



## PRELIMINARY EVALUATION OF SOCIO-ECONOMIC DATA FOR THE LANDSUPPORT PROJECT

Task 1.3

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LANDSUPPORT.eu

## 1 – Introduction

Within implementation of the LANDSUPPORT project, preliminary evaluation of socio-economic data (task 1.3 of WP1) aims to allow a better understanding of some territorial dynamics and, therefore, evaluation of the potential impact of the various instruments.

In achieving this objective, the WP2 implementation is also involved in identifying further information layers useful for some platform tools. In the following report, some case studies are presented as examples, with reference to agriculture, unused buildings and the residential population. For the moment, such cases concern Austria and Italy, particularly the Campania Region, but will soon be extended to Hungary.

## 2 - Residential population in Italy, focusing on the Campania Region, at municipality level (LAU2; ISTAT)

### 2.1 – Recent variation in the resident population (for all ages) at LAU2 between 2012-2018

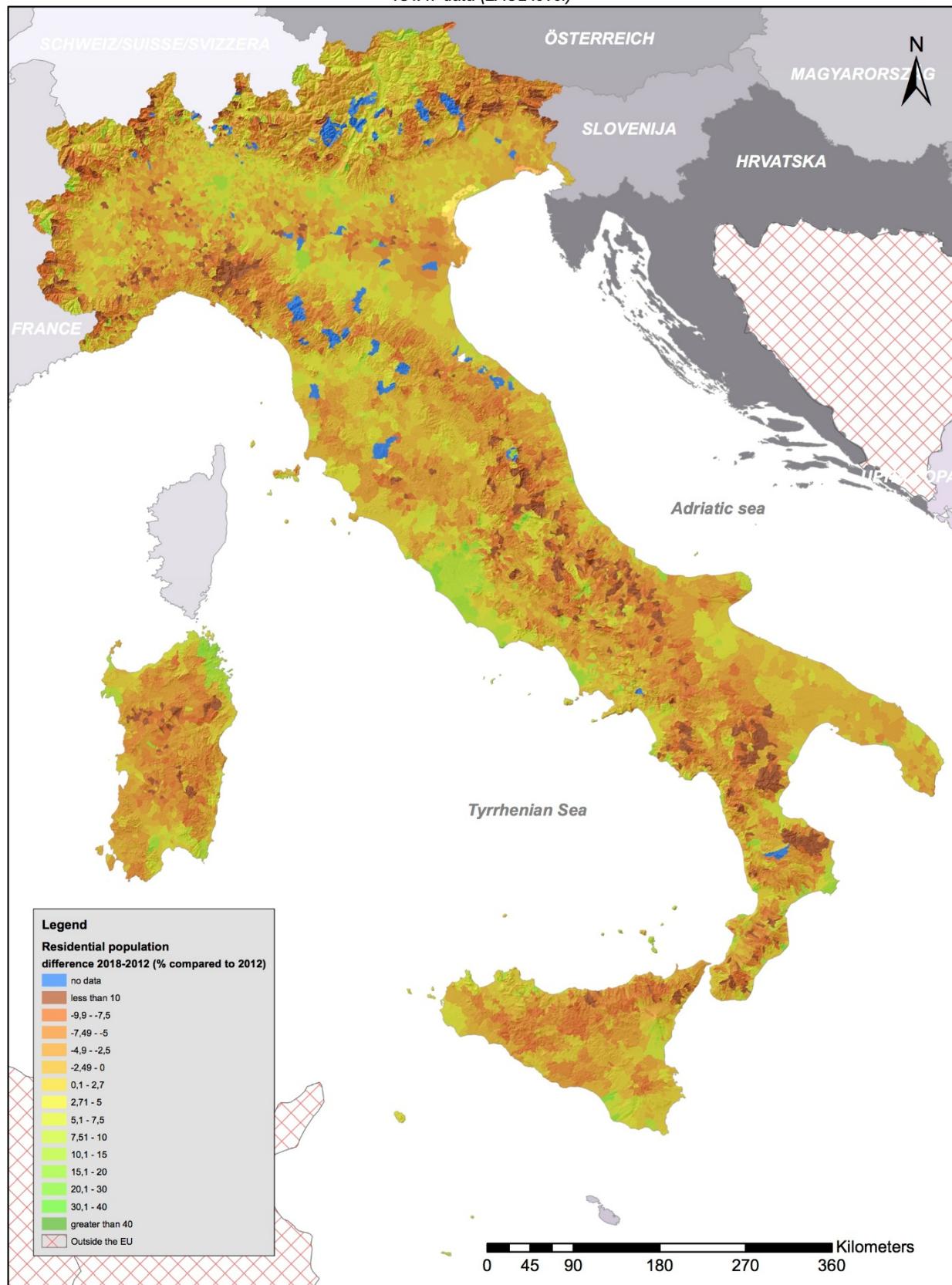
**Background:** The identification of time variation in a residential population at LAU is very important to evaluate areas where population increase/decrease is most severe and, then, whether the potential impact of certain LANDSUPPORT tools (e.g. land take, ecotourism) may be of special importance.

**Our findings:** ISTAT data of residential population (difference 2012 – 2018) indicate the existence of areas that are depopulated. In general, depopulation affects inland areas, as seen throughout the Apennine belt, especially in central and southern Italy and on the islands. On the contrary, when observing coastal areas, there is almost always a population increase, just as in large metropolitan cities and their peripheral areas. Unlike the Apennines, the Alps have a positive population trend, most probably due to better economic conditions often connected with an increasing ability to host tourism.

In line with what has been happening in the rest of the national territory, the mountain areas of the provinces of Avellino, Benevento, Caserta and Salerno of the Campania Region have undergone depopulation. The province of Naples has, in general, increased its population, as has all of the Campania coastal strip, except for the area to the South-West of Vesuvius and some municipalities in Cilento.

