


### Supplementary Material

Table S1: Criteria for the farm (EA)

	Definition	Character	Resource MED impacted	Control points
EA01	The company has fewer than 199 employees and annual sales do not exceed 15 million Tunisian dinars (according to Decree No. 2017-389 on financial incentives for investments made under the Investment Act in Tunisia).	ESSENTIAL	-	- Operating documents / Articles of association
EA02	The farm's agricultural (viticultural) land is located in the intervention zone defined by Oenomed.	ESSENTIAL	-	- Farm documents / Land registers
EA03	The company clearly displays its commitments to the Oenomed Charter by using and making available to its customers the supports provided.	ESSENTIAL	-	- Observations/ printed copies of posters
EA04	The company has identified the impact of its activities on Mediterranean heritage resources using the Oenomed self-diagnosis tool.	ESSENTIAL	-	- Analysis report - Checklist
EA05	Through its actions on its physical site, the company contributes to enhancing and highlighting the natural and cultural heritage of the protected area and its local know-how and cultural heritage of the protected area and its local know- how.	IMPORTANT		- Observations


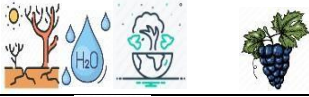












EA06	At least 25% of the company's workforce has undergone training dedicated to "agro-ecological" practices or developments.	IMPORTANT		- Proof to be provided (training certificate, etc.). certificate...)
EA08	The company is involved in at least one network of farmers working collectively towards the agro-ecological transition.	IMPORTANT		- Evidence to be submitted
EA07	The company is involved in at least one wine tourism initiative.	ADVISABLE		- Evidence to be presented
EA09	The company is committed to limiting and ensuring quality in the creation and/or extension of new farm buildings, based on all current framework documents.	IMPORTANT		-


Table S2: Agronomic criteria: Compliance with pre-existing certifications and framework documents

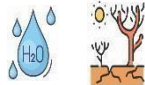
	Definition	Character	MED resource impacted	Control points
CA01	The company complies with the specifications of the Appellation d'Origine Contrôlée en Tunisie (AOC) and/or the Vin délimité de qualité supérieure (VDQS) (Decree	INDISPENSABLE		-







Table S 3: Managing virtuous practices

Virtuous practices		Resources impacted	Order of importance		Good practices	Examples of implementation	Control
			Irrigated	Dry			
PV01	Economy and consumption controlled water	 	Desirable	Essential	Collection of run-off water + The speed reduction of flow of water to increase infiltration	Installation of rain gauges and recording of relative data	1. Documentation concerning tanks for water collection or reservoirs storage
						Perform 1 single ploughing operation using a vineyard plough to store autumn rains, and 3 shallow ploughings using a vineyard plough and/or Canadian cultivator.	2. Inspection visit 3. Farm diary
PV02		 	Important	Important	Alternative scarification of ploughing		Ploughing the farm
PV03			Desirable		Water-saving in-line underground drip system	Declare the water sources used and provide appropriate documentation concerning regularity (document to be provided when signing the Charter).	1. inspection visit 2. operating log

PV04	Soil and Landscape		Essential		Calculation of actual crop requirements	Draw up an irrigation program and record irrigation volumes and dates	Farm diary
PV05			Desirable	Desirable	Adoption of intelligent viticulture	Adoption of forecasting models guarantees commitment to reducing treatments and consequently water consumption	1. Farm diary
						Experimentation with new techniques in synergy with research institutes/universities	2. Inspection visit
PV06			Important	Important	Cultivation of green manures	Planting of legumes such as faba beans	Farm diary
PV07	Soil and Landscape		Important	Desirable	Reduction of tillage and use of practices that replace tillage	Use conservation tillage tools (Chisel, vibrocultivators, disc sprayers, pdf driven tools)	Farm diary
PV08			Essential	Essential	Adoption of organic fertilization	Use of organic fertilizers	Farm diary (Fertilization plan)

