Ecological Vineyards Governance Activities for Landscape's Strategies

Deliverable T2.2.1.

Data collection in the Pilot area of Venice Biodistrict

Responsible Partner

bottegadelpaesaggio

27. 9. 2021

BASIC PROJECT INFORMATION:

PROGRAMME CALL: INTERREG V-B Adriatic-Ionian ADRION
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Lead Partner Organisation: LAG Eastern Venice, Italy
Url: www.ecovinegoals.interregadrion.eu

DOCUMENT INFORMATION

Lead Author	bottegadelpaesaggio
Contributors	-
Dissemination Level	PP (Partnership document)

Project Summary

ECOVINEGOALS promotes sustainability and resilience in the winemaking industry by encouraging the transition of intensive viticulture towards agroecological management systems that protect natural habitats and landscapes, while reducing chemical and fossil fuel inputs and harmful emissions. The project aims to enhance stakeholders' skills in participatory local governance, to strengthen transnational cooperation and provide specific transnational instruments to promote, support and manage the agroecological transition.

Expected results

- Sharing between partners in the ADRION countries of fundamental concepts and practices necessary for the transition from intensive viticulture management systems, towards agroecological management methods.
- Improvement of the participatory local governance skills of decision makers and all other viticulture stakeholders, both public and private, to jointly develop and define strategies and plans aiming to protect natural habitats and rural landscapes.
- Transnational communication, cooperation, and exchange between regional authorities and civil society organizations concerning common objectives to protect vulnerable environments, to promote ecosystem services, to prevent or mitigate climate change, and to avoid social conflicts in land use.
- An increase in the number and quality of tools and strategies available to support the planning and management of the agroecological transition of viticulture systems in the region.

Partnership:

PP1- LP	**LAG EASTERN VENICE, VEGAL (IT)**
PP2	Autonomous Province of Trento, PAT (IT)
PP3	Chamber of Agriculture and Forestry of SIovenia, KGZS-Zavod GO (SI)
PP4	Research Centre of the SIovenian Academy of Sciences and Arts, ZRC SAZU (SI)
PP5	Agency for rural development of Istria Ltd. Pazin, AZRRI (HR)
PP6	Association for the promotion of employment, vocational training and education, INFORMO (HR)
PP7	Business Development Center Kragujevac, BDCKG (RS)
PP8	Foundation Business Start-up Center Bar, BSC BAR (ME)
PP9	Municipality of Bar, BAR (ME)
PP10	Mediterranean Agronomic Institute of Chania, CIHEAM MAICh (EL)

Associated Partners (APs):

General Union CISL Cultivators Venice (IT)
Bio district of production and biological community of central-eastern Venice - BIO VENICE (IT)
IAL - Innovation Learning Work S.r.l. - Social enterprise (IT)
AIAB-Italian Organic Agriculture Association (IT)
Agroecologiki SP (EL)
Municipality of Topola (RS)
Šumadija winemakers association (RS)
Ministry of Agriculture and Rural Development (HR)
Agroecology Europe (BL)