## Italy - Changes in residential population

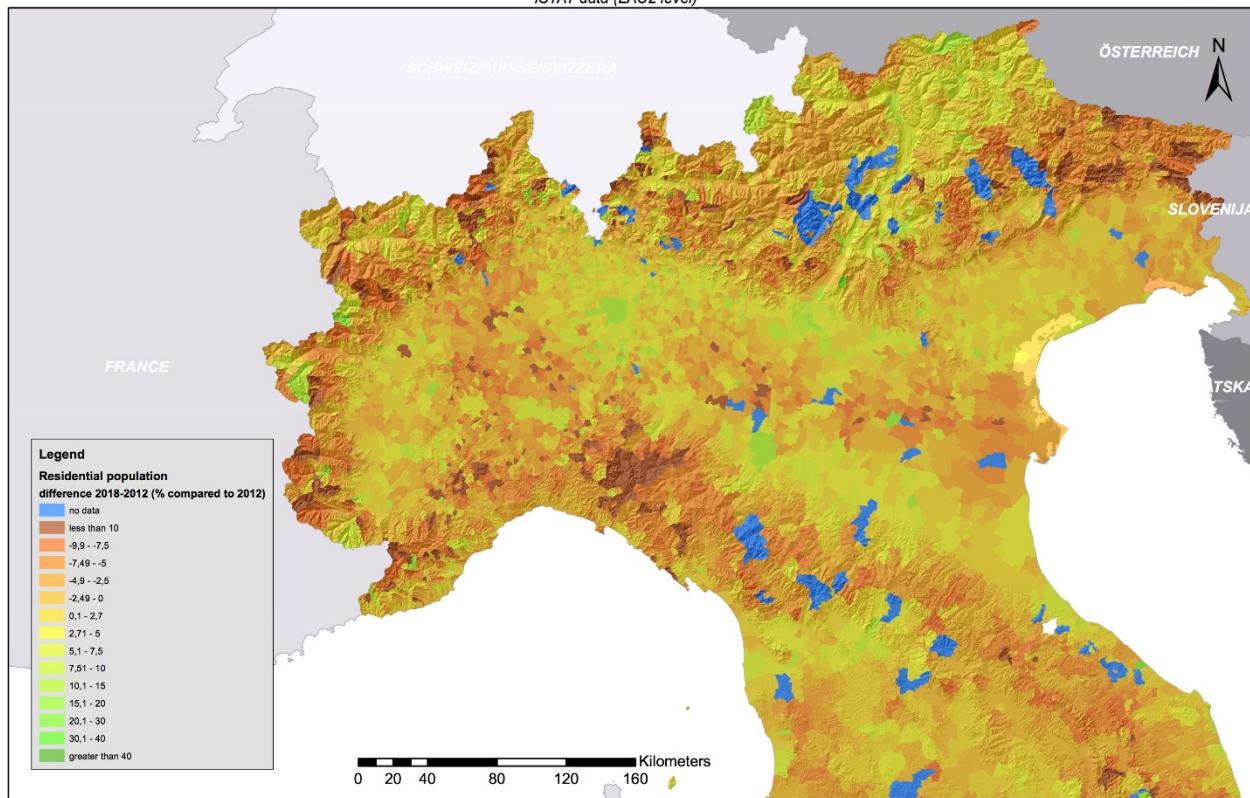
difference between 2018 and 2012 (percentage compared to 2012)  
*ISTAT data (LAU2 level)*



*Figure 1 – Current variation (difference) between 2012 and 2018 of residential population (percentage compared to 2012) at municipality level in Italy*

### Northern Italy - Changes in residential population

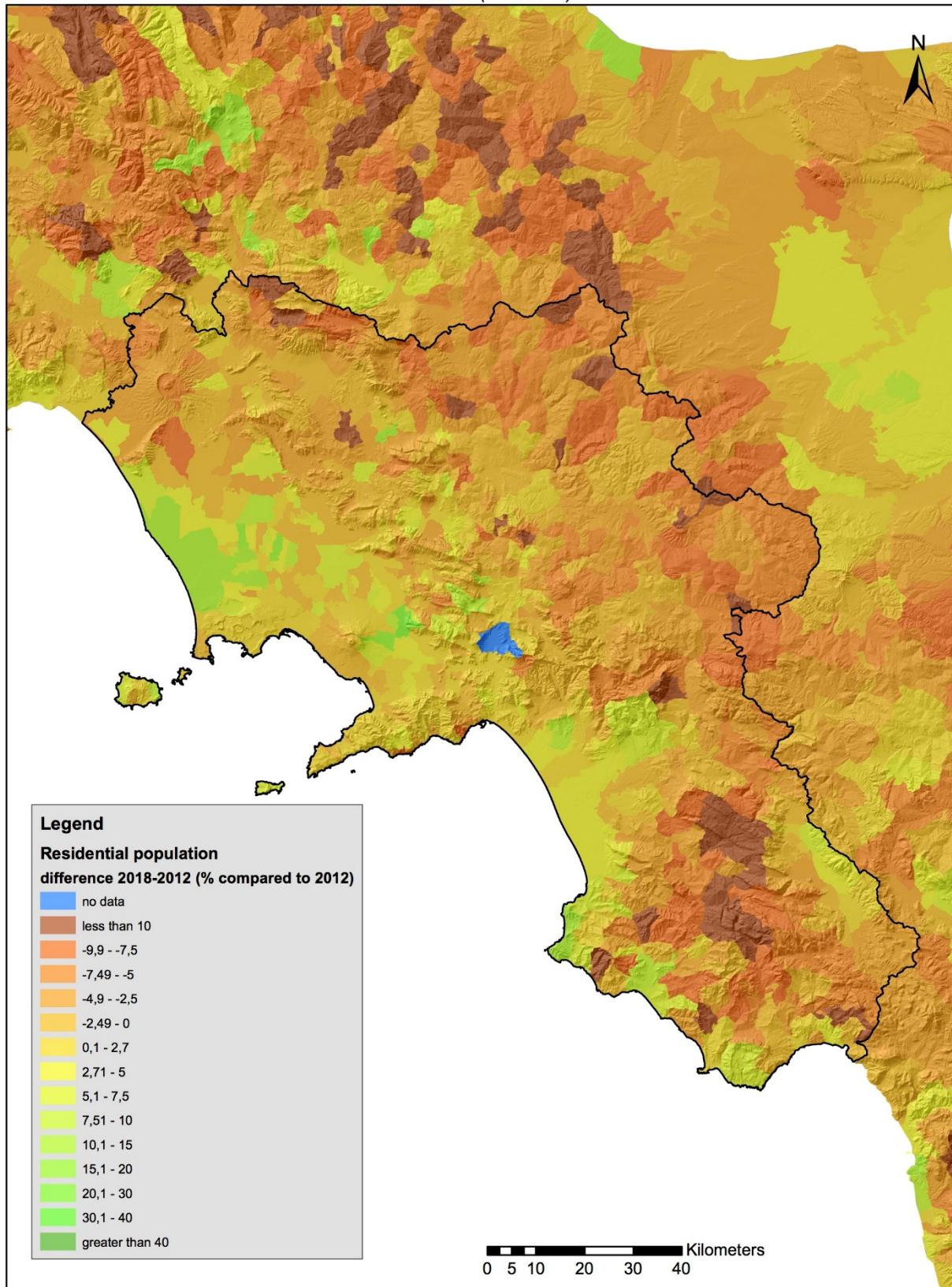
difference between 2018 and 2012 (percentage compared to 2012)  
 ISTAT data (LAU2 level)



*Figure 2 – Detail of Fig. 1 for Northern Italy –  
 Current variation (difference) between 2012 and 2018 of residential population (percentage compared to 2012) at municipality level*

## Campania Region - Changes in residential population

difference between 2018 and 2012 (percentage compared to 2012)  
ISTAT data (LAU2 level)



