SIVE

Brakel, Germany 2022

Biodiversity & Travel

IES Ribera del Tajo

Av. Real Fábrica de Sedas s/n

Talavera de la Reina, Toledo

Spain

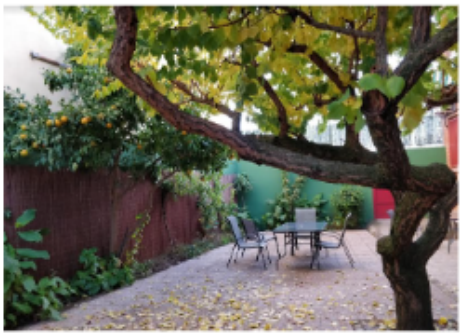
IES Ribera del Tajo
Enseñanza bilingüe

Biodiversity

IES Ribera del Tajo is a state-run vocational/secondary school located by the Tagus River (Tajo in Spanish), forming a community of around 110 teachers and more than 1600 students.

Even in a school like us (no studies that cover this area) we should give information to the students about the environment and the problems that we are creating in it. The information should raise concerns about questions like sustainability, climate change, biodiversity,...

To develop activities about biodiversity We have some limitations because our school has just a little garden, a patio and some trees at the parking area:



It is not much to start with but teachers and students had tried out several actions to help to improve the biodiversity in our surroundings.

A couple of these (and the most successful) were:

- Redesign of the garden: the lawn was removed, endemic plants and trees were planted and a drip irrigation system was installed.
- Built vertical gardens with recycled materials.

It's not that much but they improve our school area and make clear to the students that every drop counts.

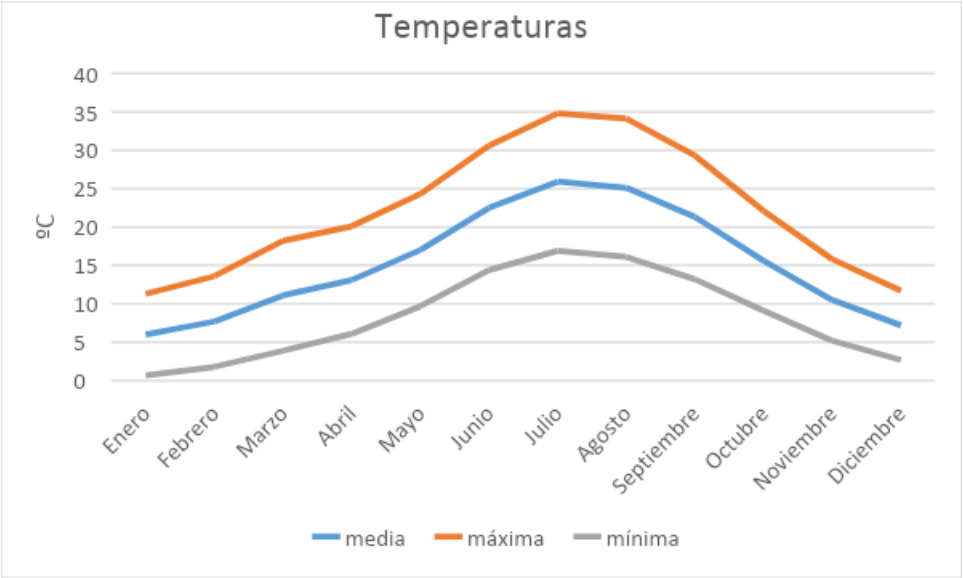
If we look over our windows we can find the main problem in Talavera to develop any activity that includes planting: the river (the lack of water) and the weather.

In Talavera de la Reina, the summers are hot, dry, and mostly clear and the winters are cold and cloudy but with scarce rains. The temperature goes from around -10ºC in winter to 45 ºC in summer, quite extreme.

A couple of year ago we almost lost the garden because of a storm that froze all the plants:

We of course recovered the garden but then in summer the high temperatures also affected it.

This is a graph of temperature and rains:



So we have extreme temperatures, lack of rains and … intensive agriculture in the South and East of the peninsula.

Do you know that one of the human structures that is most easily distinguishable from space are the greenhouses in the southeast of Spain? There are like tens of thousands of hectares covered with plastic and just at the side of the only desert in Europe.

The Iberian Peninsula, with snow in the Pyrenees mountain range, which separates Spain from France. Credit: ***NASA/Visible Earth***.

Fields of greenhouses in Almería. Credit: ***NASA/Visible Earth***.

This intensive agriculture is common in the southeast of Spain where water is a scarce resource. Part of the water that are watering the plants comes from a deviation of the river tagus.

The Tagus's flow has decreased by 40.2% over the last century and during this one due to the infrastructure developed upstream for reservoirs and transfers.

