

BIODIVERSITY

BASQUE COUNTRY

"ASIATIC WASP 1A"

The asiatic wasp it is a problem for biodiversity because they kill bees. You will think that if the bees are killed nothing happens, but it isn't like this. If the bees don't pick up the pollen, they wouldn't have babies, which leads to the decline of the population, being able to manage to eliminate the hive.



If we keep in mind that the bees pollinate the 80% of the plants, the dangers that this new specie could cause, the consequences would be terrible, affecting to all biodiversity.

Here in Durangaldea, the local specie is disappearing and the production of honey is decreasing, due to the fact that the invasion of this specie. In a long period of time could affect terribly.

Moreover, if the plants are not pollinated, plants could not be reproduced. This would affect to the food chain of some other species.

Nowadays, experts say that the eradication of this specie is practically impossible because it is very expensive and there is not a specific treatment to eliminate this specie respecting the other ones.



"ASIAN WASP 3D"

The Asian wasp is an invasive species characterized by his black thorax and abdomen with some yellow segments and brown legs. It's easy to difference it because of his measure of 3'5cm.

It came from Eastern Asia to Europe through the port of Burdeaux (France) in 2004. It quickly spread and, in 2010, it arrived to Gipuzkoa. In these 6 years it has been constantly expanding around the Basque Country. In the case of Biscay there are many hives, so firemen's receive advises of where are they every day and they are working to finish with them using special suits and tools. Most of these hives had been found high places, such as in the top of the trees, that's why most of them had been found near forests.

The problem of this invasion might become more serious than it initially appears and it affects more aspects than the production of honey. Autochthonous bees represent an important part of the diet of the Asian wasp, but they are not their only food, Asian wasps also eat other

pollinating insects and they kill our native insects, which has negative consequences for fauna. Some scientist affirm that the greatest danger is not the number of wasps that they capture, it is that autochthonous bees don't come out from the hive, which means that they don't collect pollen and don't have offspring, leading to the declining of population.



Considering that bees pollinate 80% of wild and cultivated plants, the potential dangers that this new invasive species could be disastrous, threatening not only the beekeeping industry but also all the biodiversity.

“THE ASIAN WASP 1A”

The asian wasp is the world's largest wasp and is from the Eastern Asia. This type of wasp are known as “murder wasp” because of his aggressive personality and for being more resistant than the european ones. These animals can measure 3,5 cm and they have the most powerful venom. The bite of the asian wasp leave on your body some bumps. Those bumps are quite big and let you a strong pain during 24 hour.



The asian wasp arrived in Europe in 2004 and in the basque country in 2010,inside of a container that arrived in Bordeaux. Then in few years it has expanded through all the Basque Country.

Here in Durango and surrounding areas the nest have appeared in 2012 whereas in the Basque Country appeared in 2010. There have founded these nests in Izurza and Durango.

The appearance of these specie has caused some disturbances in these towns because the bite is very dangerous and it has a lot of poison.

Video: <https://www.youtube.com/watch?v=YSYdnJRKddQ>

Information sources:

http://www.durangon.com/de-la-avispa-asiatica-a-la-abeja-iberica_es_14_25_467.html

<http://mugalari.info/2015/10/27/la-diputacion-tarda-cinco-dias-en-enviar-a-los-bomberos-de-iurreta-a-eliminar-un-nido-de-avispa-a-un-colegio-infantil-de-durango/>

<http://www.higieneambiental.com/control-de-plagas/avispa-asiatica-amenaza-apicultura-agricultura-biodiversidad>

<http://www.elcorreo.com/vizcaya/v/20110115/pvasco-espana/avispa-asesina-coloniza-euskadi-20110115.html>

<http://www.elcorreo.com/bizkaia/201409/12/avispa-asesina-llega-bizkaia-20140912181439.html>

<http://www.elcorreo.com/bizkaia/sociedad/201508/26/veneno-potente-20150826175948.html>

<http://www.deia.com/2015/01/29/bizkaia/duranguesado/hallan-posibles-nidos-de-avispa-asiatica-en-izurtza>

5.D THERMAL POWER STATION OF BOROA

THERMAL POWER STATION OF BOROA

Boroa's thermal power station called Bizkaia Energia, it's a combined cycle power plant located in the township of Amorebieta-Etxano (Vizcaya), from 2,5 km from the town center, and it's an thermoelectric station whose principal fuel is natural gas.



