Co-funded by the Erasmus+ Programme of the European Union

CLUVEX

CLIMATE UNIVERSITY

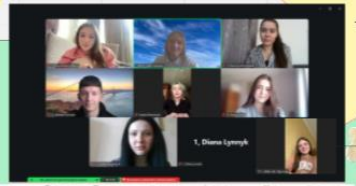
5th Virtual Exchange Week: 20-24 April 2026

MOD - Yuliia Yatsenko, Lynnyk Diana, Yevnika Reshetniak, Viktoriia Oparyk, Anastasiia Bondarenko, Hrytsulyak Vitaliy, Shevchenko Viktoria, Darchi Oleksandra, Bohdan Pyvovar, Dariia Davydchuk , Chemerynska Natalia.

One country - many climates

Group 1

BLOOMING EARTH



The future is in our hands!

The climate in Ukraine is already changing: it is getting warmer, summers are hotter, and winters are milder. Droughts and heavy rains are becoming more frequent.

In the future, these changes may intensify. That is why we need to reduce pollution, save resources, and switch to clean energy now.

"The Earth is what we all have in common." — Wendell Berry

"Maintaining climatic balance is the primary challenge of our time. Transitioning to renewable energy, preserving forests, and promoting responsible consumption, help mitigate these changes to keep the planet habitable for future generations."

FACTS

Ukraine has various climatic zones.

Climate affects nature, people and our lives.

The climate is changing, we must act now.

1

Our future depends on the choices w

Climate Scenarios Ukraine

optimistic

Global cooperation, low emissions, green economy. Temperatures will rise by 1.5-2°C, partial stabilization of precipitation. Adaptation through irrigation technologies and drought-tolerant crops.

pessimistic

Reduced cooperation. High emissions. Temperature +3-4°C, precipitation -20-30%. Critical water and food crisis, population migration from south to north.

Carpathian region (Climate change problem)

"No one is too small to make a difference." — Greta Thunberg

Green house - no; Green energy - yes

Think globally – act locally!

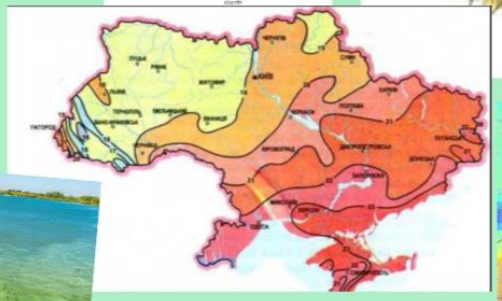
Nature in Harmony

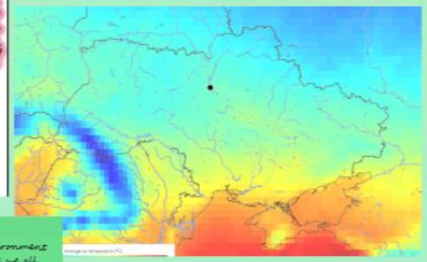
There Is No Planet B

Human nature is the reason For our downfall - Scorpions

Where Change Is The Beauty

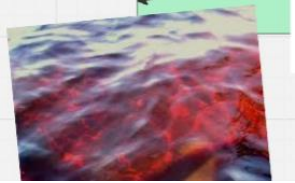
Protect the Climate- Protect Life





Eastern region (Climate change problem)

"The environment is where we all meet; where we all have a mutual interest." — Lady Bird Johnson



Group 2

Global Goals, Local Paths

Cities are becoming hubs for the implementation of "green" and "blue" infrastructure, energy-efficient design, and sustainable consumption (Veronica Kunytska).

The CLUVEX project brings universities together, enabling students and experts from different countries to study climate change collaboratively. The project's materials cover a wide range of important topics. The project teaches participants not only to dream of a better future but also to realize its true potential.(Veronica Kunytska)

The CLUVEX course provided a comprehensive and engaging learning experience that effectively combined scientific knowledge, practical tools and collaborative work. It covered key aspects of climate change, including planetary boundaries, climate impacts, socio-economic drivers, and future scenarios, while emphasizing the importance of both mitigation and adaptation strategies. The use of interactive tools and the Climate Horizon exercise made complex climate data more understandable and relevant for real-world decision-making. Overall, the course was well-structured and intellectually stimulating, encouraging critical thinking, interdisciplinary collaboration, and active participation. It not only deepened understanding of climate challenges but also fostered a sense of responsibility and motivation to contribute to sustainable and climate-resilient futures. ([illegible])

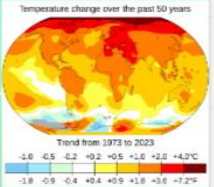
1

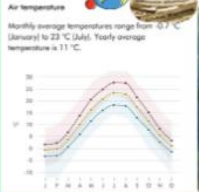
I am seriously concerned about the problem of climate change: the increasing frequency of heat waves and the risk of flooding on the Uzh River. At the same time, I believe that it is possible to achieve zero CO_2 emissions by 2050. I have prepared an infographic that compares two scenarios — optimistic and pessimistic — including the change in the number of days with temperatures above 35°C and their impact on the city. The IPCC has developed different scenarios to help predict the future in terms of climate change. One of the factors that affects agricultural conditions is the number of hot days **(Anastasia Habora).**

The future is uncertain—it depends on the path we choose and on us. Scientifically grounded scenarios show that the worst consequences can still be averted if we halve emissions by 2030 and reach net-zero by 2050, while simultaneously investing in adaptation and the protection of planetary boundaries. Without such action, the world faces a bleak future: a cascade of climate, water, and social crises. But all of this can be avoided, because we are armed with knowledge. (**Bokii Oleksandra)**

Climate change is already a real and urgent problem, worsened by global challenges like the war in Ukraine. However, instead of panic, it requires clear and purposeful action. The CLUVEX program showed that solutions and technologies already exist, but real change depends on shifting our values toward responsibility, cooperation, and sustainability.