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INTRODUCTION

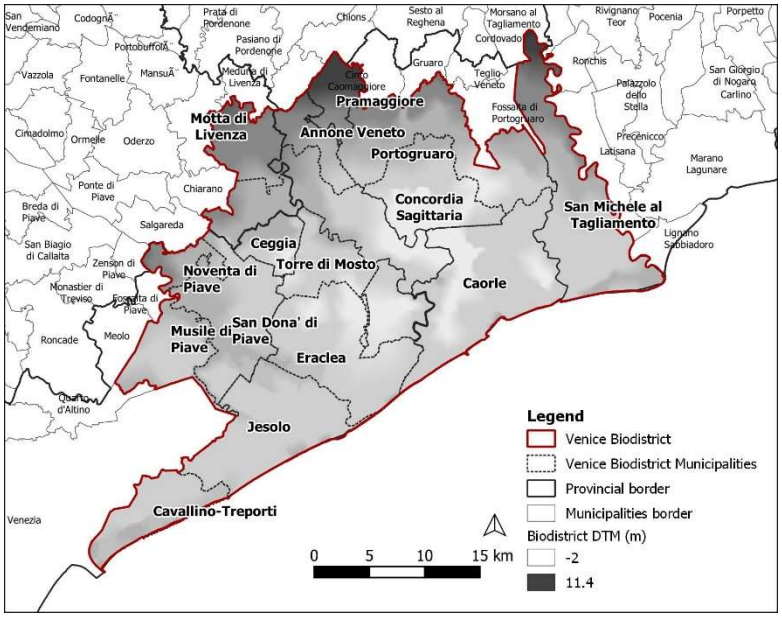

FIGURE 1 - MAP OF THE MUNICIPALITIES OF THE VENICE BIODISTRICT PILOT AREA

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1. PART A – GIS DATA COLLECTION OF VENICE BIODISTRICT

1.1 LAND USE AND MORPHOMETRY

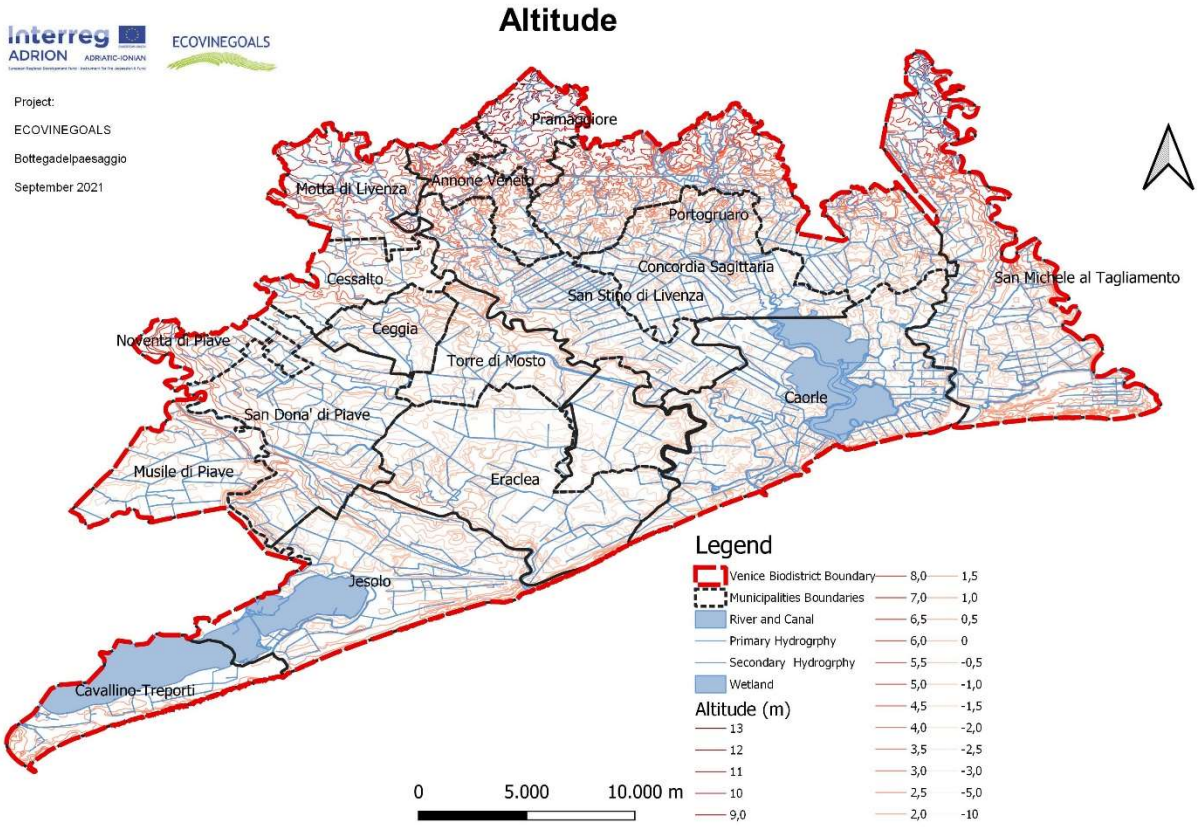


FIGURE 2 – ALTIMETRY MAP OF THE VENICE BIODISTRICT

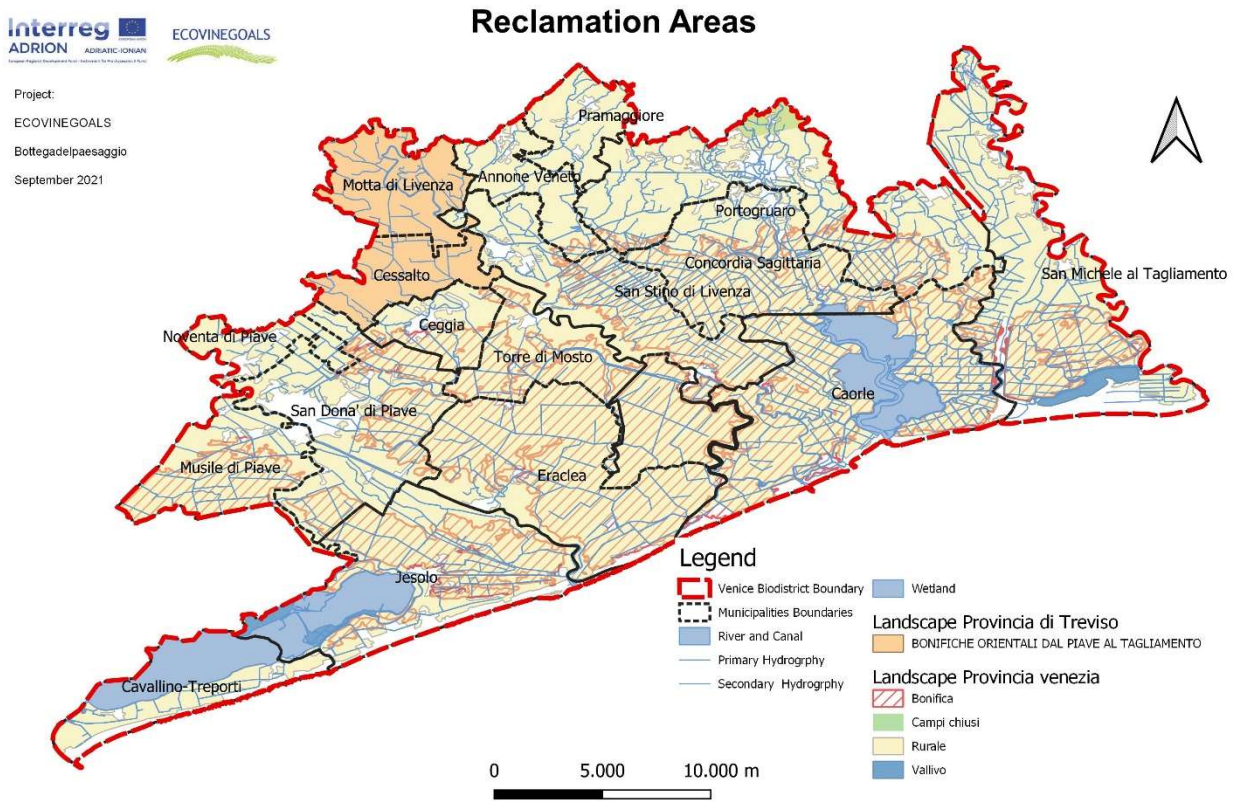


FIGURE 3 – MAP OF THE RECLAMATION AREAS

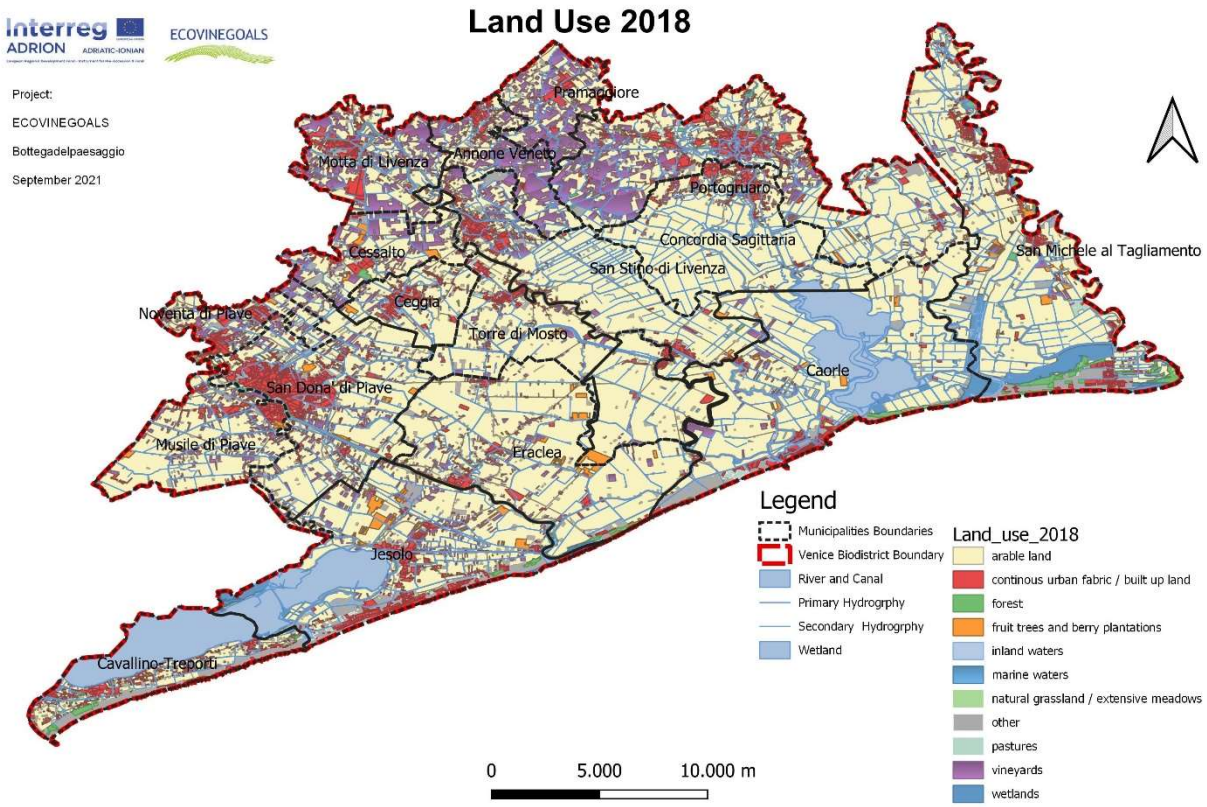


FIGURE 4 – LAND USE CHARTER OF THE VENICE BIODISTRICT

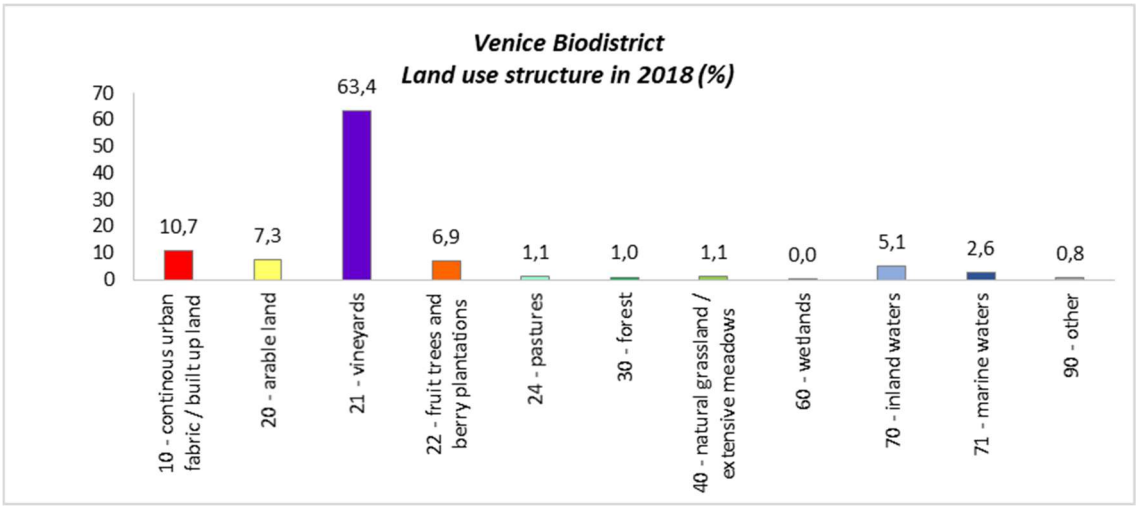


FIGURE 5 – LAND USE IN 2018

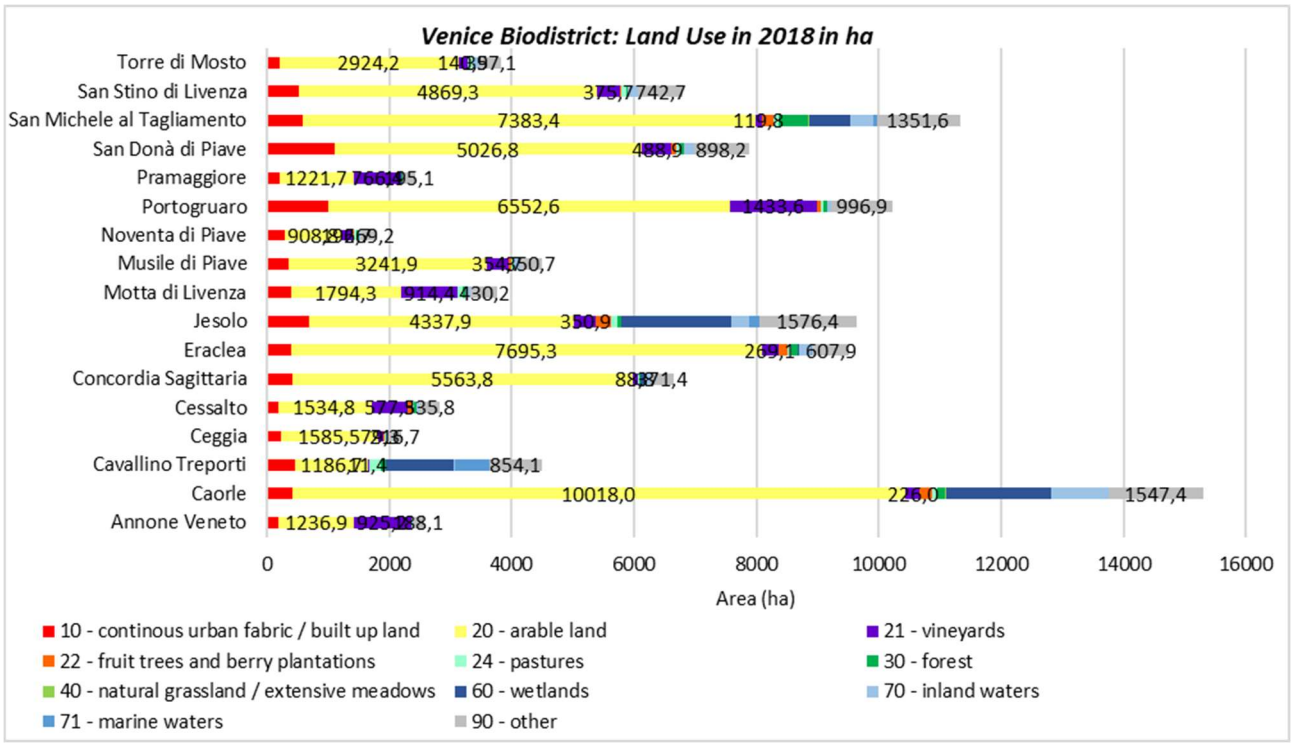


FIGURE 6 – LAND USE BY MUNICIPALITY IN HECTARES

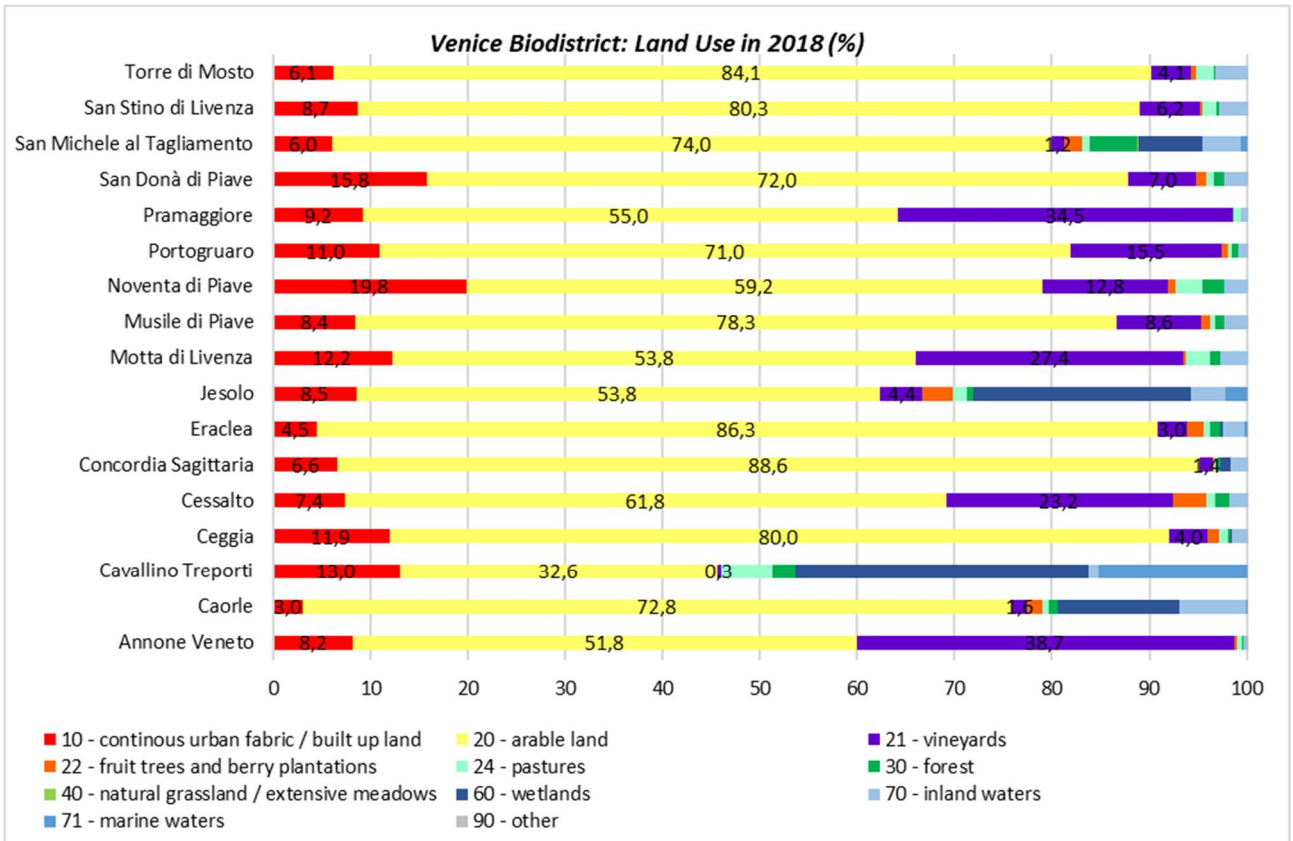


FIGURE 7 – LAND USE BY MUNICIPALITY AS A PERCENTAGE

Table 1: Comparison land use in the 1990, 2000 and 2018 (hectares)

	10 - continous urban fabric / built up land	20 - arable land	21 - vineyards	22 –fruit trees and berry plantations	24 - pastures	30 - forest	50 - transitional woodland / shrub	40 - natural grassland/ extensive meadows	60 – wetlands	70 – inland waters	71 - marine waters	90 - other
1990	6,567.9	69,078.7	2,680.8	905.4	0.0	621.5	0.0	0.0	3,728.1	2,196.9	1,459.9	18,561.0
2000	7,019.6	70,230.3	2,703.4	464.1	0.0	632.8	133.9	0.0	3,745.3	2,226.9	1,346.0	17106.4
2018	7,730.1	67,081.9	7,319.5	1,125.1	1,037.1	1,165.8	0.0	26.1	5,368.9	2,801.4	812.5	11289.5
Difference 2000-1990	451.6	,1,151.6	22.5	-441.3	0.0	11.3	133.9	0.0	17.1	30.0	-113.9	-1454.7
Difference 2018- 2000	710.5	-3,148.5	4,616.1	661.0	1,037.1	533.0	-133.9	26.1	1,623.6	574.5	-533.5	-5816.8
% Difference 2018 - 1990	**17.7**	**-2.9**	**173.0**	**24.3**	**-**	**87.6**	**-**	**-**	**44.0**	**27.5**	**-44.3**	**-39.2**

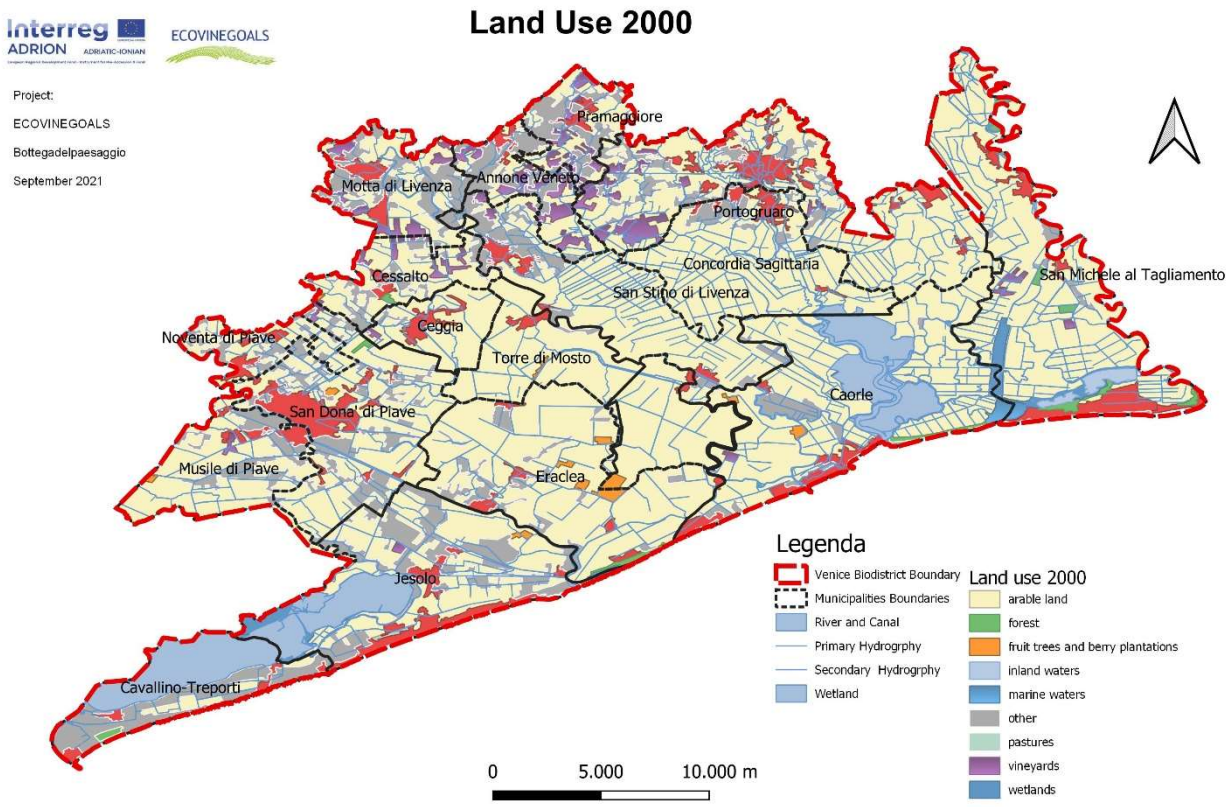


FIGURE 8 – LAND USE MAP IN 2000

1.2 CLIMATE

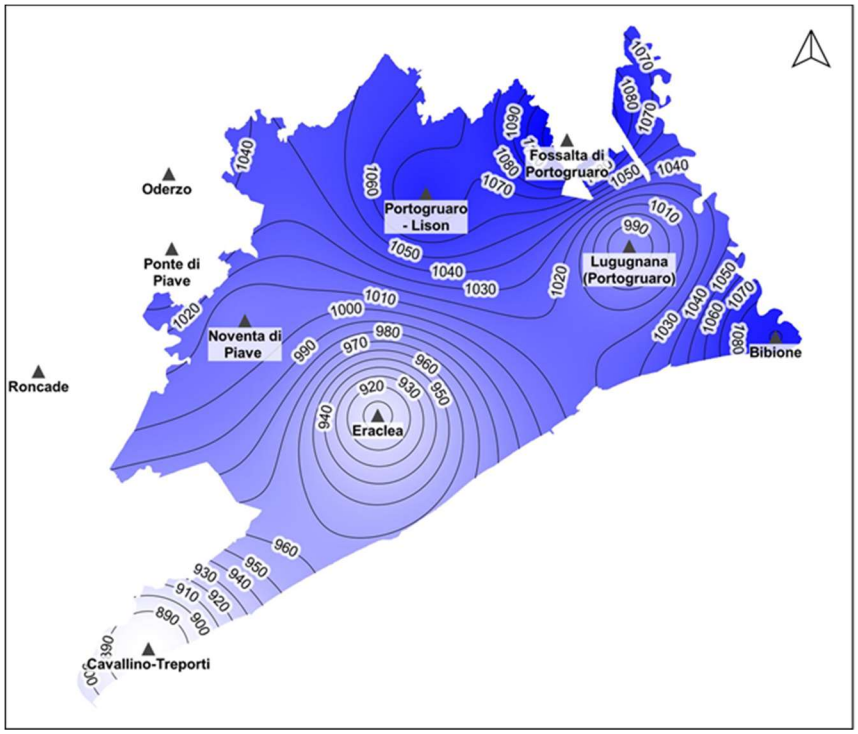
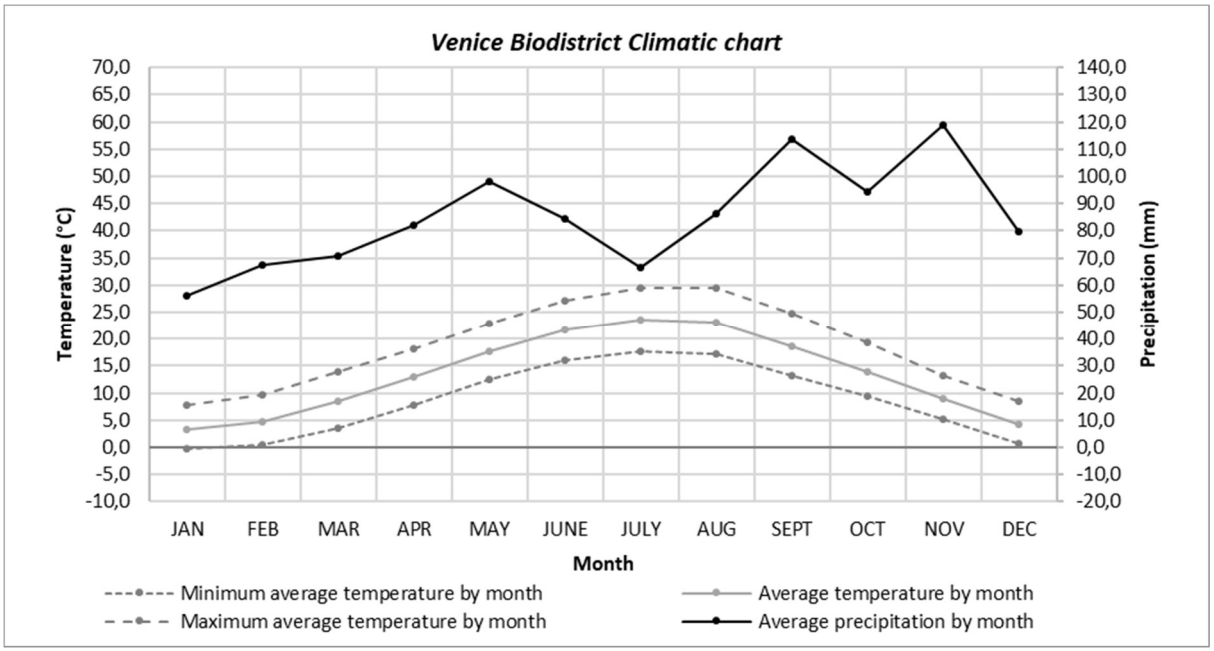