PV9		Desirable	Desirable	Maintain of biodiversity on a global scale	Association composed of plant cover (grass cover, fertilizer, etc.).	Farm diary
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					<b>of the farm</b>	<p>The use of multi-species cover crops between rows, or every other row, encourages biodiversity. This cover can be composed of crucifers (white mustard, fodder rape), legumes (broad bean, hairy vetch, purple vetch, red clover, Alexandria clover), hydrophyllaceae (phacelia), grasses (rye, oats).</p> <p>Winter cover crops are not at all competitive, as they are destroyed before the vine's peak needs (flowering).</p>	
PV10	<b>Control/ conservation</b>		Essential	Essential	<b>Limitation of use of phytosanitary products</b>	<p>Adopt the principles of <b>integrated</b> defense* principles</p> <p>Preventive protection against powdery mildew and downy mildew, with one treatment per five companions, depending on the year's weather conditions. climatic conditions with preferential use of Sulfur and Bordeaux mixture (contact)</p> <p>Ammonitre (highly soluble nitrogen)</p>	<b>Farm diary (phytopathological bulletins technical data sheets for phytosanitary products; purchase invoices for technical means used to control and monitor insects)</b>

						<p>nitrogen fertilizer) is not recommended for vines, even when irrigated, as it encourages vegetative growth and consequently the development of powdery mildew.</p> <p>Record treatment date, type and commercial name of product, quantity and method of application.</p>	
PV11		 	Important	Important	<b>Zero herbicides +Use</b>  <b>m</b>  <b>echanical weeding</b>  <b>(hoeing) or manual weeding</b>	Mulching, uncrushed vine shoots left on plots (only if disease-free)	<b>Farm diary</b>
PV12		 	Important	Important	<b>Favoring hedges and windbreaks* on borders</b>		<b>Inspection visit</b>
PV13		 	Important	Important	<b>Planting service plants</b>	It's important to target the pest(s) to be controlled or the beneficials to be favored.	<b>Farm diary</b>





**Plants**




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tagetes minuta, hairy vetch,







					<p>oats, alfalfa, red clover and birdsfoot trefoil have a nematicidal effect on the nematodes that transmit short-knot disease.</p> <p><b>Trap plants;</b> for example, tansy (<i>Tanacetumvulgare</i>) (<i>Asteraceae</i>) can be used to divert femalefemales of Eudemis (<i>Lobesiabotrana</i>) away from vines</p> <p><b>Plants with a repellent effect;</b> e.g. tagetes, basil, rosemary.</p> <p><b>Reservoir plants reservoirs</b> (allow beneficials to reproduce); for example, roses associated with grapevines allow the <i>Anagrusatomus</i> (an asitoid of the green leafhopp er <i>Empoascavitis</i>) to overwinter in the plot.</p> <p><b>Nectariferous plants:</b> they provide nectar to beneficials whic h feed on it (the</p>	
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						<div><div>vine</div><div>does not</div></div>	
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						producing nectar)	
PV14	<b>Good Spraying</b>		Essential	Essential	<b>Respect the nature of the product</b>	Use approved products and respect application rates	<b>Farm diary</b>
PV15			Essential	Essential	<b>Alternating to avoid plant resistance to disease</b>		<b>Farm diary</b>
PV16			Important	Important	<b>Use of fertilizers and pesticides ecological (which protect human health and the environment)</b>		<b>Farm diary</b>
PV17			Essential	Essential	<b>Correct setting of machine (tractor speed, spray pressure)</b>	Choose the right type of nozzle for the job (flow rate, size); check the condition of nozzles before use (clean or replace defective nozzles); calibrate the sprayer with clean water (choose the right pressure for the right dose).	<b>Self declaration</b>

						and forward speed); always double- check the dose applied during and after each application; be rigorous in observing drift); rinse tank and booms thoroughly with ammonia-based products; clean filters regularly.	
PV18			Essential	Essential	<b>Selective sorting and treatment of hazardous waste, cleaning of machines after treatment.</b>	Use of sprayequipment washing areas. Responsible management of solid pollutant waste and collection of pollutant waste by a specialized, authorized company.	<b>1. Self-declaration</b> <b>2. Documentation issued by specialized company</b>
PV19	<b>Techniques and grape varieties</b>		Essential	Essential	<b>Favour the indigenous grape varieties</b>	indigenous grape varieties represent at least 10% of the grape varieties planted in the plot.	<b>Farm diary</b>
PV20			Important	Important	<b>Introduce drought- and salinity-tolerant grape varieties and rootstocks*.</b>		<b>Farm diary (periodic soil and water analyses, origins of grape varieties and rootstocks</b>

