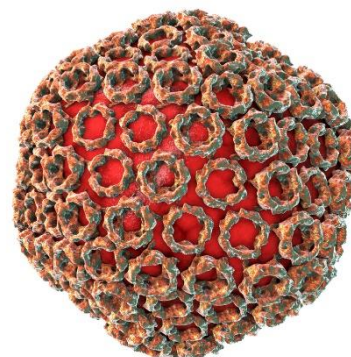# Online Simulation Exercise
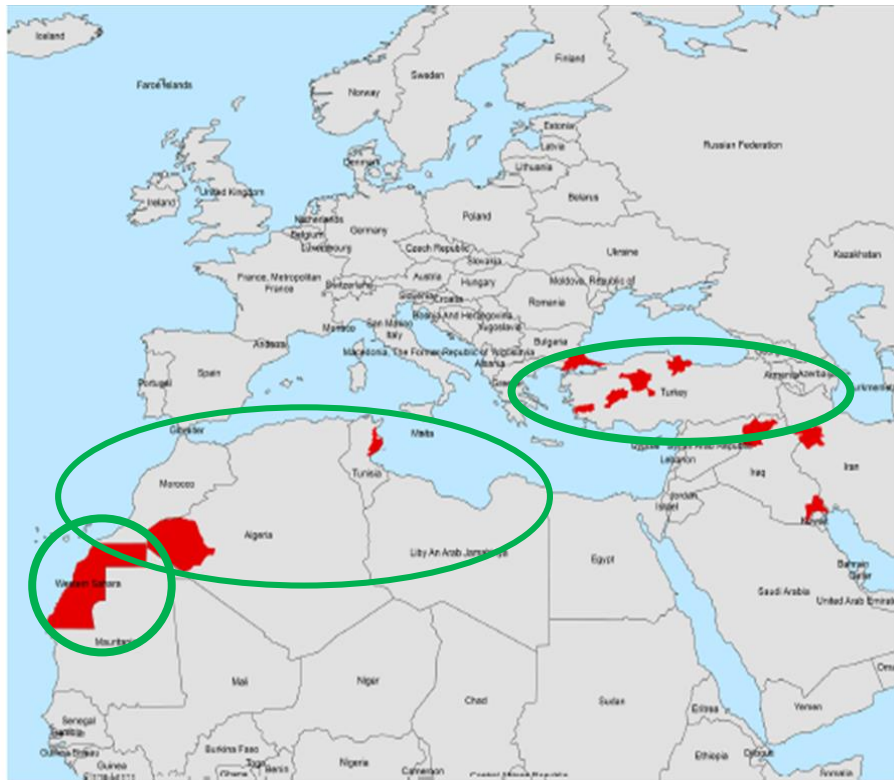# Rift Valley Fever
15th December 2021

Qualitative risk analysis (MAPA, 2014)
## Risk of entry and risk of establishment

Figure 6: Countries (Algeria, Iraq, Iran, Turkey, Tunisia and Western Sahara), where RVF seropositive results have been detected, with data available through publications or reports

Very low risk of entry

Significant pathway identified: mosquitoes carried by the wind from North African countries

Risk of establishment in case of entry

Risk map of disease establishment in case of entry

Alto

Bajo

N

0   90 180   360   540   Kilómetros
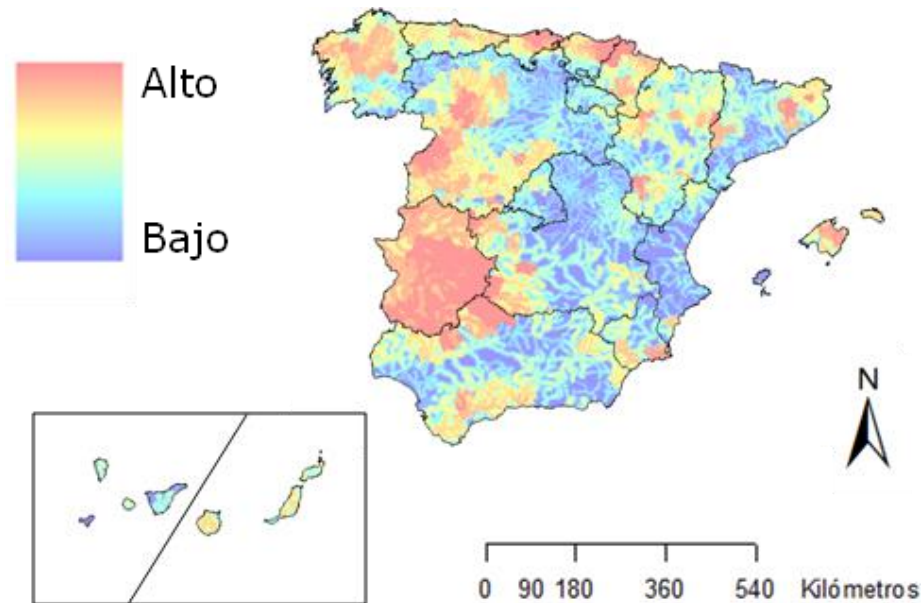
Surveillance Program Spain

