



“OS BASTIDORES DO VINHO”

Behind the scenes of wine

TEAM ETXIS

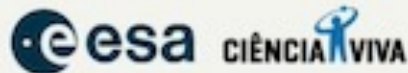
Francisca Varela; Francisco Martins; Isabel Borges; Marisa Bicho.
Teacher: Cristina Gonçalves



Project:
Educational
Project



Organization



Institutional
Partners



Partners



PRESENTATION SUMMARY

TOPICS TO COVER

1. Team Etxis
2. What is the influence of Climate Change on the grapevines' vegetative cycle and productivity?
3. Timeline
4. Mission and Vision
5. Investigation and Graphics
6. EO Browser: Source for the NDVI
7. Solutions
8. Presentations
9. Study Visit to Terras d'Alter Winery
10. Sustainable Development Goals
11. News
12. Website and Social Media



Team Etxis



Isabel Borges

Communication Manager

Equitation is her passion, a Lusitano horse connoisseur. Loves not only music but also cinema, is in charge of our communication.



Marisa Bicho

Data and Satellite Images Processing Manager

Is addicted to reading books and manhwas. Spends 50% of her time on spotify and loves to learn languages, sing and play the piano.



Francisco Martins

Data Manager

A athletics and mathematics lover, who will also be a future pharmacist. His favorite genre of music is kizomba and he attends the Ponte de Sor ranch. Is in charge of our data analysis.



Francisca Varela

Innovation Manager

Plays the violin in her free time and already has her goal set in the pharmaceutical sciences. Loves indie-pop specifically Lana Del Rey and is the writer and analyst of the team.



Cristina Gonçalves | Teacher | Educational Project Coordinator at AEPS

Physics and Chemistry teacher. Science and Technology department of the Ponte de Sor School Group | AEPS. Lives in Ponte de Sor and has been teaching Physics and Chemistry for 23 years. She is passionate about what she does and likes to embrace new projects with her students. To relax, she reads @joseluispeixoto, gardens and takes care of her "Horta do Gato".

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What is the influence of Climate Change on the grapevines' vegetative cycle and productivity?

TIMELINE

OCT.'23 TO MAY'24

PHASE 1 - IDENTIFY A CLIMATE PROBLEM.

PHASE 2 - INVESTIGATE THE PROBLEM BY USING REAL SATELLITE IMAGES AND THEIR OWN GROUND MEASUREMENTS.

PHASE 3 - PROPOSE ACTIONS TO "MAKE A DIFFERENCE" AND SHARE RESULTS.

TIMELINE

OCT.'23 to MAY'24

| 2023 | | | 2024 | | | | |
|------|------|------|------|------|------|------|-----|
| oct. | nov. | dec. | jan. | feb. | mar. | apr. | may |

Identify a climate problem

PHASE 1

- Team constitution.
- Identification of a local climate problem.
- Definition of the problem-question.
- Contact with two companies *Ímpar wines* and *"Sociedade Agrícola Monte Barrão"*.
- Study Visit to the winery in Fronteira and vineyards of Monte da Boavista in Alter do Chão.

Investigate the problem by using real satellite images and their own ground measurements

PHASE 2

- Request for data from the winery.
- Satellite (Sentinel-2) data collection on the online platforms *Climate from Space* and *EO Browser*.
- Graphical data processing.
- Data analysis.

Propose actions to "make a difference" and share results

PHASE 3

Strategy | Project Communication

- DRAFTING A PRESS RELEASE: GRUPO DE ALUNOS DA ESCOLA SECUNDÁRIA DE PONTE DE SOR SELECIONADO PARA O DETETIVES DO CLIMA.
- DISSEMINATION OF THE PROJECT WITH THE MANAGEMENT OF THE WEBSITE AND SOCIAL NETWORKS.

