*In the framework of the Erasmus project titled » Learning about European diversity and equality » the students of I. gimnazija v Celju high school and the international high school Lycée International des Pontonniers discussed European values and the protection of biodiversity in Strasbourg from 5th to 9th June 2023.*

*We summarised the findings in » resolutions » that cover different areas.*

Students: Lea Jurkošek, Kaya Špenger, Ana Lukaščik Žlavs, Elmedina Mašala, Tija Kotnik, Lana Beriša, Hana Lia Kronovšek, Lejla Ćurić, Živa Verzegnassi, Aleksandr Shakhov, Žiga Grešak, Klea Testaniere, Katarina Tržan, Lana Mastnak,

Teachers: Andrejka Lorenčak, Damjana Rebek, Mélanie Christophe

**Problems and *Solutions* of Invasive Species**

Foreign species pose significant challenges to ecosystems around the world. While they can cause various problems, there are several solutions that can help mitigate their negative impacts.

**Problem 1. Diseases from the imported species affect the indigenous species and can lead to their extinction.**

*Solution 1. Limiting and restricting the importation of the foreign species, monitoring people who buy foreign species. If possible, destroy habitats of the invasive species if it doesn't affect the indigenous species / or the environment. For example, if the invasive species live in the trash we should destroy the trash …If the invasive species are spreading a disease that can affect people it would be a good idea to vaccinate the people if the vaccine is available.*

**Problem 2. Invasive species can modify habitats and food chains and cause physical damage by consuming or replacing native vegetation and altering soil composition. This destruction can have big effects on the entire ecosystem. When foreign species are left in the wild, they often overcome and kill indigenous species. For example, if you buy a lion and the lion accidentally runs away, it grows in the wild and can be a danger for people by killing them, but also for itself because if a hunter sees it they can kill it.**

*Solution 2. We request and recommend that we should establish efficient monitoring systems and early detection protocols that can help identify invasive species at an early stage.*

*We should also spread awareness and educate people on the importance of how to take care of species, and punish those who let foreign species into the wild…*

*We should teach and introduce this topic to young children, on the consequences and dangers of owning foreign species.*

**Problem 3. Countries and people aren’t doing enough to solve this problem.**

**We noticed this in the example of the red neck turtle killing the indigenous species of turtles in Slovenia and there are similar cases all over the world.**

**Invasive species do not recognize national borders, so international cooperation is crucial in addressing this problem. Collaboration between countries can involve sharing information, best practices, and coordinated efforts in monitoring and prevention.**

*Solution 3. We would suggest financing scientific research and supporting breeding programmes of endangered species in the zoos and other facilities, build a healthy population of animals and sometimes reintroduce endangered species back into the wild.*

**Agricultural model**

*Observing* that monoculture is being more and more practiced throughout Europe.

*Affirming* that this agricultural model results in disintegration and degradation of fields and land.

*Knowing* that it also depletes soil from certain nutrients resulting in soil exhaustion, crop failure, less production and significant erosion.

*Considering* that the extensive use of pesticides and herbicides used to protect monoculture from its vulnerability to pests and diseases, pollute rivers, streams, groundwater as well as soil (diminishing the number of insects and worms available to birds as food) and affecting humans later as well.

*Noting* that monoculture leaves fields naked (after harvests) leaving animals vulnerable to predators, also leading to destruction of natural habitats, resulting in a negative impact on biodiversity. For example, the European Hamster’s population has decreased by 80% over the last 13 years leaving it in critical danger of extinction, one of the main reasons being monoculture.

*Confident* about the fact that mass breeding before release in the wild kills animals because they can’t survive on their own.

*Convinced* that mass breeding results in genetic diseases that get passed on to off springs, as well as fertility problems and congenital disorders.

1. *Noting* that implementing polyculture will solve many of monoculture’s issues.

1.a. The Farm to Fork strategy in more and more farms will upgrade the food system on a fair, healthy, and eco-friendly level, by avoiding the extensive use of natural resources, herbicides, and pesticides (eco-farming) that result in biodiversity loss and negative health impacts. This strategy is at the heart of the European Green Deal.

1.b. The use of polyculture in this agricultural system will avoid many other environmental issues as well, like the protection of endangered animals from predators i.e., the European Hamster. This is done by alternating different types of crops in each field, to avoid soil exhaustion, and maintaining grasslands by planting grass between the harvesting and planting seasons.

2. *Recognizing the importance* of electrical cables around fields and buffer zones that protect animals left vulnerable by monoculture from predators, for example, the European Hamster.

3.a. *Drawing the attention* to awareness activities that could influence the population, especially the younger generations that could make change.

3.b. *Encouraging* the financing of clean walks and more eco-friendly events.

