# Presenting data

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# Overview

- Map project aim
- Map characteristics
- Required map objectives

# Map production possibilities

**TRADITIONAL**

**INTERCATIVE**

Paper


Digital

Web mapping

# GIS project aim

Maps production is used for:

- Phenomena localization 
- Spatial relationship analysis 
- Statistical hypothesis support 

# Map characteristics

**MAP = MIX**

- Mathematical transformation
  - CRS
  - Scale

- Use aim
  - Symbols

  - Text
- Abstraction concepts
  - Selection
  - Classification
  - Aggregation
  - …

# Required map objectives

- Title
- Scale [M]
- Time of validity or reference
- North arrow
- Legend [M]
- Credits

Enhance maps communicativeness

# Title

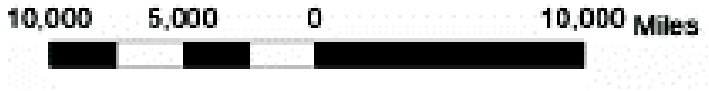
## Avian Disease (HPAI)

- Average distribution density -

- Large font
- Descriptive text
- Shouldn’t dominate map graphics
- In a publication, it must be included in a figure caption

# Scale

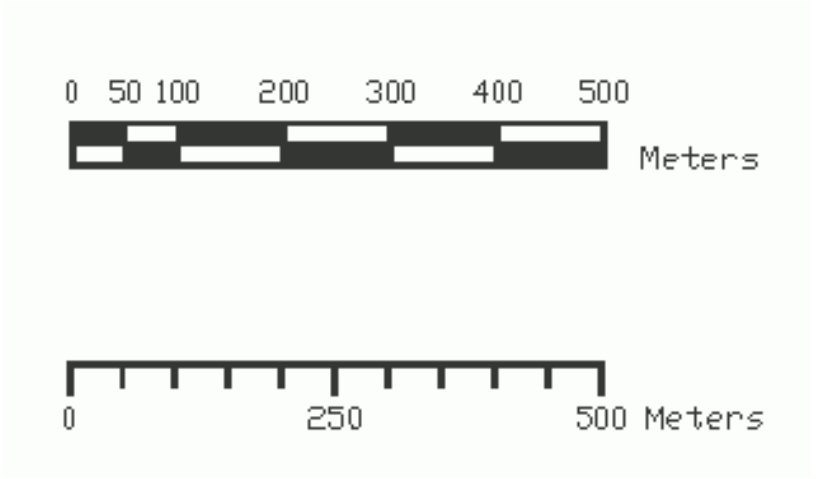
Different representation




Alternating scale bar


Double alternating scale bar


Hollow scale bar



# Scale

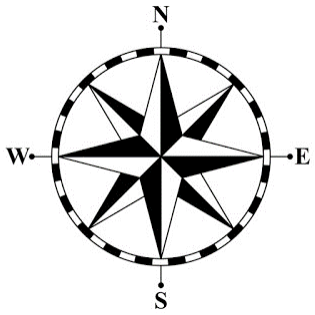
| | |
|---|---|
| Graphic |   |
| Numeric rapport | 1:10000 |
| Metric value | 1 cm = 100 m |

- is typically indicated by a **graphic bar**
- use appropriate measure units (m, km, …)
- exists popular numeric rapports (1:5.000, 1:10.000; 1:100.000…)

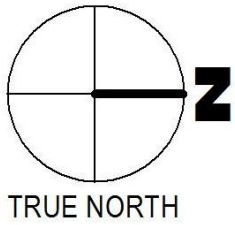
# Time of validity or reference

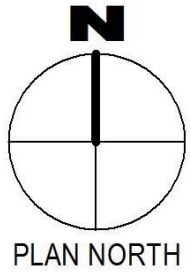
- useful to understand the time period
- mandatory if data change, or for reports

