

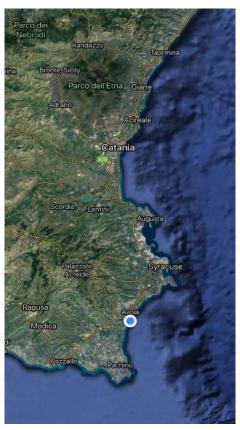
#### **Landscape Ecology**

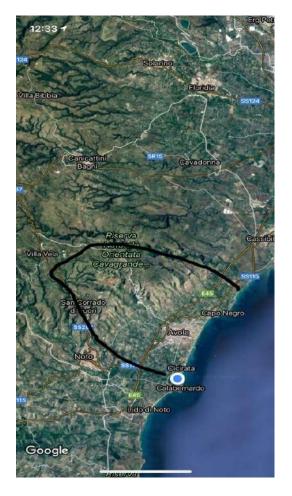
Ing. Antonin Kusbach, Ph.D. 2020



# THE ECOLOGICAL PROBLEMS OF AVOLA







# WHY DID I CHOOSE AVOLA?

- Avola is a Sicilian city. It is located in the south-eastern part of the island and has an extension of 74.5 km
- I was born and raised in Avola and I know it very well.
- The ecological problem that I found in Avola concerns the pollution of the Asinaro river.

# ECOLOGICAL INTRODUCTION

- Ecology is the science that studies the relationships of living things with each other and with the environment in which they live.
- Life and the environment are closely related. The healthier the environment in which you live, the higher the quality of life.



#### CHARACTER OF THE LANDSCAPE OF THE AREA

Avola is a small coastal town.

It borders on the sides with two rivers, the Asinaro River and the Cavagrande del Cassibile river, in the north the border is represented by the mountains.

The Cavagrande del Cassibile river also constitutes a reserve.



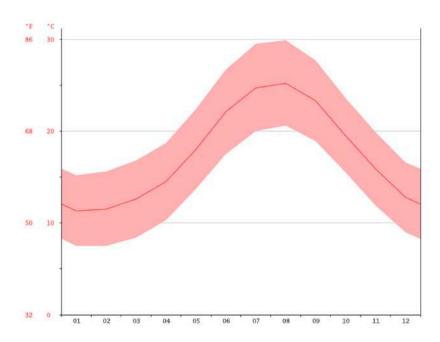
#### CHARACTER OF THE LANDSCAPE OF THE AREA

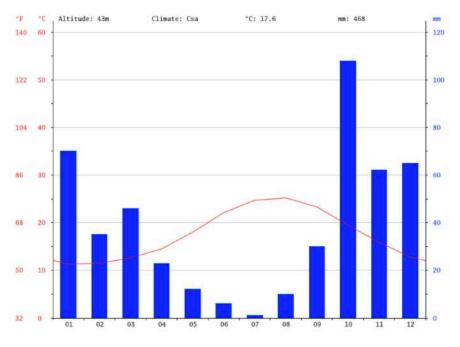
Avola is famous for the production of wine, citrus almonds and olives. These crops represent a characteristic of the landscape.



## CHARACTER OF THE LANDSCAPE OF THE AREA

- The climate is warm and temperate in Avola. There is more rainfall in the winter than in the summer in Avola.
- The average temperature is 17.6 ° C. Average annual rainfall of 468 mm.
- In August, the hottest month of the year, the average temperature is 25.2 ° C. With an average temperature of 11.3
   ° C, January is the month with the lowest temperature all year round.
- July is the driest month with 1mm. In October, the precipitation reaches its peak, with an average of 108 mm.

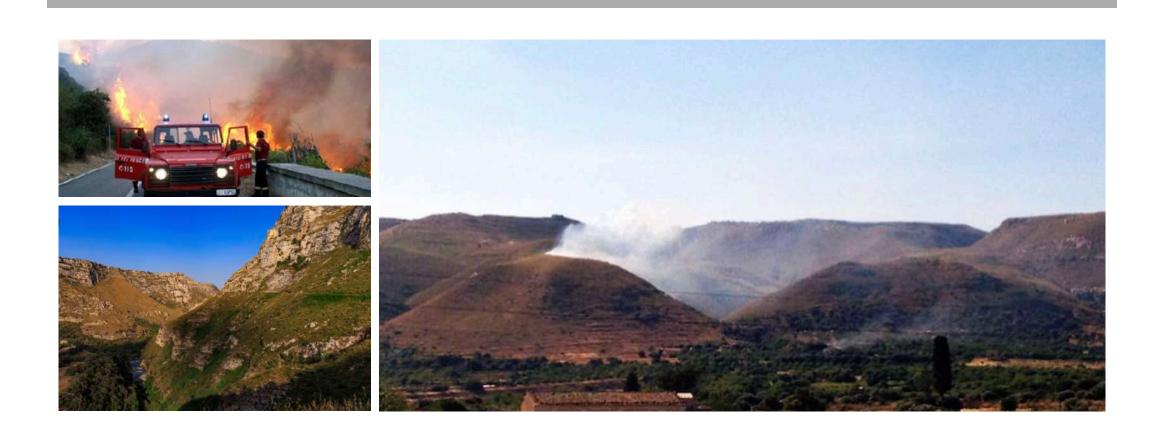




# BASIC ENVIRONMENTAL / ECOLOGICAL ISSUES OF THE AREA

- 1. Fires in the mountains
- 2. Wrong management of the Cavagrande del cassibile reserve
- 3. Pollution of the Asinaro river

### 1 Fires in the mountains

















# 2 Wrong management of the Cavagrande del cassibile reserve

In 2014 a fire almost completely destroyed the reserve which was closed to the public due to the inaccessibility of the paths.



3 Pollution of the Asinaro river

The Asinaro river is polluted by various types of waste and mainly by the waste water purifiers of the municipality of Noto. Purifiers cause the eutrophication process of the watercourse, that is an excessive intake of phosphorus and nitrogen which causes an increase in algae, an increase in microorganisms that degrade the organic substance, up to the point where microorganisms consume all the oxygen contained in the stream.

In a nutshell they completely destroy the river ecosystem.













#### POTENTIAL SOLUTIONS

The main problem of Avola concerns mainly the pollution of the Asinaro river. This pollution is caused by man, it is not a natural disaster.

I think the most efficient solution is to build new waste water purifiers, perhaps opting for a phytodepuration plant instead of a traditional plant, in order to reduce the visual impact.

Another less radical solution is to use the waste water leaving the plant (rich in nitrogen and phosphorus) to irrigate the fields, from urban greenery to arboretums. If spilled on the ground, these waters should not cause any problems.



Thank you!

Gisina Miriam 2020