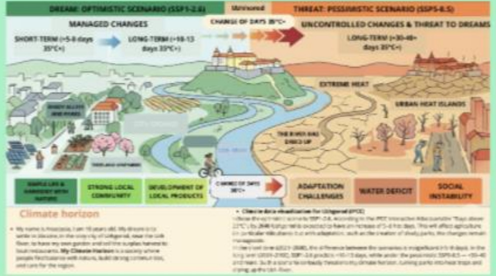
The idea of "utopia as a method" highlights the importance of imagining a better future. Even small reductions in warming matter, and through collective effort, we can move toward a more stable and sustainable world. (ALBINA)

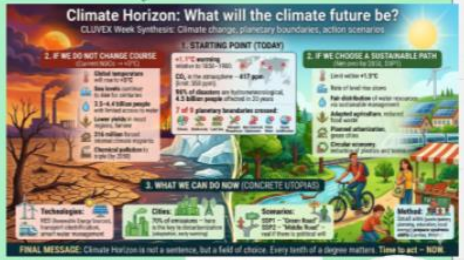




Air temperature

Monthly average temperatures range from -0.7 °C (January) to 23 °C (July). Yearly average temperature is 11 °C.





Participation in the CLUVEX program has been a transformative experience, providing me with a profound understanding of contemporary climate dynamics and their diverse impacts across the globe. By working directly with complex climate datasets and analyzing sophisticated models, I have gained the technical proficiency necessary to use scientific tools for meaningful environmental assessment. One of the most significant takeaways was learning to navigate climate scenarios, which revealed the intricate ways in which socio-economic drivers shape our future atmosphere. This seamless integration of theoretical frameworks and hands-on application has not only sharpened my analytical skills but also strengthened my ability to synthesize information and form well-supported, critical conclusions. Ultimately, the knowledge I have acquired empowers me to better comprehend the scale of global challenges and reinforces my commitment to the urgent climate actions required for a sustainable future. (Karina Marfidina)

Climate change is one of the most serious challenges for Ukraine today. Rising temperatures, droughts, floods, and the consequences of war greatly affect nature, cities, and people's lives. It is important to develop sustainable solutions and work together to protect the environment for future generations.(Horshkova Daria)

MY CLIMATE HORIZON

Imagine an eco-city of the future that serves as a major tourist attraction in its own right. There are no fossil-fuel vehicles, the air is always fresh, and buildings are draped in vertical gardens and urban farms.
Tourists come here for a new, meaningful experience. They join eco-tours to learn about green technologies, try their hand at rooftop farming, travel by foot or bicycle, and stay in zero-emission hotels.

The city is fully innovative: **smart buildings** self-regulate their temperature, streets are equipped with air purification systems, and dedicated apps track each traveler's ecological footprint. This concept can be realized as a cutting-edge urban district, an ecologically transformed resort, or a brand-new city built from scratch. (ALBINA)

Participation in … of modern climat… how to work with climate data, analyze graph…
The program helped me understand the importance of climate scenarios and how socio-economic factors influence future climate conditions. The combination of theoretical knowledge and practical tasks was especially valuable.
In addition, CLUVEX improved my critical thinking, analytical skills, and ability to draw well-founded conclusions. The knowledge I gained helps me better understand global challenges and the importance of climate action in the future.(Veremeieva Inha)

Ukraine's climate is changing towards warmer and more extreme conditions. This means that the country needs to adapt to new conditions (for example, improve water management and change approaches in agriculture) and take measures to reduce negative environmental impacts. (Mariana Kratiuk)

The future is not a threat to be feared, but rather a garden that needs care and attention. We are transitioning from the role of aggressive consumers to a conscious approach as caring guardians of our planet. The world of "Climate Horizon" is not an idealized picture of the past, but a reality where we have accepted changes (rising sea levels, shifting landscapes) and learned to live with them, minimizing our impact.(Veronica Kunytska)

The world of *Climate Horizon* is not an idealized vision of the past, but a reality in which we have accepted change (rising sea levels, shifting landscapes) and learned to live with it, minimizing the harm it causes. (Veronica Kunytska)

Group 7

MOD
Ulyana

Avital

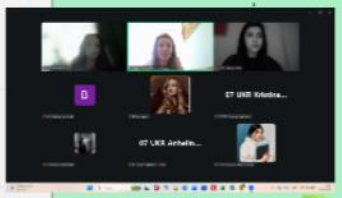
Aihiul

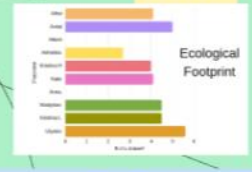
Anhelina

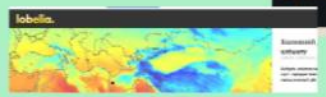
Anna

Kate

Vladyslav



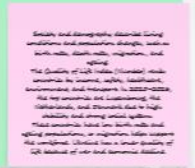




Climate Change: Challenges & Solutions

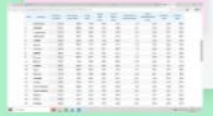
Categories

Society & Demography



During the summer months, when temperatures reach 30–38°C in cities:

people spend less time outdoors;
they adjust their work schedules (morning or evening instead of daytime);
in schools and offices, concentration and productivity decline due to overheated rooms;
the load on air conditioners increases — electricity consumption rises.



Kristina H

ECONOMIC

Kristina L

TOURISM

Global tourism is mostly focused on a few countries like France, Spain, and the United States, each getting about 80–100+ million tourists every year. Italy and China also attract many visitors. In contrast, some regions like parts of Africa and Central Asia get less than 5% of global tourists. Most investment also goes to Europe, North America, and parts of Asia, which shows an uneven distribution of tourism.

Agriculture under the influence of climate change

What We Do Matters

"We can influence climate change through our daily decisions: choosing our mode of transportation, conserving energy, reducing food waste, and consuming mindfully. Although these actions may seem small, together they lead to a significant reduction in emissions and a shift in societal behavior."

We must work together for our future and the future of our children.
- Avital

Transport – steps to reduce climate change impact

Use public transport, biking, or walking instead of cars
Carpool or share rides to reduce emissions
Choose electric or hybrid vehicles
Reduce air travel; prefer trains when possible
Plan routes efficiently to save fuel
Support clean and sustainable transport solutions

Vladyslav Lykholat

Urban Heat Islands (The "Heat Trap" Effect)

CLIMATEWAVE

Group 8

We would like to present the climate vision of Group 8. In our climate vision, we would like to see a Ukraine and a world free from global warming, where renewable energy is actively developed. With a high level of greening and environmental awareness among citizens. With a responsible attitude toward nature, green cities, and clean water bodies. Where people live in harmony with nature. With the use of biofuels and the development of "clean" hydrogen-powered vehicles. With full waste recycling and the wise use of natural resources.