							used, invoices in case of purchases)
PV21			Essential	Essential	<b>Training of specialized workforce in "agro-ecological" practices or layouts ** At least 50% of the company's workforce has undergone dedicated training in "agro-ecological" practices or layouts (cover management, etc.).</b>	At least 50% of the company's workforce has undergone training dedicated to "agro-ecological" practices or developments (cover crop management, limiting ploughing, favoring MO, biocontrol...).	<b>Provide training certificates / diplomas</b>
PV22			Essential	Essential	<b>Valorization of pruning wood</b>	Production of agricultural compost Prohibit burning of prunings Use of pruning residues as soil conditioners Production of wood chips or fuel	<b>1. Presence of a composting area</b> <b>2. Farm diary</b>
PV23			Desirable	Desirable	<b>Use of grape pomace</b>		<b>1. farm diary (fertilization plan)</b>

							<b>2. Declaration of cellar waste tonnage when signing charter</b>
PV24	<b>Preservation and enhancement of historic monuments and sites</b>		Essential	Essential	<b>The company is involved in at least one wine tourism** initiative</b>	Development or restoration work on vernacular heritage Installation of documents and/or explanatory panels Collaboration with the Ministry of Cultural Affairs	<b>1. On-site or virtual inspection visit</b>  <b>2. Documentation</b>

### Legend:



Water

Biodiversity

and historic site



Soil and landscape



Techniques and grape varieties

\* It would be important to deal with these practices on a case-by-case basis, depending on the company, the conditions and the place of application.

\*\*Mandatory and to be implemented **within one year**.

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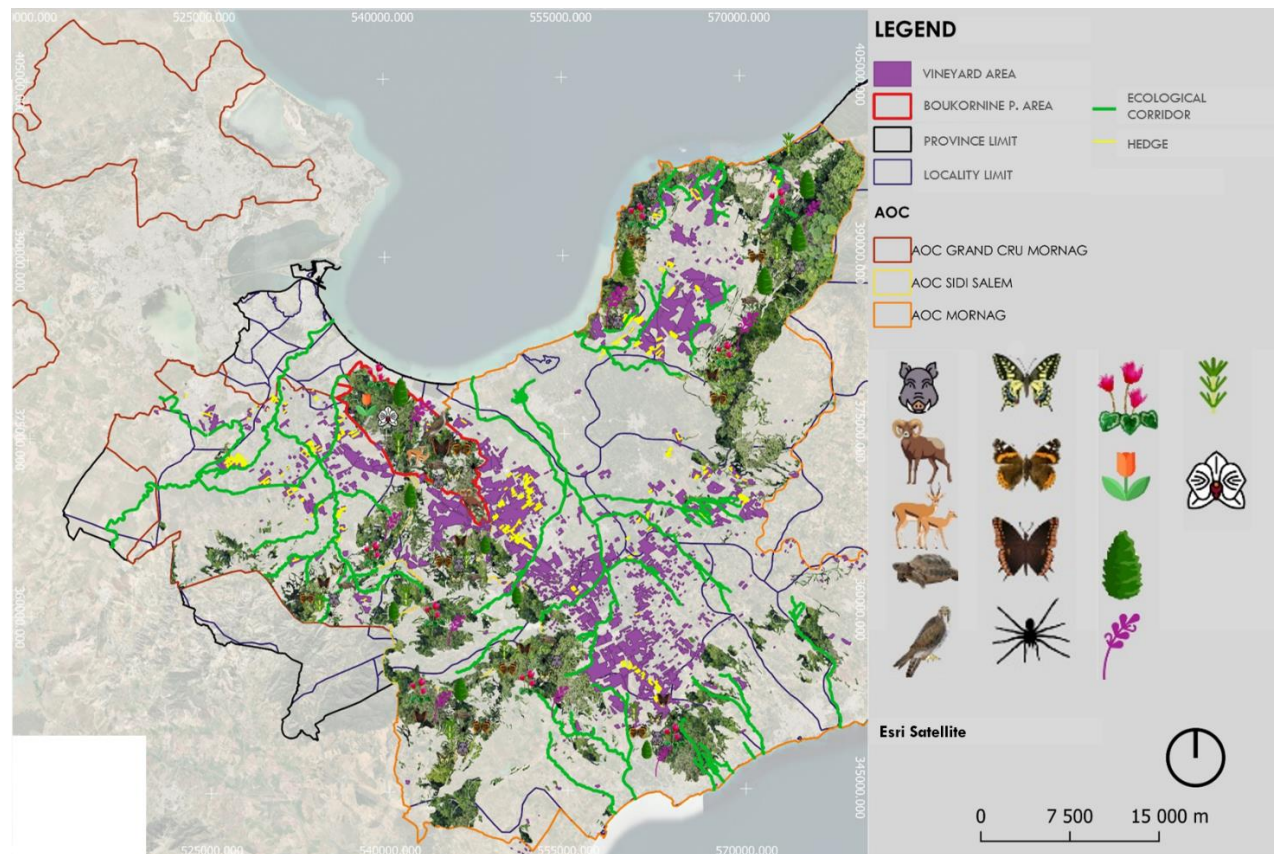