- **Passive surveillance**: identification of compatible symptoms and immediate communication to the OVS of the CA.

- **Active surveillance**: based on sentinel farms in areas of higher geographical risk due to their proximity to North Africa (Andalucía an Canary Island) and endemic countries such as Mauritania (Canary Islands).

- Objective: demonstration of no circulation.
  - Sentinel farms: 6 farms / province and 10 bovine or sheep animals / farm, 1 annual round in Andalucía (after vector activity period) / 2 annual rounds in the Canary Islands (before and after vector activity period)
  - A total of 59 samples per province (4 provinces in Andalucía and 2 provinces in the Canary Islands) trying to distribute the sampling spatially in each province as much as possible.

Annual sampling by region	Sampled animals	Total
Andalucía (Cádiz, Huelva, Málaga, Sevilla)	236 (4x59)	236 (1 round)
Canarias (Las Palmas, Santa Cruz de Tenerife)	118 (2x59)	236 (2 round)
Total	**354**	**472**

All samples have been negative for RVF so far

Monitoring system for competent mosquitoes

Main competent mosquito populations well characterized
Historical information available

Figura 3. Distribución en España de los mosquitos *Culex pipiens*
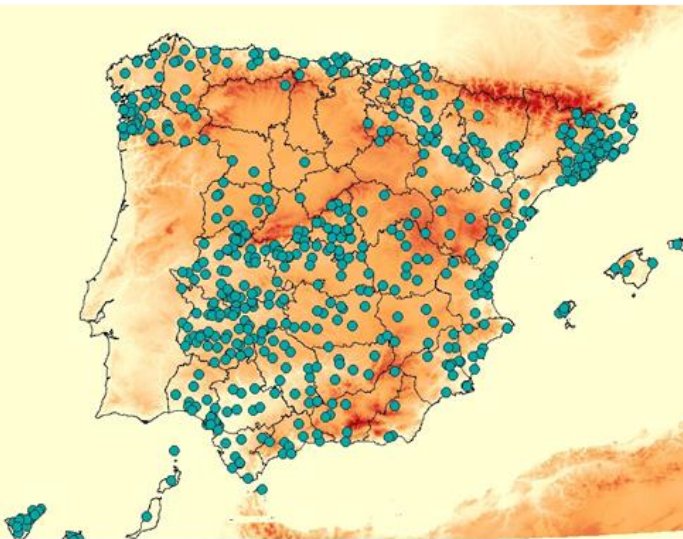
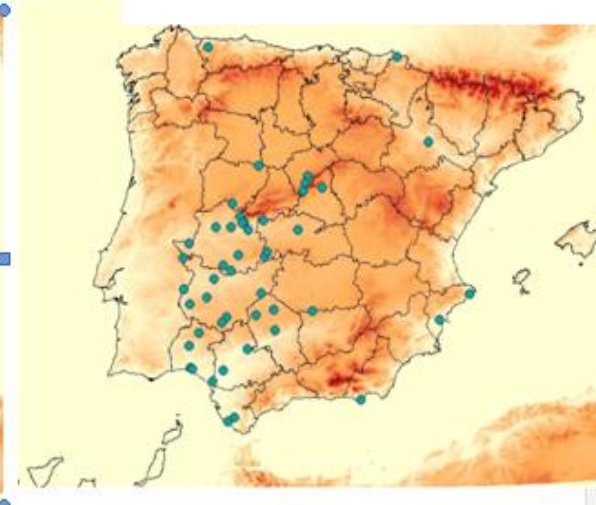Elaboración propia: J. Lucientes, R. Estrada, S. Delacour