Example of a water car

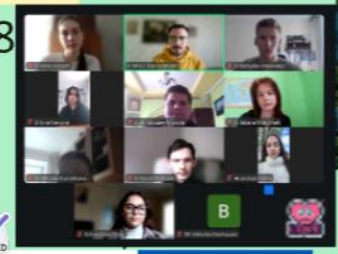
Beautiful sunset on the reservoir shore

The Beauty of the Carpathian Mountains

Environmentally conscious citizens

Green energy

Waste recycling

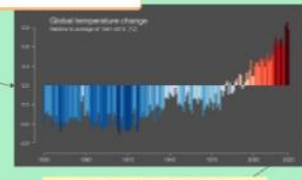


Our climate horizon is a Ukraine where technology and law work in synergy. We must shift from passive observation to active risk management. The use of digital monitoring platforms must become the norm for every citizen and policymaker.

Ukraine is warming faster than the global average. We don't have time to wait.

Biofuel

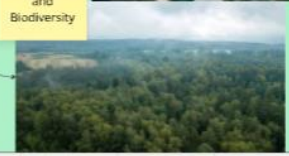
Stop global warming



Trends that should be changed

Consequences of the flood

Forest Conservation and Biodiversity



Paris Agreement & SSP1
This is the legal foundation for Ukraine's "green" recovery. Adopting the SSP1 scenario is more than an environmental duty; it is a mandatory requirement to unlock international investments for sustainable reconstruction.

Action Plan for Ukraine
Adopt strict EU eco-standards, implement digital emission monitoring, and prioritize energy efficiency. This transforms climate challenges into a roadmap for a modern, resilient, and investment-attractive economy.

Moderator: Olha Yeremenko

Leonid Samofalov Roman Smahin Kosharina Anastasia Denis Chichikalo Nataliia Kushnir
Ivashenko Yurii Daryna Smorshchok Alexandr Levchenko Roman Lieshuk Nataliia Podzerei

Group 9

Projected Impacts of Climate Change on the Tourism Sector of Ukraine by 2100

According to the SSP2-4.5 scenario, temperatures in Ukraine are rising steadily and are projected to increase by approximately 2.5–3.5°C by the end of the century, indicating a long-term warming trend.

Winters will become milder and shorter, with a significant decrease in the number of days with sub-freezing temperatures and snow cover (by tens of days).

Precipitation will be unevenly distributed: there may be more in winter and less in summer, leading to more frequent droughts in the southern and central regions.

As a result, natural zones will shift northward: the steppe zone will expand, the forest-steppe zone will shrink, the mixed forest zone may disappear entirely, and conditions in some regions will become drier. The frequency of extreme events, particularly heat waves and droughts, will also increase.

POLISSIAN

By 2100, the Podsiprovskyi region will transition to a semi-arid steppe climate, extending the tourism season to six months but making mid-summer too hot for outdoor activities. The Dnipro River will shift from a swimming destination to a hub for yachting and technical water sports due to rising temperatures and water quality changes. Tourism will refocus on the mild spring and autumn periods, prioritizing climate-resilient agritourism and indoor recreational infrastructure.

DNIPRO

Spatial Distribution of Landscape Zones and Tourism Systems of Ukraine: 2100 Forecast

CARPATHIAN-PODOLIAN

By 2100, travel to Kharkiv, Donbass and Luhansk regions will be significantly harder and more dangerous due to military activity.

Hot summers will become much hotter, droughts, steppe dust storms and extreme weather events will become frequent. This will make natural recreation less convenient, and more dependent on the season. Instead, urban, artistic and cultural tourism, assisted by the local (green) level, dwelling, movement, will flourish. In Ukraine, the value of protected natural territories and "new" natural sites (parks/reserves) rose.

EASTERN

By 2100, summers in Crimea will become significantly hotter and drier, which will reduce the comfort of mass beach tourism and increase the risks of droughts and fires. At the same time, the velvet season (spring and autumn) will be longer and may become the main period for recreation. The pressure on water resources and infrastructure will also increase, which will require new approaches to sustainable tourism.

CRIMEAN

By 2100, most of the Kharkiv region, Sloboda-Ukraine, and Zaporizhzhia region will be significantly affected by climate change.

Summers will become much hotter and drier, with droughts, heatwaves, and extreme weather events will occur more often. In the Kharkiv region, desertification, loss of structure, soaring agriculture and rural tourism more difficult. In the Luhansk and Donetsk regions, coastal areas may be affected by erosion and rising sea levels, which can include coastal tourism. In the Zaporizhzhia region, drought-resistant crops change due to heat and lack of moisture. At the same time, the growing season may become longer, but more dependent on extreme heat conditions.

NORTHERN BLACK SEA

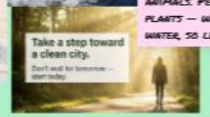
MADE IN UKRAINE

TERRA HUMIDA

Group 10

Group moderator: Viktoriia Zapototska
Group members: Bodya Matviichuk, Anna Budenna, Oleksandra Svitlyk, Mikhaylo Chernyshev, Arsenii Savchenko,Kateryna Koshel, Mariia Aslykhmina, Oleksandra Tochanenko

CITY - AS ONE TRIANGLE FROM HIGH PLANING TO LOCAL INICIATIVES

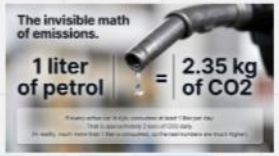


CITIES SHOULD HAVE MANY OPEN WATER SOURCES: RIVERS, PONDS, FOUNTAINS. IF THERE ARE NONE — WE SHOULD BUILD THEM AND MAKE THEM ACCESSIBLE TO NOT JUST HUMANS BUT ALSO WILD ANIMALS. PEOPLE, ANIMALS, PLANTS — WE ALL LOVE WATER, SO LET'S ADD MORE

location intiatives, which provides reusing space in other "greener" way than it was + using participation method.