Figure S1. Biodiversity Resources Map.



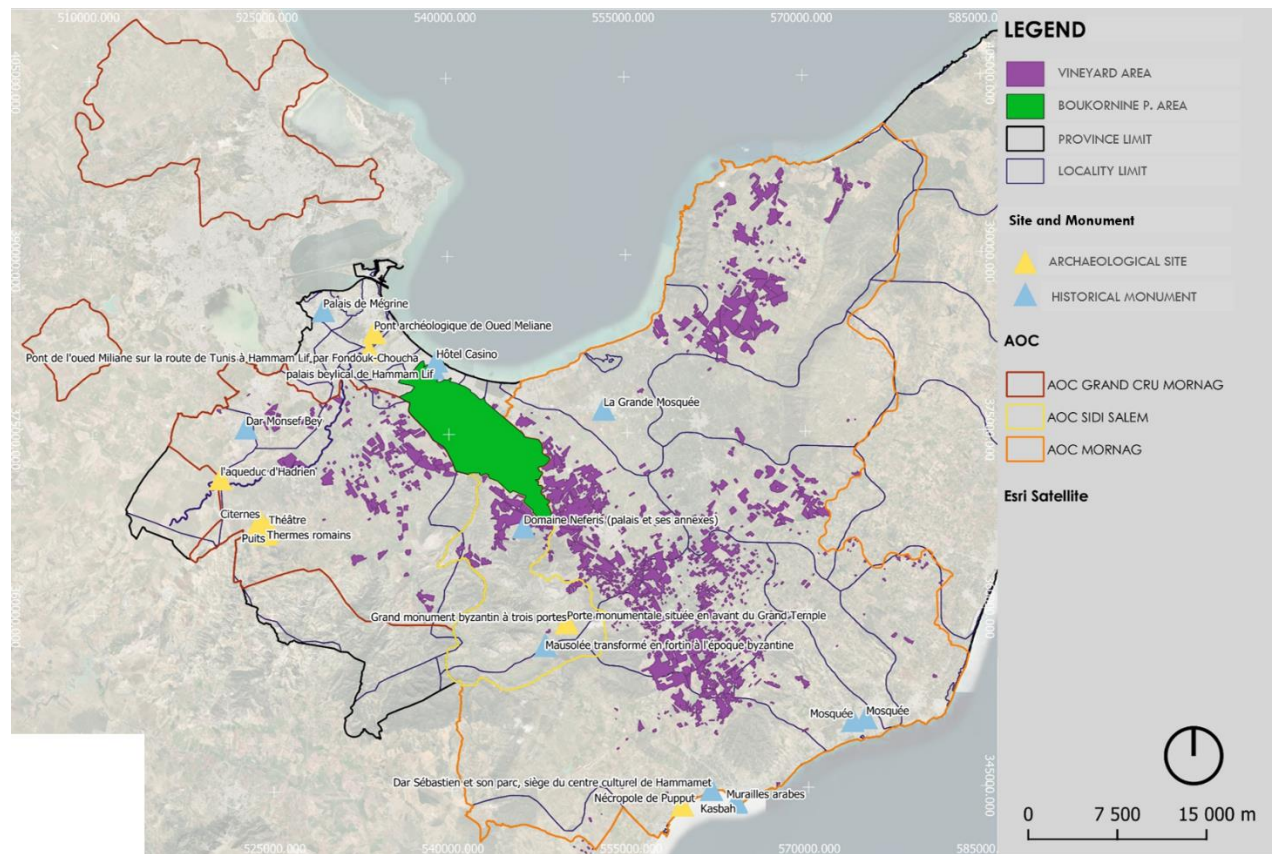


Figure S2. Historical