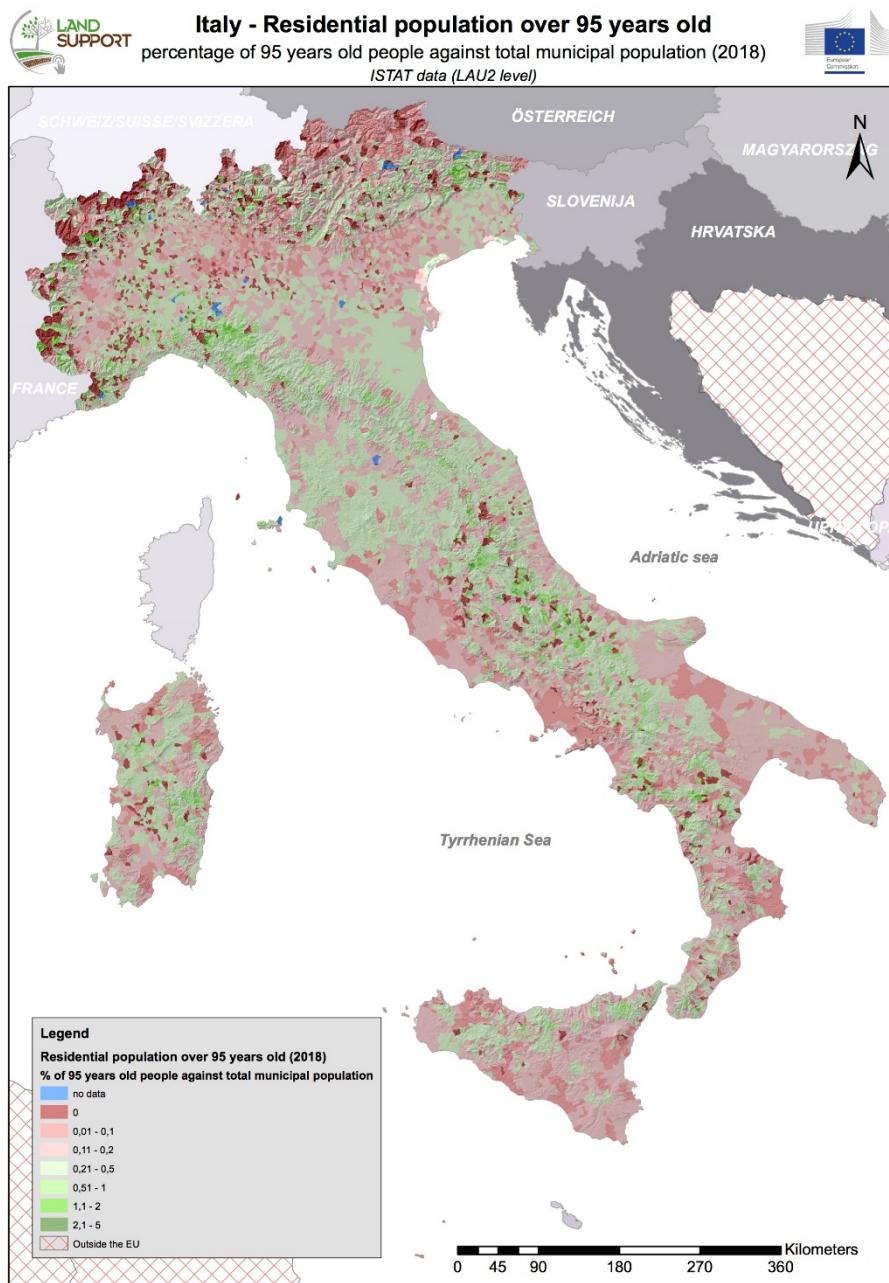
*Figure 3 – Detail of Fig. 1 for the Campania Region –  
Current variation (difference) between 2012 and 2018 of residential population (per-  
centage compared to 2012) at municipality level*

## **2.2 – An example concerning the use of population data for tool “o” (ecotourism) . Focus on residential population of over 95 year olds at LAU2**

The LANDSUPPORT project will develop an ecotourism tool. This tool will be dedicated to the use of cultural ecosystem services that are difficult to quantify. As part of this tool, the interest in the residential population of over ninety-five-year-olds is related to the search for data which immediately detects areas of the country with a longer living population.

In general, it seems that living in the mountains helps people live longer; the Apennines and the Alps (the latter less so) are peppered with a series of communities where the percentage of ultra ninety-five-year-olds is greater than in the rest of Italy. Possibly, environmental and social conditions in these municipalities permit greater longevity. In some locations, this data also relates to a depopulation of the younger generations in more internal areas.





*Figure 4 - Residential population over 95 years old (2018) – (% of 95 years old people with reference to total municipal population)*

### 3 - Buildings - state of use (ISTAT – Census 2011)

**Background:** The identification of unused buildings at LAU2 is very important to evaluate the potential impact of our LANDSUPPORT tools k and m - referring to spatial planning – over areas with a large number of unused buildings. Unfortunately, this information is currently only available for Italy as a whole and for 2011.

**Our findings:** The last census in Italy shows 743,435 unused buildings, representing 5.14% of total building stock. The regions with the highest percentage of unused buildings (compared to the total buildings in the single region) are Valle d'Aosta (12.8%), Abruzzo (9.3%) and Calabria (9.2%); the most virtuous Regions are the Autonomous Province of Bolzano (0.5%), Trentino Alto Adige (2.6%) and Tuscany (2.8%). As was easy to foresee, greater inactivity was detected in the more internal areas of Central Southern Italy and the Western Alps. It is interesting to note that some areas of the Po Valley, where several agricultural and industrial areas are concentrated among the most important within the Italian economy, exhibit moderate inactivity.

Campania is very close to the national average (5.9%) with 6,277 unused buildings. The less virtuous provinces are Benevento (7.8%), Avellino (7.2%) and Salerno (7.2%), where the highest percentages of inactivity are to be found in the inland areas of Cilento.

## Italy - Unused buildings

Population and housing census (percentage of disuse)  
ISTAT 2011 - population and housing census (LAU2 level)

