



CLIMATE DETECTIVES 2021 – 2022



Mussel researchers
Primary School of Makrigialos

RESEARCH QUESTION

How mussel farms affect local ecosystem and how climate change is affecting mussel farms.

SUMMARY OF PROJECT

Through this project we tried to investigate the connection between mussel farming, climate change and local ecosystem.

First of all, we defined what marine ecosystem is and what we consider as healthy ecosystem. Then we talked about mussels, how they are raised, what are the appropriate conditions and places for mussel farms and what is their role in the food chain. With the Local Mussel Farmers Cooperative we visited the port of the area where they showed us the means and the process of collecting mussels. After that we visited a local place where processing mussels, peel (open) and pack to be delivered to consumers. We discussed about satellites and their importance and through satellite images we located the mussel farms in our area. We connected and combined satellite images with observations on the field by visiting a neighbouring observatory where we observed with binoculars the extent of mussel farming that we saw on satellite images. Together with the Municipality we are planning to take action by organizing an action of cleaning the local coast and inform local community at the World Environment Day. Implementing mathematics and the scientific method as well we created and shared a questionnaire to local community so as students to see the way scientists work and to detect opinions and have a research on mussel farming. On the art field we created a simulation of a mussel farm by using everyday materials and things that mussel farmers use (nets, barrels, mussel shells etc).



Figure 1: Working together on a "mussel farm"

MAIN RESULTS

Climate Warming is a possible trigger of mussel population decline
Rising sea temperatures affect and spoil mussels
There has been a reduction on mussel population/production/activity past years
Improper use of mussel farms leads to marine pollution (plastic barrels, nets)
Reducing mussel production leads to problems at local community (lack of income, jobs insecurity)

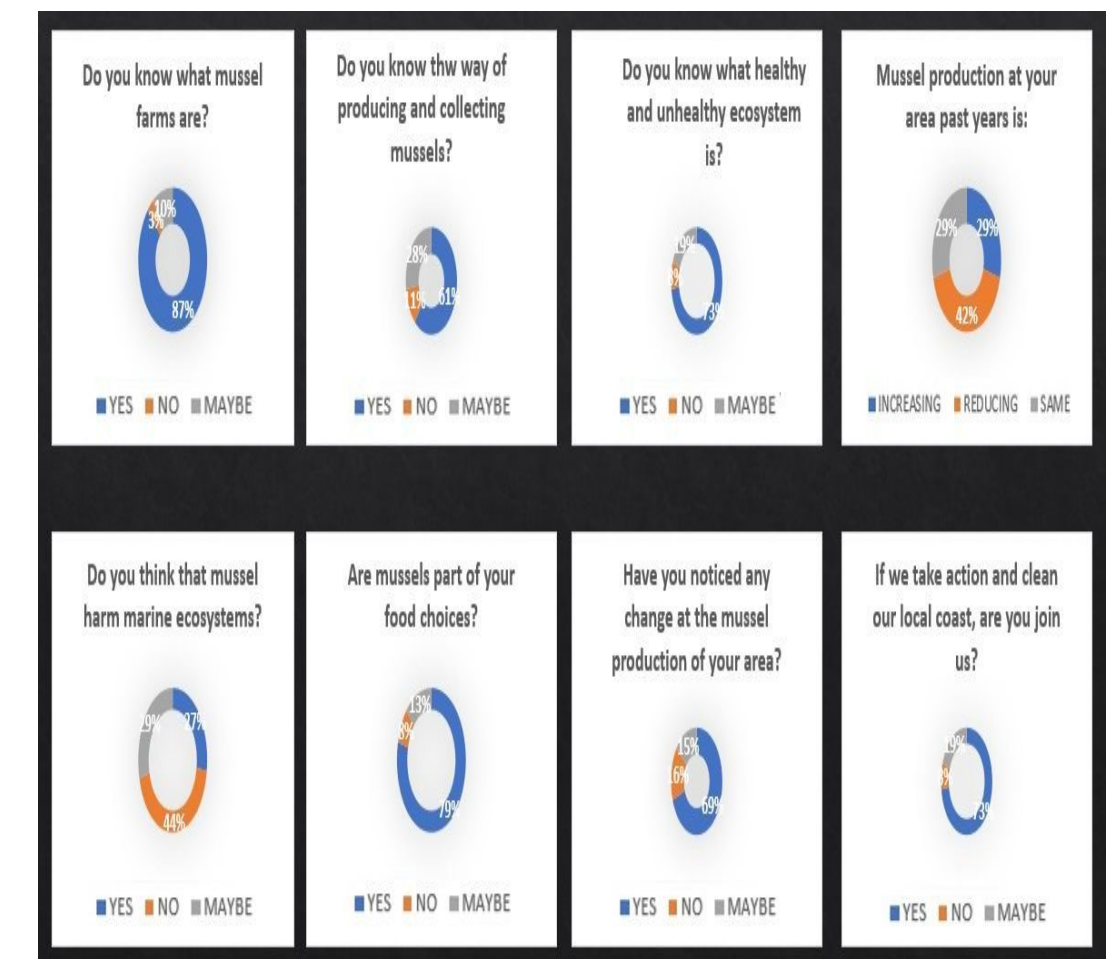


Figure 2: Research on public opinion for our topic on our area

ACTIONS TO HELP LESSEN TO THE PROBLEM



Figure 3: "Let's clean our beach!" poster for world environment day

First of all we plan to organise an action of cleaning local coast at the world environmental day on 5th of June. After that at the end of school year we will inform local community and social partners on an open event taking place at our school about our project and our results and conclusions reached. Children will play a role of multipliers to their families of what they learned through our project.