Resources Map.



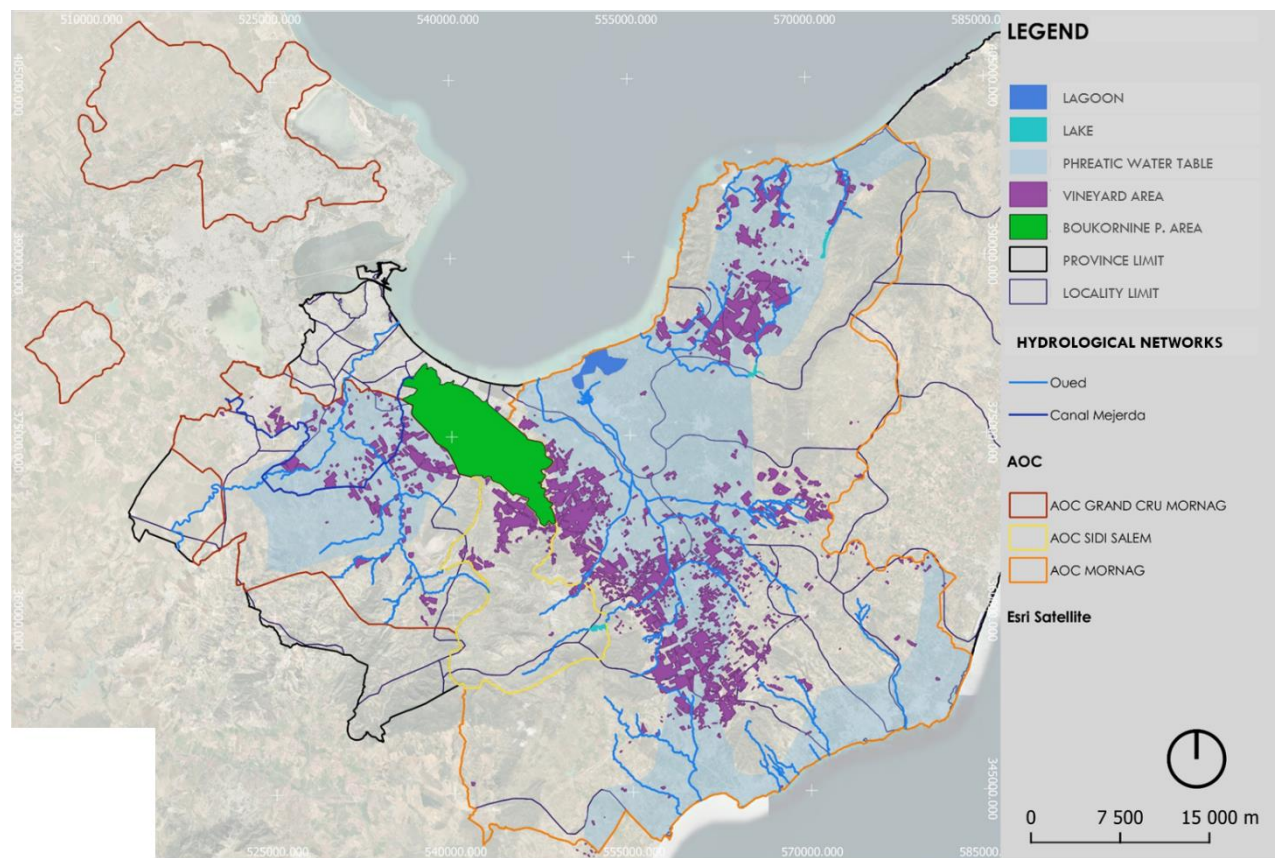


Figure S3. Water Resources Map.