This thermal power plant produces 20% of the total energy of Euskadi, so you can see that it's a big amount. But, as you can see in this picture, most of the energy produced contaminates the air.

They don't know the causes of these emissions or if they are polluting smokes or not, but, apparently it seems that some compounds with sulfur are burned, or perhaps with hydrochloric or nitric acid. The central insisted that the smoke always occurs in the starter motor and that doesn't pollute. "Everybody knows that the combined cycle does not produce sulfur." said. The responsible of the station said that due to the crisis, they were forced to stop and start up more often, and is in that moment when the smoke turns yellow. In addition, the Basque government verify that the quality of the air is not affected because of the presence of the station.

Apart from the problem of the emissions of "yellow smoke", is said that this central pollutes more than 568.000 cars, so as a result, Amorebieta's inhabitants have organized more than 10 protests to close the thermal power station

Furthermore, apart from causing air pollution, they also cause water pollution due to the fact that the station poured 50,000 liters of sodium nitrite to the rivers, causing that the river network have five black holes in the Ibaizabal river, between Boroa and Elorrio, Oka and Barbadun

4D TALDEA:

FOURTEEN BEACHES IN VIZCAYA DRAG THIS SUMMER POLLUTION PROBLEMS

Fourteen Biscay beaches are suffering problems of water pollution in summer. In two of them, in Toña beach (Sukarrieta) and in Las Arenas beach, the rescues have banned the bath according to the Department of Health controls. In addition, this summer there have been days when these two beaches and ten more have suffered minor pollution problems.



These ten beaches are: Ereaga, Bakio, Ea, Lekeitio, Mendexa, Ondarroa, San Antonio (Sukarrieta), Muskiz, Plentzia, Gorliz and Mundaka. In its waters it is very easy to see plastic waste, hydrocarbon residues and gasoline residues caused by boats. Environmental organizations warn of the evils of this pollution, which may affect human health.

Thousands of species of marine animals and plants that live nearby the beach see their natural habitat destroyed, due to, water pollution. Of course, this affects the quality of food that we eat and the activity of fishing industries, which are drastically reduced its turnover.

References:

- <http://www.deia.com/2015/09/25/bizkaia/margen-izquierda-encartaciones/prohibido-el-bano-en-la-arena-por-una-fuga-de-aguas-residuales>
- <http://www.irekia.euskadi.eus/es/news/6576-playa-vizcaina-ereaga-escenario-simulacro-basado-contaminacion-hidrocarburos?track=1>
- <http://www.20minutos.es/noticia/490015/0/playa/contaminacion/mar/>

RED SWAMP CRAWFISH (American Crab)

In the 70s, the native crab species in our rivers was starting to disappear because of a disease called “Afanomicosis”. In order to repopulate the rivers, they introduced a new species: the red swamp crawfish, also known as the “American Crab”.



But three years ago they discovered that the solution was worse than the starting problem, especially in the "Ibaizabal" river and Urrunaga's reservoir. This kind of crab is really aggressive and it's stopping the repopulation of the native one. Whereas the native one only eats “detritus”, the invasive one eats everything that they find (eggs, algae, tadpoles...). This doesn't help biodiversity. Apart from that, the native one helps to keep the rivers clean, however, the American one doesn't.

Trying to solve this massive problem, the government has removed the limit on the amount of crabs you can fish, but there is still a limit on the amount of them you can take home. What other solutions can you think about to solve this issue?

References:

EL CORREO
MACIZODELGORBEA

Wind energy consequences. (4A)

Consequences of windmills.

We can differ the consequences of the wind farms in two stages. The process when they are being built and when they have already built the windmills.