# North arrow

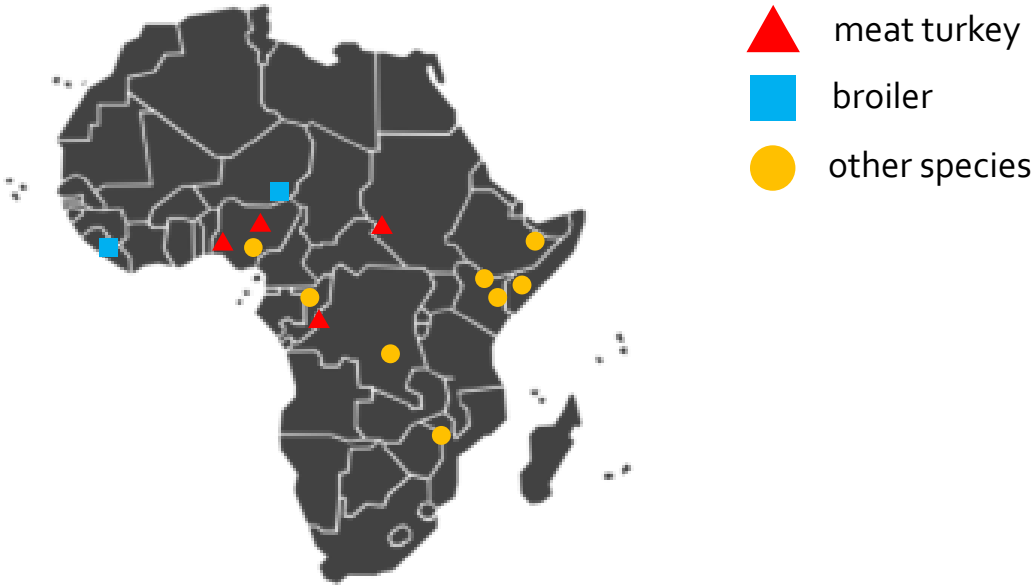




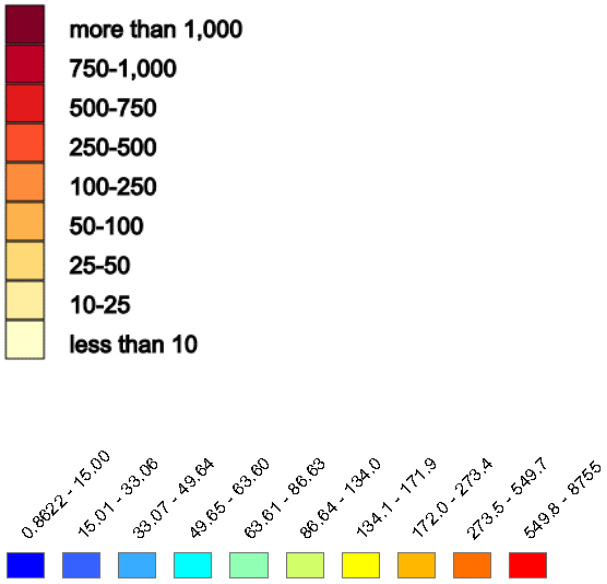

- indicate which way is the north
- useful for building management (cadaster maps use true north)

# Legend




- is mandatory for the symbol comprehension
- is important even for really intuitive symbols
- can contains grouped symbols