4.a. *Strongly recommending* applying responsible breeding practices, like implementing strict guidelines and regulations to ensure the health and welfare of animals.

4.b. *Inviting* the preservation of genetic diversity by maintaining a diverse gene pool to prevent inbreeding and associated genetic disorders. Breeders can then carefully select breeding pairs to minimize the risk of inherited diseases and maintain a healthy population.

**Artificialisation of the grounds**

|  |  |
| --- | --- |
| **We observed/noticed:**  | **We request / recommend:** |
| Nearly half of the land artificialized between 2006 and 2014 in Europe was used for housing, by which time the latter concerned more than 40% of all artificialized land. This is called urbanization.It causes animals to be pushed away from their natural habitat. Their habitat is highly fragmented by roads and buildings. We observed that the Green deal is also focused on this problem, because it reinforces rules to increase carbon removal in the land use, land-use change and forestry sector. | To help animals navigate our fast-paced highway systems (and avoid turning into roadkill in the process), nature conservationists have started building wildlife bridges and tunnels, designed especially for critters. These designs aren’t only intended to help animals evade death. They’re used to facilitate gene flow (migration) that could be stunted by a highway. |
| Forest cover more than 30% of Earth’s land surface and are home to an estimated 80% of Earth’s terrestrial species. For the first eight months of that period, August 2022 to March 2023, deforestation is up 39% year on year. It causes habitat loss Disappearing of species. | To reduce the loss of forests we should adopt a more reasonable management of forests (such as one tree cut equals two planted trees). We can reinforce the legal protections concerning natural habitats. We could use less paper and reduce our carbon footprint.One way the European Union is protecting life on land through the European Green Deal, which encompasses their Forest Strategy for 2030. The EU recently made a large stride toward protecting forests around the world by passing a regulation for deforestation-free products. |
| Port operations can have a significant impact on water quality and the health of marine life. Waste from ships and other port activities can result in loss or degradation of habitat areas and can also harm marine life.Oil spills are dangerous because of oil contamination which effects habitats.Ship paint causes problems because of the leaching of toxic paint additives, meant to prevent barnacles from clinging to ships. It can result in health impacts on marine life. | To improve port operations, we should switch to LowSulfur Fuel, we could use liquefied natural gas as Marine Fuel. We could start using efficient vessels and clean energy to reduce harmful emissions Improvements that the EU makes:The phasing out of heavy fuel oils with compensation via tax exemptions on alternative fuelsThe decarbonisation, digitalisation, and automatization of European ports Regulated access to EU ports for the most polluting ships technical improvements such as vessel speed optimisation, innovation in hydrodynamics new propulsion systemsFit for 55The European climate law makes reaching the EU’s climate goal of reducing EU emissions by at least 55% by 2030 a legal obligation. EU countries are working on new legislation to achieve this goal and make the EU climate-neutral by 2050. |

**Climate change**

We observed/noticed:

1. Due to climate change, many animal and plant species are in danger of extinction.
Threats:
* the melting of icebergs causing the water lever rising,
* extreme weather events such as hurricanes, floods, wildfires leading to habitat loss,
* the use of non-renewable energy such as coal, gas, nuclear energy is a big contributor to global warming,
* the temperature rising affects species to travel up north, where they don’t necessarily have food to survive,
* deforestation (less trees absorb CO2 and produce O2)
* greenhouse gases are produces by rotting of food, from burning fossil fuels, transportation, heat, industry in general.

We request/recommend:

1. government to put in place laws for companies to minimize deforestation,
2. to organize events and fundraises to plant new trees,
3. investment in renewable energy sources (more solar panels, electric cars, etc. …),
4. switching to sustainable transport,
5. constructing protected areas (national parks, wildlife sanctuaries …),
6. reducing what we consume (especially food, clothes, transport, plastic …),
7. improving farming and encouraging people to buy local products (fresh vegetables),
8. saving energy at home (lower your heating and cooling, switch to energy-efficient electric appliances),
9. encouraging companies to work with renewable sources instead of plastic.

The most efficient solutions:

1. INVESTMENT IN RENEWABLE ENERGY SOURCES
This is a very efficient way to lower down the greenhouse gas emissions, however it is hard to achieve that soon.
2. SWITCHING TO SUSTAINABLE TRANSPORT

It would lower down emissions and it’s easier than switching to only renewable sources.

1. REDUCE EVERYTHING WE CAN

Especially plastic, clothes (encourage second-hand stores), food (encourage buying local products and producing food at home).

In our opinion, we can be successful in fighting climate change threats if we make a move individually, as much as collectively. We believe that small steps can make a difference on a global scale every day and are aware of the fact that the EU is already working on these problems with the Green Deal, however it is unfortunately not efficient enough yet.

