In order to optimize risk-based surveillance of animal diseases, a method developed by CIRAD integrates a risk mapping approach linked to animal mobility and risk assessment.

The principal objective of this training program is to reinforce national capacities and to assist the vet services or animal health actors of specific countries to prevent the introduction and the spread of diseases in the field and to detect new outbreaks with risk-based surveillance systems. This method can be applied to zoonotic diseases and used by public health experts. The aims of these training program are in particular to acquire gradually tools and methods to manipulate animal flows information and identify the risks associated with them. The training will deal with data collection, processing of technical and statistical analysis, handling geospatial information and cartographic visualization and finally risk assessment, risk mapping and risk-based surveillance. Veterinaries and animal health workers learn different tools for handling animal flows information and methods to estimate the highest risk factors (movements, periods, regions...). Finally, they are able to produce risk maps for targeted diseases such as Highly Pathogen avian Influenza, Rift Valley Fever, Foot-and-mouth disease, Peste des petits ruminants.

The 1st session (5 days) will cover data collection (protocols design and data collection on tablet), processing of technical and statistical analysis (specifically on animal mobility), handling geospatial information and cartographic visualization (GIS tools). The 2nd session (5 days) will be devoted to an introduction to risk mapping, risk assessment and risk-based surveillance methods.

**Educational objectives**

At the end of the 1st training week, participants will be able to:

- Master all basic functions of QGIS software for handling geospatial information and creating maps;
- Collect, visualize and analyze animal (or human) movements

At the end of the 2nd training week, participants will be able to:

- Assess risk of a disease, analyze and map it (risk assessment)
- Finally design risk based surveillance protocols according to a specific country context and national monitoring system.
Admission

To attend the course, the candidate must

**Week 1**: Hold a diploma in veterinary medicine or public health, or hold a degree in agronomy, a master's degree compatible with the subject of the course, a diploma in agricultural or medicine work engineering, or equivalent. This course may be taken by candidates not belonging to these categories, but justifying sufficient professional experience.

Candidates must be proficient in English and have basic computer skills (knowledge of the Windows environment) as well as in the basic QGIS functions (recommended)

**Week 2**: be present during the 1st week or know the basic use of QGIS and SNA (Social Network Analysis).

Material provided

- PowerPoint presentations, computers. All softwares are free and will be pre-installed.
- It is essential for the second week, that the participants bring their own datasets on the animals movements (national or/and transboundary) and possibly any information such as the list of municipalities, water points, markets and epidemiological data (outbreaks, vaccination coverage linked to a priority disease).

If participants can’t provide their own information on animal movements, examples of other countries will be taken.

Training costs

- **Training costs**: 1 500 € per week or 2 800 € for 2 weeks
- **Travel towards Montpellier**: not included, to be covered by participants
- **Housing expenses**: not included, plan a minimum of 80 € a day

If necessary, a customized quote can be established upon request.

Important

CIRAD cannot provide study grants. If you wish to request a grant, submit an application as soon as possible to national authorities in charge of livestock and/or scholarships; Cooperation and Cultural Action Services (SCAC) of your local French Embassy; the embassies of other countries; international organizations (FAO, UNDP, EU, IAEA, IDB ...); development projects or NGOs.

Application procedure

Applications, consisting of a detailed resume, a motivation letter and details about the organization managing your grant, must be sent as far as possible before **March 1st, 2019**

by email to: formation-emvt-fvi@cirad.fr

See our other trainings: [http://formation-elevage-suds.cirad.fr](http://formation-elevage-suds.cirad.fr)

*CIRAD is an OIE collaborating centre for the diagnosis and control of animal diseases in tropical areas. The organization of training courses in this field is part of its mandate.*

**CIRAD-FVI – Capacity Building Platform for Livestock Management and Animal Health in the Global South** formation-emvt-fvi@cirad.fr