# Legend

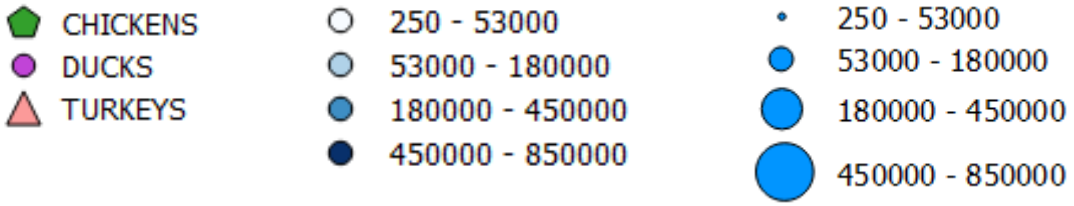



- Use vertical or horizontal extension
- Use numeric or descriptive values

# Legend - Vector

Vector data

- Shapes
- Dimensions
- Colors

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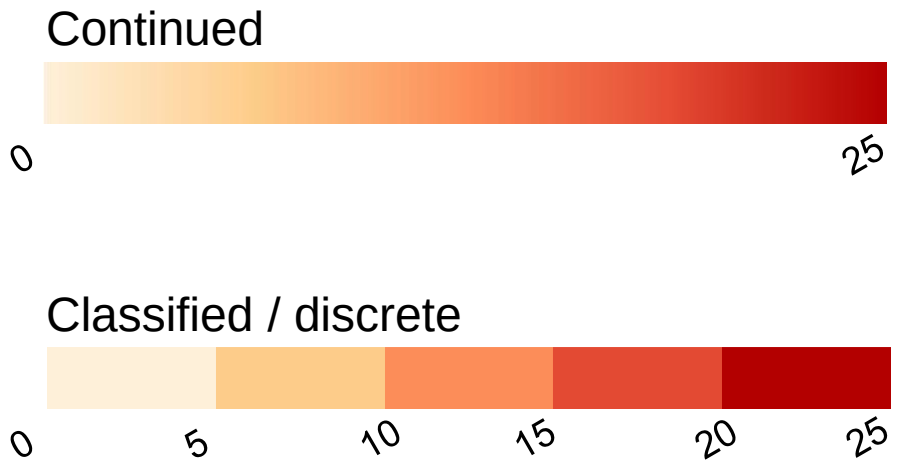
- Each symbols need a description
- In case of quantities, use numeric values where is possible
- Not use too much symbols or colors in the same group