FIGURE 9 – RAINFALL DISTRIBUTION IN THE VENICE BIODISTRICT



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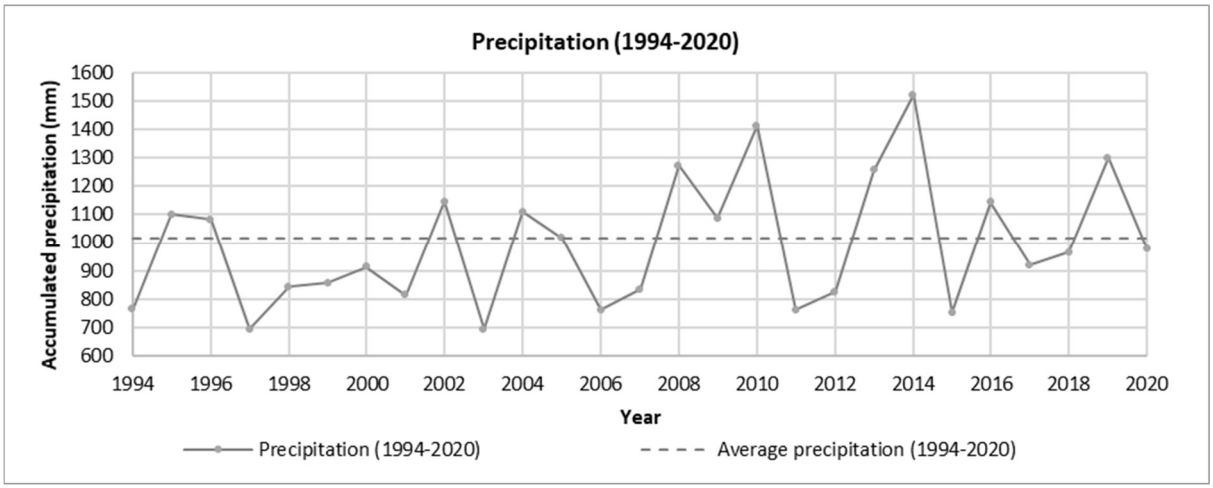
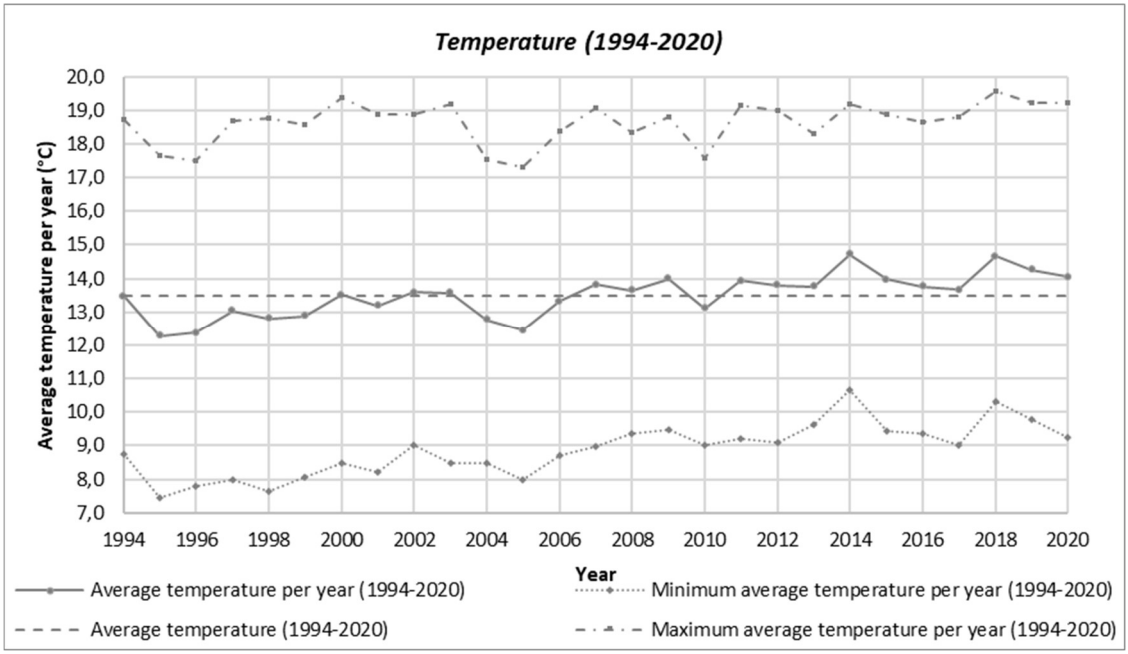


FIGURE 11 – TREND OF CUMULATIVE ANNUAL RAINFALL IN THE PERIOD (1994-2020) OF THE VENICE BIODISTRICT. THERE IS A PROGRESSIVE INCREASE IN RAINFALL, WITH AN INCREASE IN THE VARIABILITY.



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1.3 PEDOLOGY

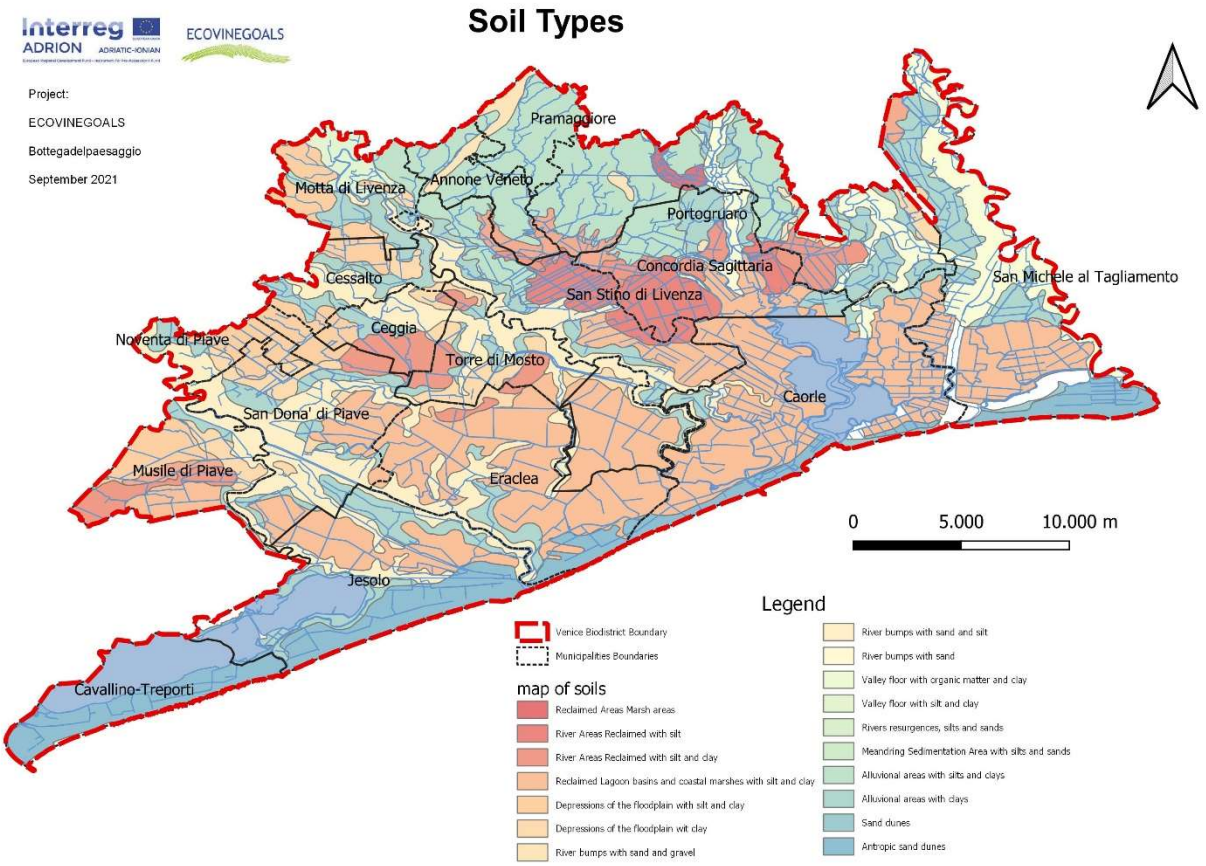

FIGURE 13 - SOIL MAP OF THE VENICE BIODISTRICT

1.4 NATURA 2000 AREAS

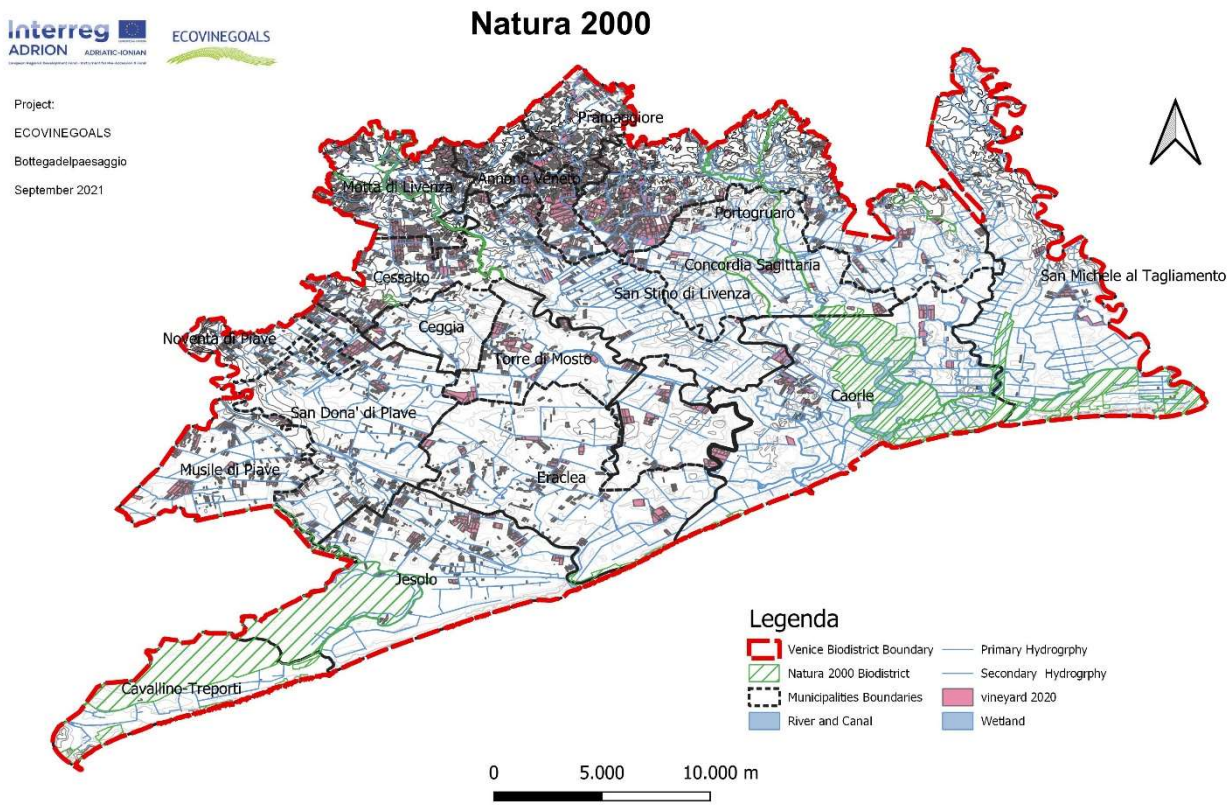

FIGURE 14 – MAP OF NATURA 2000 AREAS IN THE VENICE BIODISTRICT

1.5 THE VINEYARDS IN THE VENICE BIODISTRICT

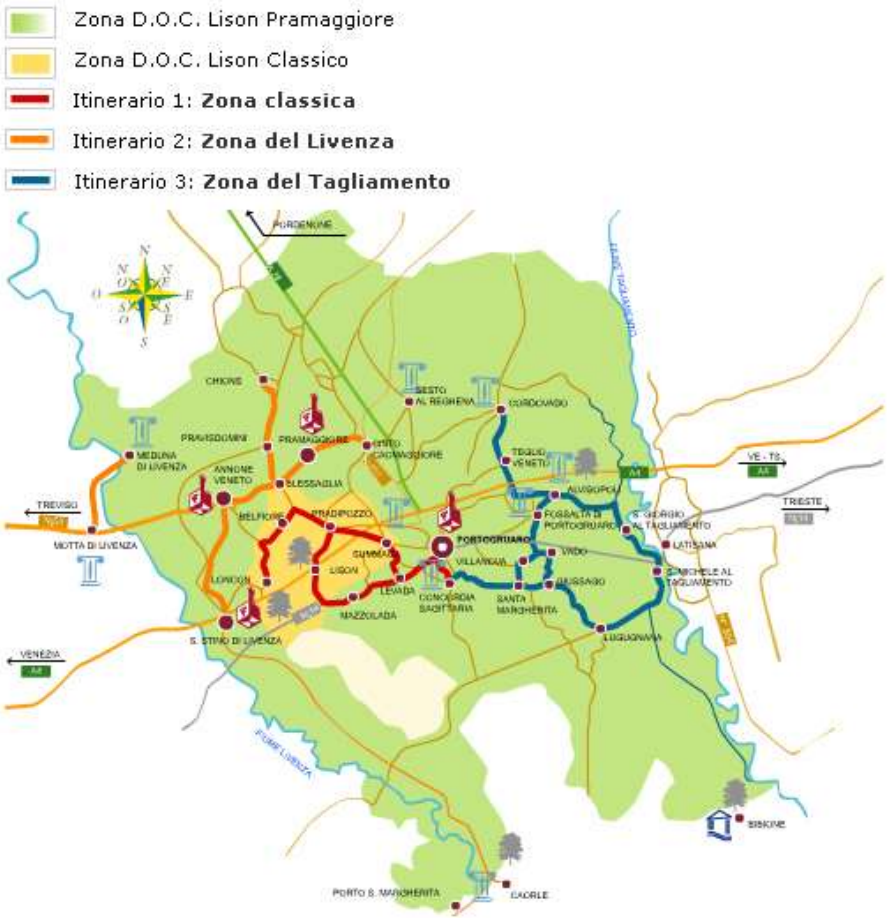

FIGURE 15 – THE WINE ROUTE OF THE LISON - PRAMAGGIORE (HTTPS://WWW.STRADAVINI.IT/)

Table 2: Division between organic and conventional crops in 2020

	Area (ha)	Area (%)
Crops	74,815.1	100.0
Organic Crops	1,387.4	1.9
Conventional crops	73,427.7	98.1

Table 3: Distribution of organic and conventional vineyards for 2020

	Area (ha)	Area (%)
Vineyards surface	10,061.7	100,0
Organic vineyards	805.6	8.0
Conventional vineyards	9,256.1	92.0

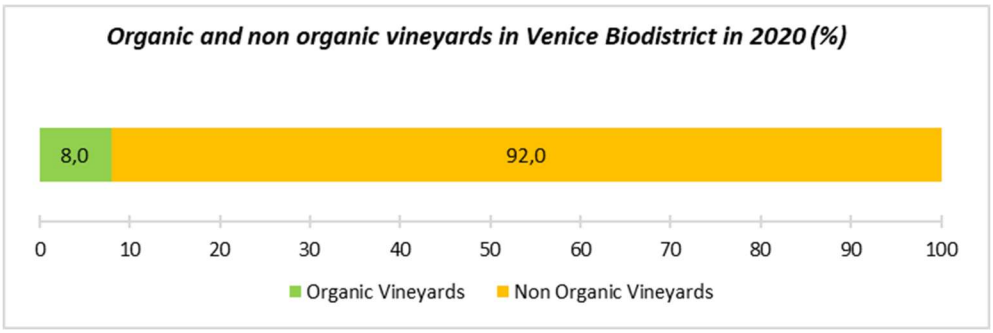

FIGURE 16 – COMPOSITION OF THE SURFACE WITH ORGANIC AND CONVENTIONAL VINEYARDS OF THE VENICE BIODISTRICT. (SOURCE: AVEPA, 2020)