Figura 4. Distribución en España de los mosquitos *Culex theileri*

Figura 5. Distribución en España de los mosquitos *Culex perexiguus*

Elaboración propia: J. Lucientes, R. Estrada, S. Delacour

EFSA Opinion: Rift Valley Fever – epidemiological update and risk of introduction into Europe (January 2020)

Table 10: Qualitative model outputs of entry, transmission and overall introduction RVF for each MSs

Country pathways	Entry score animal	Entry score vector	Level of transmission animal	Level of transmission vector	Establishment animal	Establishment vector	Overall score of introduction animal	Overall score of introduction vector
AT	very low	very low	moderate	moderate	very low/low	very low/low	very low	very low
BE	very low	very low	moderate	moderate	high	very high	very low	very low/low
BG	very low	very low	moderate	moderate	very low	very low/low	very low	very low
HR	very low	very low	moderate	moderate	moderate/high	very low	very low	very low
CY	very low	very low/low	moderate	moderate	high/very high	moderate/high	very low	very low
CZ	very low	very low	moderate	moderate	very low	very low	very low	very low
DK	very low	very low/low	moderate	moderate	very low	very low	very low	very low
EE	very low	very low	moderate	moderate	very low	very low	very low	very low
FI	very low	very low	moderate	very low	very low	very low	very low	very low
FR	very low	very low/low	moderate	moderate	moderate/high	low/moderate	very low	very low
DE	very low	very low/low	moderate	moderate	very low/low	very low/low	very low	very low
EL	very low	very low	moderate	moderate	very high	very high	very low	very low/low
HU	very low	very low	moderate	moderate	low/moderate		very low	very low
IE	very low	very low	moderate	moderate	very low	moderate/high	very low	very low
IT	very low	very low	moderate	moderate	high/very high	moderate/high	very low	very low
LV	very low	very low	moderate	moderate	very low	very low	very low	very low
LT	very low	very low	moderate	moderate	very low	very low	very low	very low
LU	very low	very low	moderate	moderate	moderate	high	very low	very low
MT	very low	very low/low	moderate	moderate	very high	very high	very low	very low/low
NL	very low	very low/low	moderate	moderate	high	very high	very low	very low/low
PL	very low	very low	moderate	moderate	very low	very low	very low	very low
PT	very low	very low/low	moderate	moderate	very high	high	very low	very low
RO	very low	very low	moderate	moderate	low/moderate	low/moderate	very low	very low
SK	very low	very low	moderate	moderate	very low	very low	very low	very low
SI	very low	very low	moderate	moderate	low/moderate	very low/low	very low	very low
ES	very low/low	very low	moderate	moderate	low/moderate	very low	very low	very low
SE	very low	very low	moderate	moderate	very low	very low	very low	very low
UK	very low	very low	moderate	moderate	very low	high/very high	very low	very low

Two important recommendations to fulfill

- Although it appears that EU territories are not directly exposed to an immediate risk of introduction of RVFs, **EU authorities need to strengthen, improve and harmonize their surveillance and response capabilities**, as well as their scientific and technical knowledge to be better prepared in case of introduction of RVF virus.

- Taking into account that the highest risk values were estimated for the introduction of infected vectors, **it is recommended to integrate the surveillance systems for invasive mosquitoes**, currently active in the EU, taking into account the main possible entry points for vectors infected by RVF through sea and air.

Theoretical-practical tabletop simulation exercise in online format.

Focused on managing a health event due to the introduction of RVF in Spain with the participation of competent authorities on Animal Health and Public Health in the frame of the "One Health" approach.

Approximately 100 participants
Ministry of Agriculture, Fisheries and Food (MAPA)

Health Alerts and Emergencies Coordination Center (CCAES) of the Ministry of Health (MS)

National Center for Epidemiology (CNE) and the **National Center for Microbiology (CNM)** of the Ministry of Science and Innovation

Regional Central Services for Animal Health and Public Health (Epidemiology and Food Safety) of the Autonomous Communities of **Andalucía, Extremadura, Castilla - La Mancha, Castilla y León and Cataluña**; as well as the **Provincial and Local Animal Health Services** of those Autonomous Communities.