# Legend - Raster

Raster data

- Colors

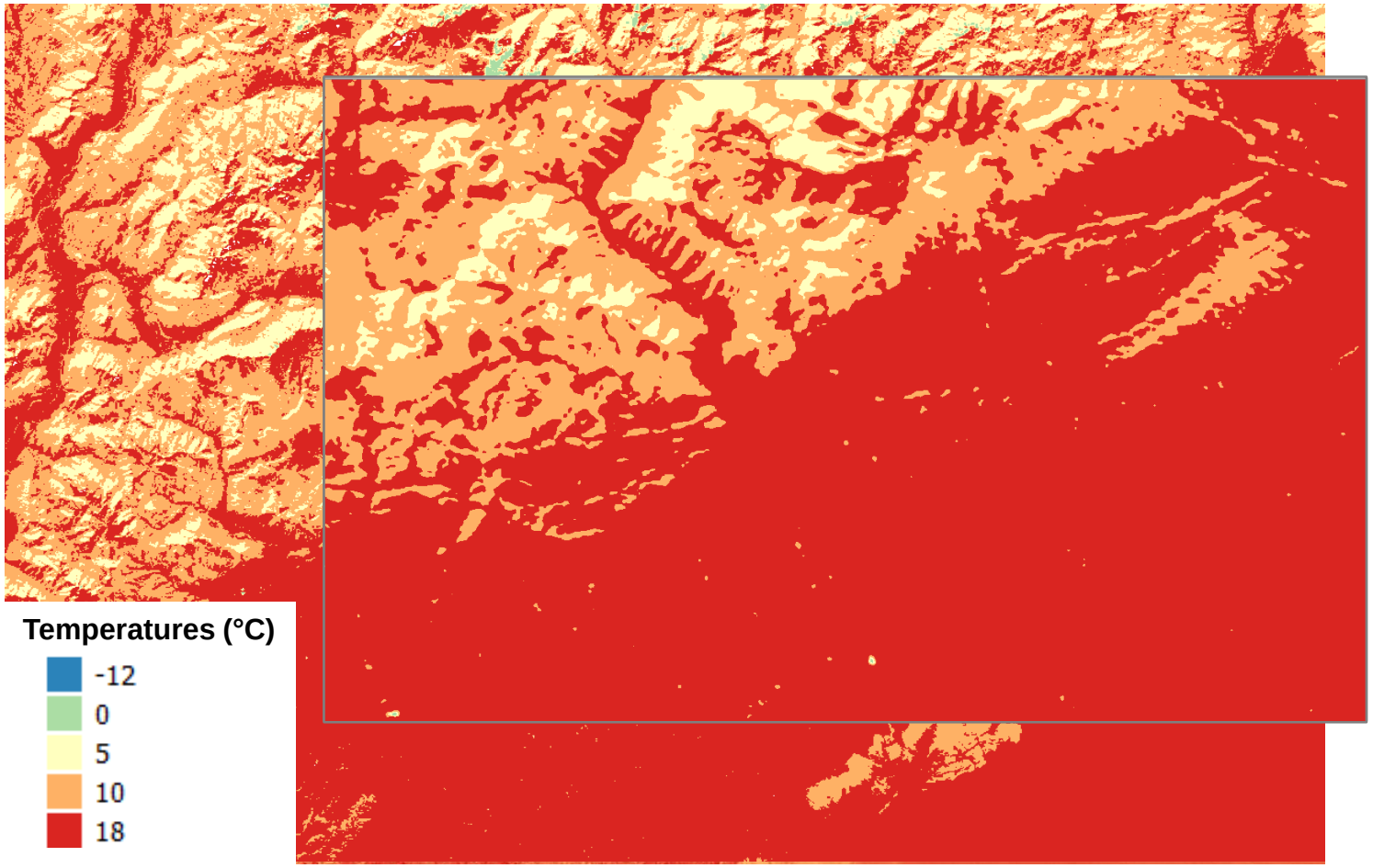



- Not use too much classes
- Use numeric values for discrete scale
- Use descriptive / important values for continue scale

