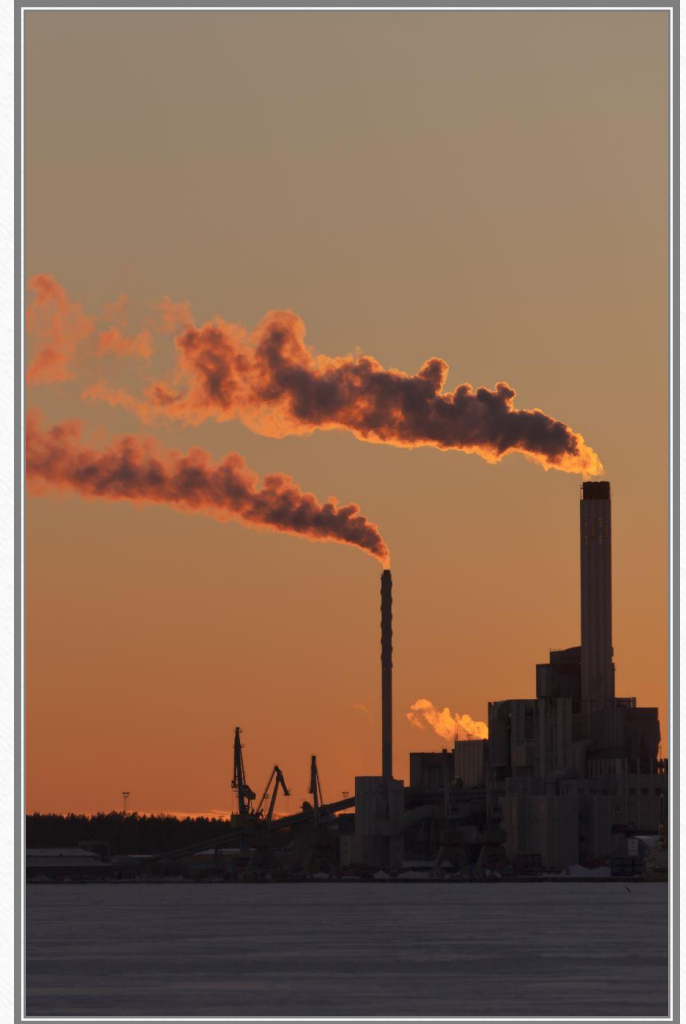
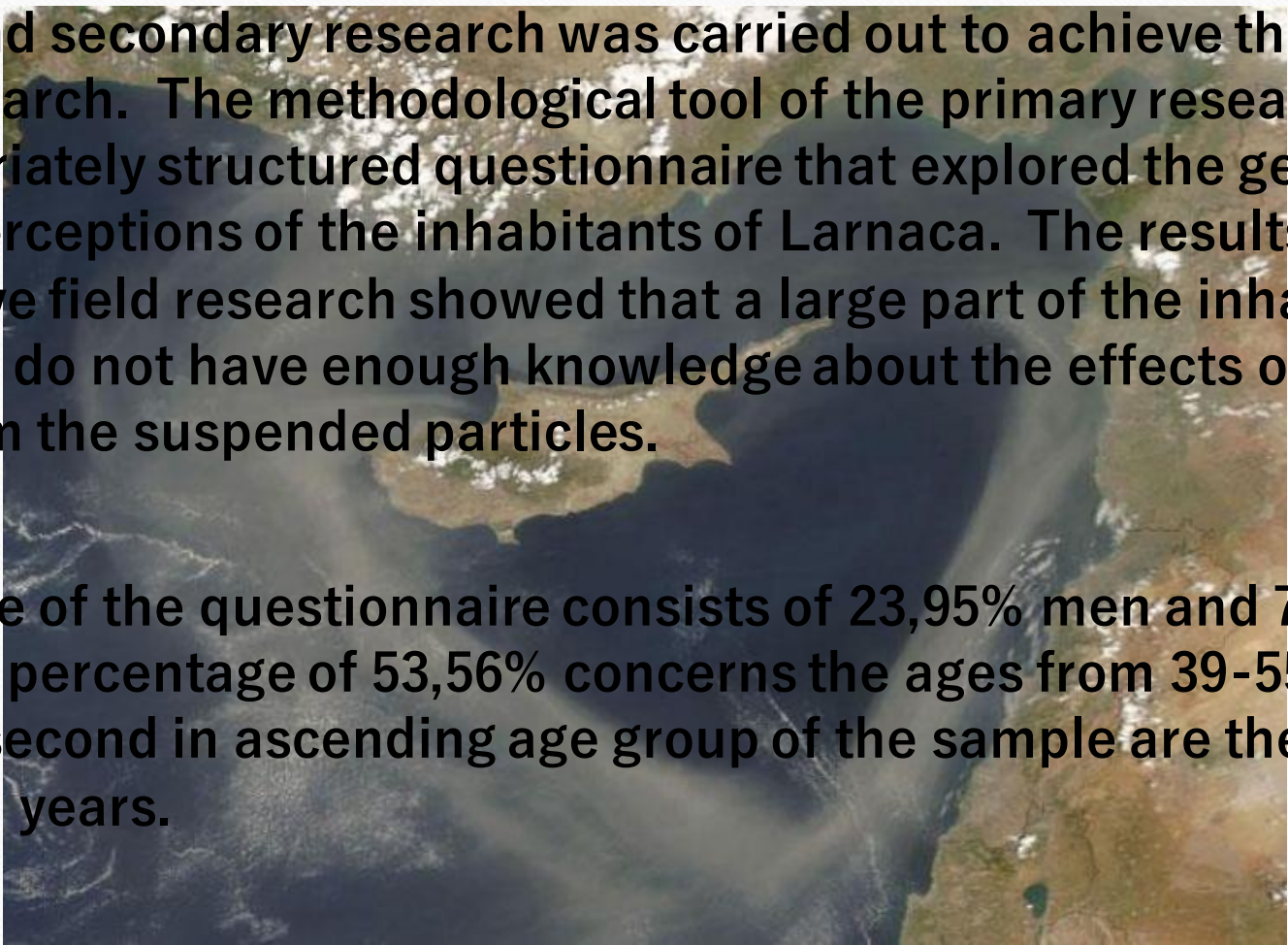