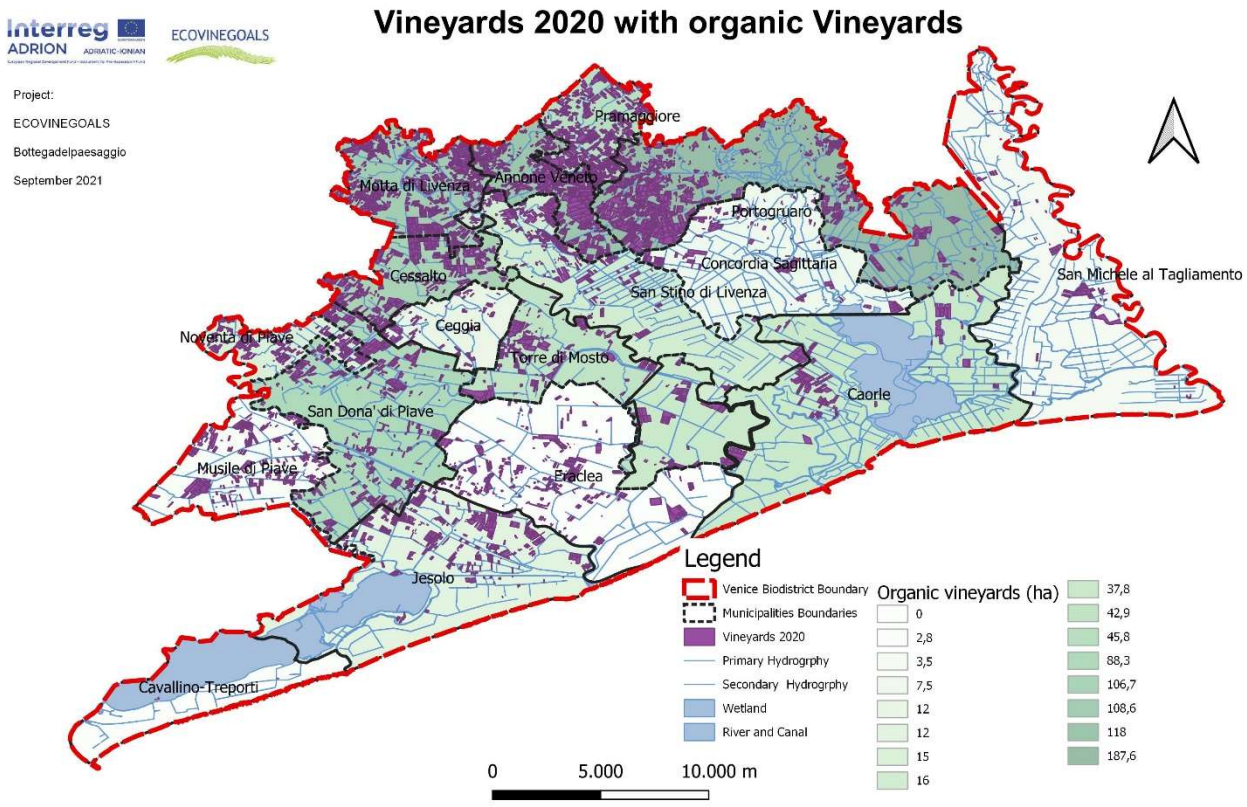

FIGURE 17 – MAP OF THE VINEYARDS IN 2018 AND AREA IN HECTARES OF ORGANIC VINEYARDS BY MUNICIPALITY

Table 6: Vineyards by municipalities

Municipalities	Total agricultural surface (ha)	Total organic surface (ha)	Organic surface/ Total agricultural surface (%)	Vineyards (ha)	Vineyards/ Total agricultural surface (%)	Organic vineyards (ha)	Organic vineyards/ Total organic surface (%)
Venice Biodistrict	**74,815.1**	**1,387.4**	**1.9**	**10,061.7**	**13.4**	**805.6**	**8.0**
Annone Veneto	1,974.1	185.4	9.4	959.9	48.6	118.1	12.3
Caorle	11,996.7	58.5	0.5	572.8	4.8	37.8	6.6
Cavallino Treporti	393.1	1.7	0.4	0.6	0.1	0.0	0.0
Ceggia	1,530.0	14.4	0.9	128.9	8.4	12.0	9.3
Cessalto	2,135.6	110.0	5.2	720.9	33.8	106.7	14.8
Concordia Sagittaria	5,310.0	39.3	0.7	275.4	5.2	7.5	2.7
Eraclea	7,955.5	74.3	0.9	536.7	6.7	0.0	0.0
Jesolo	6,452.2	62.3	1.0	613.7	9.5	12.2	2.0
Motta di Livenza	2,637.3	110.9	4.2	1,127.9	42.8	108.7	9.6
Musile di Piave	3,387.1	71.2	2.1	485.2	14.3	2.8	0.6
Noventa di Piave	1,029.9	20.6	2.0	318.9	31.0	15.5	4.9
Portogruaro	7,288.9	258.6	3.5	1,672.9	23.0	187.6	11.2
Pramaggiore	1,765.3	50.9	2.9	841.7	47.7	45.9	5.5
San Donà di Piave	5,232.8	112.3	2.1	684.2	13.1	88.3	12.9
San Michele al Tagliamento	7,575.4	37.5	0.5	146.9	1.9	3.6	2.4
San Stino di Livenza	5,068.0	23.4	0.5	520.6	10.3	16.0	3.1
Torre di Mosto	3,083.1	156.1	5.1	454.4	14.7	42.9	9.4

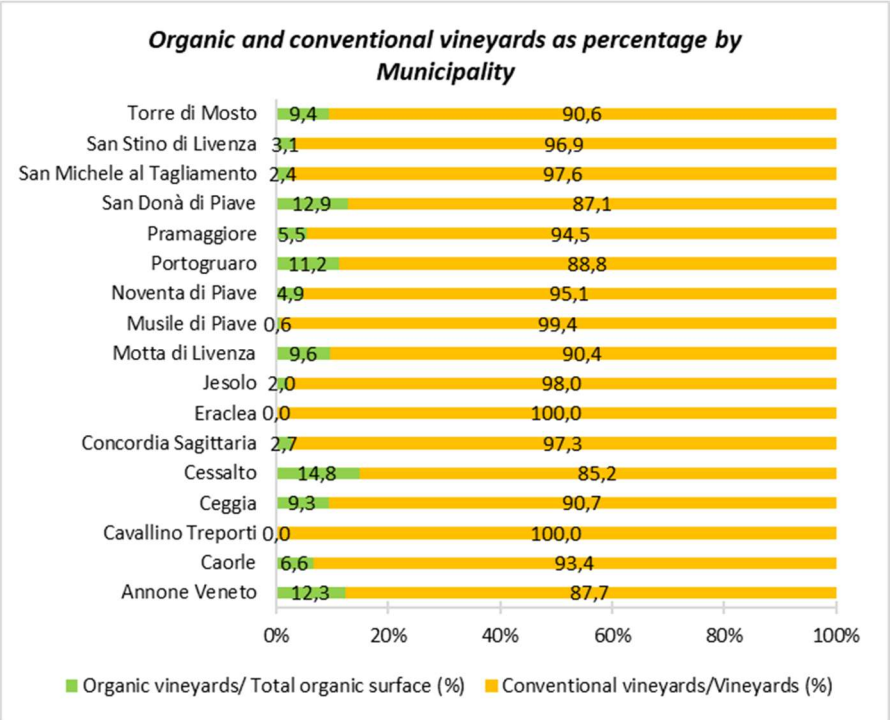

FIGURE 18 – COMPOSITION OF THE SURFACE WITH ORGANIC AND CONVENTIONAL VINEYARDS AS PERCENTAGE

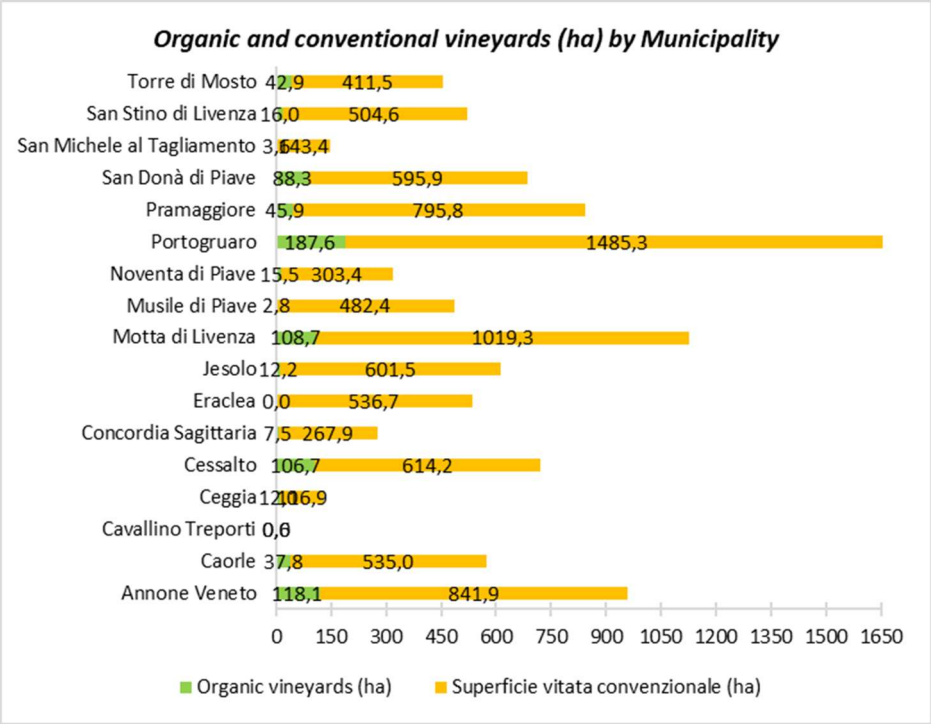

FIGURE 19 – ORGANIC AND CONVENTIONAL VINEYARDS IN HECTARES FOR MUNICIPALITY

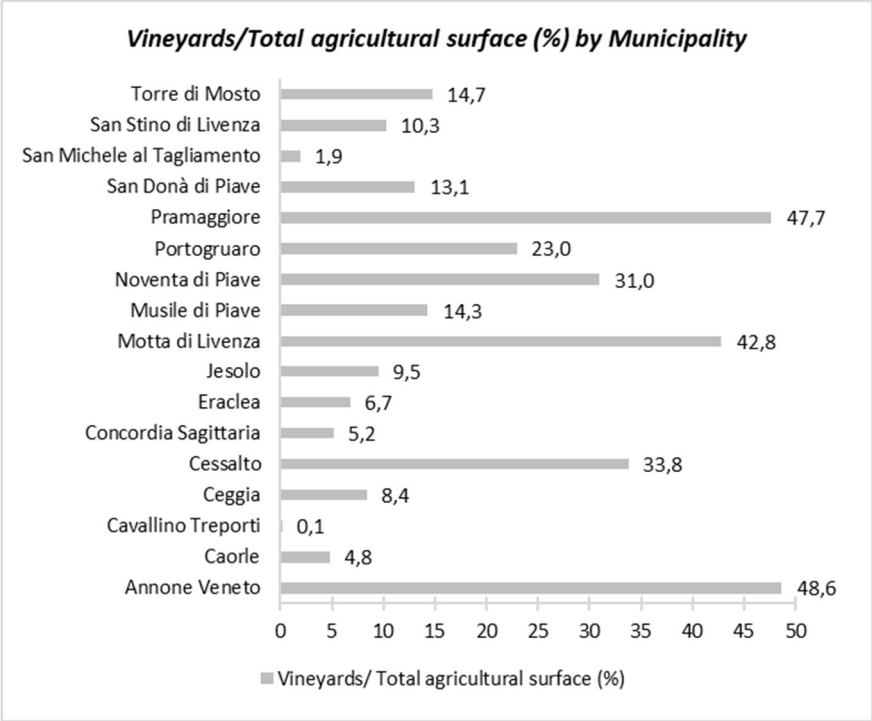

FIGURE 20 – VINEYARDS PERCENTAGE ON TOTAL CULTIVATED AREA PER MUNICIPALITY

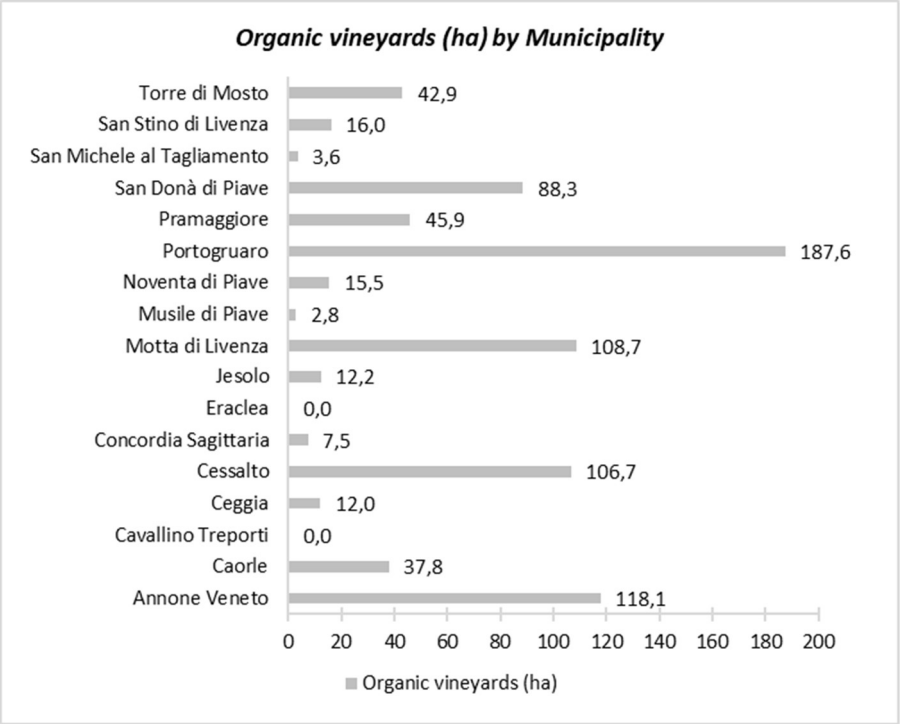

FIGURE 21 – ORGANIC VINEYARD AREA IN HECTARES PER MUNICIPALITY

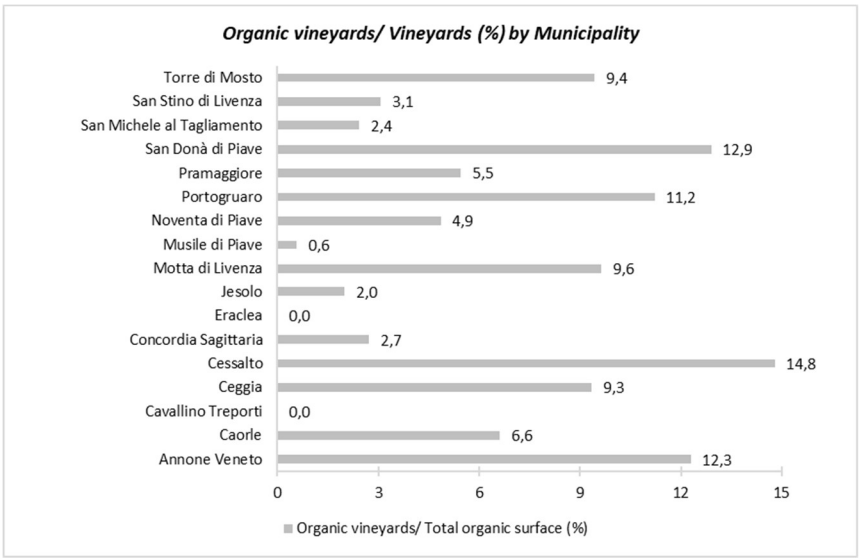

FIGURE 22 – ORGANIC VINEYARD AREA COMPARED TO THE TOTAL VINEYARD IN PERCENTAGE PER MUNICIPALITY

Table 7: First three conventional crops grown in 2020 per Municipality

Municipality	Conventional					
	I		II		III	
	Crops	Area (ha)	Crops	Area (ha)	Crops	Area (ha)
Venice biodistrict	**Corn**	**17,867.2**	**Soya**	**15,735.6**	**Grape**	**8,852.2**
Annone Veneto	Grape	832.3	Soya	252.5	Corn	143.0
Caorle	Corn	4,336.2	Soya	1,794.7	Wheat	1,310.0
Cavallino Treporti	Corn	77.8	Wheat	55.9	Orticulture	24.3
Ceggia	Soya	476.2	Corn	400.6	Wheat	217.2
Cessalto	Grape	610.2	Soya	334.4	Corn	316.3
Concordia Sagittaria	Corn	1,775.7	Soya	1,559.9	Wheat	720.9
Eraclea	Soya	2,099.6	Corn	1,951.7	Wheat	1,156.2
Jesolo	Soya	1,037.5	Corn	966.6	Grape	597.3
Motta di Livenza	Grape	1,013.1	Soya	436.8	Corn	228.0
Musile di Piave	Soya	913.5	Corn	753.1	Wheat	559.1
Noventa di Piave	Grape	293.4	Soya	236.8	Corn	137.7
Portogruaro	Soya	1,513.7	Grape	1,471.7	Corn	1,425.1
Pramaggiore	Grape	790.3	Soya	234.7	Corn	141.6
San Donà di Piave	Soya	1,446.0	Corn	1,260.6	Wheat	612.3
San Michele al Tagliamento	Corn	2,435.6	Soya	1,984.6	Wheat	834.4
San Stino di Livenza	Corn	1,373.1	Soya	1,292.1	Wheat	584.2
Torre di Mosto	Soya	772.7	Corn	669.1	Grape	410.7

Table 8: First three organic crops grown in 2020 per Municipality

Municipality	Organic					
	I		II		III	
	Crops	Area (ha)	Crops	Area (ha)	Crops	Area (ha)
Venice Biodistrict	**Grape**	**807,9**	**Soya**	**137,0**	**Wheat**	**117,5**
Annone Veneto	Grape	117,9	Soya	30,3	Sunflower	25,0
Caorle	Grape	37,8	Orticolture	16,0	Sunflower	10,7
Cavallino Treporti	Meadow	1,3	Fruit trees	0,3	Orticolture	0,3
Ceggia	Grape	12,0	Wheat	2,3	-	0,0
Cessalto	Grape	106,7	Meadow	2,6	Meadow	0,7
Concordia Sagittaria	Sunflower	22,6	Soya	9,2	Grape	7,2
Eraclea	Soya	40,1	Wheat	34,0	Apple	2,3
Jesolo	Meadow	35,9	Tomato	22,6	Orticolture	21,8
Motta di Livenza	Grape	108,7	Soya	2,1	Orticolture	0,3
Musile di Piave	Wheat	38,0	Soya	25,6	Meadow	3,9
Noventa di Piave	Grape	15,5	Meadow	3,3	Meadow	1,4
Portogruaro	Grape	187,6	Soya	38,1	Sunflower	14,6
Pramaggiore	Grape	45,9	Sunflower	3,0	Soya	2,0
San Donà di Piave	Grape	88,3	Meadow	11,0	Soya	6,5
San Michele al Tagliamento	Medicinal plants	11,3	Wheat	9,4	Sunflower	8,7
San Stino di Livenza	Grape	16,0	Farro	7,1	Meadow	0,3
Torre di Mosto	Grape	42,9	Wheat	37,5	Meadow	26,7