# Legend - Raster

Choose the right raster classification and legend associated, based on

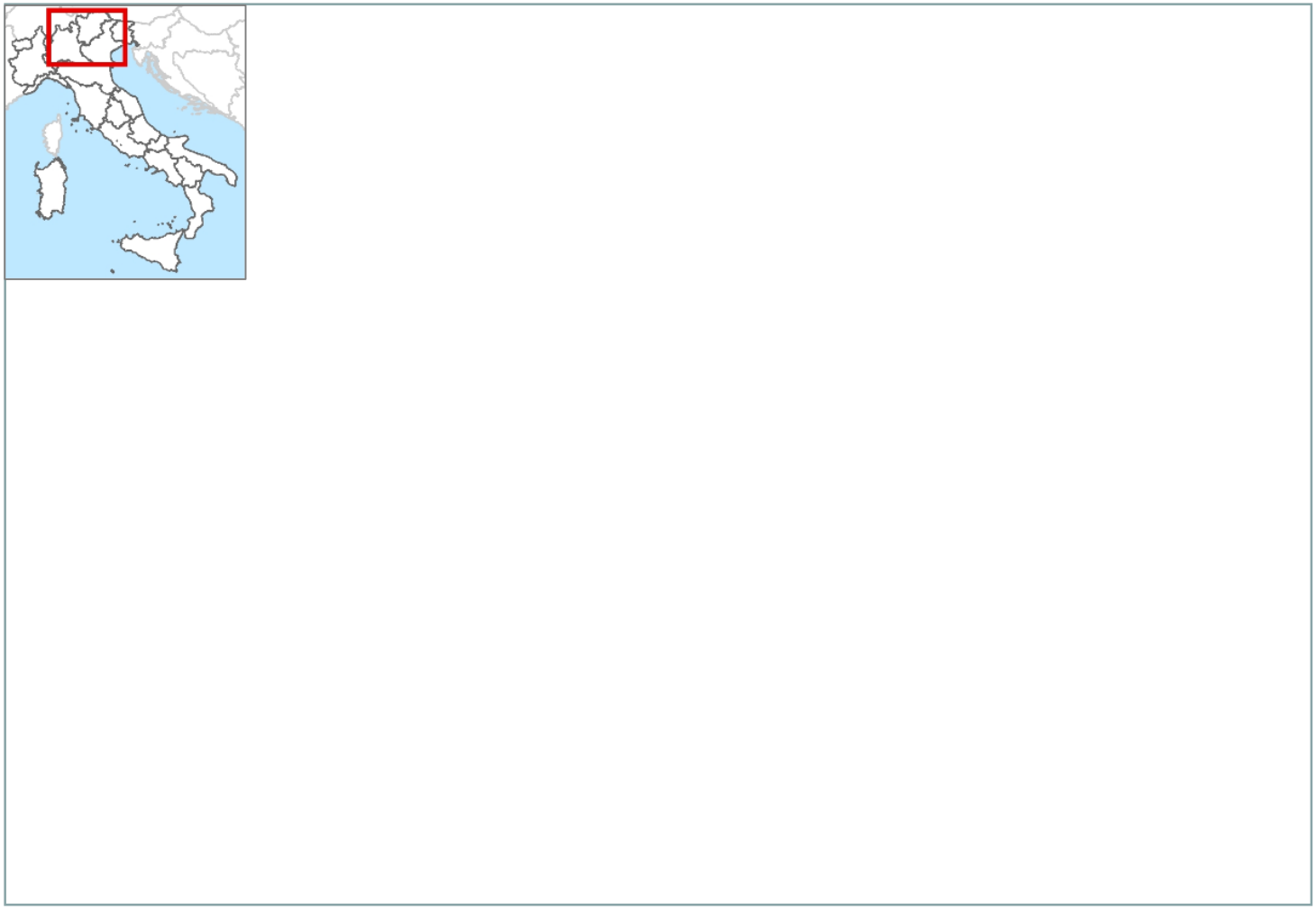
- Scale
- Aim
- Data



# Legend - Basemap layers

Basemap layers are not required in the legend

# Legend - Overview



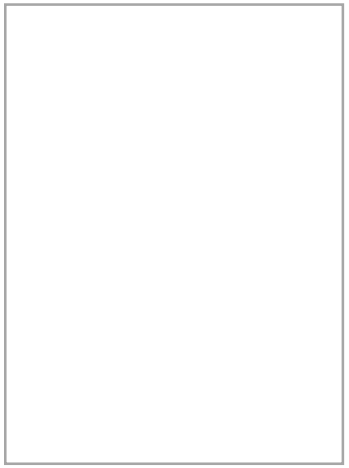
# Legend - Overview

- Helps to identify the geolocation
- Overview layers are usually not required in the legend
- Can contains the frame indicator
- All information are related to the main map frame