Green roof in Berlin

Nature and technology are harmoniously intertwined: green terraces on skyscrapers, transparent greenhouse domes, solar and wind stations, clean rivers with waterfalls and parks where people relax and travel by ecological transport.



Group 11

HORIZON'S ELEVEN

our nature needs our help.

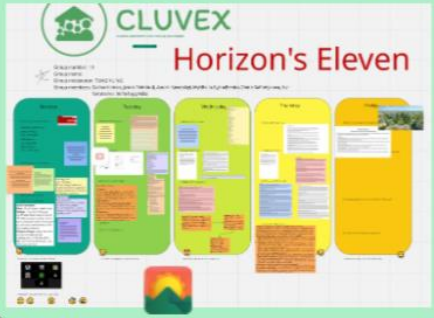
Act now for a sustainable future!

~How to help our nature~

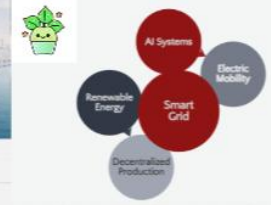
- Reduce plastic use and recycle waste.
- Save water and electricity.
- Use public transport, ride a bicycle, or walk.
- Plant trees and protect green spaces.
- Do not litter and take part in clean-up activities.
- Support recycling and eco-friendly products.

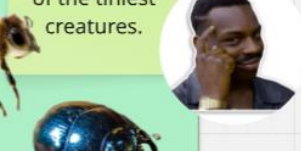
We can reduce waste by using less plastic and sorting trash for recycling.
We can save water by turning off the tap when it is not needed and using water carefully.
We can save electricity by switching off lights and electronic devices when they are not in use.
We can choose more eco-friendly transport: walking, riding a bike, or using public transport.
We can plant trees because they clean the air and help the environment.
We can take part in cleaning activities and avoid polluting nature.
We can raise awareness and tell other people about the importance of protecting the environment.

🌍 8 million tons of plastic enter oceans yearly
🌳 One tree absorbs ~22 kg CO_2 per year
💧 Saving water helps preserve ecosystems



Small actions create global change





Group 12

The "Horizon" isn't a distant point; it is a choice we make in our daily strategy.

BIO - CITIES

Breathable air in the future would be nice 😇

When we heal the Earth, we heal ourselves

Lowered resource intensity

Collaboration

Inequality

POST-GROWTH

responsible consumption

Success is tied to the health of the tiniest creatures.

Natural filtration and climate control.

Sustainable Agriculture & Agroforestry practices

Sustainable and renewable energy

Ending deforestation and forest degradation & Enriching biodiversity

DREAM TEAM

Group 13

Serhii Shevchenko (UA) Kseniia(UA)), Esteban Solis, Radeeka Gamlath, Khrystyna Diachenko, Sheila Owuor, Grace Kadyamadare

Sustainable Future for Our Planet

Technology

Technology and data can help solve climate problems.
Climate models and data tools can predict risks and improve decisions.
Smart technologies can reduce energy use and pollution.

Materials
The bioeconomy is developing. Metal and plastics, etc. continue to be used exclusively on the principles of cyclical production.

Global cooperation

Climate change is a global problem, so countries need to work together. International cooperation is necessary to reduce emissions and share solutions

Sustainability

Caring for the Earth today so it can care for us tomorrow.

Economy

The economy should become more sustainable and "green". Businesses should invest in environmentally friendly solutions.

Society

People should live more sustainably, reduce waste and make better environmental decisions.

Any heavily polluted industrial city can become clean and sustainable if people change their behavior and work with nature!

Green cities

Coastal cities designed with blue green buffer that could breath with the rising tides instead of fighting them.

A future where cities use nature to stay clean, cool, and environmentally friendly.

Local communities manage their own resilient farms, cutting down transport emissions to nearly zero.

Food

Local communities manage their own resilient farms, cutting down transport emissions to nearly zero.

In the future, food should be more local and sustainable. This can reduce transport emissions and support local farmers.

If we reduce pollution, use clean energy, and make cities greener, the air will be cleaner and people will live healthier lives.

Group 14

SELF- SUFFICIENCY

WOW

SUSTAINABLE CONSTRUCTION.
-Adopting green construction practices, by including green roofs and gardens actively neutralize the heavy carbon emissions of concrete structures.

-Including dense vegetation in the architectural spaces combats rising urban temperatures through natural shading and evapotranspiration, creating a much cooler microclimate.
- Integrating safe and tranquil spaces to foster human connection, promotes holistic community wellness, within a sustainable ecosystem.

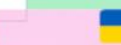
UA

My Climate Horizon is a vision for transforming Pokrov from a resource-dependent industrial hub into a self-sufficient, regenerative city. At the heart of the concept is a shift toward decentralized water management: through cascades of natural filtration ponds, rainwater harvesting, and the use of solar panels to shield canals, the city creates closed-loop resource cycles.

2

Harmony between industry and nature is achievable! Real changes start with people's mindset, education and our daily actions! <3

To make Lviv more eco-friendly, the city needs to change its transport system and reduce air pollution. The main goals are to replace old buses with modern electric vehicles and improve the tram network. Additionally, building a wide network of bicycle lanes will help people move around safely and quickly. Creating more pedestrian zones and planting trees will also make the air cleaner and protect historical buildings. In conclusion, these green steps are essential to preserve Lviv's beauty and health for the future.



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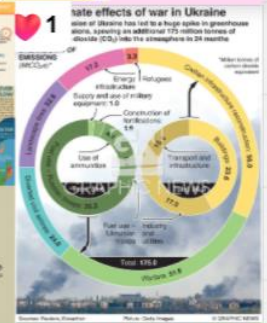


Change is possible and our future, and the future of the climate depends on human choices and our responsibility!