AIR - QUALITY

Air quality research that aims to investigate whether particulate pollution in the atmosphere of Cyprus and specifically Larnaca, was affected during the pandemic.

Initially, he recorded the perceptions of the citizens of Larnaca about the existence of dust in the air.





Primary and secondary research was carried out to achieve the purpose of the research. The methodological tool of the primary research was an appropriately structured questionnaire that explored the general and specific perceptions of the inhabitants of Larnaca. The results of the quantitative field research showed that a large part of the inhabitants of Larnaca do not have enough knowledge about the effects on their health from the suspended particles.

The sample of the questionnaire consists of 23,95% men and 76,05% women. A percentage of 53,56% concerns the ages from 39-55 years while the second in ascending age group of the sample are the ages from 11-15 years.

The department of Labor Inspection issues around 71 dust alerts per year – equivalent to about one alert per five days!!

Dust episodes have increased in the past two-three years!

Dust particles are harmful as our bodies do not have the defensive mechanisms to remove them on time. The bigger the particles, the easier it is for our organism to discard them. The most harmful dust particles are the p.m. 2.5% (particulate matter), which cannot be discarded easily by our bodies.

P.M2.5 refers to atmospheric particulate matter (PM) that have a diameter of less than 2.5 micrometers, which is about 3% the diameter of a human hair.

Since they are so small and light, fine particles tend to stay longer in the air than heavier particles. This increases the chances of humans and animals inhaling them into the bodies.

Owing to their minute size, particles smaller than 2.5 micrometers are able to bypass the nose and throat and penetrate deep into the lungs and some way even enter the circulatory system.

Studies have found a close link between exposure to fine particles and premature death from heart and lung disease. Fine particles are also known to trigger or worsen chronic disease such as asthma, heart attack, bronchitis and other respiratory problems.



• Causes of high dust levels

• The first question focuses on the population's knowledge of the causes of dust in the atmosphere and the degree of their contribution.

• Judging cumulatively from the answers **much** and **too much** to the above question, the predominant reason given by the people is the dust storms from the Sahara Desert or the wider neighboring areas with the second most prevalent being the traffic of motor vehicles.



• Health effects

- The next question aims to capture the knowledge of the population about the serious damage that may be caused by the inhalation of dust in the human body and to a greater extent.
- The conclusion from the analysis of the results showed that the first possible damage is respiratory problems to a very large extent, followed by allergies and eye infections at the same level.
- Respectively, to a very large extent, the order of 44,64% considers that the dust can cause lung cancer.