Table 9: First three conventional vine cultivars grown in 2020 per Municipality

Comune	Conventional					
	I		II		III	
	Vine cultivar	Area (ha)	Vine cultivar	Area (ha)	Vine cultivar	Area (ha)
Biodistretto delle Venezie	**Glera**	**2,773.0**	**Pinot grigio**	**2,246.0**	**Merlot**	**561.8**
Annone Veneto	Glera	182.6	Pinot grigio	174.1	Merlot	44.8
Caorle	Glera	254.5	Pinot grigio	118.5	Glera	37.8
Cavallino Treporti	Glera	0.3	Pinot grigio	0.2	-	-
Ceggia	Glera	46.3	Pinot grigio	30.9	Chardonnay	10.6
Cessalto	Glera	206.1	Pinot grigio	119.4	Glera	65.0
Concordia Sagittaria	Glera	115.4	Pinot grigio	101.1	Merlot	12.4
Eraclea	Glera	196.1	Pinot grigio	157.9	Pinot nero	25.0
Jesolo	Pinot grigio	177.1	Glera	158.9	Chardonnay	26.8
Motta di Livenza	Glera	362.1	Uva da vino	155.5	Pinot grigio	154.0
Musile di Piave	Pinot grigio	164.9	Glera	128.6	Pinot nero	35.6
Noventa di Piave	Pinot grigio	70.5	Glera	68.6	Chardonnay	26.7
Portogruaro	Pinot grigio	442.2	Glera	352.2	Merlot	108.1
Pramaggiore	Pinot grigio	181.8	Glera	165.7	Merlot	64.4
San Donà di Piave	Pinot grigio	204.4	Glera	147.2	Glera	41.0
San Michele al Tagliamento	Glera	67.3	Pinot grigio	38.6	Pinot bianco	5.7
San Stino di Livenza	Pinot grigio	161.9	Glera	136.4	Merlot	44.0
Torre di Mosto	Glera	263.2	Pinot grigio	72.7	Glera	23.6

Table 10: First three organic vine cultivars grown in 2020 per Municipality

Comune	Biologico					
	I		II		III	
	Vine cultivar	Area (ha)	Vine cultivar	Area (ha)	Vine cultivar	Area (ha)
Biodistretto delle Venezie	**Glera**	**367.7**	**Pinot grigio**	**167.7**	**Merlot**	**39.7**
Annone Veneto	Glera	28.2	Pinot grigio	15.9	Merlot	15.4
Caorle	Glera	37.8	-	0.0	-	-
Cavallino Treporti	-	-	-	-	-	-
Ceggia	Pinot grigio	5.6	Glera	3.7	Traminer aromatico	2.1
Cessalto	Glera	65.0	Pinot grigio	27.4	Chardonnay	6.5
Concordia Sagittaria	Glera	6.2	Helios	0.4	Cabernet	0.3
Eraclea	-	-	-	-	-	-
Jesolo	Glera	12.2	-	0.0	-	0.0
Motta di Livenza	Glera	56.6	Pinot grigio	24.3	Chardonnay	3.2
Musile di Piave	Pinot grigio	1.4	Carmenere	0.8	Verduzzo trevigiano	0.6
Noventa di Piave	Glera	4.4	Pinot nero	4.3	Pinot grigio	2.4
Portogruaro	Glera	73.0	Pinot grigio	36.5	Merlot	16.0
Pramaggiore	Pinot grigio	10.2	Cabernet franc	5.8	Tocai friulano	4.3
San Donà di Piave	Glera	41.0	Pinot grigio	22.5	Pinot nero	9.2
San Michele al Tagliamento	-	-	-	-	-	-
San Stino di Livenza	Glera	10.1	Pinot grigio	3.7	Merlot	2.2
Torre di Mosto	Glera	23.6	Pinot grigio	17.4	Pinot nero	1.8

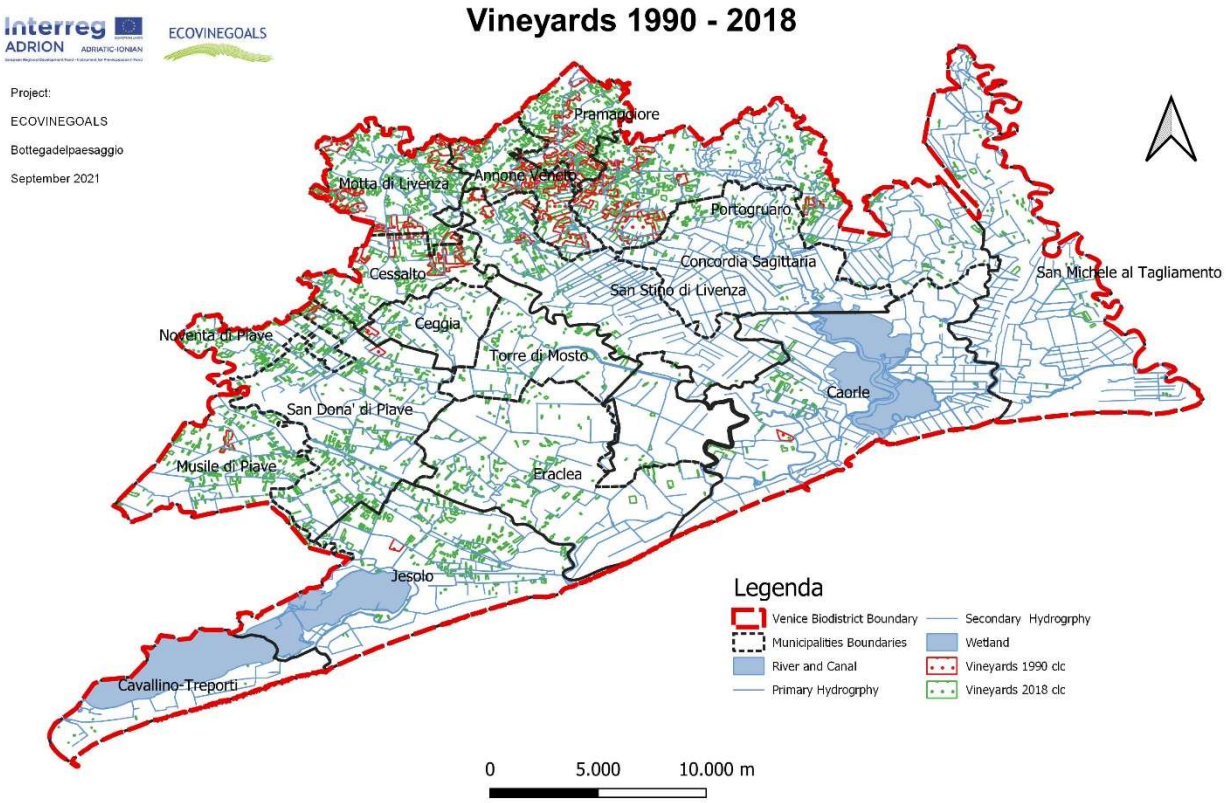

FIGURE 23 - MAP OF THE COMPARISON BETWEEN VINEYARDS PRESENT IN 1990 AND 2018 IN THE BIODISTRICT

2. PART B - SOCIO-ECONOMIC AND CULTURAL ASPECTS OF VENICE BIODISTRICT LANDSCAPE

2.1 DEMOGRAPHY

Table 11 – Biodistrict resident population per Municipality

		Male			Female			Total		
Municipalities	**Province**	**1995**	**2000**	**2018**	**1995**	**2000**	**2018**	**1995**	**2000**	**2018**
Venice Biodistrict	**-**	89,183	96,855	105,914	94,082	102,090	111,611	183,265	198,945	217,525
Annone Veneto	VE	1,620	1,714	1,921	1,700	1,752	1,907	3,320	3,466	3,828
Caorle	VE	5,654	5,654	5,565	5,852	5,852	5,958	11,506	11,506	11,523
Cavallino-Treporti*	VE	-	5,925	6,604	-	6,039	6,880	-	11,964	13,484
Ceggia	VE	2,462	2,457	2,976	2,556	2,641	3,090	5,018	5,098	6,066
Cessalto	TV	1,519	1,521	1,895	1,602	1,585	1,947	3,121	3,106	3,842
Concordia Sagittaria	VE	5,126	5,092	4,985	5,406	5,464	5,342	10,532	10,556	10,327
Eraclea	VE	6,100	6,196	6,034	6,211	6,283	6,187	12,311	12,479	12,221
Jesolo	VE	10,919	11,102	12,686	11,476	11,834	13,414	22,395	22,936	26,100
Motta di Livenza	TV	4,359	4,769	5,269	4,499	4,907	5,485	8,858	9,676	10,754
Musile di Piave	VE	4,810	5,060	5,672	4,946	5,172	5,790	9,756	10,232	11,462
Noventa di Piave	VE	2,819	2,835	3,399	3,001	3,029	3,548	5,820	5,864	6,947
Portogruaro	VE	11,792	11,686	11,852	12,676	12,668	12,817	24,468	24,354	24,669
Pramaggiore	VE	1,801	1,962	2,313	1,853	1,980	2,319	3,654	3,942	4,632
San Donà di Piave	VE	16,742	17,388	20,259	18,126	18,658	21,879	34,868	36,046	42,138
San Michele al Tagliamento	VE	5,789	5,671	5,743	6,201	6,096	6,121	11,990	11,767	11,864
San Stino di Livenza	VE	5,716	5,716	6,368	5,932	5,932	6,504	11,648	11,648	12,872
Torre di Mosto	VE	1,955	2,107	2,373	2,045	2,198	2,423	4,000	4,305	4,796

* Cavallino-Treporti was a district of the Municipality of Venice until 1999

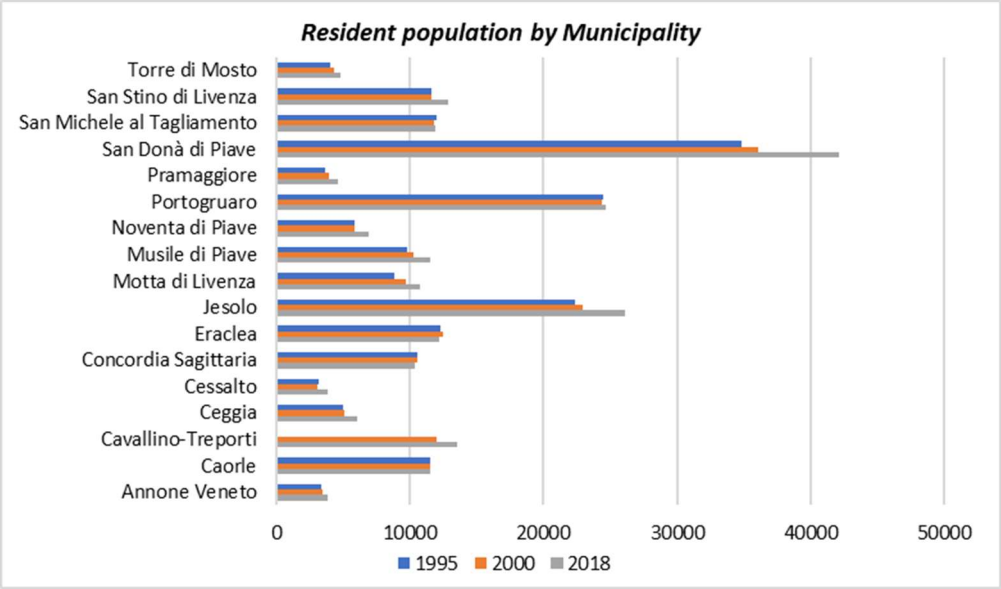

FIGURE 24 – RESIDENT POPULATION BY MUNICIPALITY

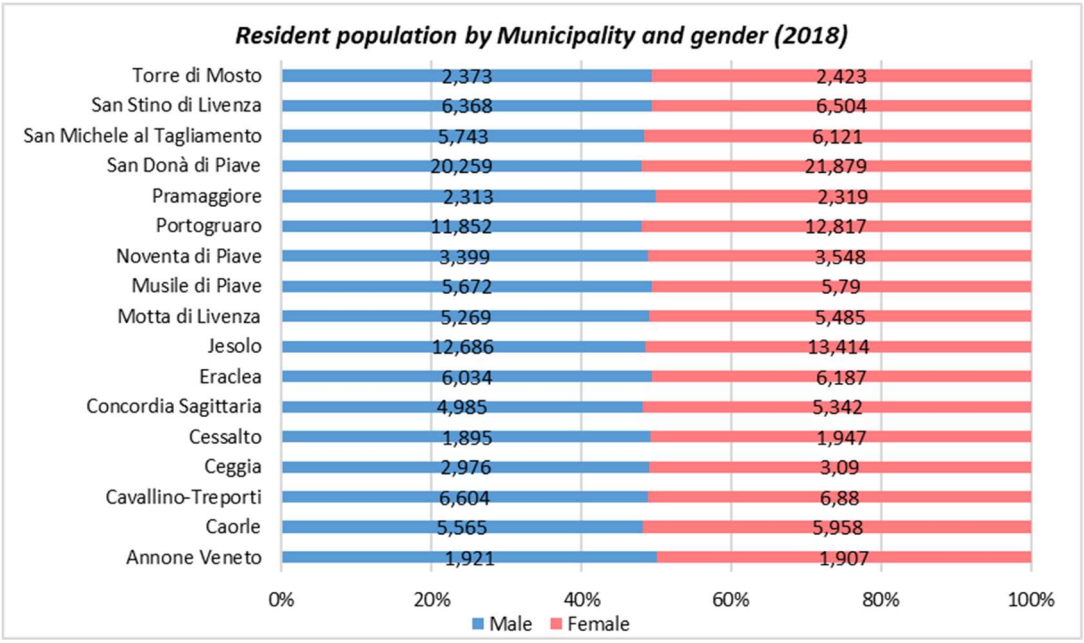

FIGURE 25 - HISTOGRAMS OF THE DISTRIBUTION OF MALES AND FEMALES IN THE RESIDENT POPULATION BY MUNICIPALITY

Table 12 – Population of resident foreigners by Municipality

Municipalities	Province	Male	Female	Foreigners	Totale resident population	Foreigners percentage (%)
Venice Biodistrict	**-**	**10,304**	**11,778**	**22,082**	**217,998**	**10,1**
Annone Veneto	VE	237	250	487	3,932	12,4
Caorle	VE	469	578	1,047	11,606	9,0
Cavallino-Treporti	VE	499	652	1,151	13,563	8,5
Ceggia	VE	283	331	614	6,123	10,0
Cessalto	TV	292	310	602	3,854	15,6
Concordia Sagittaria	VE	195	298	493	10,373	4,8
Eraclea	VE	426	524	950	12,276	7,7
Jesolo	VE	1,386	1,557	2,943	26,199	11,2
Motta di Livenza	TV	829	789	1,618	10,801	15,0
Musile di Piave	VE	681	640	1,321	11,461	11,5
Noventa di Piave	VE	381	421	802	6,966	11,5
Portogruaro	VE	923	1,187	2,110	24,959	8,5
Pramaggiore	VE	303	301	604	4,644	13,0
San Donà di Piave	VE	2,086	2,436	4,522	41,794	10,8
San Michele al Tagliamento	VE	544	629	1,173	11,822	9,9
San Stino di Livenza	VE	600	673	1,273	12,855	9,9
Torre di Mosto	VE	170	202	372	4,770	7,8