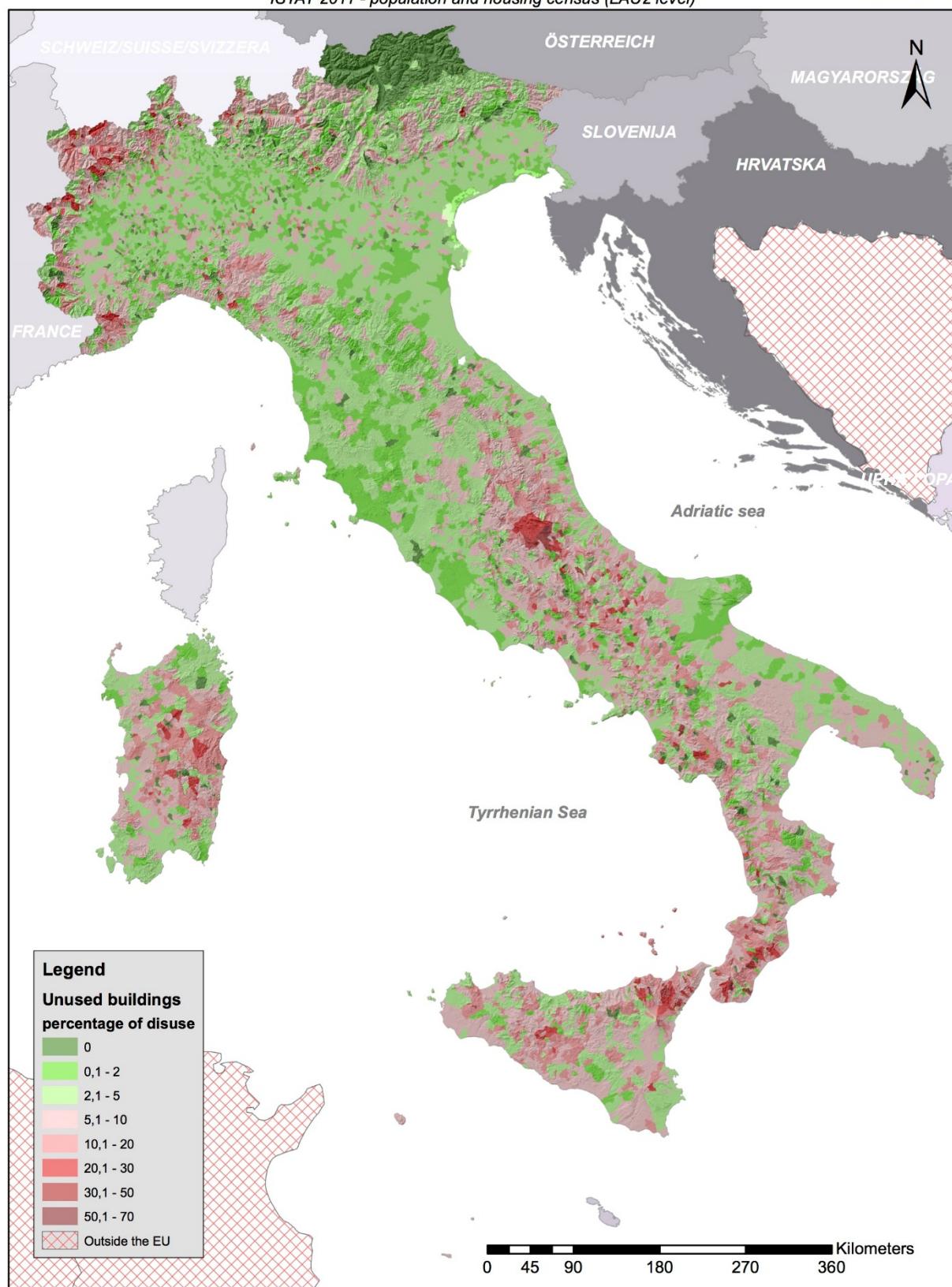


Figure 5 - Unused buildings at LAU2 level in Italy (percentage of disuse)

## Campania Region - Unused buildings

Population and housing census (percentage of disuse)  
ISTAT 2011 - population and housing census (LAU2 level)

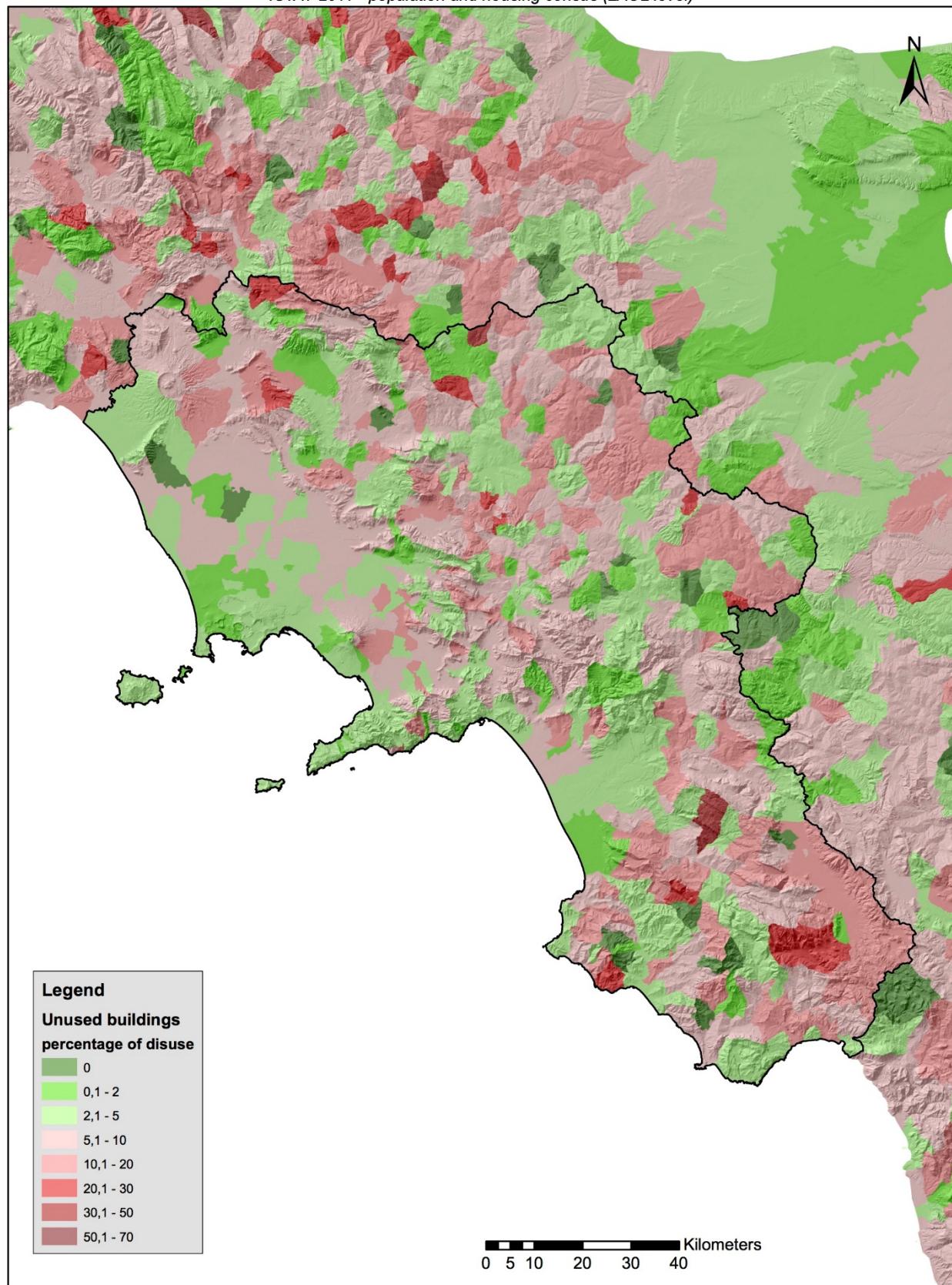


Figure 6 - Unused buildings at LAU2 level in Campania (percentage of disuse)

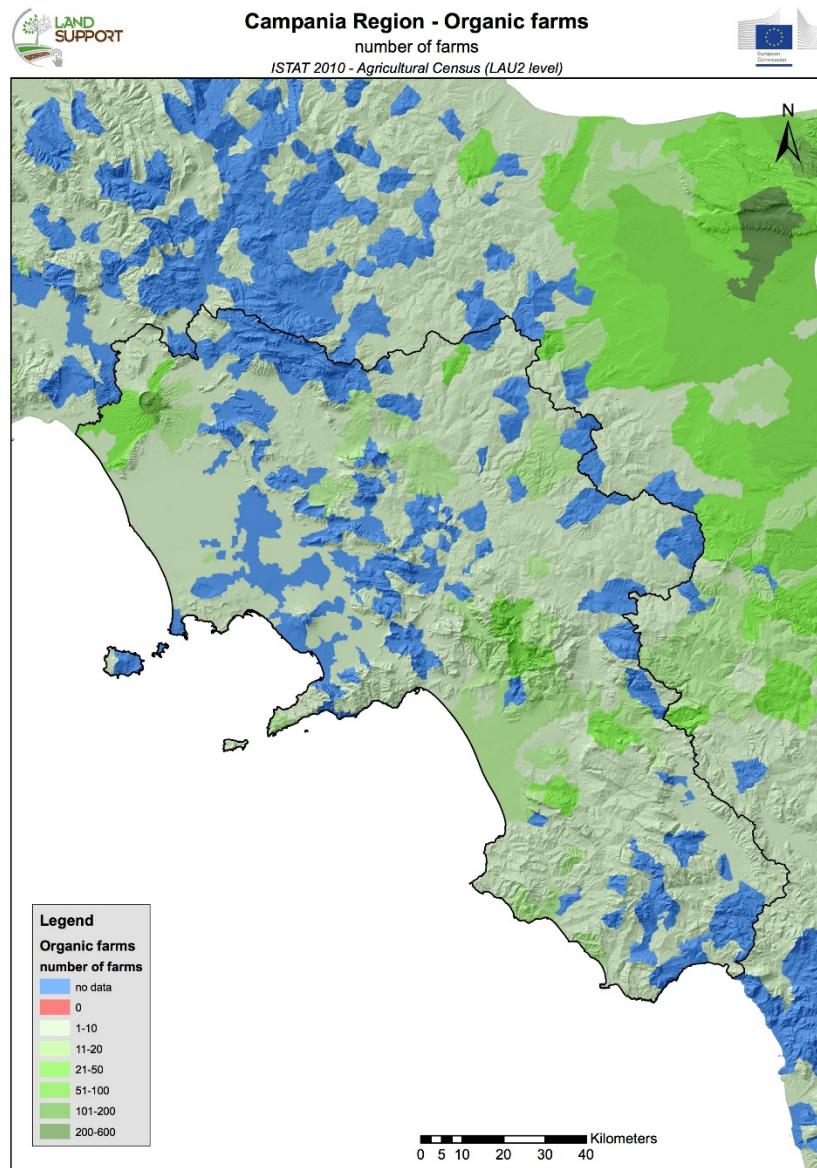
## 4 – Agriculture (ISTAT - Census of agriculture – 2010)