**Problems and resolutions on overconsumption**

We observed that because of pollution and the rising population it has birthed a bigger trend in overconsumption, we have been hunting more and more animals over the years and in return we have decreased and annihilated natural populations of countless species which caused the destruction of habitats all over the world. We have now gathered many pieces of information that can help us slow and prevent this issue in the future.

**1. Illegal hunting** is a problem that has been around for years and decades. Many people hunt to gather food and feed their families, while others do it purely for sport. Many animals are also hunted because of their horns, furs and exotic meat. In recent times many people have gone to countries to hunt exotic prey just so they can take their bodies home as a trophy, for example the killing of lions in Africa. The green deal has already banned the hunting of multiple birds; however, many animals are still being hunted today.

It’s an issue that can be solved simply, however would have to be heavily reinforced. Banning the hunting and trade of exotic animal products would kill the exotic animal memorabilia business entirely, but to do that it would have to be heavily enforced by law enforcement, meaning governments would need to sink millions into the cause.

**2. Trawl fishing** has become the main fishing tactic all over the world. Even though it is incredibly effective it also catches many fish that are under protection by accident and destroys the coral and seabed because of the net being dragged across it. They also do not kill the fish immediately and let them die by suffocating, in exchange the fish will not last as long on the shelf.

Trawl fishing has today been banned in a couple countries, but the change has been minimal. The countries with the biggest fishing production are all still using trawl fishing. By banning trawl fishing, killing the fish as soon as they are caught and giving a maximum amount of a haul when mass fishing can restore many species and habitats to their previous glory.

**3. Human intolerance** is a tricky thing. We humans have portrayed some animals in media as “evil”, for example sharks, spiders, and crocodiles. So, when we hear that they are endangered or at threat of going extinct we almost don’t care. Many sharks are going extinct because of people hunting them for sport or eating them as an extreme dish, however when many people hear about that we don’t care about it because of the negative stigma around them.

This issue is not easy because changing minds of people is difficult, but in our opinion the only real option is to educate the population, that animals that have a bad reputation around them are not only harmless to people unless disturbed but are in fact crucial to existing habitats and food chains. Without sharks the population of small fish would explode and destroy the coral systems and overtake the ecosystem, and other animals that have a reputation just as bad as them or worse are just as needed as them.

**Fast fashion**

**Fast fashion** refers to the constant release of low-quality clothing products at cheap prices. Clothes are designed based on rapidly shifting fashion trends and are meant to be worn only as long as they are in style. This phenomenon is a rising problem that is now a part of our day-to-day lives.

We observed that fast fashion is a big factor in overconsumption.

1. Working conditions in the fast fashion industry are assimilated to modern slavery. Indeed, the workers have very low salaries, inhumane working conditions (a lot more than 35 hours a week). This is the reason why fast fashion is so cheap: the workers are exploited. There are many cases of illegal child employment in poor countries leading to poor living conditions. To prevent modern slavery, businesses should have specific policies and pay attention to their workers. We should also raise awareness for people about ethical or unethical brands.
2. The fashion, but especially fast fashion industry are high consumers of energy, water and material like synthetic textiles derived from fossil fuels. It can take up to 10 000 Liters of water to make one pair of jeans, and even during bleaching processes. As solutions, we should raise awareness and educate people to buy ethical brands with natural textiles, democratize second-hand and mindful buying.
3. Fast fashion landfills are getting more and more common: when clothes from fast fashion brands don’t get sold in a period of time, they get thrown away in perfectly good condition and end up creating massive dumpsters. We should forbid this type of waste and ensure that brands recycle or donate unsold garments.
4. Water pollution: according to scientific research, 500 000 tons of microplastic fibres end up in the ocean each year. Those microfibers come from synthetic textiles (from the production and the few first washes). The problem here is that when it comes to the fast fashion, cheap prices and trends can encourage customers to buy more, more often and wear the clothes less. The solution here is to raise awareness among the customers. We can also implement sustainable production processes and measures to control factory microfiber emissions. We also have to check factories to make sure rules are respected.
5. Inclusivity is one of the reasons why customers turn to fast fashion. It can seem like the easy solution because of the cheap prices and wide range of sizes. Therefore, we have to make ethical fashion accessible to everyone through body inclusivity and reducing prices (maybe creating an allocation for sustainable buying).

**Pollution**

Issues:

The waters (oceans and rivers) are contaminated by plastics, therefore creating knots of plastic debris and even a whole continent of plastic. The animals get tangled but also eat the debris getting them to die. The plastic pollution is not the only issue in the seas and oceans: the sea level rises, habitats are destroyed, all this thanks to global warming. On one hand we have sea levels rising and cities getting flooded, but on the other hand many lands and grounds suffer from severe droughts, destroying ecosystems and habitats.

