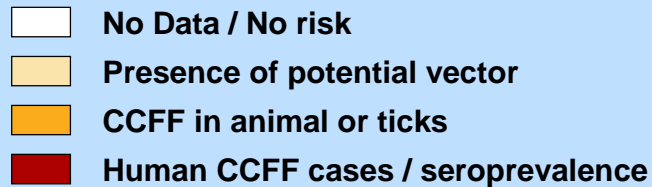


Philippe BARBOZA,
for the EpiSouth WP6 Steering committee

Department of International and Tropical Diseases
Institut de Veille Sanitaire (InVS),
France

- CCHF is the most widespread viral haemorrhagic fever : enzootic large parts of old continent
- In 2008, indication of intense CCHF circulation in Balkan & Black Sea area
- Review of CCHF epidemiology performed jointly by EpiSouth, InVS & WHO-EURO for Albania, Bulgaria, Greece, Iran, Kosovo, Russia & Turkey

Distribution of vector and known areas of CCHF seroprevalence, 1944–2009.



● **Transmission:**

- ❑ Essentially linked to tick bites during farming or cattle-raising activities
- ❑ Person-to-person transmission, especially in health care setting

● **Clinical presentation:** pauci/asymptomatic infections frequent → Surveillance biases

● **Case-fatality rate (CFR) :**

- ❑ **Literature** : as high as 40–50%, in severe forms during epidemics in resource-poor settings
- ❑ **More recent data (in 2008)** from Turkey, Iran and Russia : Global CFR in hospitalized patients (all grades of severity), is closer to 2–6%.

● **Treatment**

- ❑ Ribavirin approved by WHO as a specific treatment

CCHF epidemiology (1)

Turkey

- 1st symptomatic human case in 2002
- Since 2002 increasing trend
- 2002- 2009 : 4 435 confirmed cases
- CFR 4.9%

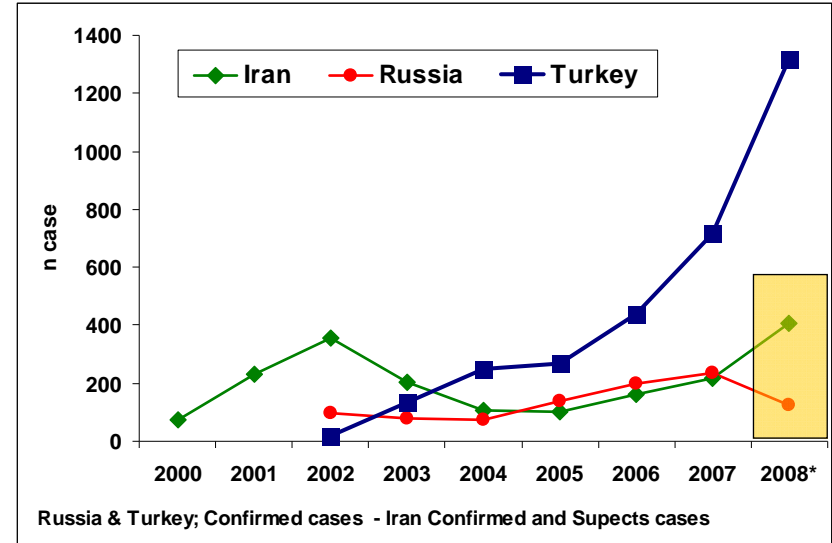
Russia

- Since 1999 re-emerged in several part of the country
- In Southern Federal District 2002 - Mai/08 ; 839 confirmed cases
- CFR 3.2%

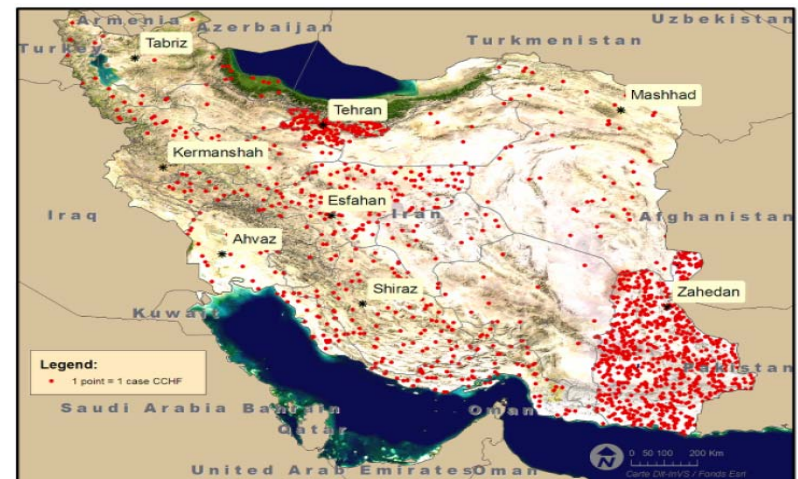
Iran

- Endemic in many areas
- 2000 - 2008 : 1 863 cases
- CFR 4.1%

Reported CCHF cases Iran, Russia & Turkey 2000–2008 (Sources MoHs/ PI)



CCHF Cases Iran, 2000–2008



Source: EpiSouth, upon permission of Dr S. Chinikar, Pasteur Institute, Tehran)

● Albania

- ❑ 2001 - 2006, 92 cases; 7 family clusters (\approx 50% of the cases).