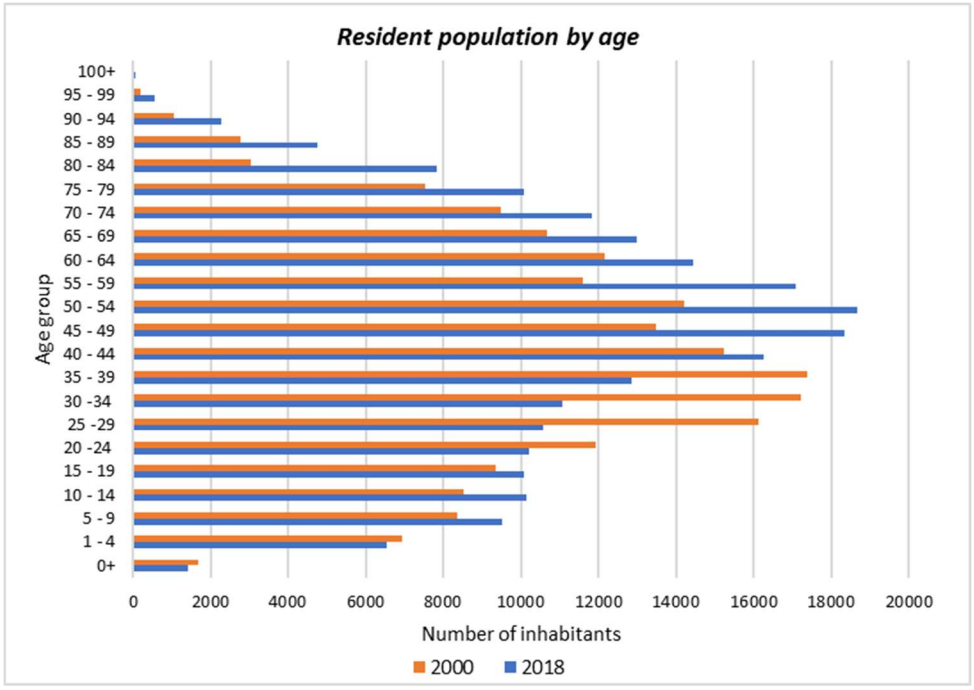

FIGURE 26 - POPULATION BY AGE GROUP OF THE VENICE BIODISTRICT IN THE YEARS 2000 AND 2018

3. PART C - ECOSYSTEM SERVICES IN VENICE BIODISTRICT LANDSCAPE

Table 13: Ecosystem services in Venice Biodistrict

ECOSYSTEM SERVICES					Compliance with the pilot area Y/N Venice Biodistrict vineyards	
Section	**Division**	**Group**	**Class**	**Code**	**Conventional**	**Organic**
Provisioning (Biotic)	Biomass	Cultivated terrestrial plants for nutrition, materials or energy	Cultivated terrestrial plants (including fungi, algae) grown for nutritional purposes	1.1.1.1	Y	Y
	Biomass	Cultivated terrestrial plants for nutrition, materials or energy	Fibres and other materials from cultivated plants, fungi, algae and bacteria for direct use or processing (excluding genetic materials)	1.1.1.2	N	N
	Biomass	Cultivated terrestrial plants for nutrition, materials or energy	Cultivated plants (including fungi, algae) grown as a source of energy	1.1.1.3	Y	Y
	Biomass	Cultivated aquatic plants for nutrition, materials or energy	Plants cultivated by in- situ aquaculture grown for nutritional purposes	1.1.2.1	N	N
	Biomass	Cultivated aquatic plants for nutrition, materials or energy	Fibres and other materials from in-situ aquaculture for direct use or processing (excluding genetic materials)	1.1.2.2	N	N
	Biomass	Cultivated aquatic plants for nutrition, materials or energy	Plants cultivated by in- situ aquaculture grown as an energy source	1.1.2.3	N	N
	Biomass	Reared animals for nutrition, materials or energy	Animals reared for nutritional purposes	1.1.3.1	N	N
	Biomass	Reared animals for nutrition, materials or energy	Fibres and other materials from reared animals for direct use or processing (excluding genetic materials)	1.1.3.2	N	N
	Biomass	Reared animals for nutrition, materials or energy	Animals reared to provide energy (including mechanical)	1.1.3.3	N	N
	Biomass	Reared aquatic animals for nutrition, materials or energy	Animals reared by in-situ aquaculture for nutritional purposes	1.1.4.1	N	N
	Biomass	Reared aquatic animals for nutrition, materials or energy	Fibres and other materials from animals grown by in-situ aquaculture for direct use or processing (excluding genetic materials)	1.1.4.2	N	N
	Biomass	Reared aquatic animals for nutrition, materials or energy	Animals reared by in-situ aquaculture as an energy source	1.1.4.3	N	N
	Biomass	Wild plants (terrestrial and aquatic) for nutrition, materials or energy	Wild plants (terrestrial and aquatic, including fungi, algae) used for nutrition	1.1.5.1	N	N
	Biomass	Wild plants (terrestrial and aquatic) for nutrition, materials or energy	Fibres and other materials from wild plants for direct use or processing (excluding genetic materials)	1.1.5.2	N	N

	Biomass	Wild plants (terrestrial and aquatic) for nutrition, materials or energy	Wild plants (terrestrial and aquatic, including fungi, algae) used as a source of energy	1.1.5.3	N	N
	Biomass	Wild animals (terrestrial and aquatic) for nutrition, materials or energy	Wild animals (terrestrial and aquatic) used for nutritional purposes	1.1.6.1	N	N
	Biomass	Wild animals (terrestrial and aquatic) for nutrition, materials or energy	Fibres and other materials from wild animals for direct use or processing (excluding genetic materials)	1.1.6.2	N	N
	Biomass	Wild animals (terrestrial and aquatic) for nutrition, materials or energy	Wild animals (terrestrial and aquatic) used as a source of energy	1.1.6.3	N	N
	Genetic material from all biota (including seed, spore or gamete production)	Genetic material from plants, algae or fungi	Seeds, spores and other plant materials collected for maintaining or establishing a population	1.2.1.1	N	N
	Genetic material from all biota (including seed, spore or gamete production)	Genetic material from plants, algae or fungi	Higher and lower plants (whole organisms) used to breed new strains or varieties	1.2.1.2	N	N
	Genetic material from all biota (including seed, spore or gamete production)	Genetic material from plants, algae or fungi	Individual genes extracted from higher and lower plants for the design and construction of new biological entities	1.2.1.3	N	N
	Genetic material from all biota (including seed, spore or gamete production)	Genetic material from animals	Animal material collected for the purposes of maintaining or establishing a population	1.2.2.1	N	N
	Genetic material from all biota (including seed, spore or gamete production)	Genetic material from animals	Wild animals (whole organisms) used to breed new strains or varieties	1.2.2.2	N	N
	Genetic material from all biota (including seed, spore or gamete production)	Genetic material from organisms	Individual genes extracted from organisms for the design and construction of new biological entities	1.2.2.3	N	N

	Other characteristics of living systems that have cultural significance	Other	Other	3.3.X.X	N	N
Provisioning (Abiotic)	Water	Surface water used for nutrition, materials or energy	Surface water for drinking	4.2.1.1	N	N
	Water	Surface water used for nutrition, materials or energy	Surface water used as a material (non-drinking purposes)	4.2.1.2	N	N
	Water	Surface water used for nutrition, materials or energy	Freshwater surface water used as an energy source	4.2.1.3	N	N
	Water	Surface water used for nutrition, materials or energy	Coastal and marine water used as energy source	4.2.1.4	N	N
	Water	Ground water for used for nutrition, materials or energy	Ground (and subsurface) water for drinking	4.2.2.1	N	N
	Water	Ground water for used for nutrition, materials or energy	Ground water (and subsurface) used as a material (non-drinking purposes)	4.2.2.2	N	N
	Water	Ground water for used for nutrition, materials or energy	Ground water (and subsurface) used as an energy source	4.2.2.3	N	N
Regulation & Maintenance (Biotic)	Transformation of biochemical or physical inputs to ecosystems	Mediation of wastes or toxic substances of anthropogenic origin by living processes	Bio-remediation by micro-organisms, algae, plants, and animals	2.1.1.1	N	N
	Transformation of biochemical or physical inputs to ecosystems	Mediation of wastes or toxic substances of anthropogenic origin by living processes	Filtration/sequestration/storage/accumulation by micro-organisms, algae, plants, and animals	2.1.1.2	N	N
	Transformation of biochemical or physical inputs to ecosystems	Mediation of nuisances of anthropogenic origin	Smell reduction	2.1.2.1	N	N
	Transformation of biochemical or physical inputs to ecosystems	Mediation of nuisances of anthropogenic origin	Noise attenuation	2.1.2.2	N	N
	Transformation of biochemical or physical inputs to ecosystems	Mediation of nuisances of anthropogenic origin	Visual screening	2.1.2.3	N	N
	Regulation of physical, chemical, biological conditions	Regulation of baseline flows and extreme events	Control of erosion rates	2.2.1.1	Y	Y
	Regulation of physical, chemical, biological conditions	Regulation of baseline flows and extreme events	Buffering and attenuation of mass movement	2.2.1.2	N	N

	Regulation of physical, chemical, biological conditions	Regulation of baseline flows and extreme events	Hydrological cycle and water flow regulation (Including flood control, and coastal protection)	2.2.1.3	N	N
	Regulation of physical, chemical, biological conditions	Regulation of baseline flows and extreme events	Wind protection	2.2.1.4	N	N
	Regulation of physical, chemical, biological conditions	Regulation of baseline flows and extreme events	Fire protection	2.2.1.5	N	N
	Regulation of physical, chemical, biological conditions	Lifecycle maintenance, habitat and gene pool protection	Pollination (or 'gamete' dispersal in a marine context)	2.2.2.1	Y (Minor)	Y
	Regulation of physical, chemical, biological conditions	Lifecycle maintenance, habitat and gene pool protection	Seed dispersal	2.2.2.2	N	N
	Regulation of physical, chemical, biological conditions	Lifecycle maintenance, habitat and gene pool protection	Maintaining nursery populations and habitats (Including gene pool protection)	2.2.2.3	N	N
	Regulation of physical, chemical, biological conditions	Pest and disease control	Pest control (including invasive species)	2.2.3.1	N	N
	Regulation of physical, chemical, biological conditions	Pest and disease control	Disease control	2.2.3.2	N	N
	Regulation of physical, chemical, biological conditions	Regulation of soil quality	Weathering processes and their effect on soil quality	2.2.4.1	N	N
	Regulation of physical, chemical, biological conditions	Regulation of soil quality	Decomposition and fixing processes and their effect on soil quality	2.2.4.2	Y (Minor)	Y
	Regulation of physical, chemical, biological conditions	Water conditions	Regulation of the chemical condition of freshwaters by living processes	2.2.5.1	N	N
	Regulation of physical, chemical, biological conditions	Water conditions	Regulation of the chemical condition of salt waters by living processes	2.2.5.2	N	N
	Regulation of physical, chemical, biological conditions	Atmospheric composition and conditions	Regulation of chemical composition of atmosphere and oceans	2.2.6.1	N	N

	Regulation of physical, chemical, biological conditions	Atmospheric composition and conditions	Regulation of temperature and humidity, including ventilation and transpiration	2.2.6.2	N	N
	Other types of regulation and maintenance service by living processes	Other	Other	2.3.X.X	N	N
Cultural (Biotic)	Direct, in-situ and outdoor interactions with living systems that depend on presence in the environmental setting	Physical and experiential interactions with natural environment	Characteristics of living systems that that enable activities promoting health, recuperation or enjoyment through active or immersive interactions	3.1.1.1	N	N
	Direct, in-situ and outdoor interactions with living systems that depend on presence in the environmental setting	Physical and experiential interactions with natural environment	Characteristics of living systems that enable activities promoting health, recuperation or enjoyment through passive or observational interactions	3.1.1.2	N	N
	Direct, in-situ and outdoor interactions with living systems that depend on presence in the environmental setting	Intellectual and representative interactions with natural environment	Characteristics of living systems that enable scientific investigation or the creation of traditional ecological knowledge	3.1.2.1	N	N
	Direct, in-situ and outdoor interactions with living systems that depend on presence in the environmental setting	Intellectual and representative interactions with natural environment	Characteristics of living systems that enable education and training	3.1.2.2	N	N
	Direct, in-situ and outdoor interactions with living systems that depend on presence in the environmental setting	Intellectual and representative interactions with natural environment	Characteristics of living systems that are resonant in terms of culture or heritage	3.1.2.3	Y	Y
	Direct, in-situ and outdoor interactions with living systems that depend on presence in the environmental setting	Intellectual and representative interactions with natural environment	Characteristics of living systems that enable aesthetic experiences	3.1.2.4	N	N

	Indirect, remote, often indoor interactions with living systems that do not require presence in the environmental setting	Spiritual, symbolic and other interactions with natural environment	Elements of living systems that have symbolic meaning	3.2.1.1	Y	Y
	Indirect, remote, often indoor interactions with living systems that do not require presence in the environmental setting	Spiritual, symbolic and other interactions with natural environment	Elements of living systems that have sacred or religious meaning	3.2.1.2	N	N
	Indirect, remote, often indoor interactions with living systems that do not require presence in the environmental setting	Spiritual, symbolic and other interactions with natural environment	Elements of living systems used for entertainment or representation	3.2.1.3	N	N
	Indirect, remote, often indoor interactions with living systems that do not require presence in the environmental setting	Other biotic characteristics that have a non-use value	Characteristics or features of living systems that have an existence value	3.2.2.1	N	N
	Indirect, remote, often indoor interactions with living systems that do not require presence in the environmental setting	Other biotic characteristics that have a non-use value	Characteristics or features of living systems that have an option or bequest value	3.2.2.2	N	N

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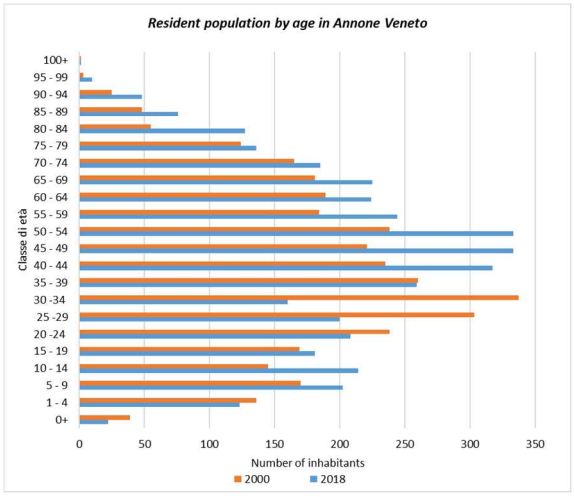
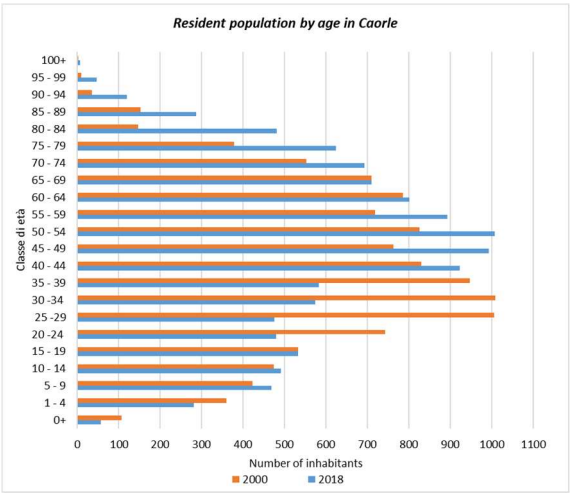
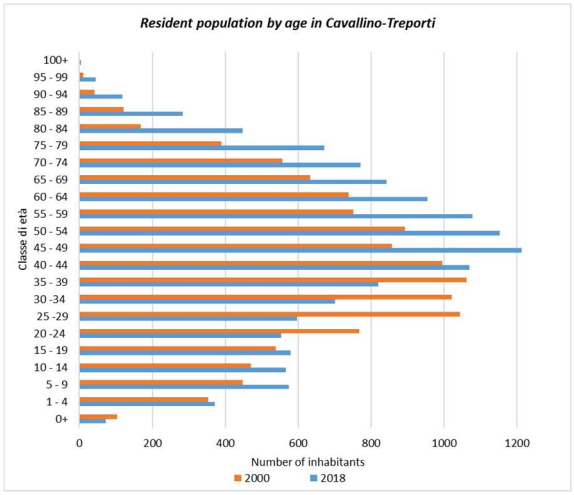
Strada vini Lison Pramaggiore https://www.stradavini.it/

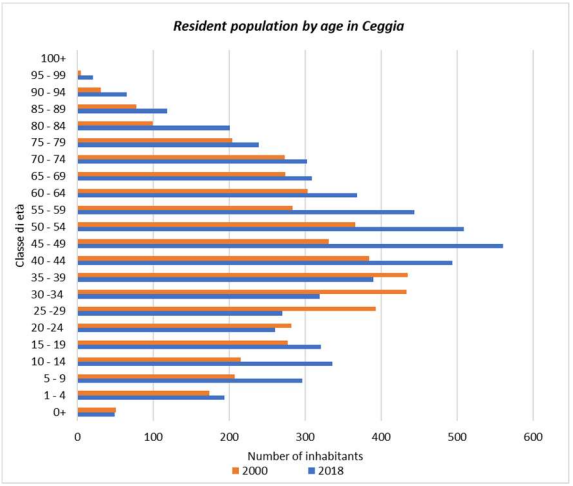
Annexes

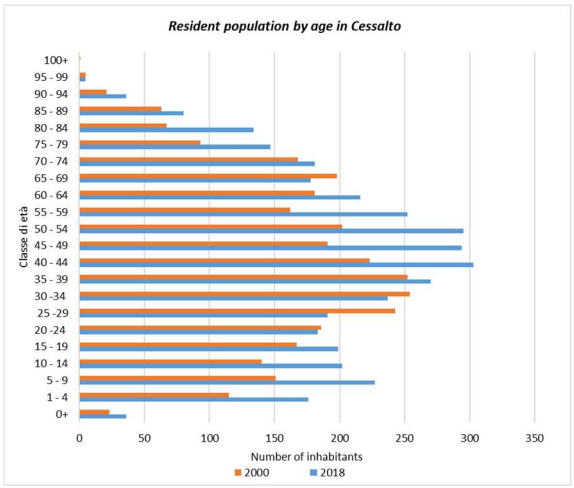
Annex 1 – Population distribution by age in the Municipalities of the Venice Biodistrict