The period of building:

- **Atmospheric emissions:** the trucks and all the machinery which is essential to build the wind farm give off a lot of fumes and dust to the environment.
- **Soil erosion:** the construction of roads and trenches damage the soil. As a consequence, many kinds of plants and vegetation is destroyed.
- All the facilities that are needed to the appropriate working of the wind farm take away the habitat. The fauna of flora is removed and normally the vegetation is not replanted.

The period of exploitation:

- **Noise,** wind turbines produce some noise when they operate and often we are not able to listen to natural noises.
- **Visual Impacts,** windmills are often placed in exposed areas and are really visible.
- **Birds** are the animals which most suffer wind turbines. However, lighthouses, tall buildings, radio and television towers have been associated also with birds deaths.



As we can see in this picture, in OIZ, in the area where the wind turbines are located, the vegetation is very scarce

Information sources:

- <http://www.adurcal.com/mancomunidad/viabilidad/59.htm>

POLLUTION IN BASQUE COUNTRY

SMURFIT KAPPA

There are 19 Smurfit Kappa factories in Spain and Portugal.

This company manufactures paper and wavy shaped cardboard in a sustainable, safe, efficient and innovative way. They are an integrated company ranging from sustainable forest management to the production of fibre and recycled paper.

Smurfit Kappa mainly works doing packaging, cardboard paper and forest products.

This factory is quite beneficial as it recycles paper and their solutions are natural, renewable and recyclable, but the problem is that it pollutes the air and, as a result, it harms the environment and produces not only physical disabilities, but also psychological and behavioral disorders in people.



is
as

There is a Smurfit Kappa factory in the outskirts of Iurreta. This factory is quite beneficial as it recycles paper and their solutions are natural, renewable and recyclable, but the problem is that it pollutes the air and, as a result, it harms the environment and produces not only physical disabilities, but also psychological and behavioral disorders in people.

The contamination attracts dioxin and furan, which are the agents of contamination. These are very toxic, active, physiologically small and not easy to degrade, that's the reason why they can last years and years. There is a long list of problems that these factories can make, such as, genetic disorders, skin diseases, respiratory cancer, pneumoconiosis, bronchopulmonary infections due to the aluminum dusts or fumes or its compounds, bronchopulmonary infections due to powders of metals, asthma caused in the professional average by the substances not included in other sections and diseases caused by irritation of the upper airway by inhalation or ingestion of powders, liquids, gases or vapors.

These factories also damage the biodiversity because they produce air pollution and acid rain, for example.

Now, Smurfit Kappa has created a new headquarter of renewable energy. What they want to achieve by creating this project, is the improvement of its operative global efficiency through the support of the renewable energies, the forest's sustainable management and the respect and protection to the environment.

TRAFFIC IS THE MAIN ENVIRONMENTAL PROBLEM IN THE BASQUE COUNTRY

- **Vizcaya produces 65 % of pollutants emissions in the Basque Country**

The traffic and the gas emission that carries with it are the principal environmental problems of the Basque Country. According to some reports, Biscay is the responsible of the 65% of the atmospheric contamination that haves the Basque Country. The worst gas emissions of Biscay are the sulfur dioxide (SO₂), which the manufacture industry mainly produces(for example the industry” Smurfit Kappa Nervión” located in Iurreta, generally known as “La Papelera”), and the carbon monoxide (CO), that it’s emitted by the traffic.



Probably you already know that the gases emitted by traffic or by the industries are not good for any living organism. However, we have investigated more deeply and these are some of the **consequences** that, at some point, the emission of SO₂ or CO could have in us:

- **IN HUMANS:** Deterioration in human health , cardiovascular problems , conjunctivitis, bronchial diseases, lung cancer, skin cancer, vision problems, blood diseases , problems in mental development of the unborn, among others.
- **IN PLANTS:** Great repercussions in the evolutionary process of plants , preventing photosynthesis in many cases, with serious consequences for the purification of air that we need to breathe.

IN THE ATMOSPHERE: These gases causes the known environmental problems and their consequences in each individual case, such as smog, acid rain, reducing the ozone layer, global warming, the greenhouse effect, etc ..

SMURFIT KAPPA IN IURRETA

Smurfit Kappa Nervion, advancing in its investment process, has launched a central renewable energy from forest biomass, along with a number of other environmental improvements designed for the treatment of gases.