# Layout / Print orientation

- Landscape
  - *Useful for min scale*
  - *Lateral legend with more symbols*

- Portrait
  - *Vertical maps*
  - *Detailed maps, or square map regions*

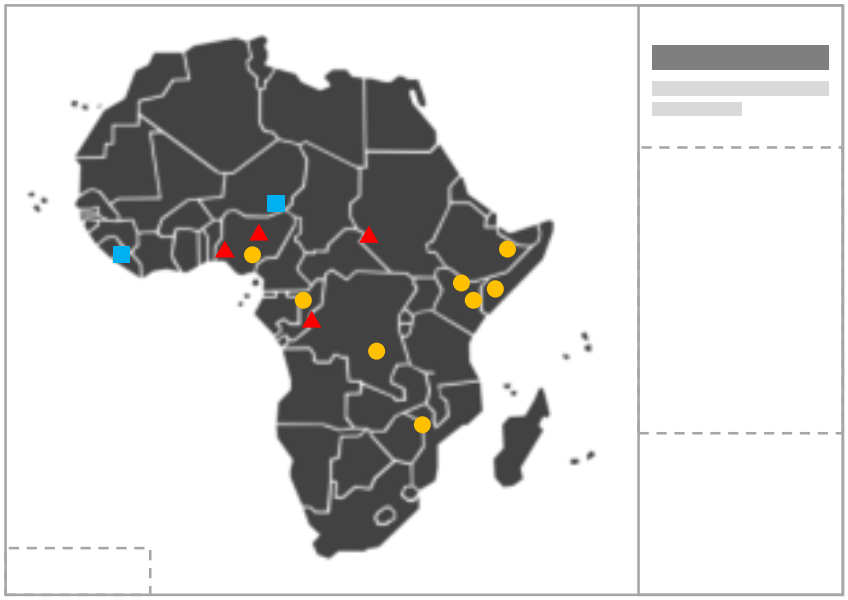


# Credits

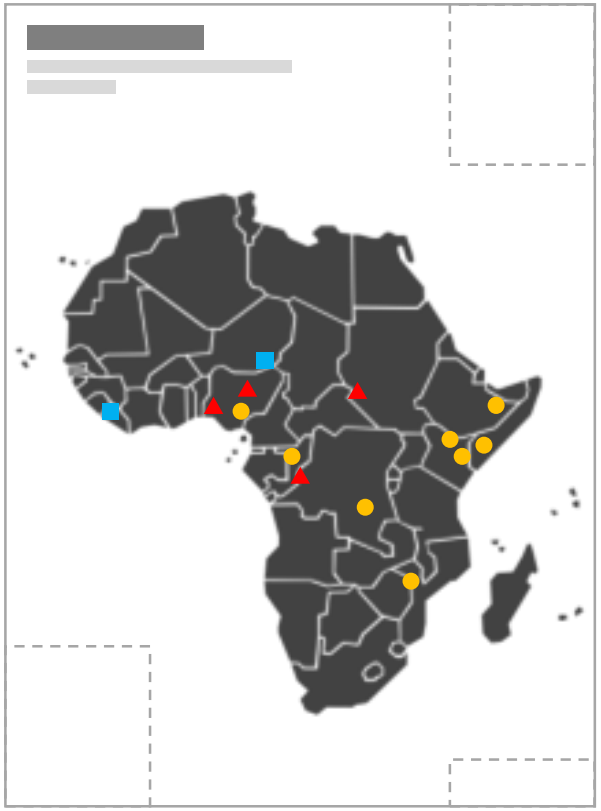
- Credits are fundamental for  overall quality assessment
- Transparency
- Policy
- Additional data
  - Data source
  - Data used data
  - Cartographer’s name
  - Map creation date
  - Coordinate reference system used