1

Group 15

The EnvironMentals

CYcLE

THE ENVIRONMENTALS — UNITY ◦ DIVERSITY ◦ SUSTAINABILITY

◦ CLUVEX ◦ VIRTUAL EXCHANGE GROUP ◦
UKRAINE | SOUTH AFRICA | GHANA | KENYA

Mod: Vladyslav Tochanenko

Group Members:
- Nobantu Mtimde
- Isaac Lemalasia
- Lilia Bertit
- Valerie Zadvornova
- Nastya Bohush
- Alina Kupraieva
- Emmanuel Bafile

The Hartbeespoort Dam is a key focal point for water management and resource availability in South Africa. The 100 year old dam has been suffering from eutrophication since the 1970's. It is also polluted as a result of 16 sewage plants that are draining into it from sub-standing industry. Climate change is a threat 'multiplier' for the dam as it accelerates toxic algal blooms, structural damage to the wall, and biodiversity loss. Using the different tools which were presented I was able to create a climate horizon for the Hartbeespoort Dam. Using the SSP1 scenario, the Hartbeespoort dam will transition into a sustainable resource that supports the health and well-being for both human and non human species.

"We do not inherit the Earth from our ancestors, we borrow it from our children." - Wendell Berry.

2026 is designated as the **Year of Water** because it serves as a global focal point for addressing a "water cycle out of balance" through major international conferences and political initiatives.

"The greatest threat to our planet is the belief that someone else will save it."- Robert Swan.

MONSTER PROBLEM

Environment is no one's property to destroy; it's everyone's responsibility to protect. – Mohith Agadi

My Climate Horizon ideas

Valerie's Personal Climate Horizon

Introduction

Ukraine needs to restructure the interaction between society and the environment, focusing on sustainable development and the preservation of biodiversity.

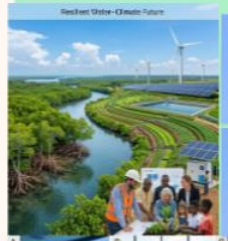
2. Energy Savings

This requires the large-scale implementation of solar and wind power plants, as well as the thermal modernization of residential and industrial facilities to reduce energy consumption. To protect the environment, it is necessary to completely abandon single-use plastics, sort waste and recycle it as a resource, introduce new emission standards for enterprises, and implement eco-innovations.

3. Pollution Reduction

To restore nature, we must expand the boundaries of national parks and reserves and transition to organic production; meanwhile, territories contaminated by military actions require demining and land reclamation. In cities, preference should be given to electric transport and bicycles. Most importantly, it is essential to cultivate an eco-culture within society.

SAVE OUR PLANET!



Isaac's Personal Climate Horizon:
- **Informed Decision Making & Mitigation**
- **Adaptive Water & Agriculture**
- **Ecosystems & Natural Buffers**
- **Inclusive Action & Climate Justice**

(A) Control Center: An analyst monitoring real-time wind and water data on a multiple screens.
(B) City Model: A clean energy engineer reviewing a net-zero city design with active renewables in the background.
(C) Planting & Power: Hands planting a coastal mangrove, with a distant clean solar farm visible.
(D) Green Transit: A light rail system powered by a smart grid.

Ukraine has the potential to become one of the green leaders of Europe if environmental policy continues to develop in a progressive and ambitious way.Agriculture, which is one of Ukraine's strongest sectors, could transform into a model of sustainable farming with soil protection, water conservation, and organic production. Rivers and forests might be carefully restored and protected, creating healthier ecosystems and improving quality of life for citizens.

The government will strictly control industrial activity, illegal construction, and fishing practices. Coastal development will follow sustainable rules that protect beaches and natural habitats. Scientists and marine biologists will carefully study sea animals, fish populations, and water quality in order to improve marine life and restore biodiversity. Protected marine zones will allow ecosystems to recover naturally.

Buster Ecologists

Group 16

Anthony Ricky Baes Gaspar, Taisiia Stupak, Roksana Bohdasheva, Christine Achieng, Joan Njoki, Yelyzaveta Chemodurova, Maria Riabukha, Chloe Morway

MOD Svitlana

Norway, Ukraine, Poland, Ecuador, Kenya

Climate change is not only environmental; it is also linked to water, agriculture, urban growth, protected areas, and social adaptation.

Learned about climate change and its various impacts (on countries, the economy, the environment, etc.)

Rain-Smart City
Rain becomes a resource, not a problem.
The city feels alive and people moving safely even on the rainiest days.

'It is not about the bad weather , only bad clothing'

Mindset evolution: people coming forward to restore the environment

Community Support

Small actions

Sustainable Planning

A Simple Promise

A balanced, breathable climate that supports health, wellbeing and a deep connection with the natural world — a legacy for future generations.

Better climate

Pavlo, Pilvi, Valeria (Enni-Mari moderator)

✨ Group 17 ✨

Making **products that last**, instead of just recyclable products that fall apart

Heavy industry and nature need to exist in balance

Climate change is not uniform, so future solutions need to be adapted to specific regions and local conditions.

Scientific research should be done **without harming our environment**. For example space research or exploration shouldn't harm our planet, because there is no Planet B!

The climate is the mathematical projection of human behavior.

We still have a choice to change our habits

Using nature (like sunflowers) to clean and refresh polluted soil in industrial areas

The climate is the mathematical projection of human behavior.

We still have a choice to change our habits

Small daily actions and co-operation

Another important idea is that future climate planning must rely on scientific data and modern visual tools that help us understand real changes over time and space, rather than general assumptions.

Heavy industry and nature existing in perfect balance
Combining zero-emission technologies with urban green spaces.

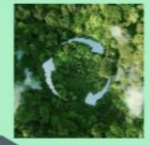
A further idea for the climate horizon is that early warning systems and climate forecasting will become essential for protecting communities

Group 18

Group members

- Mora brenda
- Valeriia Yevenko
- Anastasia Lyashenko
- Isaac Johnson (MOD)
- Génesis Coba
- Yevhen Hubin
- Vladyslava Slabniuk

Our general vision: cities designed with nature in mind. Coasts protected by wetlands. Streets cooled by trees. Solar and wind energy. Communities that are ready, not just informed.



"What we do matters"

SAVE THE EARTH

What unites us:
→ Transition to renewable energy sources → Sustainability of coastal zones and water resources → Green urban spaces → Climate justice for all communities

Comparing my vision with others showed that there are shared global values, even across different countries and contexts.

I reflected on my own role and realized that individual actions, combined with policy and community efforts, are all necessary.

The project emphasized the importance of collective action, combining policy, community efforts, and individual responsibility.

Similarities include integration of green spaces into urban environments. Removing the divide between city and nature. Green public transit. Solar panels on all buildings , greenhouses, water is not treated as a danger or an exploited resource. Utopia is not impossible it's something which can be achieved if we work to solve those problems.