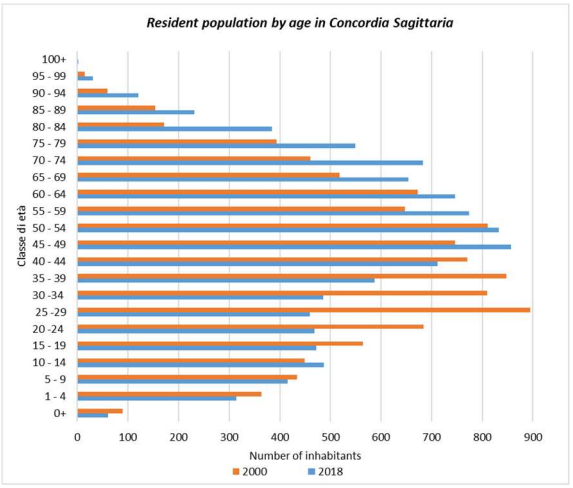


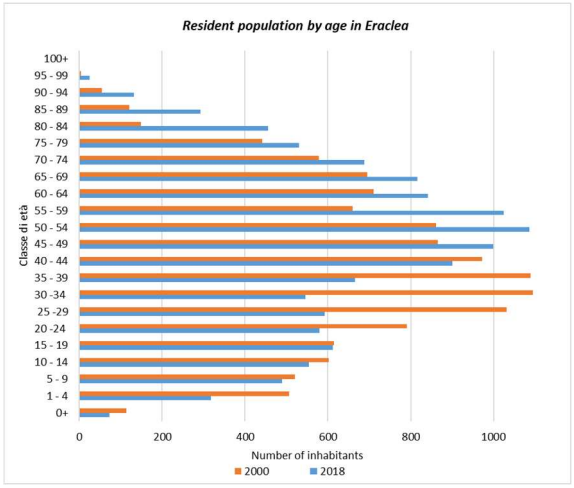


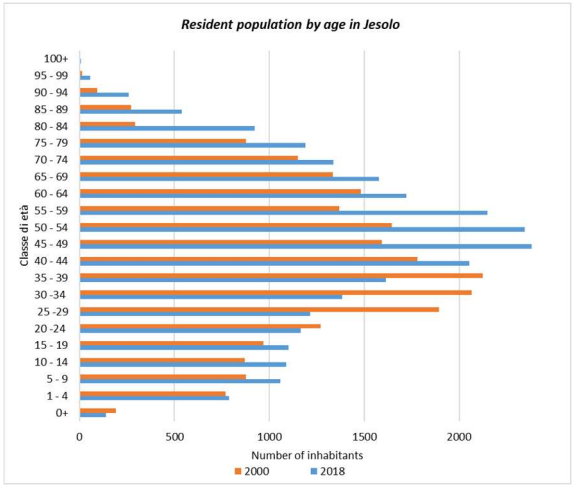


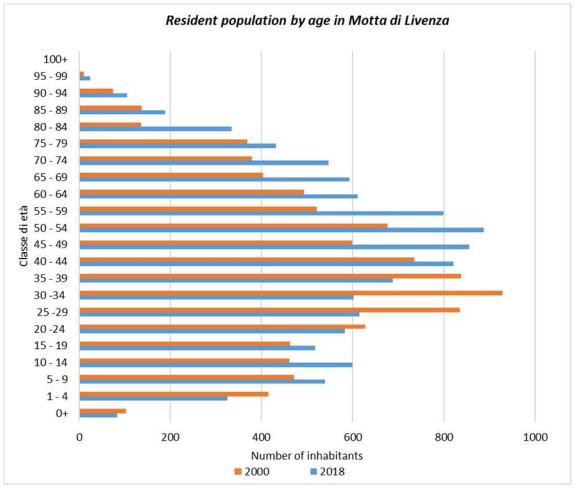


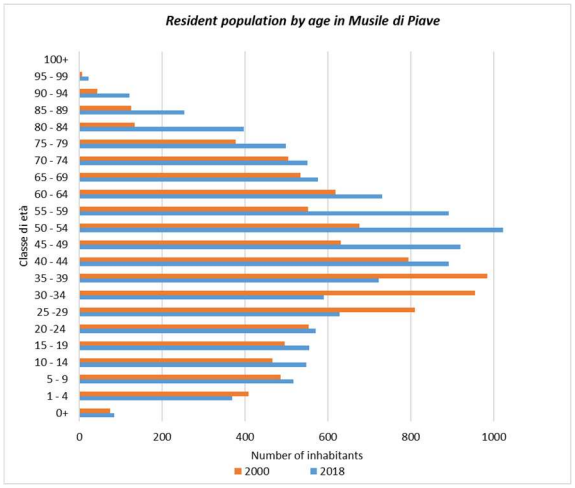


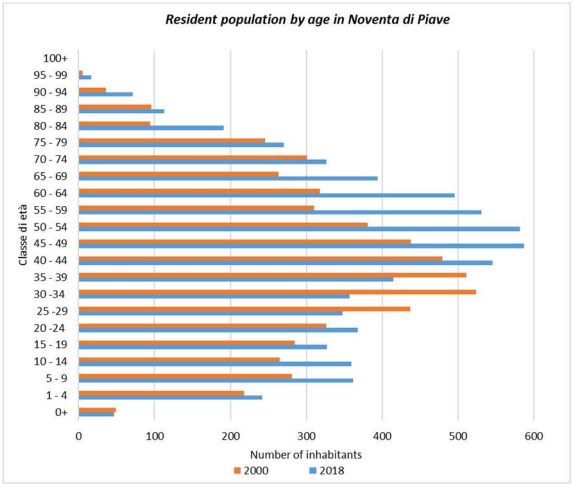


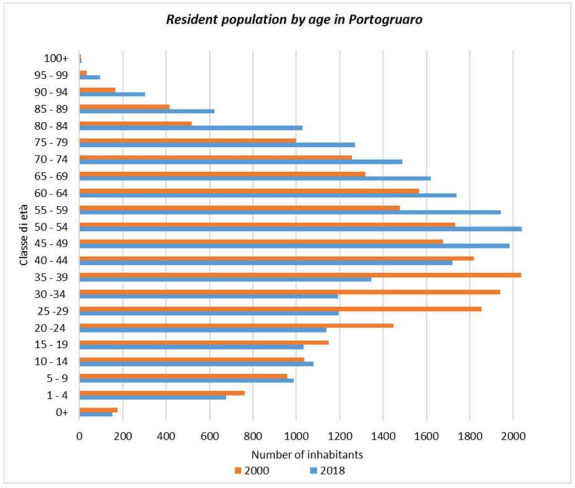

Resident population by age in Eraclea
Classe di età
100+
95 - 99
90 - 94
85 - 89
80 - 84
75 - 79
70 - 74
65 - 69
60 - 64
55 - 59
50 - 54
45 - 49
40 - 44
35 - 39
30 -34
25 -29
20 -24
15 - 19
10 - 14
5 - 9
1 - 4
0+
0
200
400
600
800
1000
Number of inhabitants
2000
2018

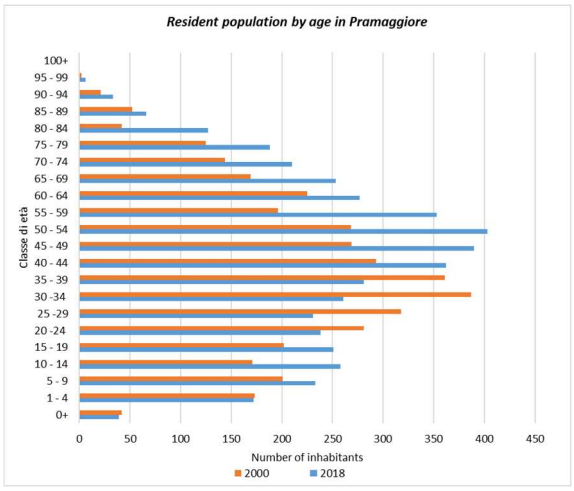

Resident population by age in Jesolo
Classe di età
100+
95 - 99
90 - 94
85 - 89
80 - 84
75 - 79
70 - 74
65 - 69
60 - 64
55 - 59
50 - 54
45 - 49
40 - 44
35 - 39
30 -34
25 -29
20 -24
15 - 19
10 - 14
5 - 9
1 - 4
0+
0
500
1000
1500
2000
Number of inhabitants
2000
2018

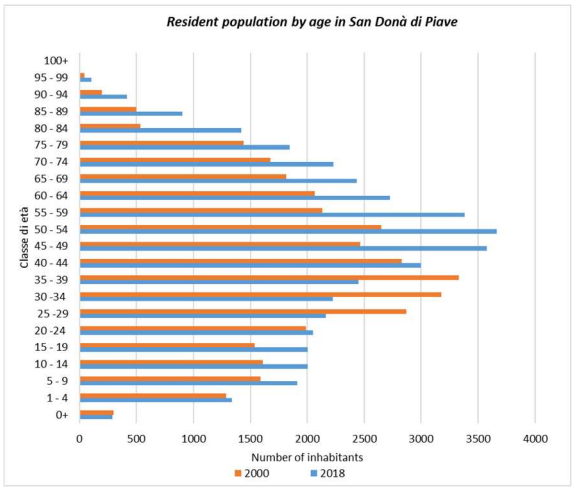

Resident population by age in Motta di Livenza
Classe di età
100+
95 - 99
90 - 94
85 - 89
80 - 84
75 - 79
70 - 74
65 - 69
60 - 64
55 - 59
50 - 54
45 - 49
40 - 44
35 - 39
30 -34
25 -29
20 -24
15 - 19
10 - 14
5 - 9
1 - 4
0+
0
200
400
600
800
1000
Number of inhabitants
2000
2018

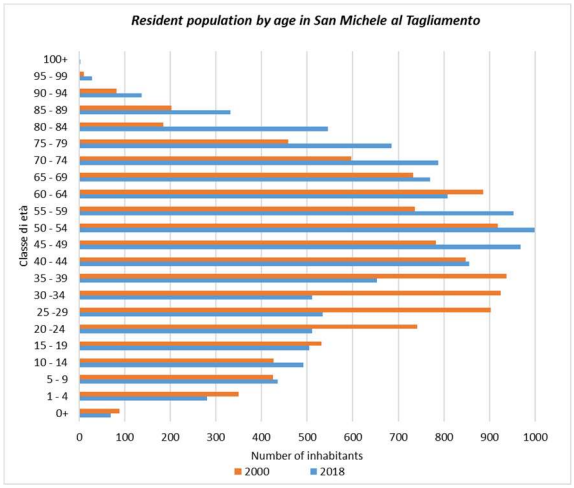

Resident population by age in Musile di Piave
Classe di età
100+
95 - 99
90 - 94
85 - 89
80 - 84
75 - 79
70 - 74
65 - 69
60 - 64
55 - 59
50 - 54
45 - 49
40 - 44
35 - 39
30 -34
25 -29
20 -24
15 - 19
10 - 14
5 - 9
1 - 4
0+
0
200
400
600
800
1000
Number of inhabitants
2000
2018

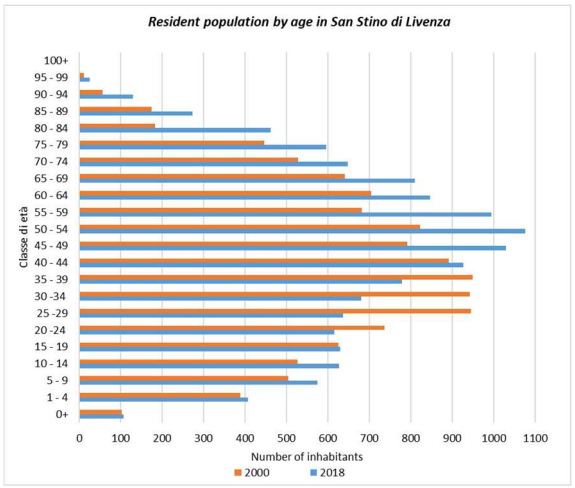

Resident population by age in Noventa di Piave
Classe di età
100+
95 - 99
90 - 94
85 - 89
80 - 84
75 - 79
70 - 74
65 - 69
60 - 64
55 - 59
50 - 54
45 - 49
40 - 44
35 - 39
30 -34
25 -29
20 -24
15 - 19
10 - 14
5 - 9
1 - 4
0+
0
100
200
300
400
500
600
Number of inhabitants
2000
2018

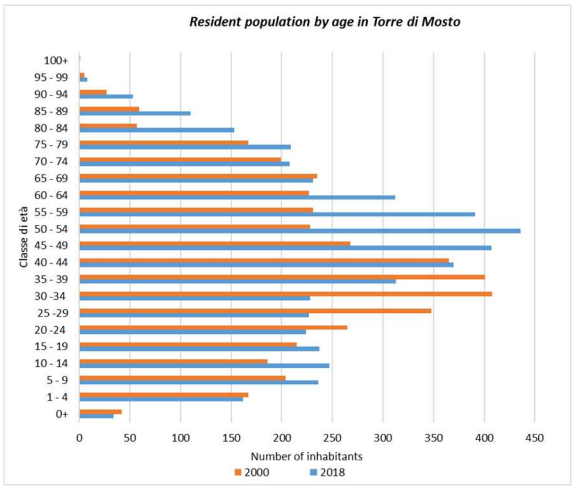

Resident population by age in Portogruaro
Classe di età
100+
95 - 99
90 - 94
85 - 89
80 - 84
75 - 79
70 - 74
65 - 69
60 - 64
55 - 59
50 - 54
45 - 49
40 - 44
35 - 39
30 -34
25 -29
20 -24
15 - 19
10 - 14
5 - 9
1 - 4
0+
0
200
400
600
800
1000
1200
1400
1600
1800
2000
Number of inhabitants
2000
2018


Resident population by age in Pramaggiore
Classe di età
100+
95 - 99
90 - 94
85 - 89
80 - 84
75 - 79
70 - 74
65 - 69
60 - 64
55 - 59
50 - 54
45 - 49
40 - 44
35 - 39
30 -34
25 -29
20 -24
15 - 19
10 - 14
5 - 9
1 - 4
0+
0 50 100 150 200 250 300 350 400 450
Number of inhabitants
2000
2018

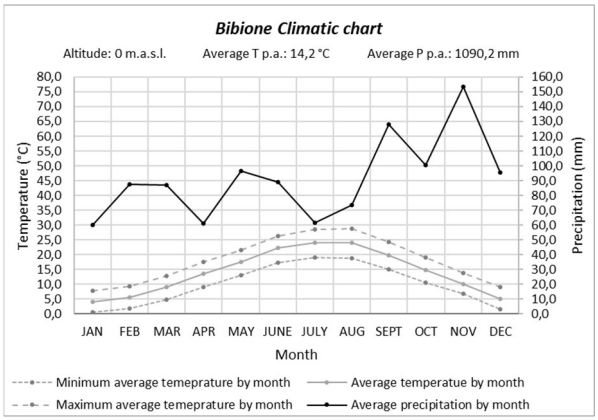

Resident population by age in San Donà di Piave
Classe di età
100+
95 - 99
90 - 94
85 - 89
80 - 84
75 - 79
70 - 74
65 - 69
60 - 64
55 - 59
50 - 54
45 - 49
40 - 44
35 - 39
30 -34
25 -29
20 -24
15 - 19
10 - 14
5 - 9
1 - 4
0+
0 500 1000 1500 2000 2500 3000 3500 4000
Number of inhabitants
2000
2018