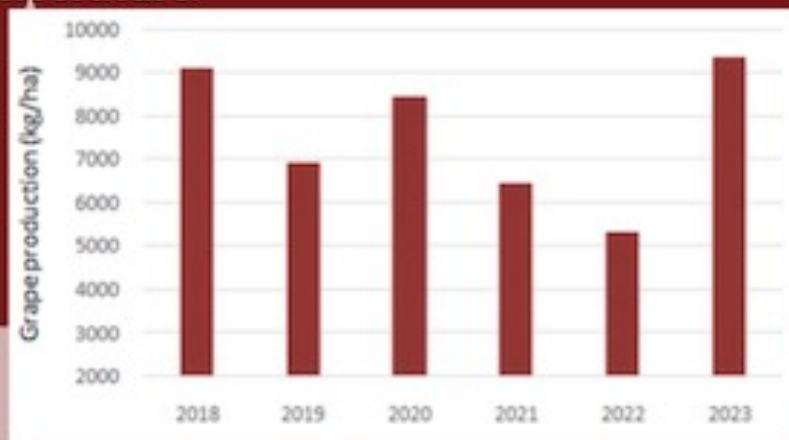


CLIMATE DETECTIVES
ETXIS

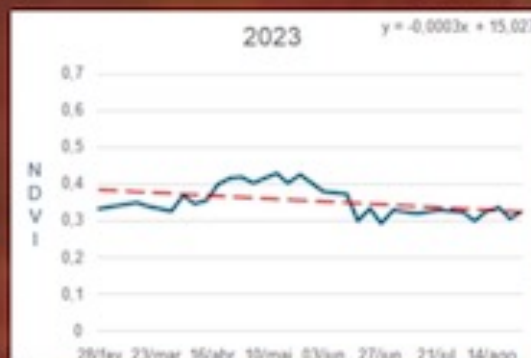
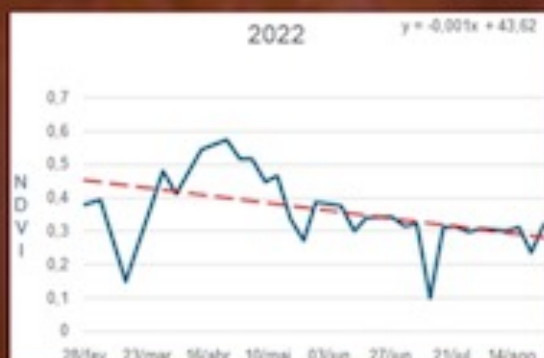
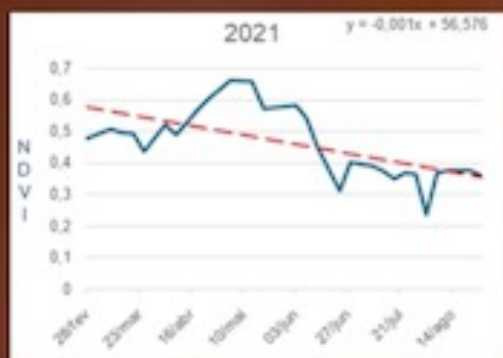
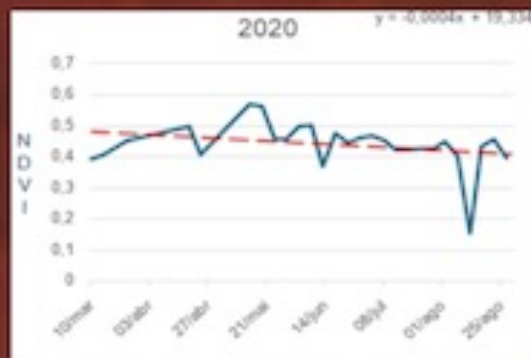
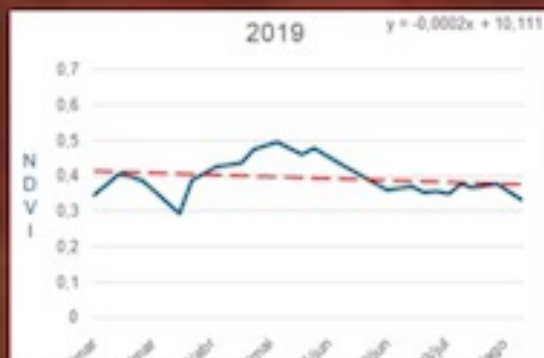
- Preparation of the final presentation of the project.
- Dissemination of the presentation to the class and the school community.
- Website update.
- Press and Social media