### 4.1 - Organic farms (total per municipality)

**Background:** Quantifying of organic farms at LAU2 is very important for some of our tools, d, e, f, g, which could be used also by organic farmers to aid their organic agriculture management.

**Our findings:** There were 45,167 organic farms in Italy in 2010, for a total SAU of 1,251,731.92 ha.

Almost half of these farms are located in southern Italy (south: 42 %; north: 19%; center: 18%; islands: 21%), mainly in Puglia and Sicily. There are 1832 organic farms in the Campania region, mostly in the province of Salerno and principally cultivating intensive crops and olive groves. Other organic farms are located in the North West area of the province of Caserta, probably relating to the presence of orchards and chestnut groves. In the Benevento area, organic farms are mainly linked to viticulture; in the province of Avellino to the exploitation of chestnut groves and OTHER.



*Figure 7 - Organic farms in Campania– number of farms at LAU2 level*

## 4.2 – Viticulture

**Background:** For the regional scale of Campania, tool “d” is also very important for improving zoning and terroir analysis of high quality products, such as quality grapes for producing high quality wines. It is also self-evident that our tools require an end-user to have basic competence with a computer, internet navigation and smartphone. Thus, our tools are unlikely to have a major impact on elderly people or people with poor education. Therefore, we here seek to identify geographical areas (sort of hot spots) in the Campania region where the impact of our project might be the greatest. Once these areas have been identified, we are better able to monitor the impact of our project on those areas. To achieve such a goal, we had to mix different types of geospatial information.

**Our findings:** The Campania region has about 12,291 ha of grapevines (Campania Nature map, 2018). This patrimony is mostly located in the province of Benevento, particularly in some municipalities within the Telesina Valley (Castelvenere, Guardia Sanframondi, San Lorenzo Maggiore, Ponte, San Lorenzello, Torrecuso, Solopaca and Paupisi); on the island of Ischia; more fragmentedly, in the province of Avellino and near to the municipality of Castelcivita in the Cilento hinterland.

Just as are some viticulture areas in the province of Avellino, the Telesina Valley seems to be experiencing by a trend of generational turnover (estimate from ISTAT data, 2010). In many municipalities (Castelvenere, Guardia Sanframondi, San Lorenzo Maggiore, Tufo, Santa Paolina), the percentage of land owners under the age of 49 exceeds 30%. On the other hand, Cilento and the island of Ischia have generally lower generational turnover rates.

Regarding land owners' education (ISTAT data, 2010), the situation in Campania is more heterogeneous. Indeed, it is not possible to identify any correlation between the distribution of farms and higher agricultural education .

By combining age and education data of land owners, it is possible to identify hotspots of particular interest for the project, such as the municipalities of San Lorenzello, Telese Terme, Tufo and Santa Paolina.

## Campania Region - Viticulture, age of farmers

percentage of farm owners over the age of 60

ISTAT 2010 - Agricultural Census (LAU2 level)

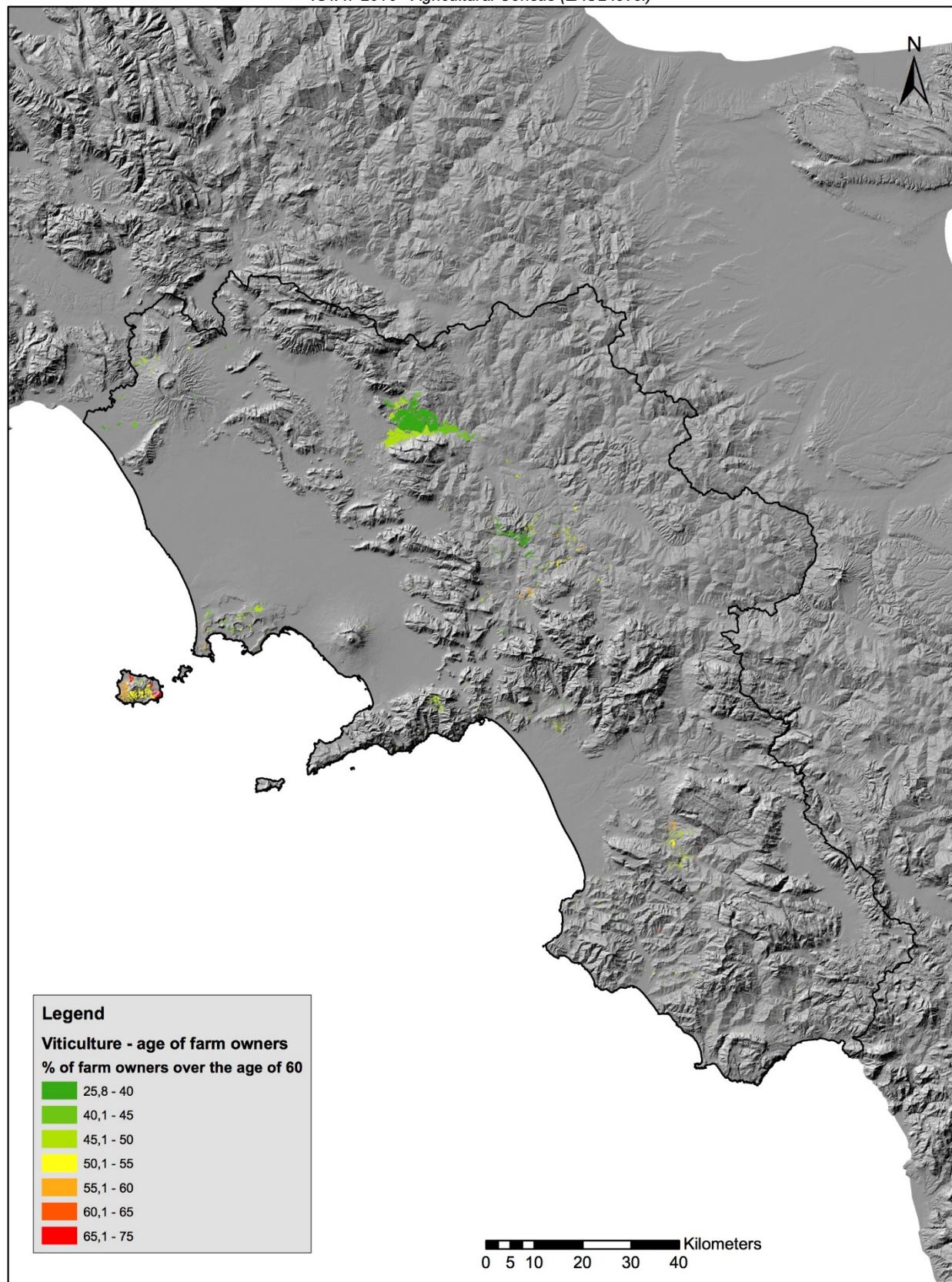


Figure 8 – Viticulture farms - Age of farmer (% of farmers over the age of 60)