The aim of the investment is to increase the generation of thermal and electric energy of the plant from renewable sources, increasing the efficiency of the equipment installed and boosting the capacity of treatment and management of forest residues. So it has installed a new steam turbine with three extractions of steam at different pressures, to feed thermal energy in the different processes for the

production of pulp and paper. Previously, installing produced 80,000 MW h per year of renewable electric energy from biomass, using the black liquor as fuels and crusts generated both in the plant itself as in the sawmills.

The main objective of the project is to increase the consumption of biomass residual forestry from forest holdings, which, until now, remained as residue in the mountains, so that the investment will allow, in addition, to generate clean energy, contribute to keep clean the mountains, supporting the sustainability of forest resources.



Primary forest biomass will proceed in silviculture* (group of activities related to forest exploitation) operations, such as, pruning* (trimming of plants) and selection of outbreaks. Its Valorisation has advantages such as the reduction in 34% of the indirect emissions of CO₂. It will also reduce emissions of SO₂* (Sulphur dioxide) and promote greater sustainable forest management.

This project will increase the consumption of forest biomass in more than 40,000 t per year, reaching a consumption of more than 100,000 t annually, with which will increase the generation of electric energy in more than 40%.

ZEBRA MUSSEL

The biodiversity problem that we have chosen is the **zebra mussels**, which has its name because of the striped pattern of their shells. This species is originally from the lakes of southern Russia.



However, the zebra mussel has been introduced to another ecosystems, in other words, this issue



can lead into the invasion of this mussel into different rivers, considering that it can live up to four or five years and it reproduces rapidly, just to mention a fact, they produce nearly **one million eggs each year**.

For example, near us, there is a **plague** about these species, concretely, in **Basauri - Biscay** which is getting bigger and bigger everyday.

Sources:

https://en.wikipedia.org/wiki/Zebra_mussel

<http://www.irekia.euskadi.eus/es/news/16362-confirmada-presencia-ejemplares-adultos-mejillon-cebra-nervion-basauri>

ZEBRA MUSSEL: PROBLEMS AND SOLUTIONS

This problem started in the Basque Country in 2006 but this year, it has become more dangerous. Last year it was founded in Ibaizabal, in Bedia and in Usansolo.





The main **cause** of the zebra mussel invasion is that they stick in the lower part of the boats and that lead to the displacement of the mussel and their larvae. They don't affect human health but they affect the aquatic ecosystem in a severe way. In other words, the zebra mussel feeds on plankton and that fact is bad because it reduces the amount of food for other species (fishes) and that indirectly

affect us.

One solution that we have thought about is that the government should send reports to the fishermen to warn and teach them how to fish in a responsible way. Some people thought about using pesticides, but in our opinion, that's very harmful, due to the fact that it can damage other species and also us.

Sources:

http://www.macalester.edu/academics/environmentalstudies/threerivers/studentprojects/ENVI_133_Spr_08/Invasive_species/Zebra%20Mussels.html

<http://www.elcorreo.com/vizcaya/v/20131017/vizcaya/mejillon-cebra-comienza-colonizar-20131017.html>

<http://www.dnr.state.mn.us/invasives/aquaticanimals/zebramussel/index.html>

HUNTERS SHOOT UZELAI, THE MOST FAMOUS STORK OF THE BASQUE COUNTRY

Urdaibai, a protected area in Biscay (Basque Country), is considered a perfect place for migratory birds due to its large area and the big degree of humidity. Many birds have been living there for a long time and the reason of it is that it has been protected by the man.

The last 23rd December, the most well-known stork in the Basque Country called



Uzelai has been cruelly shot by a group of teenagers through a car. A week later, the stork's pair was searching for him.

Uzelai was a stork male and, with its pair, were part of the first couple that made their nest in Urdaibai in the last century. It was originally from Lleida (Cataluña) and as others animals, it came from the Recovery center Vallcalent Wildlife where they rescue disoriented and injured animals. It was released in Urdaibai in 2005, where it raised every year in its nest of Atxaga, Forua.

