GIS fundamentals | Training Course **Agenda**

The use of Open-Source, Real-Time Geo-Visualization in Monitoring Vectors and Vector Borne Diseases, Jelsa, Croatia, 13-17 May 2019

Day 1 | Fundamentals

INTRODUCTION

- Course objectives & setup [lectures & hands-on sessions]
- Course resources and materials

FUNDAMENTAL GIS CONCEPTS

Presentations can be found here covering the following topics:

- Geographical data representation: vector, raster (image)
- Layers & Geometry types (points, lines & polygons)
- Coordinate Reference System (CRS)
- Notion of scale
- Different maps for different purposes: thematic mapping, Digital Elevation Models, topographic, …

QGIS

- Set up
- Handling GIS layers (opening, overlaying, selecting features, basic styling and saving as project)
- Handling Coordinate Reference Systems (CRS)
- Importing geo-referenced EMPRES Excel files & overlaying it over Google Maps

Day 2 | African Swine Fever (ASF) Romania Use Case

- Acquiring, exploring (Heatmap) and preparing data
- Creating infected/surveillance zones "buffers"
- Zonal statistics - administrative levels and thematic mapping
- Spatial aggregation techniques - grid/hexagons

Day 3 | More advanced analysis

- Digital Elevation Model and raster analysis
- Interpolation techniques: an introduction
- Time series animation
- "Publication ready" map layout

[OPTIONAL]

- On-demand/ad hoc QGIS, GIS and Data Analysis [to be covered when schedule allows]
- Graphical modeler introduction [Available soon]

Day 4 | Remote Sensing

- **Remote Sensing Data – The European Copernicus Programme**, Dr. Matthias Schramm, Vienna University of Technology
- On-demand/ad hoc QGIS, GIS and Data Analysis [to be covered when schedule allows]

Day 5 | Remote Sensing

- **Practical Use of Remote Sensing Data in Agriculture**, Dr. Matthias Schramm, Vienna University of Technology
- On-demand/ad hoc QGIS, GIS and Data Analysis [to be covered when schedule allows]