## Campania Region - Viticulture, education level of the farmers

percentage of highly qualified farm owners

ISTAT 2010 - Agricultural Census (LAU2 level)

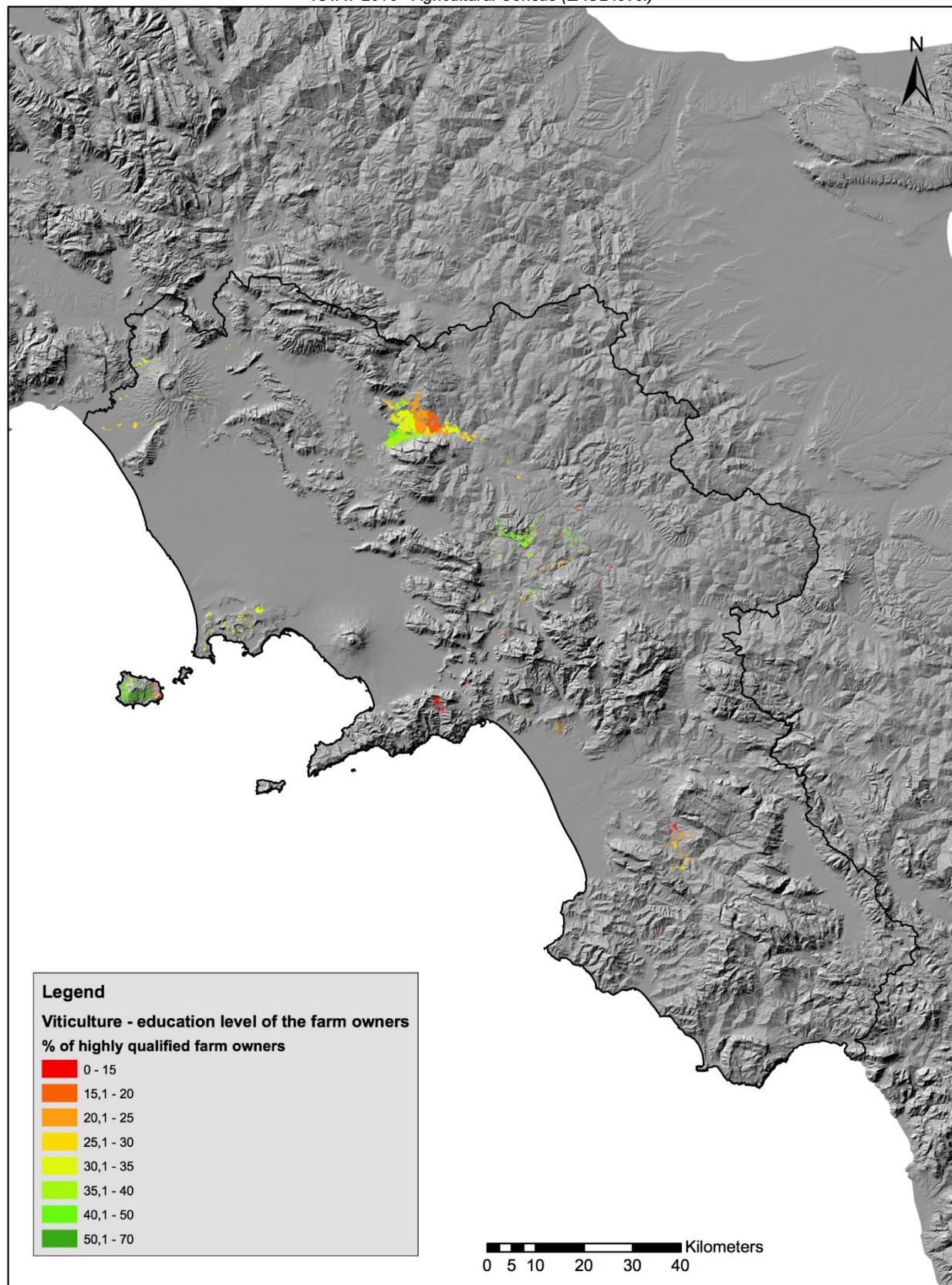
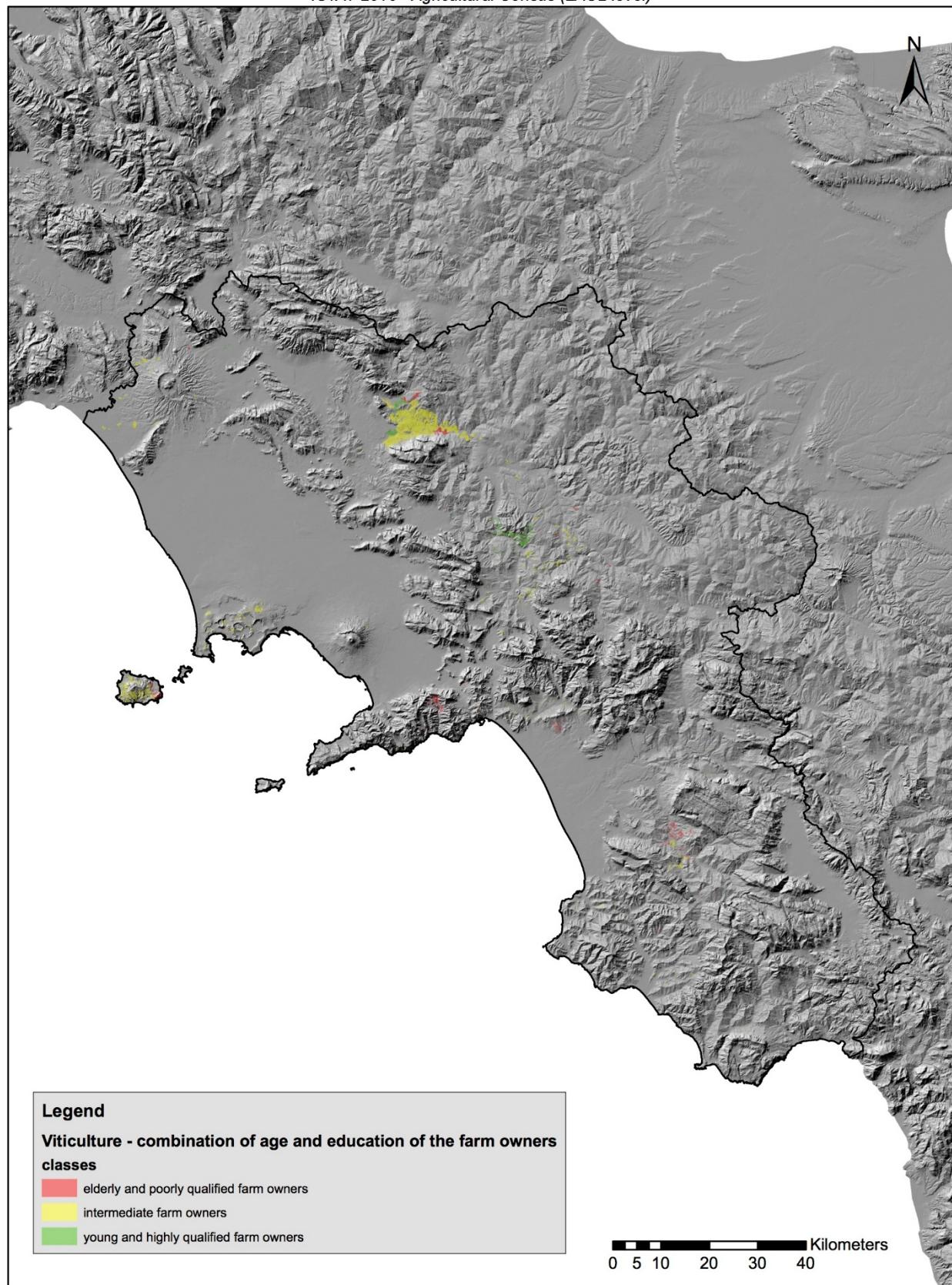