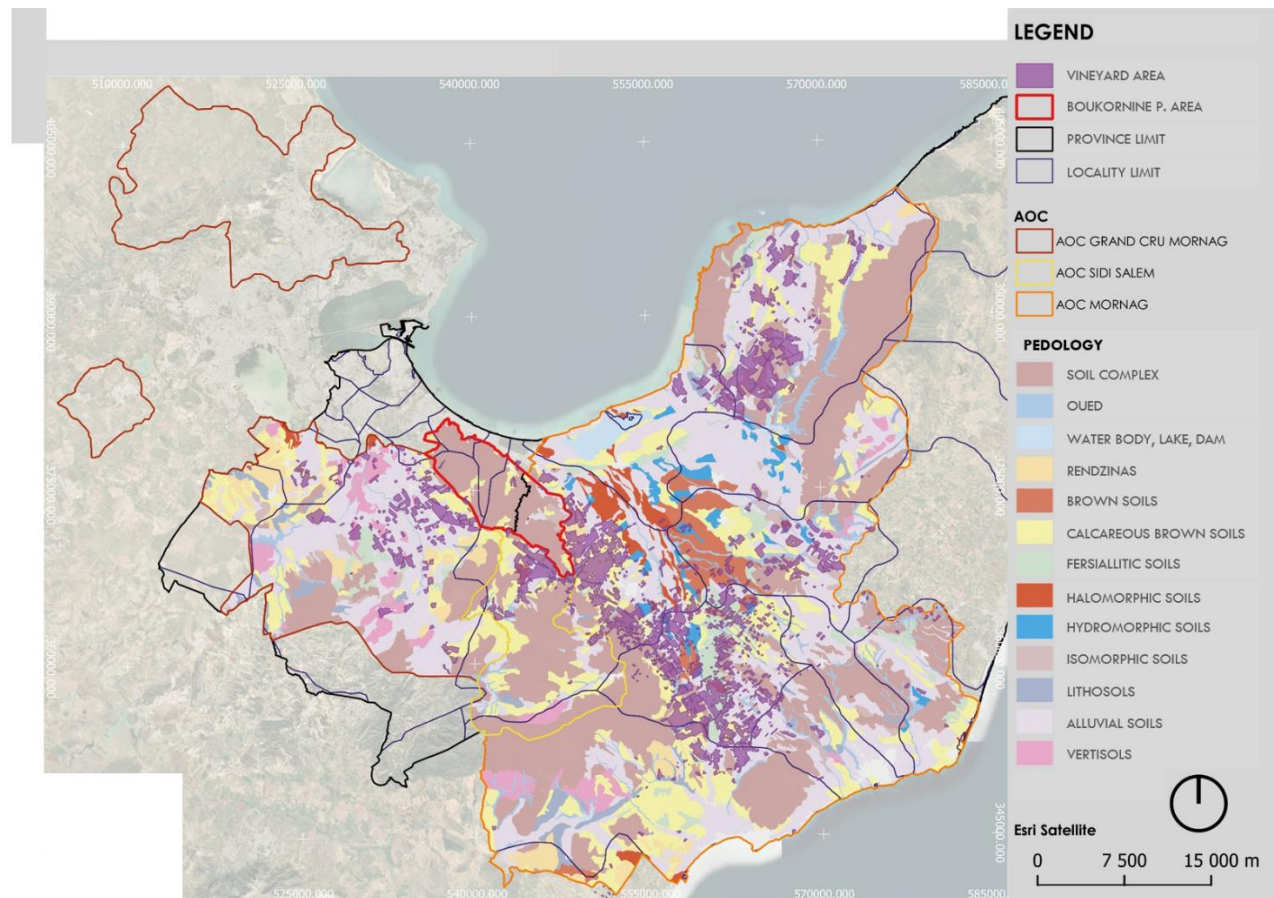


Figure S4. Soil Resources Map.