● Bulgaria

- ❑ 1953 - 1974, 1 101 cases
- ❑ 1975 - 1996, vaccination \rightarrow 271 cases
- ❑ 1997-2008 , 197 (CFR: 22%)

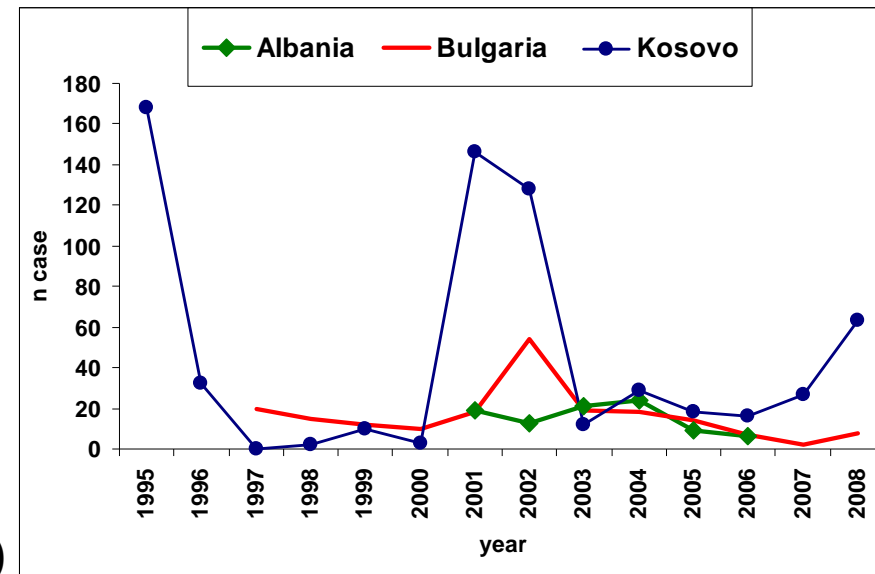
● Kosovo

- ❑ Endemo-epidemic several rural areas
- ❑ Seroprevalence \approx 24% in endemic areas.
- ❑ 1997-2008 : 654 cases (CFR 5.6%)

● Greece

- ❑ Before 2008 Non pathogenic strain (AP/92)
- ❑ 1st human cases in 2008

Reported CCHF cases Albania Bulgaria and Kosovo 2000–2008
Sources NPI



- Since \approx 2000, increasing trend in several areas
- 2008 conclusion : Network needed to better document
 - Epidemiology of human CCHF cases
 - Severe cases management and response to treatment
 - Differences in implemented surveillance systems
 - Lack of funding → Still pending
- CCHF continues to be a PH issue in the Balkan
 - e.g. Kosovo Apr. 26-Jul. 7, 2010 : 123 suspect cases (incl 19 confirmed) admitted ICG Pristina

West Nile virus circulation in the EpiSouth countries

as of 7th October 2010

- Since 1st documented outbreak in 1951 in Israel, circulation documented almost worldwide
- Large human outbreaks
 - EpiSouth area :Romania (1996-1997) Tunisia (1997); Israel (2000)
 - Also in neighboring areas : Russia (1999)
- Up to 2010, restricted to limited geographical settings
- Surveillance biases
 - Number of neurological reported cases grossly underestimate circulation in human
- Not all countries have specific surveillance system



West Nile 2010

- Mid August 2010 increased WNV circulation detected
- 2nd September → EpiSouth survey on
 - WN surveillance systems, availability of national WNV laboratory
 - Epidemiological context; cases definition and recent cases...
- 24 countries participated
- 1st July and 7th Oct. → 8 countries reported WN outbreaks

■ 373 human confirmed cases including 41 deaths in 6 countries

❖ Greece	257 cases	(31 deaths)
❖ Israel	65 cases	(3 deaths)
❖ Italy	1 case	(0 death)
❖ Romania	41 cases	(4 deaths)
❖ Spain	2 cases	(0 death)
❖ Turkey	7 cases	(3 deaths)