Moreover, the pair has brought up 20 baby storks, and the last three in 2015. This score means a lot taking into account the lacking number of this type of animals here.

Uzelai didn't migrate to Africa, he spent the winter in Alava. And like other years, he returned early to Urdaibai, exactly 2 weeks ago, to fix its nest and protected it from intruders.



This pair was extremely important for the reproduction of the stork in the Basque country but now, unfortunately, a group of heartless has finished with one of them. The consequences of this actions mean the loss of a lot of species in the ecosystems of the Basque Country's biodiversity.

Urdaibai Bird Center has been protecting this specie since 2005, and they feel very sorry about this loss. They have criticized the thoughtlessness or insensibility of people with animals and their dangerous situation. They also pointed out that a great education and information is essential to avoid this kind of situation and have warned authorities about that.

PACMA, an spanish animalist party against the abuse of animals that protect the environment and the social justice, is up to date of this incident and said that it is

immoral and horrible action made by human. Furthermore, they said that they are going to continue fighting against the use of weapons and in favor of the prohibition of hunting.

There are a lot of differing opinions about how to preserve the environment and the ecosystems and avoid this situations. But, what should we really do? How make people be aware of the importance of animal's existence?



Main Sources:

- https://es.wikipedia.org/wiki/Reserva_de_la_biosfera_de_Urdaibai
- <http://pacma.es/cazadores-disparan-a-uzelai-la-ciguena-mas-famosa-del-pais-vasco/>
- <http://pacma.es/>
- <http://www.eitb.eus/es/radio/radio-euskadi/programas/boulevard/audios/detalle/3742690/han-matado-ciguena-uzelairadio-euskadi>

MAÑARIA'S QUARRIES

A quarry is an open pit mine from which are extracted large blocks of stone, which are crushed and towed. Normally a quarry is used for a certain time. Then, it is fill with groundwater and all the area is restored to create a habitat for wildlife and natural recreation.

The main negative effect of quarry extraction is the loss of habitat and the species that inhabit it. Habitats are destroyed not only by direct removal, it may also be altered or destroyed by excessive dust, water seepage, erosion of the soil and the noise caused by the quarries. Other secondary impacts are mainly related to rivers, air and soil



pollution.

The mayor of Mañaria, Endika Jaio looked for solutions to the problem of the quarries in his town. He granted the license to begin the process of dismantling the plant, however, due to the politic about pillaging the natural resources, he can't start his project yet. Moreover, he thinks that despite her objective is very far to fulfill, the process has already began with the closing down and the recuperation of Zalloventa's quarries, situated in Urkiola's Natural park, two years ago. But more surprising was that when they were forced to close, the government pay them a compensation of 9.2 milion euros. Furthermore, the prohibition of continuing with the mining activities in this quarry previous mention, didn't affect in any stent to Markomin Goikoa business, the biggest mining company in Bizkaia. Unfortunately, for our astonishment mining will continue until 2027 in one side of the quarry and until 2030 in the other one, Mutxatxe, both with a extend of 30 years.

We are four students from San Jose Jesuitak call Estepan, Pablo, Ana and Candela. Our teacher has presented to us the proposal of making a blog about all the issues in Bizkaia that can causes several changes or can affect in the biodiversity in some aspects. Some of our classmates are working on fracking, invasive species... we have decided to work on a topic situated really close to us, Mañaria's curries.

Mañaria is a little village situated, as all the issues we are working with, in Bizkaia, the Basque Country. This small village is not very populated; it has near 500 persons, and it's increasing with the years. It's characterized by it proximity to nature and old tradicions.It's strategically situated due to the fact that it's surrounded by mountains and Urkiola's natural park, but during the XVIIIth century mining began and

since then, mountains started being affected up to the point that, nowadays, almost a whole mountain has disappeared.

The first aim of this quarries was to produce an excellent quality marble which is used in construction. As, when this project began construction was really developed, many raw materials were needed and thanks to it, Mañaria's quarries started becoming more and more popular, being the main pillar of this village's economy.