Climate change is one of the most serious global challenges of our time. It is caused by human activities, especially greenhouse gas emissions, deforestation, and environmental pollution. Its effects include rising temperatures, melting glaciers, and more frequent extreme weather events. To address this problem, it is necessary to reduce emissions, switch to renewable energy sources, and increase environmental awareness in society.

TerraNova

Group 19

Originals

MOD Nour

Members:

Yaroslava | Kateryna | Vaibhav | Mark | Federico | Kateryna | Ivanna | Yelyzaveta | Diana

DO THIS

Ideas :

The only way to solve climate problems at all, is to solve the reasons! Caring only about symptoms cant help us in long distance, so we must change the way humanity think, and only then we would be able to look forward to a bright future!

2 2 2

Earth from Artemis 2 on Earth day

Rights of Nature: Giving ecosystems a legal voice could raise awareness. For example, giving a forest or a river a legal representative who can protect its interest in court.

Smart Legislation: Moving away from static laws, we should use real-time data (like the tools we used throughout the course) to automatically trigger environmental protections the moment a boundary is threatened.

"Gamified" Citizenship: I can imagine a society where sustainable choices are tracked. Throwing away trash in the right place or reducing waste isn't just a "good deed" - it's a digital achievement that could grant social and economic benefits, and also make people more interested in "doing the right thing".

A tech enabled, transparent global society that restores warming to 1–1.5°C through revenue-neutral carbon pricing and individual 'K-metrics' eliminates environmental externalities, regulates geo-engineering and guarantees universal, flexible education—freeing people to focus on growth and development and meaningful living.

EDUCATION

The Solution to Climate Change

GIF

NEARLY ZERO ENERGY BUILDINGS NZEB

Nearly Zero on the roof

Triple-glazed on the walls

Enhanced insulation on the walls

LED Light

WORK IN PROGRESS

WE NEED A CHANGE

STUDENTS: ACTIVE INFORMATION BRIDGES

IDEAL FUTURE STARTS WITH MICRO-ACTIONS

OUR FUTURE WITHOUT CHANGES

Future seen :

I see a future where climate change is no longer a crisis, but a challenge we have learned to manage. Cities are cleaner, energy is renewable, and people live in balance with nature.

Great Idea +3

START HERE

As students, we should actively share these tools to help our peers understand climate data, cause it's vital to spread the information about the current state of our planet/regions/cities ect.

I believe that putting the vision of an ideal future into practice depends not only on us, but we're also responsible for the small actions we can take daily to help the environment

Tools :

Difference in temperature increase between SSP1 AND SSP5


WOW
GeNius!
Mod:Roman Nuterman
BOSS
Group 20
Group members:
- Liliya Chernyshova
- Elizaveta Zhurenko
- Yaryna Belinska
- Mishel Cholоquinga
- Mariia Pryimak
- Iulia Denisyuk
- Anastasiia Topalo
- Oleksandra Kuzmenko
DREAM TEAM
FUTURESHIELD
SOLUTIONS TODAY. A RESILIENT TOMORROW.
FutureShield
CYcLE
Air temperature in Ukraine
Air temperature in Ecuadorian
Climate change is irreversible on human timescales.
But it is within our power to mitigate its effects
MANAGERS CAN MITIGATE THE EFFECTS OF CLIMATE CHANGE.
THE FUTURE OF CLIMATE:
Our ideas
Managers can mitigate the effects of climate change. This can be achieved by: switching to renewable energy sources, installing air filters, or fostering environmental awareness within the organization.
Liliya Chernyshova
Personal Carbon Footprint App (developing an AI-based app that tracks daily habits and gives rewards for making eco-friendly choices)
elizaveta.zhurenko
In the future, the climate outlook must focus on adapting to changes at the local level, without losing sight of the global problem. This means improving monitoring, protecting ecosystems, and promoting more sustainable practices in everyday life.
Mishel
Change public transport to electric to reduce CO2 emissions
Yaryna
Creating a system of free (or cheap) and convenient public transportation to encourage people to abandon the constant use of their own cars.
Oleksandra Kuzmenko
Nuclear energy is considered as a green one now.
For example, future micro nuclear reactors or thorium reactors (less wasteful) could be a great option.
Roman
Clean energy expansion, greener cities, reforestation, reduced waste, and global cooperation to cut emissions and protect ecosystems.
Anastasia
It is necessary to invest in the development of solar and wind power plants to reduce dependence on fossil fuels. Transition to environmentally friendly public transport and development of cycling infrastructure in cities.
Julia Denisyuk
as a future lawyer, I believe that governments must create and enforce strong environmental laws to protect the environment and reduce the impact of climate change
elizaveta.zhurenko

Group 22

Mod: Bebhinn

Ocean Heroes

Group Members:

Hanna Bielinska, Volkova Ariadna, Anastasiia Nykolaieva, Vika Buzovskaya, Daria Chvanko, Piasetska Yelizaveta.

Hanna Bielinska

Taking a green path (SSP1) while continuing to invest in tech aspect (SSP2). Say, limiting AI usage to the areas where it's strictly necessary such as science, while investing in repairing the green and marine areas damaged.

Restructure political and educational institutions.

SSP1 (The green path) drawing some inspo from SSP2 (The current path).

Sustainable green energy resources gradually replacing traditional ones.

Prioritising natural products, slow consumption, human individuality and natural brain capacity. Creating systems that adapt to humans not forcing humans to adapt to systems.

Anastasiia Nykolaieva

SYMBIOCITY: A CREATIVE AND SUSTAINABLE VISION – WHERE CITIES GROW WITH NATURE, TECHNOLOGY SUPPORTS LIFE, AND ALL LIVING BEINGS EXIST IN BALANCE AND HARMONY

A green futuristic city where nature and technology live in harmony.

Ecosystems recover naturally

Floating gardens where food grows on water using sustainable systems.

Daria Chvanko: personal climate horizon

Global Solarpunk reality: A utopian future where technology and nature are in perfect harmony

Green energy hub: Ukraine and the world shift to 100% renewable energy. We abandon fossil fuels and the endless pursuit of GDP.