Figure 9 - Viticulture farms – Education level of the farmer (% of highly qualified farmers)

## Campania Region - Viticulture

combined analysis of age and education of the farm owners  
 ISTAT 2010 - Agricultural Census (LAU2 level)



*Figure 10 - Viticulture farms –Combination of Age and education of the farmer*

#### 4.3 – Olive grove

**Background:** For the regional scale of Campania, tool “d” is also very important for improving zoning and terroir analysis of high quality products, such as high quality olive groves for producing high quality olive oil. It is also self-evident that our tools require an end-user to have basic competence with a computer, internet navigation and smartphone. Thus, our tools are unlikely to have a major impact on elderly people or people with low levels of education. Therefore, we here seek to identify geographical areas (sort of hot spots) in the Campania region where the impact of our project would be the greatest. Once these areas have been identified, we are better able to monitor the impact of our project on those areas. To achieve such a goal, we had to mix different type of geospatial information

**Our findings:** Campania has about 93,577 ha of olive groves, most of which are in the province of Salerno (72193 ha), especially in the Cilento area. The municipalities of Campagna, Buccino and Roccadaspide are the 3 municipalities with the largest cultivation of olive trees (2,851, 2,458 and 2,204 ha). Other areas are notable for olive tree cultivation are the municipality of Sessa Aurunca (2,104 ha) and the area between the Amalfi and Sorrento coasts (about 2,000 ha).

Olive growing in Cilento is practiced by over sixty land owners with a high level of education; otherwise the land owners in the provinces of Avellino and Benevento are generally younger and with a lower level of education.

Just as for viticulture, combining age and education data for land owners, it is possible to identify hotspots of particular interest, in this case Rutino, Castelvenere, Presenzano and Praiano.

## Campania Region - Olive growing, age of farmers

percentage of farm owners over the age of 60

ISTAT 2010 - Agricultural Census (LAU2 level)

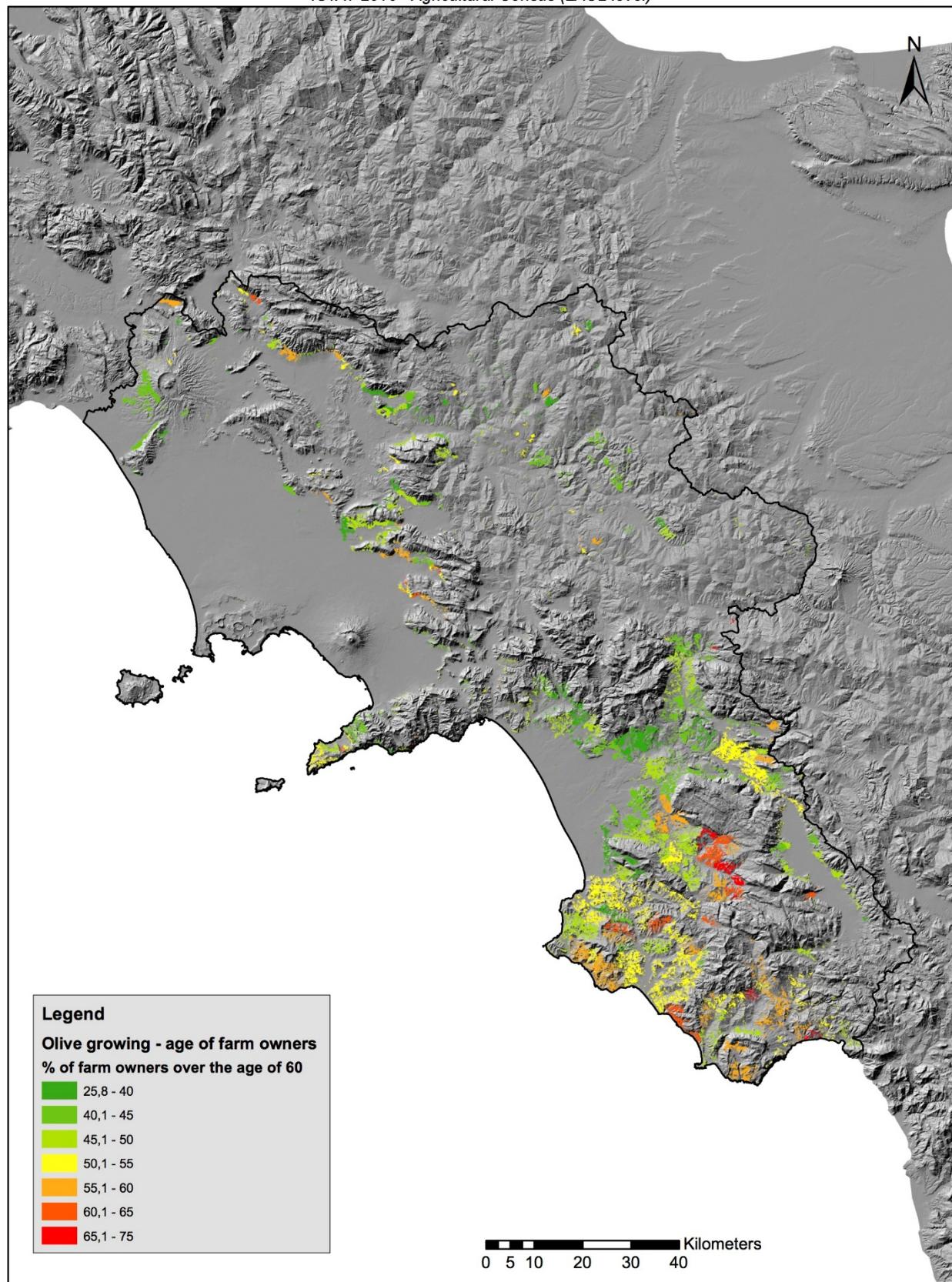


Figure 11 - Olive growing - Age of farmer (% of farmers over the age of 60)