From Mañaria's valley, is really impressive how close we are not only from Anboto Mountain, we have Urkiola Mountain too, but presently what it's much more impressive, it's the big bite that the five quarries has caused on it. Despite the government, since the last month of the year 2015, have forbid to this type of companies to continue exploiting this resources, but they had continue doing it.



You will ask yourselves, in which extent can this affect to biodiversity, the short answer is that they destroy the wild life in that area plants, animals..., but behind it, there are more complicated reasons. The environment can be straight affected by this big explosions, but the dust and noise, aquatic leaks, soil erosion can produce have bigger consequences.

We will focus the next post in working deeply in the consequences and in the solutions that the mayor, Endika Jaio, has propose to solve this big problem presented.

Information resources:

<http://www.elcorreo.com/bizkaia/duranguesado/201406/08/cantera-zalloventa-comienzo-desmantelamiento-20140607212923.html>

http://www.ehowenespanol.com/efectos-ambientales-canteras-info_184967/

<http://www.manaria.org/es-ES/Ayuntamiento/Paginas/default.aspx>

<http://www.monografias.com/trabajos82/medio-ambiente-explotacion-canteras/medio-ambiente-explotacion-canteras2.shtml>

ARTXONDO'S QUARRY

A quarry is a place from which we obtain a lot of different materials. Once not in use, it causes a lot of environmental damages, mainly related to the destruction of the landscape.

We just think this is a problem that it is not affecting us, but we have just need to look around us to realise that we are wrong. Let's talk about Bilbao. What it was once a quarry in Artxondo, it is now being filled with the discharge of surplus from other exploitations by "Cementos Rezola de Arrigorriaga". Artxondo (Bolintxu), is the area

with the highest natural values of Bilbao and it is protected by the special plan of the Pagasarri's mountain (PEMP).

The PEMP requires the renaturalization and the regeneration of wetlands and ponds located at the bottom of the old exploitation area, where different species of amphibians live. But, with the discharges, is not only that the land is not regenerated, but also the habitats are destroying. This is happening because trucks are pouring tons of debris on wetlands.



In addition, the quarry also requires the conservation of its walls, because some of the protected birds live there, such as the peregrine falcon and the common kestrel. These animals are also being affected because trucks pour the debris from the highest point.

Knowing these consequences, Bilbao's city council gave the building authorization to the company Cementos Rezola.

So, if we don't stop it before it's too late, we will be living in the year 2031, year when the constructions are supposed to be finished, and all the damage directly related to the biodiversity will be caused.

Video: <https://www.youtube.com/watch?v=f8vfgR7LTss&feature=youtu.be>

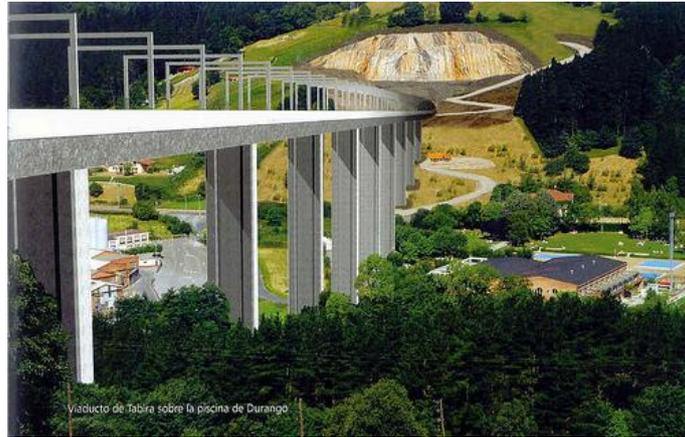
Resources:

<http://www.ekologistakmartxan.org/2015/05/19/el-ayuntamiento-de-bilbo-permite-a-cementos-rezola-una-pista-en-el-pagasarri/>

<http://www.ekologistakmartxan.org/2015/10/15/el-ayuntamiento-de-bilbao-permite-que-se-danen-ecosistemas-protegidos/>

HST PROBLEM IN BISCAY

It is a well known fact that HST, high speed train, is a common problem in The Basque Country. It is the railway project that pretends to join together different capitals. In addition, this public transport is one of the faster trains that no one have ever invented, this is to say, the train arrives until 250 km/h.