Mission and Vision

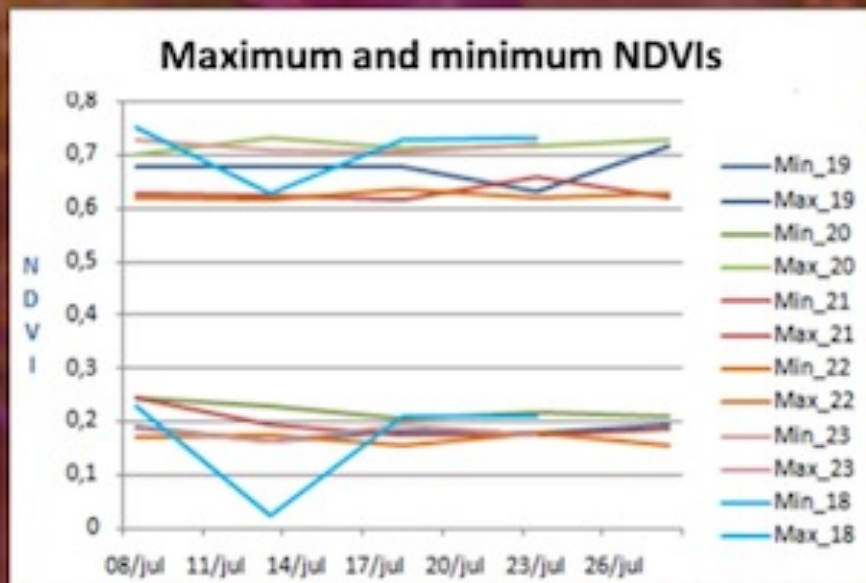
Viticulture is greatly important for the Alto Alentejo region. Unfortunately, climate changes have been taking a toll on the productivity of grapevines, creating adverse conditions for good grape production such as droughts and unpredictable weather. Us, Etxis, decided to investigate this problem using satellite images from the last 6 years of the vineyard Boavista located on Monte da Boavista, Alter do Chão and the information about its grape production, the NDVI and values of precipitation and temperature.



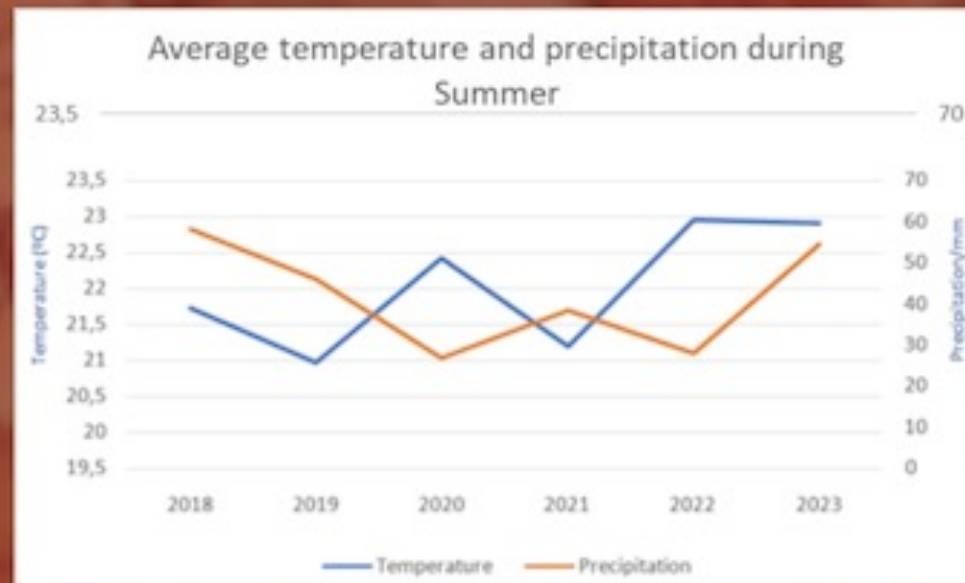
Investigation and Graphics



In this slide, our statistics showed us that there was a correlation between the size of the module of the slope and the resulting harvest. For example, in years when the module of the slope was bigger, the harvest was worse. Simply put, the bigger the variation in the NDVI, the more likely it is that there will be a reduction in grape productivity.



A strong correlation was also found between the values of the maximum NDVIs and the best production years.