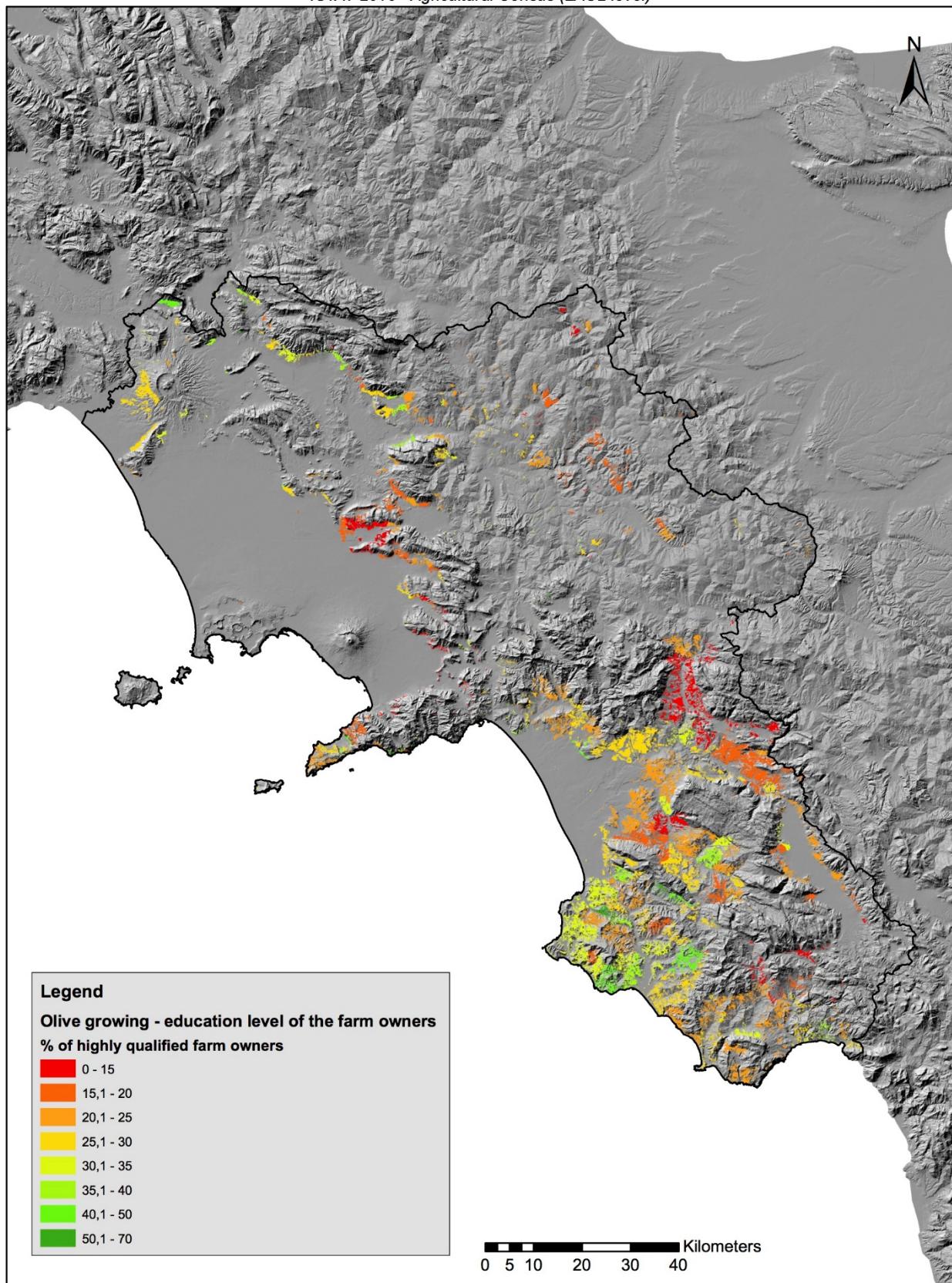
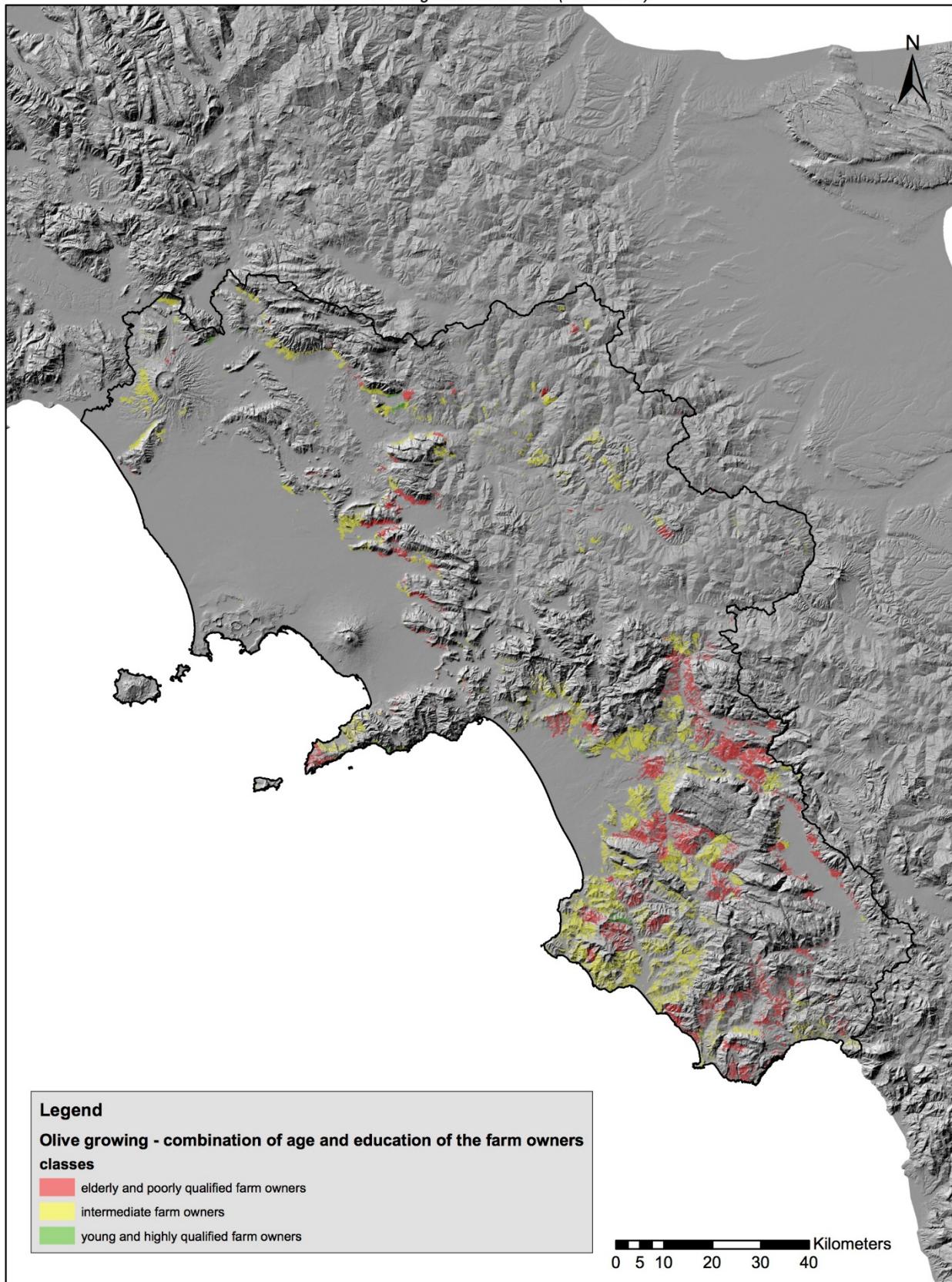


Figure 12 - Olive growing - Education of the farmer (% of highly qualified farmers)



*Figure 13 - Olive growing – Combined geospatial analysis of Age and education of the farmers*