It crosses the south zone of Durango, one of the landscapes more relevant ecologically, and from the north limit of Urkiola Natural Park. In that area there are many endangered species, such as, the European mink and sand martin.

The implantation of this transport demands the construction of expensive infrastructures that involve deep environmental impacts and social problems like destroying a lot of forests. It's a very big problem also, because the habitat and the biodiversity of the area is affected too and all the animals that used to live there have had to go away or maybe they have disappeared. Another important fact caused by the creation of the train on the environment is the visual and noise pollution, this means, that this problem may harm the activity or balance of human or animal life. As well as the movement of the lands, that can destroy a lot of trees.

Besides, HST is affecting directly to the 17 townships of The Basque Country. This public transport has 4 stops during its way, in Bilbao, Donosti, Iruña and another one in Gasteiz. So it consumes six times more than a usual train, for this reason it brings more pollution to our atmosphere.

How could we reduce the destruction caused by this train in order to achieve the biodiversity that we used to have in this area?

It has never been built anything as big as this in the Basque Country. The infrastructure that will change not only the communications, but also the social and economic structure of the Basque Country is now called the HST. (High speed trains)

But, what's the high speed train? This new way of transport is designed to join big cities in competitive times with the plane. The idea consists of doing a design of route combined with the reduction of stops on the stations in order that trains could circulate to speeds superior to 250 km/h. This implantation, logically, demands the construction of costly infrastructures designed only for this specific project, which brings serious social, environmental impacts and high costs of construction.

If we focus on the environmental problems, we will see that this affects strongly on the biodiversity, for example:

Physical barrier: The high-speed train's road and constructions turns into an impregnable barrier between the fauna



and people. This effect provokes the isolation of species and the increase of the probability of extinction and plagues.

Erosion: The route has to be straight due to the high announced speeds, which forces to realize big tunnels and bridges. But this routes generate millions cubic meters of rubbles and this will suppose an environmental serious and decisive impact for animals and, apart from that, these rubbles will need near 300.000 trucks to be transported.

Electromagnetic pollution: This High-velocity projects makes the system of electrification grow 25.000V and they ignore the pollution of electromagnetic type that take place in the environment. This causes repercussions in the health, for example, cancer, immunological system, alterations in the production of hormones and proteins...

Nowadays HST (High Speed Train) is very known among people all over Spain. As you would probably know, this fast train has caused a lot of problems, like destroying a lot of mountains, but also has some benefits too. This project was created in 2001, and they are still building it.

First of all, why was it created? Which was the aim of this project? Well, this high-speed train, was designed to join big cities, like from the Basque Country to Madrid, so that the travelers wouldn't have to take aircrafts. Apart from that is faster than conventional trains and it is also cheaper than some other public transports. We also have to take into account that it doesn't pollute as much as some other transports.

Video: <https://www.youtube.com/watch?v=-DVwsNzNMUs>

Despite having made a brief introduction on the HST, we decided to dig deeper into the subject by mentioning the advantages and disadvantages. On the one hand, HST's construction has a big effect in biodiversity. In addition, the construction of HST has made a grave impact on the deforestation. In other words we have less oxygen. Moreover, it pollutes less, because it works with electricity.

On the other hand, we also have to agree that, as it is faster, this make people use it to move from places and thanks to this we will pollute less than using a car.

[http://www.cntvalladolid.es/IMG/pdf/Tren de Alta Velocidad y sus consecuencias.pdf](http://www.cntvalladolid.es/IMG/pdf/Tren_de_Alta_Velocidad_y_sus_consecuencias.pdf)

<http://www.ahtgelditu.org/norgara/index.php>

[https://es.wikipedia.org/wiki/Tren de alta velocidad](https://es.wikipedia.org/wiki/Tren_de_alta_velocidad)

<http://www.euskonews.com/0080zbn/gaia8007es.html>

<http://www.ahtgelditu.org/zerdaht/index.php>

<http://www.ahtgelditu.org/zerdaht/?Hizk=es>

<http://sindominio.net/ahtez/?q=es/node/1249>