Milder temperatures and higher precipitations proved to be the most favorable to the production of the grape varieties cultivated on Boavista vineyard.

EO Browser: Source for the NDVI



Solutions:

- Early pruning;
- Investing in late-maturing grapevine varieties;

These two solutions would work towards delaying the vegetative cycle of the grapevine up to 2 months. Postponing the maturation and harvest phases to October and November which currently have a better climate for the occurrence of these phases (being climatically equivalent to the August and September of the 80s).

Other solutions that would work towards keeping the same calendar but mitigating the effects of climate change would be:

- Shading panels adjusted to the times of light and heat in the vineyard in order to control the daytime temperatures and insolation;
- Kaolin clay application, which works as sort of a sunscreen for the grapevine, protecting it from the sunrays.

Presentations



To alert our community we also presented this project to our classmates and our school board.

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Study Visit to Terras d'Alter Winery



On January 9th we visited the Terras d'Alter winery.

It aimed to show the 12^A class of ESPS how the grape winemaking process works. We visited the laboratory, where the quality control of the wine is carried out, including the tasting and evaluation of the different parameters that characterize it (such as the alcohol content).

The various places where the winemaking stages take place and the winery it self where the wine is stored and aged.

Sustainable Development Goals

The Climate Detectives project of the ETXIS team was developed with the aim of contributing to the goals 13 and 15 of the United Nations SDG.

GOAL 15 | PROTECT, RESTORE AND PROMOTE THE SUSTAINABLE USE OF TERRESTRIAL ECOSYSTEMS, SUSTAINABLY MANAGE FORESTS, COMBAT DESERTIFICATION, HALT AND REVERSE LAND DEGRADATION AND HALT BIODIVERSITY LOSS



GOAL 13 | TAKE URGENT ACTION TO COMBAT CLIMATE CHANGE AND ITS IMPACTS



News

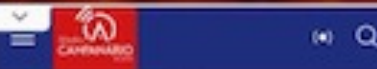
Alunos de escola de Ponte de Sor nomeados 'Detetivos do Clima'

Uma equipa da Escola Secundária de Ponte de Sor está em competição na 6ª edição dos Detetivos do Clima. O projeto desafia jovens dos 8 aos 19 anos a fazer a diferença na investigação e proteção do planeta, ao identificar e investigar um problema ambiental ou climático da Terra.

por Paula Mourato
13 de Janeiro, 2024



A equipa de Ponte de Sor está na 6ª edição dos Detetivos do Clima. Foto: DSI



Alunos de Ponte de Sor selecionados para Detetivos do Clima em defesa do Planeta



Um grupo de alunos da Escola Secundária de Ponte de Sor foi selecionado para desempenhar a função de Detetivos do Clima.

NORTE ALENTEJO

CONTÉÚDOS INFORMATIVOS PRODUZIDOS POR LINHAS

O MELHOR CONCEITO QUE USAR POSSIVELMENTE O NOSSO AGRICULTOR

Adubos | Agroquímicos | Sementes | Rações

Instituto Terra Verde

Proteção e Nutrição de Plantas

Rua de Espanha 471 - D. Zona Industrial 2640-101 Beja - Portugal

Telefone: 288 918 313 | Email: info@terraverde.pt

Anúncio no NorteAlentejo

Destaque Principal | Região

Ponte de Sor: Alunos da escola secundária são "Detetivos do Clima"

Por Redação | Publicado em Janeiro 20, 2024, 08:00

Linhas do Alentejo



Alunos da Escola Secundária de Ponte de Sor foram selecionados para o "Detetivos do Clima"

por Bárbara Ferradas - 18/01/2024



Imagem da Escola Secundária de Ponte de Sor



Alunos da Escola Secundária de Ponte de Sor foram selecionados para o "Detetivos do Clima"

No passado dia 22 de dezembro, a candidatura da equipa da Escola Secundária de Ponte de Sor para a 6ª edição do "Detetivos do Clima" foi aprovada, estando, agora, (oficialmente) em curso.



Alunos de Ponte de Sor selecionados para serem detetivos



Website and Social Media



Website

[@chemistry_seniors](#)



Instagram

[@chemistry_seniors](#)

THANK YOU!

CONTACTS:

ETXIS . Climate Detectives Project

dc@aeps.pt