Many of those issues are created on a part by one big issue: waste. Excessive consumption

and bad waste regulation is what creates those continents of plastic, they suffocate ground and sea animals and species.

Solutions:

As some say, every problem has its solution. Plastic waste in the oceans and on land could easily be prevented by the reduction or the suppression of non-biodegradable waste, but also by recycling to limit waste that could easily be converted and reused. On the other hand, the destruction of marine habitats can be limited by applying extensive and heavy protection laws on fishing, creating e.g., installations. For the droughts, which are caused by global warming (same for sea level rising) one solution seems to be the most evident one: trying and managing to reduce CO2 production.

Water polluted by plastics creates clusters of plastic, animals get tangled inside of it, eat microplastics and get poisoned, choke on debris.

Global warming is destroying whole ecosystems, including marine ecosystems (corals,

fish banks) and induces sea level rises (melting ice on the ice floes)

Global warming generates heavy and extended droughts.

-reducing/ Suppressing non-biodegradable/ non-recyclable waste

-expansion of recyclable materials possibilities

-clean disposal of waste and garbage

-reducing CO2 emissions to contain the rise of temperature due to global

warming (by encouraging people to use cleaner ways of traveling and moving like bikes

or co-traveling)

-applying heavy and extensive laws for submarine life protection in endangered and

fragile sites

We observed that more and more animal and plants species, are in danger due to water poisoning.

Especially the species whose habitat is water. The water pollution can lead to the extinction of species, because by poisoning the waters we are making water inhabitable. That could obviously be prevented.

 We would like to encourage the development of the local biodiversity trash stopping deforestation, so that poisonous substances could not get to the underground water. We could also just plant more trees near waters by replacing the concrete sidewalks by river with grass paths.

We suggest that we stop the black waste dumps, since they don't only pollute waters on the surface but underground waters as well. Green deal has already been organizing cleaning actions where volunteers can pick up garbage in the water and help reducing poisoning. However, the impact is so small that the participation in cleaning actions should be mandatory in schools. Students should learn about the pollution and the effect it has on biodiversity, which might want to make them volunteer in cleaning actions later on.

The main reason for water pollution is the mass production of non-degradable plastic. Waters are filled with islands of plastic. The plastic is usually consumed by sea animals that we later consume.

So, we are not only consuming sea animals, but the microplastic as well.

We recommend that companies stop mass microplastic production. Especially fast-food restaurants which still use non- reusable: plastic plates, cups. Green deal has already tried to put an end to wasteful packaging by trying to make non- reusable packaging recyclable, It would be however much easier if they focused more on the use of reusable packaging instead of the production of even more plastic, that is biodegradable. The companies which still support mass microplastic production should pay compulsory taxes.

We have found out that in the modern days noise has become one of the biggest pollutants. Especially in busy cities, noise is something that is hard to prevent and avoid. Even though it is not as dangerous as some other pollutants it effects almost all people living in cities.

The most common causes of noise pollution are all types of industries, transport, construction, and tourism.

The World Health Organization (WHO) defines noise above 65 decibels (dB) as noise pollution. A car horn, for example, produces 90 dB and a bus produces 100 db. A single aircraft produces 130 db.

Noise pollution can cause many health problems, like hearing loss, high blood pressure, heart disease, sleep disturbances, stress, anxiety, headaches and, in case of extremely loud, constant noise even heart attacks. These health problems can affect all age groups, especially children. European Environment Agency estimates that noise is responsible for 12,000 premature deaths and 48,000 new cases of ischemic heart disease.

Noise does not only affect humans, but also wildlife. It affects their ability to find food, mates and to communicate. It can also be responsible for extinction of some species.

To minimize the effect of noise pollution on animals we protect certain areas such as parts of the countryside, areas of natural interest, city parks. We should separate residential zones and sources of noise like airports. We could put more law enforcements for industries like fines to exceed noise limits that would put pressure on companies to act more environmentally friendly.

To minimize effects of noise pollution on our health and surroundings we could avoid very noisy activities, use alternatives means of transport and make them more affordable, such as bicycles. We should use electric vehicles over taking the car, do our housework at recommended times, insulate homes with noise-absorbing materials, create pedestrian areas where traffic is only allowed to enter to offload goods at certain times, replace traditional asphalt with more efficient options that can reduce traffic noise by up to 3 dB In recent years, the European Union has been promoting the use of new barriers that allow changes in sound waves, mainly for motorways and other forms of transport, such as trains. Tests have been carried out in Benelux and it seems that this is going to be extended to northern Europe. The EU goal it is to reduce 30% of the number of people chronically disturbed by transport noise by the year 2030 compared to 2017 levels.