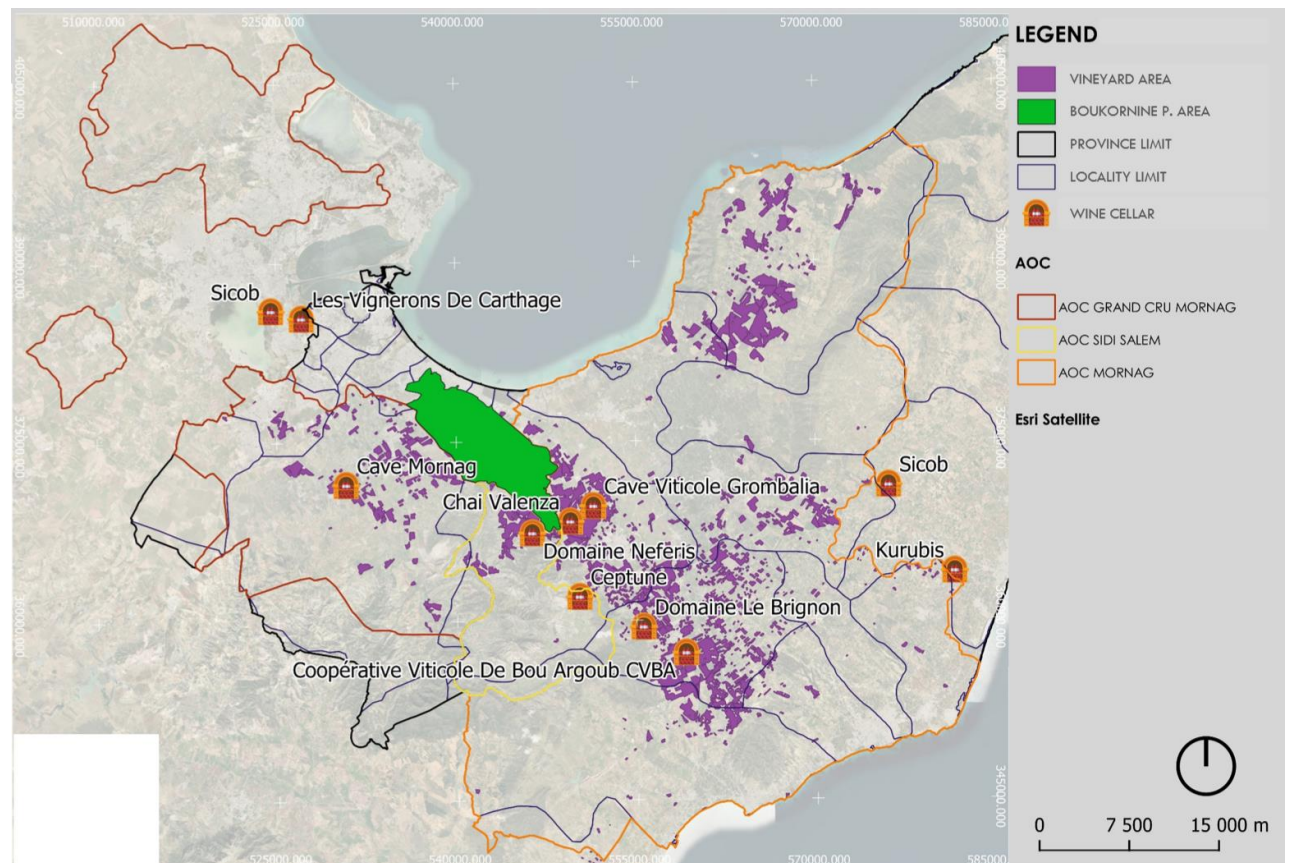


Figure S5. Wine cellar Map.