In addition, the **Central Regional Public Health Services of Valencia**.

Central Regional Animal Health Services of the Autonomous Communities of La Rioja and País Vasco participated as **observers**.

Objectives:

- **Increase the level of awareness** of the official services of both Animal Health and Public Health regarding RVF.

- Verify and/or evaluate channels and level of **coordination and communication between the official services of both Animal Health and Public Health within the framework of the "One Health" approach** as the best possible approach for the management of a zoonotic disease such as RVF.

- Assess **response and management capacity to deal with an** outbreak of RVF affecting animals and humans.

- Evaluate **internal and external risk communication protocols**, particularly communication aimed at professionals and the general public, given the possibility of social alarm that a disease like this could cause.

Main strengths:

- Existence of an **Inter-ministerial Commission** for the management of alerts related to zoonotic diseases that has been activated in the past per example in the case of HPAI.
- **RVF surveillance plan in place for animals**.
- There is a **satisfactory level of communication and coordination** at technical and mainly central level, through informal channels, between Animal Health and Public Health authorities.
- **Continuous collaboration with experts that could be rapidly involved to assist decision-making.**
- **Sufficient preparation and capacity to provide a rapid, coordinated and effective response to a primary incursion of RVF.**
- **Entomological monitoring systems in place could provided useful information and equipment for the management of outbreaks**.
- Existence of **powerful databases** of farms (REGA), animal identification and animal movements (RIIA and REMO) (Spain has a state of the art traceability from farm to fork).
- **Computer applications that** may help to define rapidly PZ and SZ for rapid assessment of the affected zone.
- **Capacity to diagnose** the disease in both Public Health and Animal Health laboratories.

Main weaknesses:

- **Spain does not have a formally regulated joint technical management body** within the **framework of "One Health".**
- **In some areas** with high density of susceptible animals/farms there could be **shortages of human and material materials**.
- **Lack of integration and coordination of** entomological monitoring and surveillance programs between Animal Health and Public Health at national level.
- **Lack of commercial vaccines in the EU market**. **Lack of DIVA vaccines at Internacional markets.**
- Many sheep/goat and cattle farms with low **biosecurity due to extensive productions systems**, which could complicate the control of the disease.
- The **increasing level of society sensitivity towards animal welfare**, which could make official actions difficult, in particular the slaughter of animals to control del outbreak.
- **Lack of information on the role of wildlife** in the epidemiology of this disease.

Recommendations (I):

- Creation of a **formal joint technical management body** within the framework of "One Health" as a communication body in peace time and to be rapidly activated in the case of an outbreak.

- **Coordinate a joint communication plan** between MAPA and the Ministry of Health to be activated in the event of outbreaks of zoonotic diseases of particular severity such as RVF.

- **Improve training and awareness of professionals to be involved with RVF outbreaks**.

- Given the large areas that would be put under restrictions**, a review of the RVF operational manual would be useful to assist CA,** in particular in the organization of measures to be implemented in the protection and surveillance zones around outbreaks.

- **Integrate animal health side in the national preparedness and response plan for vector-borne diseases implemented by the public health authorities** which include surveillance and response.

- Take into account **other transmission routes** such as those associated with the handling of risk materials such as infected meat and raw milk from viremic animals.

Recommendations (II):

- **Improve biosecurity in sheep and cattle farms, especially in risk areas related to RVF.**

- Due to the zoonotic potential of RVF related samples an **improvement** is necessary, through training and awareness-raising campaigns, **on the delivery of samples to the laboratory** to ensure that it is done correctly (packaging and identification), what would increase laboratory personnel safety.

- Prepare **specific contingency plans for animal health diagnostic laboratories**, which could lead to the establishment of a list of regional official (and non-official) laboratories that have biosafety levels for adequate management and diagnosis of RVF samples,. This would make the transfer of diagnostic techniques from the Algete LNR rapid in case an increase in diagnostic capacity is necessary in the event of an outbreak.

- I+D effort to develop a **safe, effective, quality and DIVA vaccine to be used in an emergency of RVF in Spain**.

- Communicate to the EC the **need to establish a vaccine bank at EU level**, with the characteristics above, for RVF at the disposal of the MMSS.

Thank you for your attention!

Any question?