Non-human flourishing: Restored natural habitats and massive wildlife reserves. Safe environment for all animal species without extreme heatwaves.

Human flourishing: Clean air, clean water, and global ecological balance. A shift away from overconsumption.

Human and animal realm issues included
Alternative energy resources

SSP1 and SSP2 combined (eco-cities, tech development etc)
Human factor as a priority (intellect, the ability to connect, create community etc)

Group 23

GEO HEROES

Group moderator: Mariia Zhokhova
Group members: Arina Bakhovska, Sofiia Artemenko, Samotey Olexander, Sofiia Gorbachova, Anton Knyr, weldon cheruyot, Nidielko Daria, Benjamin Maina, Patricia Soto Valles

Global Collaborative Climate Horizon 2050: The Universal Resilience Shield

1. Global Vision
"By 2050, we envision a world where international law and climate science are fully integrated. Our goal is to move from national survival to a **Universal Climate Justice** model, ensuring that every human being, regardless of their country's GDP, is protected from the extremes of a +4°C warming scenario."

2. Global Strategic Pillars

International "Greenfield" Treaty (Legal & Policy) We propose a Global Treaty mandating that 100% of all new infrastructure and post-conflict reconstruction must be carbon-neutral. Sustainability becomes a strict legal prerequisite for international investment, turning global recovery into a "Greenfield" opportunity.

Global Thermal Rights Accord (Social & Justice) Climate safety is a human right. We advocate for the recognition of **'Thermal**

Security' at the UN level—guaranteeing every citizen legally protected access to energy for heating during extreme winters and cooling during lethal heatwaves.

Planetary Data Ledger (Data & Accountability)
Establishment of an open-access global climate registry. Using

IPCC Warming Stripes and **CMIP6 models** as forensic evidence, this system will automate climate reparations, moving funds from the world's largest emitters to the regions most afflicted by environmental anomalies.

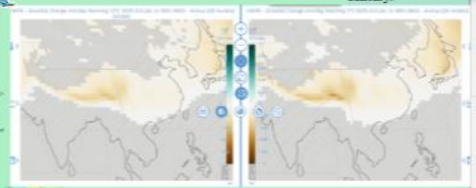
Transnational Green Grids (Technology & Infrastructure)
Shifting from isolated national grids to interconnected, continental "Green Megagrids." This allows for the cross-border sharing of renewable energy surpluses to maintain stability during localized climate disasters.

3. The Global Outcome
"A planet where the 'Atmospheric Stripes' no longer lead to social collapse, but to a coordinated, legally-bound global response. We transform the +4°C threat into a catalyst for worldwide cooperation, radical sustainability, and enforceable justice."

Bridging the Global Divide: Institutional Reform & Tech Sovereignty
"A major barrier to the Global Horizon is the **'Green Divide'**. Non-industrialized and developing nations often lack the political will, institutional capacity, or technical knowledge to transition directly to a green economy.

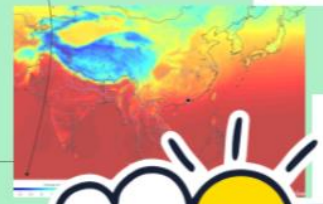
Our Strategic Response:
Proactive Institutional Reform: Instead of just providing aid, the international community must launch **'Climate Reform Missions'**. These are collaborative projects aimed at restructuring national energy laws and building local administrative capacity from the ground up.

Knowledge & Technology Transfer: Shifting from 'patent protection' to 'planetary survival.' We advocate for the mandatory sharing of green technologies, ensuring that the Global South isn't left behind in the industrial revolution of the 21st century."

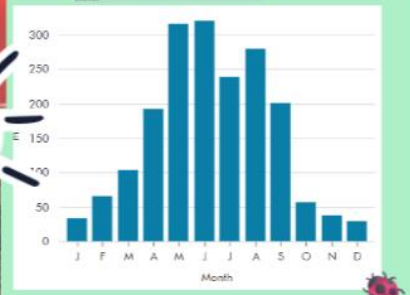


"Technological Synergy: Aquaponic Bio-Domes"
The Concept: Integrating closed-loop aquaponic systems (fish + plant cultivation) into our global infrastructure.
Climate Resilience: These domes provide food security during extreme heatwaves and droughts, independent of local soil quality.
Legal Implementation: We propose international funding for 'Food Sovereignty Hubs' in developing nations, using these bio-domes to bridge the gap between economic growth and environmental protection.

The disaster we might cause through our actions or inaction is terrifying.
Protect our own planet!



Decoupling Development from Carbon: We propose a global framework where developing nations receive **'Sovereign Green Grants'**—funding that is legally tied to carbon-neutral growth. This ensures they don't have to choose between economic development and ecological health.



This is what the city might look like in 2050 if we don't and do care about the environment