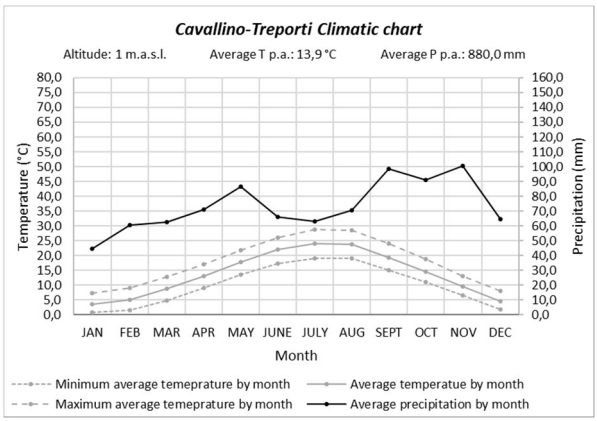

Resident population by age in San Michele al Tagliamento
Classe di età
100+
95 - 99
90 - 94
85 - 89
80 - 84
75 - 79
70 - 74
65 - 69
60 - 64
55 - 59
50 - 54
45 - 49
40 - 44
35 - 39
30 -34
25 -29
20 -24
15 - 19
10 - 14
5 - 9
1 - 4
0+
0 100 200 300 400 500 600 700 800 900 1000
Number of inhabitants
2000
2018

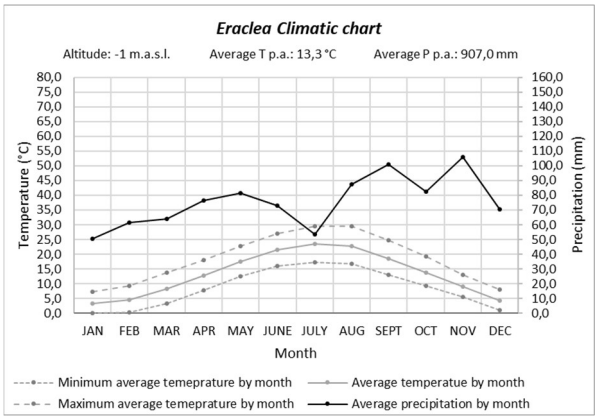

Resident population by age in San Stino di Livenza
Classe di età
100+
95 - 99
90 - 94
85 - 89
80 - 84
75 - 79
70 - 74
65 - 69
60 - 64
55 - 59
50 - 54
45 - 49
40 - 44
35 - 39
30 -34
25 -29
20 -24
15 - 19
10 - 14
5 - 9
1 - 4
0+
0 100 200 300 400 500 600 700 800 900 1000 1100
Number of inhabitants
2000
2018

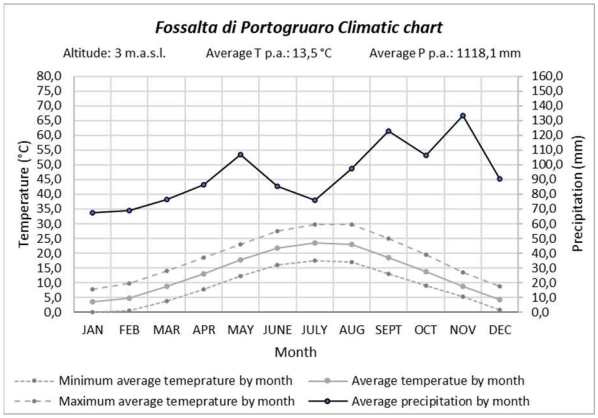

Resident population by age in Torre di Mosto
Classe di età
100+
95 - 99
90 - 94
85 - 89
80 - 84
75 - 79
70 - 74
65 - 69
60 - 64
55 - 59
50 - 54
45 - 49
40 - 44
35 - 39
30 -34
25 -29
20 -24
15 - 19
10 - 14
5 - 9
1 - 4
0+
0 50 100 150 200 250 300 350 400 450
Number of inhabitants
2000
2018

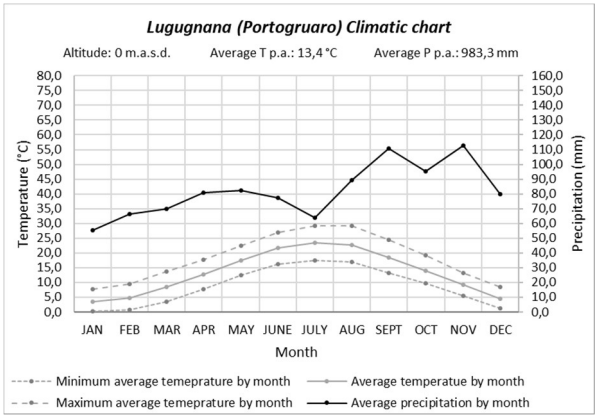
Annex 2 – Climate diagrams in the Biodistrict

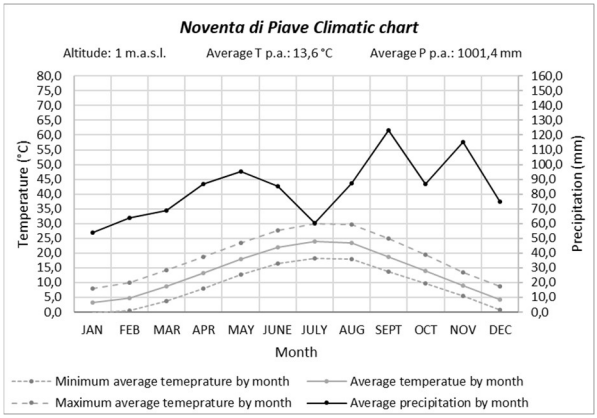


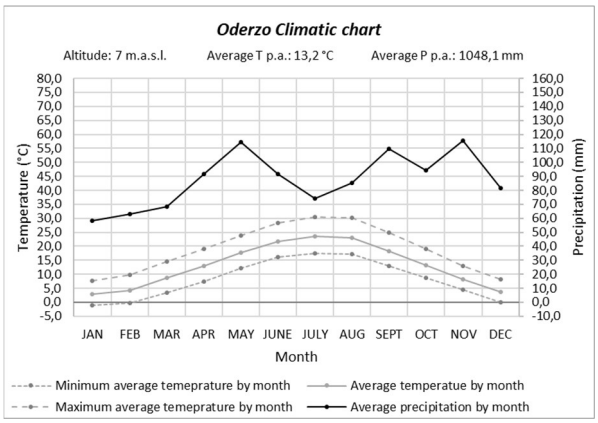


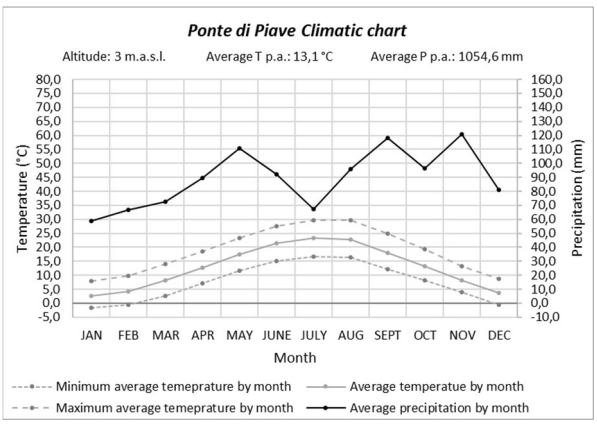


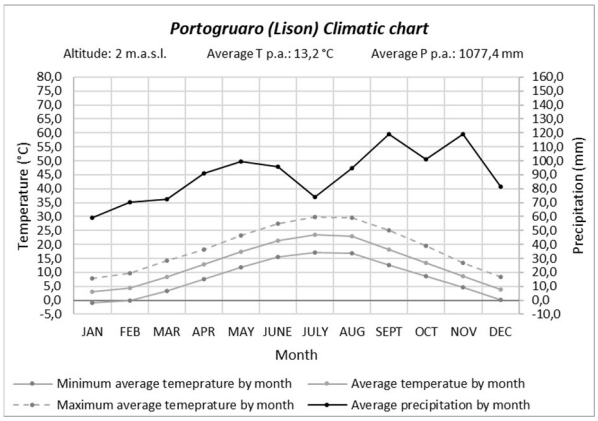


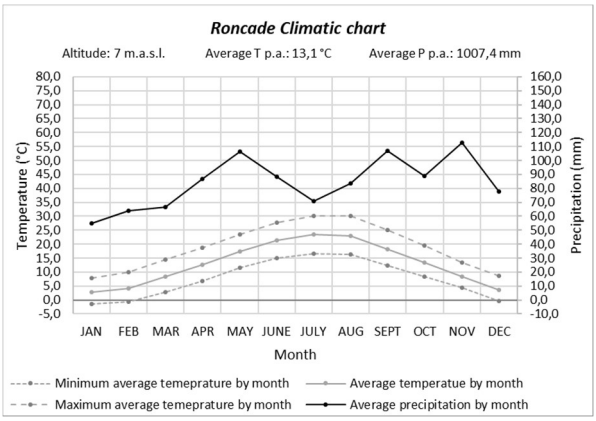





Oderzo Climatic chart
Altitude: 7 m.a.s.l.
Average T p.a.: 13,2 °C
Average P p.a.: 1048,1 mm
Temperature (°C)
Precipitation (mm)
JAN FEB MAR APR MAY JUNE JULY AUG SEPT OCT NOV DEC
Month
Minimum average temeprature by month
Average temperatue by month
Maximum average temeprature by month
Average precipitation by month


Ponte di Piave Climatic chart
Altitude: 3 m.a.s.l.
Average T p.a.: 13,1 °C
Average P p.a.: 1054,6 mm
Temperature (°C)
Precipitation (mm)
JAN FEB MAR APR MAY JUNE JULY AUG SEPT OCT NOV DEC
Month
Minimum average temeprature by month
Average temperatue by month
Maximum average temeprature by month
Average precipitation by month


Portogruaro (Lison) Climatic chart
Altitude: 2 m.a.s.l.
Average T p.a.: 13,2 °C
Average P p.a.: 1077,4 mm
Temperature (°C)
Precipitation (mm)
JAN FEB MAR APR MAY JUNE JULY AUG SEPT OCT NOV DEC
Month
Minimum average temeprature by month
Average temperatue by month
Maximum average temeprature by month
Average precipitation by month


Roncade Climatic chart
Altitude: 7 m.a.s.l.
Average T p.a.: 13,1 °C
Average P p.a.: 1007,4 mm
Temperature (°C)
Precipitation (mm)
JAN FEB MAR APR MAY JUNE JULY AUG SEPT OCT NOV DEC
Month
Minimum average temeprature by month
Average temperatue by month
Maximum average temeprature by month
Average precipitation by month

Annex 3 – Comparison between soil land use 2018 and vineyards 1990

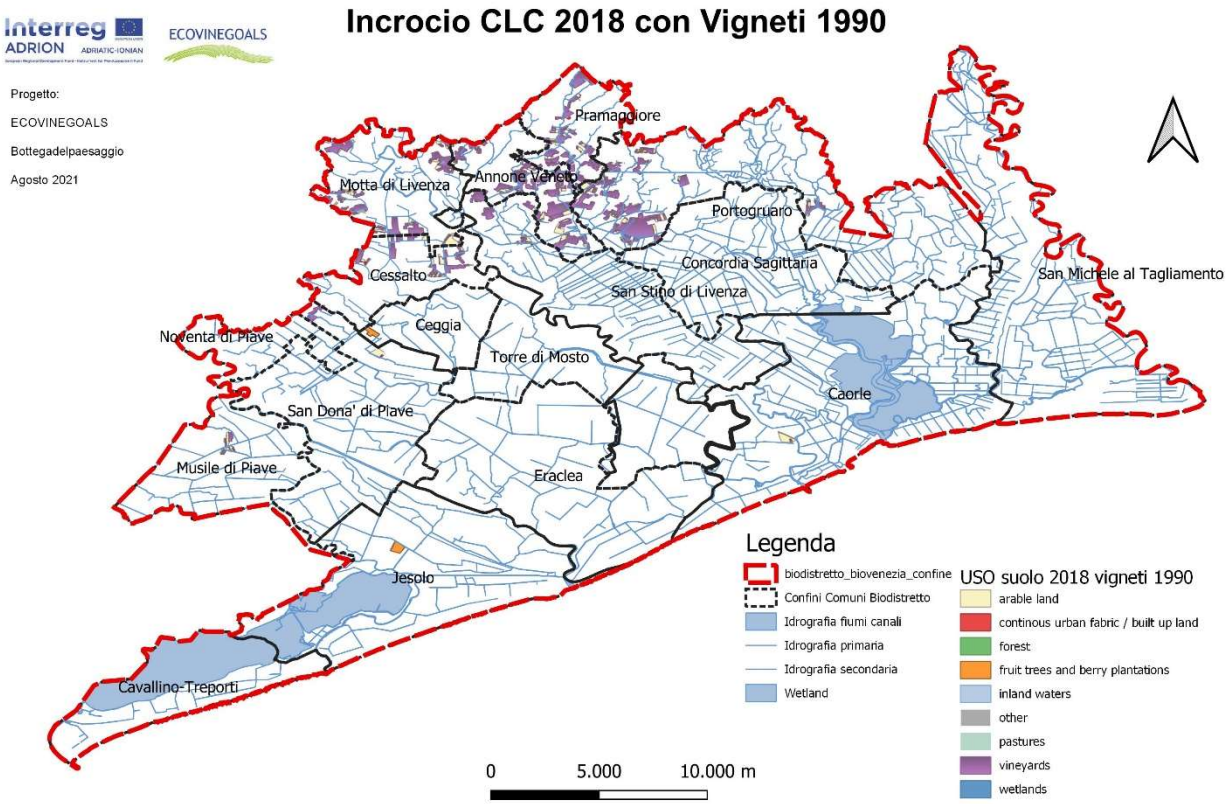


FIG. 27 – COMPARISON BETWEEN SOIL LAND USE 2018 AND VINEYARDS 1990

Annex 4 - Comparison between soil land use 1990 and vineyards 2018

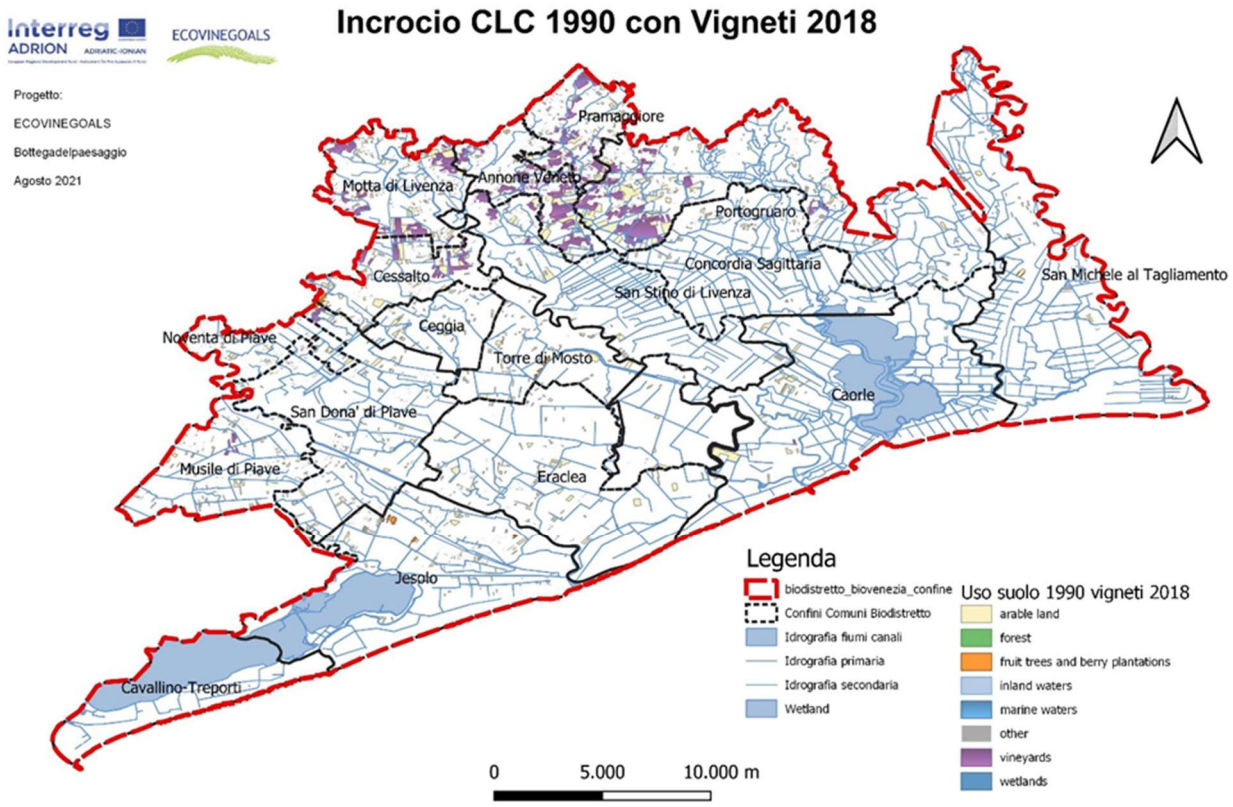


FIG. 28 – COMPARISON BETWEEN SOIL LAND USE 1990 AND VINEYARDS 2018