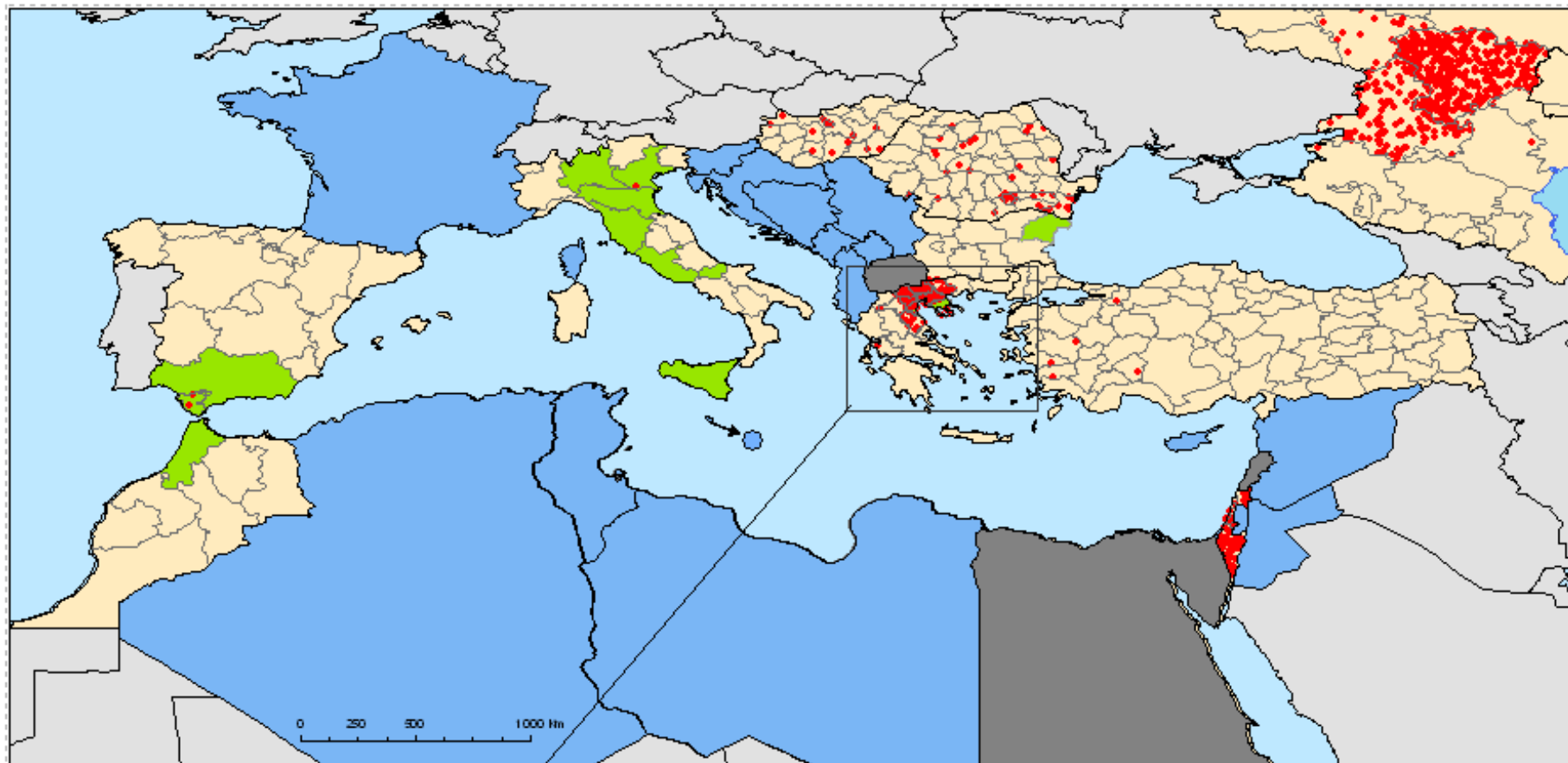
For Greece and Turkey, there are the 1st WN human infections first ever.