The decreasing flow of the river and the extreme temperatures has forced the local farmers and animal breeders to abandon their labour causing (apart from the increase of the unemployment rate in the city) high amount of fields and woods covered by dried weeds.

In the past the land would be tilled and the sheeps and cows would eat the weeds and bushes on the hills. The increase of the biomass in the fields is also increasing the risk of fire overall in the summer. In fact our city was involved in several fires this year :

(the picture is from CPEIS Toledo)

The extreme temperatures, the lack of water and the fires are causing a impoverishment of the flora and fauna in the area that is causing permanent damage to the biodiversity.

And respect to the fauna we have other silenced problems. Some foreign species were introduced because of the irresponsibility of individuals and wrong decisions of the authorities. Initially most of them were brought to fix a problem and now they are bigger problems themselves.

Invasive species are responsible for the destruction of ecosystems and habitats. As a consequence we got a reduction of biodiversity and the extinction of native species

The problem with the American crab for example, it was brought to repopulate our rivers (it was easy to reproduce them) but it began eating the native species and then left the water to eat the crops on the fields. The native species affected are the "white-footed crab", and the "noble crab".

The catfish is another invasive species that came to Spain because someone thought it was a good idea to have the possibility of fishing them. Being such a large predator it needs a lot of food to survive and It is at the top of the food chain so it is eating the rest of the species on the rivers and lakes.

Years ago in our city, there were too many rabbits, and the authorities decided to release an animal called the mongoose, so it would eat the excess of rabbits, but soon it get out of control and the population of rabbits and other small animals has been reduced too much.

The last example is an animal affected by climate change: storks no longer migrate. In the past the storks only passed through the city in some seasons, but now, they are here all year round.

Now we can see these birds making their nests anywhere in the city (chimneys, electric turrets,..)

Some solutions were already treating some of the problems: Several species have been detected on the islands of the Tagus River, including storks, herons, black vultures, foxes, etc.

The townhall decided to buy and to rehabilitate the entire Talavera riverfront: recovery of native vegetation, reconstruction of the urbanised shores, construction of walkways that connect the islands with the shores and with each other, pedestrian circuits, bio-healthy ones, ecological paths, and cultural and leisure infrastructures..

A bird observatory will be installed, a fauna recovery center, a classroom in nature and an interception center in the Tagus River: and this will be installed in the abandoned building of the power plant and that it will have a research and exhibition program , it will also have a native seed bank and captive breeding programs for endangered native fauna.

Also the authorities have also carried out conditioning works in the La Portiña reservoir that serve to improve the fluvial environment of the reservoir and its plant recovery, with specific treatments to improve the existing specimens and the planting of native species, as well as promoting the recreational use of the place, with fishing areas, viewpoints for bird watching and cleaning trails for the recreation of citizens.

Lastly the city is planning the plantation of more than 300 trees, 1,000 shrubs and 37,000 flowers for an urban tree-lined plan guided by sustainability.

So we can observe that in our city there are plenty of problems but also a lot of actions are trying to improve the situation. Till now our school is participating overall in raising the awareness of our students in these problems (the people normally ignore the situation because nobody informs about it) and also in cleaning the riverside to improve as much as possible the environment for the human and the animals.

Travel

Because Talavera is not a big city, our local students usually go by foot to the school, and some of them also use their bikes or the public electric scooters thanks to the special spots that the school offers to us.

There are also some students that prefer to use the bus because they leave a little bit further., we have an bus stop just at the school door.

Línea 3: C. C. Los Alfares - Verjas de Prado

The students from outside Talavera usually use public buses or share a car with other students in order to save some money and if they are from a city that is not that close they share a flat near the school.

Because of the high unemployment rate, Talavera is having one of the worst situations of depopulation in the European Union . We lost 5,500 inhabitants in 11 years, since it had 88,986 inhabitants in 2010 and 83,477 in 2021. This is having a good effect on the price of housing, the average price of a house for rent in Talavera is around €500 per month.

Apart from that in our centre we have more than 500 e-learning students, They can follow the courses from home (using the tool moddle: https://fp.cloud.riberadeltajo.es/moodle) and they only need to come to the school for exams. This is a good way to reduce carbón footprint :)

What can we do about it

- ☐ Raise the awareness with talks, posters, videos, groups to clean the nearby area of the river,...
- ☐ Inform of the activities related to the project:

- ☐ Sostenibleriberadeltajo.wordpress.com
- ☐ https://www.latribunadetoledo.es/Noticia/Z439FC5BC-B5A0-B79C-68586331B714F42C/202211/La-sostenibilidad-tambien-viaja-con-Erasmus-

- ☐ Build an application as meeting forum to help the students to share cars and houses
- ☐ Encourage the utilisation of public transport to came to the school

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