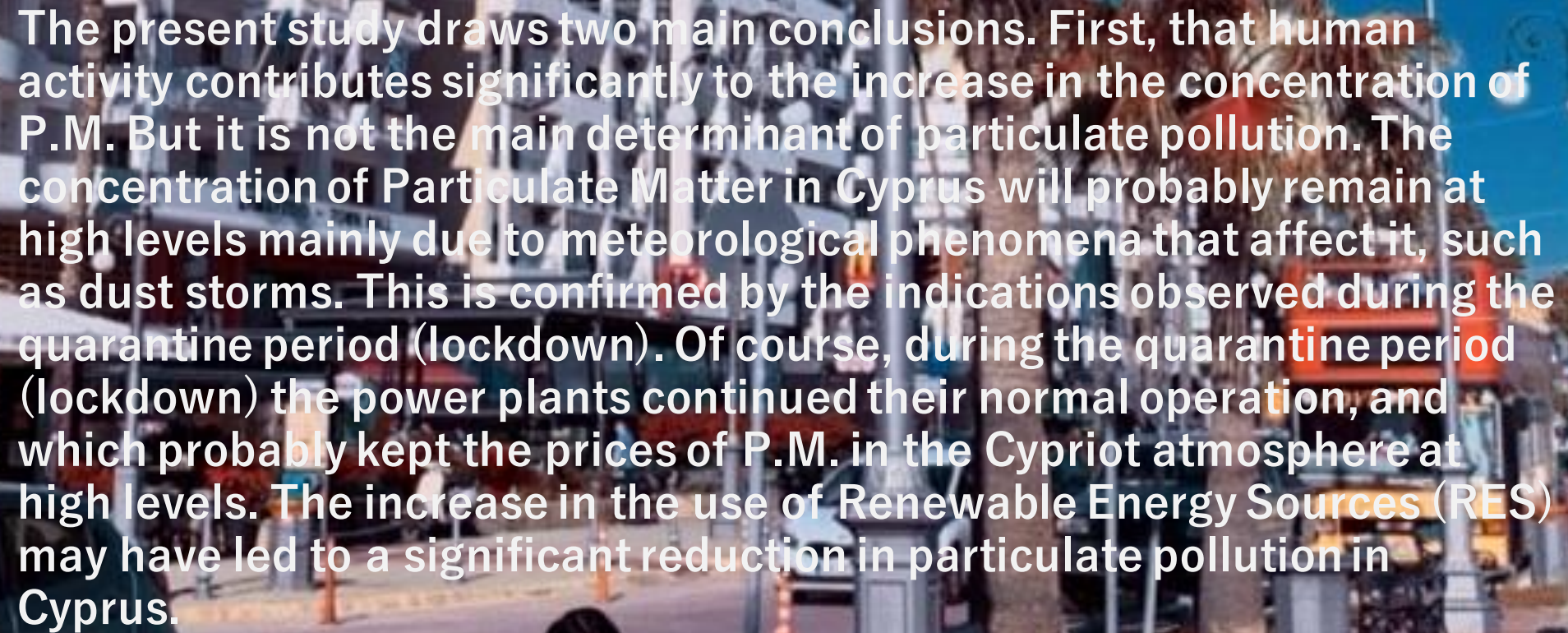


• Prevention Measures

• When asked about preventive measures at the individual level on days with high levels of dust (microparticles) the most common answer at 42.86% was "closing the windows" and "restricting outdoor activities" 28.63% respectively. It is also noteworthy that the population does not stop working and does not wear a protective mask during the strong presence of dust in the atmosphere. Finally, a significant percentage of 42.11% stated that they do not take any preventive measures



-
- From the first part of the research, it became clear that a large part of the residents of Larnaca are not aware of the effects on their health from their exposure to them. As well as having incomplete knowledge for taking self-protection measures but also that their daily habits lead to an increase in Particulate Matter, both inside their home (e.g., coals charcoal for barbecue) as well as externally (e.g., fireplace, car, electricity).

A photograph of a city street in Cyprus. In the foreground, a man in a brown jacket is sitting on a black metal bench, looking down. To his left, a dark green car is partially visible. The background shows a wide street with modern buildings, palm trees, and streetlights. The sky is clear and blue. The text is overlaid on the image in white, bold font.

The present study draws two main conclusions. First, that human activity contributes significantly to the increase in the concentration of P.M. But it is not the main determinant of particulate pollution. The concentration of Particulate Matter in Cyprus will probably remain at high levels mainly due to meteorological phenomena that affect it, such as dust storms. This is confirmed by the indications observed during the quarantine period (lockdown). Of course, during the quarantine period (lockdown) the power plants continued their normal operation, and which probably kept the prices of P.M. in the Cypriot atmosphere at high levels. The increase in the use of Renewable Energy Sources (RES) may have led to a significant reduction in particulate pollution in Cyprus.



Figure 49: Anexartisias street with bus lane



Figure S1: Anaxartisia street near Coastal boulevard





SotosCon

Thank you for watching!!!