■ 5 countries reported 140 equine WN cases:

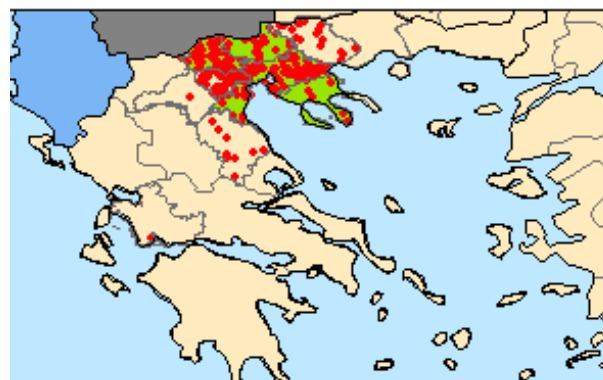
- ❖ Bulgaria,
- ❖ Greece,
- ❖ Italy,
- ❖ Morocco
- ❖ Spain

For Bulgaria & Spain, the 1st equine cases reported to OIE







7 Oct 2010



Source Data EpiSouth Countries, and MoH for non-EpiSouth Countries / Map EpiSouth



Legend:

Recent West Nile circulation	Human Cases / Region
 Information pending	 1 point=1 Human case
 No recent WNV	cases randomly located within administrative unit
 Recent WNV Circulation	Animal WNV cases (Horses/Birds)
 No information/Non EpiSouth Country	 Recently affected region

Reference Laboratory (23 responding countries)

- 15 have operational national WN reference laboratory,
- 4 have a **non** functional reference laboratory
- 1 has identified an external reference laboratory
- 4 have no reference laboratory

Human Surveillance (23 responding countries)




- 15 countries have a specific human specific WN surveillance
 - 9 maintain permanent (year long) passive surveillance,
 - 2 have a seasonal only surveillance system
 - 3 permanent surveillance + enhanced seasonal system in at-risk areas.

Veterinary surveillance (23 responding countries),




- 11 countries maintain permanent equine surveillance system
- 3 have seasonal equine surveillance.
- 6 countries have also implemented a bird sentinel surveillance system