# Common print patterns

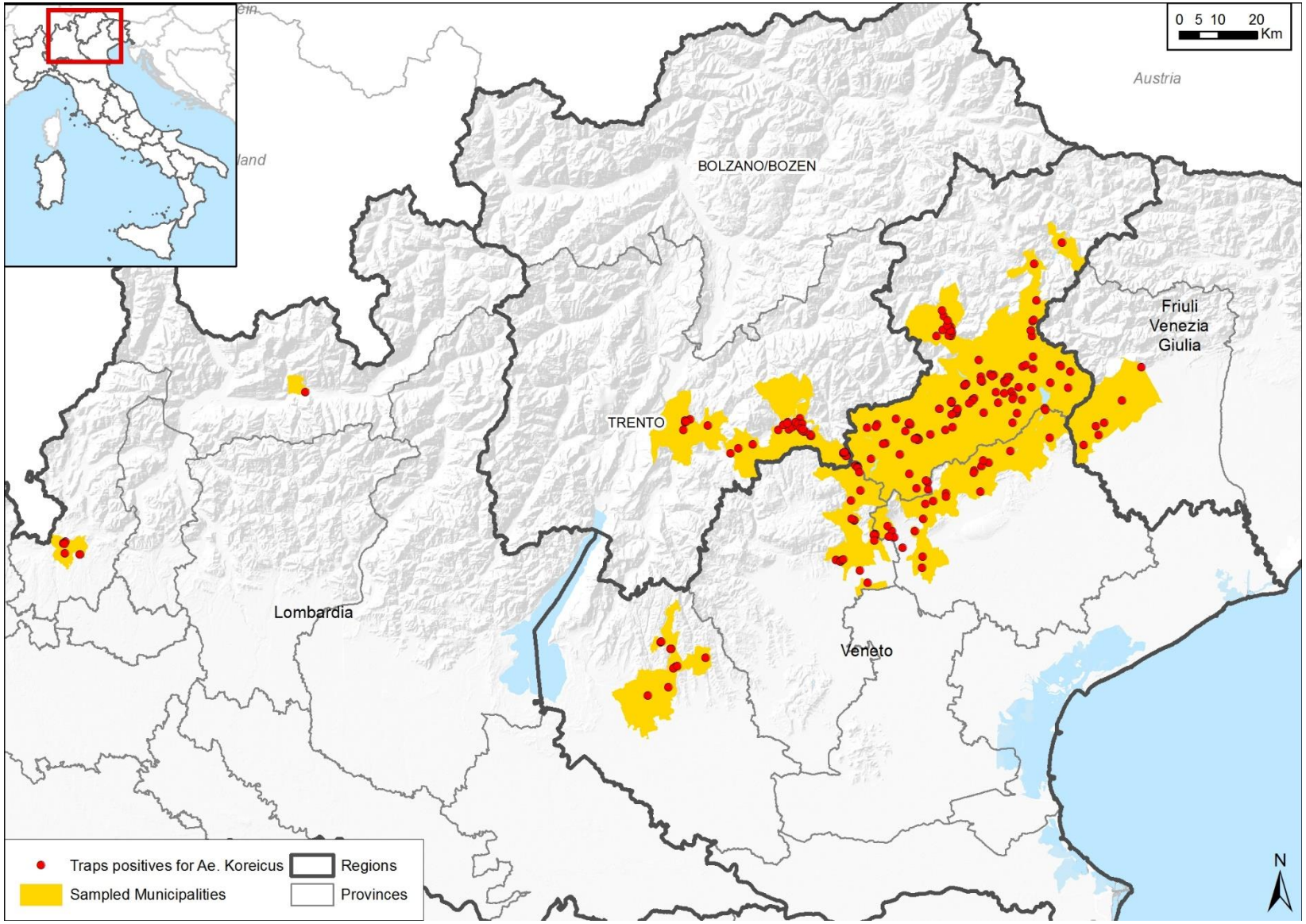
Landscape



Portrait



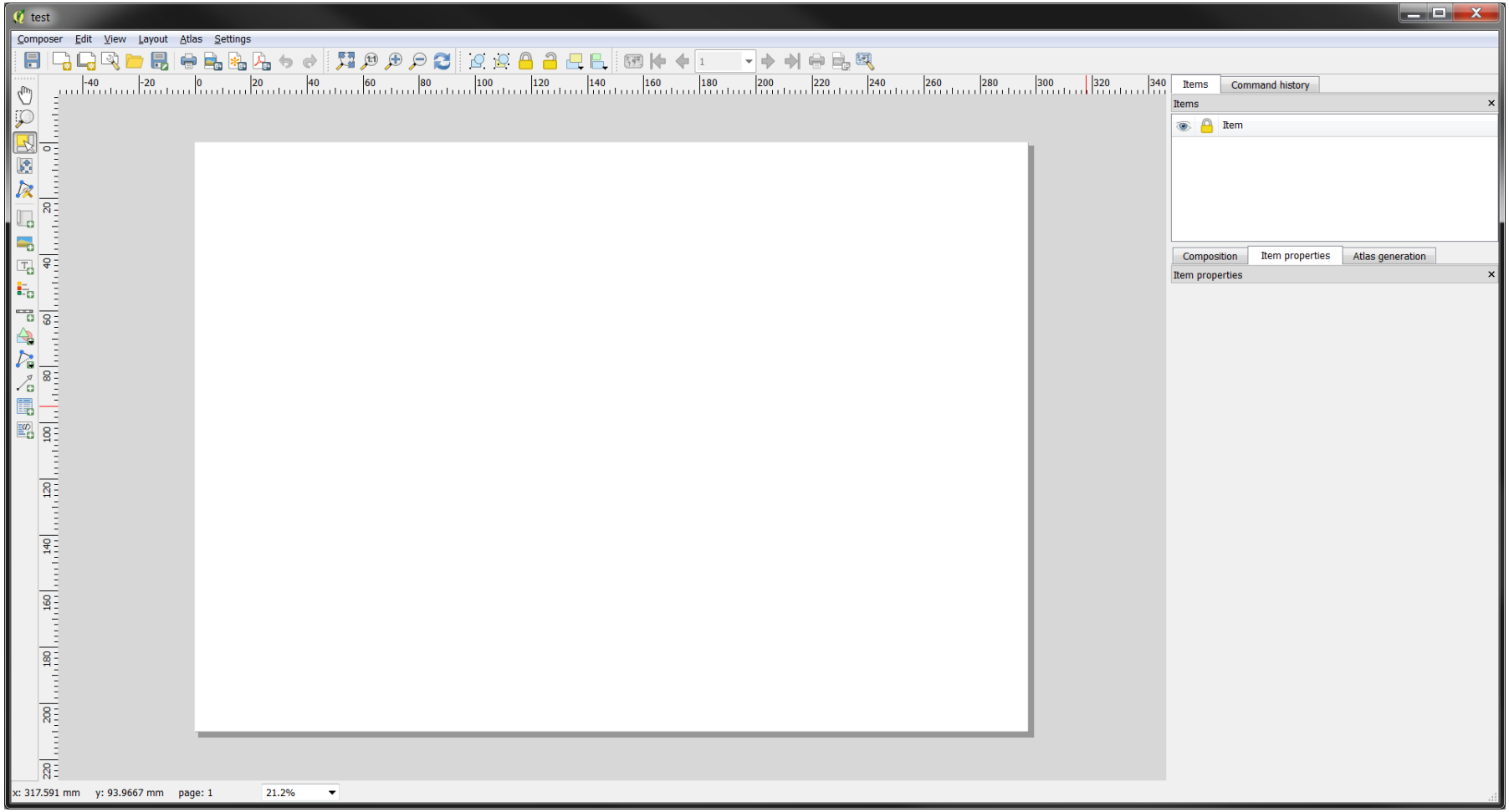
# Examples


0 5 10 20
Km
Austria
BOLZANO/BOZEN
TRENTO
Friuli
Venezia
Giulia
Lombardia
Veneto
Traps positives for Ae. Koreicus
Sampled Municipalities
Regions
Provinces
N

# QGIS Print composer

- Create different layouts for the same project
  (Different from other GIS software that provide a single layout)
- Export map in different format (pdf, image…) or print on paper
- Manage external items (images)
- Manage maps items

# QGIS Print composer



# QGIS Print composer

- Layout definition
- Items
  - Add/Remove/Modify
  - Change properties
  - Refreshed
  - Locked

# QGIS Print composer

- Add map 
- Move on the map (zoom-in, zoom-out, pan) 
- Add legend 
- Add north arrow 
- Add image 
- Add figure 
- Add scale bar 
- Add text 

# Practical exercise (5.2)

4_5_ex_presenting_data.docx

**objectives**

- Produce a map using QGIS Print composer