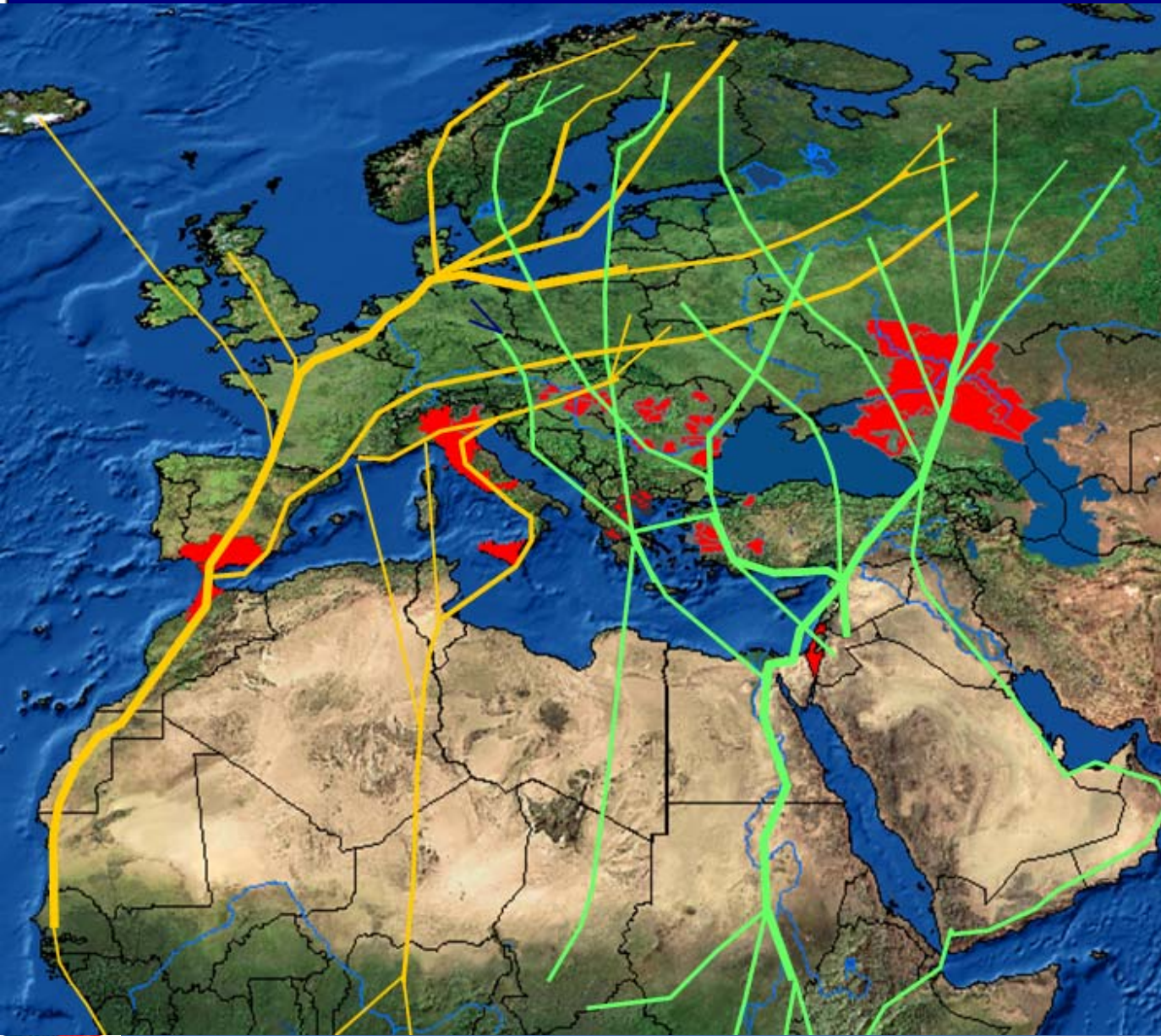


Human WNV surveillance (areas or whole country)



- | | | | |
|---|---------------------------|---|--|
|  | Permanent surveillance |  | No Human WNV surveillance, but equine surveillance |
|  | Seasonal surveillance |  | No information |
|  | Non specific surveillance |  | Non EpiSouth Countries |
|  | No Human WNV surveillance | | |

Lab, human & equine WNV cases

- | | |
|---|-------------------------------------|
|  | Functional WNV reference laboratory |
|  | WNV Human cases (Since Aug. 2010) |
|  | WNV equine cases (Since Aug. 2010) |



Major flyways

-  Eastern Route
-  Western Route

Documented
WNV circulation
(human / animal)
1st Aug. 7th oct.
2010



- **Limits** : Information collected in a very short time, number of items wilfully limited and does not allow in-depth analysis.
- **Objective** : Share as rapidly as possible information for decision making (e.g. blood donors restriction)
- Contributed to raise awareness in providing broad perspective of WN circulation & heterogeneity of strategies and resources available for WN surveillance.
 - 11 EpiSouth countries with specific WNV (humans **and** horses) surveillance **and** operational lab : 7 diagnosed human or horses cases
 - **None of** countries without specific WNV surveillance system reported case.

Conclusion

- 2010 : Unprecedented. reported viral circulation in Mediterranean
- WNV circulation in Mediterranean concomitant with outbreak in Russia (esp Volga delta).
- Origin of high viral circulation not clearly understood.
 - Human or horse cases almost simultaneously on **all majors birds migratory routes** crossing Mediterranean but also in the Volga delta
 - Link between with Volga or other unreported /detected outbreaks?
- Lack of virological data (lineage, phylogenetic...)
- Further studies involving the different countries needed to document dynamic of this unusual viral circulation and its impact for future
- Promotes strengthening WN surveillance & access to laboratory facilities across EpiSouth countries & synergies with existing networks

WNV & CCHF Arbo-zoonet priority diseases

→ Which possible synergies?



Acknowledgments

Network for Communicable Disease Control in Southern Europe and Mediterranean Countries

CCHF

F. AÏT-BELGHITI (1), A. TARANTOLA (1), J. GUEGUEN (1), A. RACHAS (1), A. KURCHATOVA (2), S. CHINIKAR (3), A. KALAVESHI (4), N. RAMADANI (4), M. TORUNOGLU (5), R. YILMAZ (5) AND P. BARBOZA (1)

Affiliation

- 1) International and Tropical Department, Institut de Veille Sanitaire, France
- 2) National Centre of Infectious and Parasitic Diseases, Bulgaria
- 3) Pasteur Institute of Iran, Islamic Republic
- 4) National Institute for public Health of Kosovo, Kosovo
- 5) Ministry of health, Turkey

WNV

AÏT-EL-BELGHITI (1), P.BARBOZA (1), V GAUTIER (1), G LA RUCHE (1), I CAPEK (2), MG DENTE (3), R VOROU (4), M GASTELLU-ETCHEGORRY (1), ON BEHALF OF WP6 STEERING-TEAM (5)

Affiliation

- 1) International & Tropical Department, InVS, France
- 2) Infectious department, InVS, France
- 3), Istituto Superiore di Sanità, Italy
4. HCDCP, Greece.
- 6.WP6 Steering Team : E. Anis, M. Bromberg (Israel); A.Kalaveshi, N Ramadani (Kosovo) R. Haddadin, S. Abdullah Saleh (Jordan); C. Gauci, T. Mellilo Fenech, J. Maistre Mellilo (Malta); A. Rguig, M. Youbi (Morocco); D. Lausevic, Z. Vratnica (Montenegro); B. Madi , B. Rimawi (Palestine); M. Bejaoui, M Ben Gorbali (Tunisia).

And All EpiSouth Focal Points