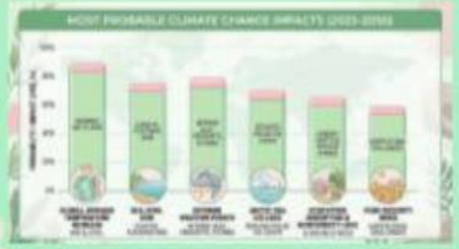
Group 24

Group name: Flora Mundi

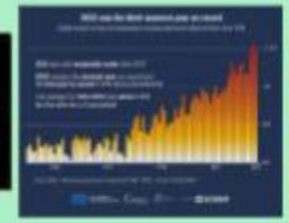
Mod: Elen Martirosyan

Ukraine India Kenya

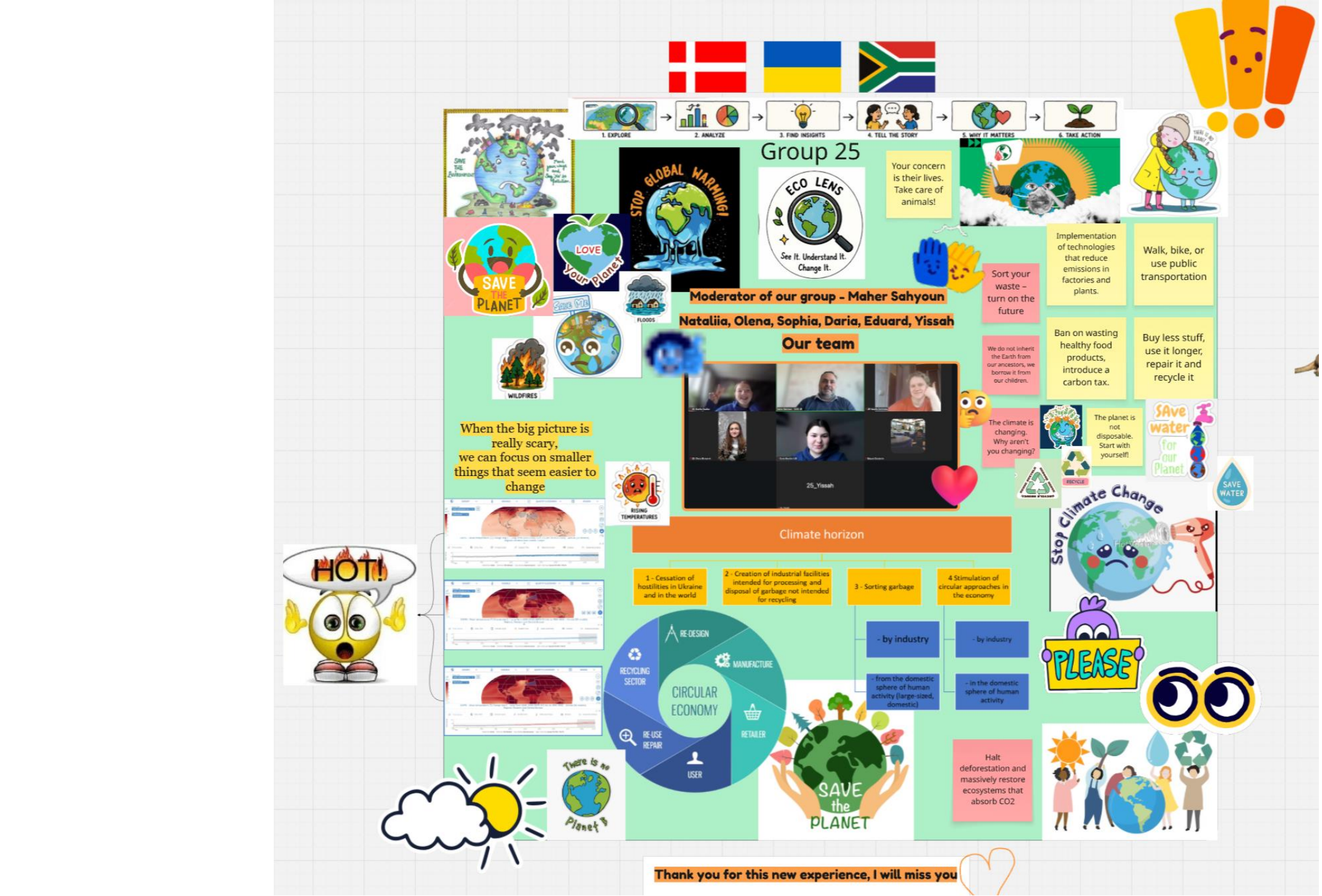
Group members: Olena Sihalova, Humphrey Maweu, Alina Pasha, Kurochkina Angelina, Olga Bardonova, Maydannik Dmytro, Morgan Daniel Simiyu, Caroline Akinyi Odhiambo, Suhani Chaudhary

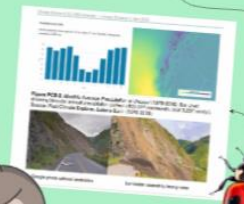


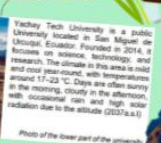
OUR GROUP



Дмитро Майданник


1. EXPLORE
2. ANALYZE
3. FIND INSIGHTS
4. TELL THE STORY
5. WHY IT MATTERS
6. TAKE ACTION
Group 25
Your concern is their lives. Take care of animals!
ECO LENS
See It. Understand It. Change It.
STOP GLOBAL WARMING!
LOVE Your Planet
SAVE THE PLANET
FLOODS
WILDFIRES
Moderator of our group - Maher Sahyoun
Nataliia, Olena, Sophia, Daria, Eduard, Yissah
Our team
25_Yissah
Implementation of technologies that reduce emissions in factories and plants.
Walk, bike, or use public transportation
Sort your waste – turn on the future
Ban on wasting healthy food products, introduce a carbon tax.
Buy less stuff, use it longer, repair it and recycle it
We do not inherit the Earth from our ancestors, we borrow it from our children.
The climate is changing. Why aren't you changing?
The planet is not disposable. Start with yourself!
SAve water for our Planet
SAVE WATER
When the big picture is really scary, we can focus on smaller things that seem easier to change
RISING TEMPERATURES
Climate horizon
1 - Cessation of hostilities in Ukraine and in the world
2 - Creation of industrial facilities intended for processing and disposal of garbage not intended for recycling
3 - Sorting garbage
4 Stimulation of circular approaches in the economy
- by industry
- by industry
- from the domestic sphere of human activity (large-sized, domestic)
- in the domestic sphere of human activity
CIRCULAR ECONOMY
RE-DESIGN
MANUFACTURE
RETAILER
USER
RE-USE REPAIR
RECYCLING SECTOR
Stop Climate Change
PLEASE
HOT!
There is no Planet B
SAVE the PLANET
Halt deforestation and massively restore ecosystems that absorb CO2
Thank you for this new experience, I will miss you





Group 26

Ideas

PILLARS
1. Environmental restoration
2. Clean & Equitable Energy
3. Sustainable Food Systems
4. Climate & Health Resilience
5. Community Action & Inclusion
6. Education & Awareness
7. Global Cooperation & Accountability

Reduction the oil dependance;Implement large scale ecosystem protection programs
progresive change to renewable energy; Implement of sustainable agriculture to secure the food resources ;
Increase the community participation

Idea: Establishing a national network of "climate corridors" would serve as a powerful tool for revitalizing Ukraine's ecosystem. This concept involves linking fragmented forests and steppe reserves into a unified living network through wide strips of wilderness, enabling wildlife migration and allowing plant species to adapt to shifting temperatures. Such a natural framework would not only restore biodiversity but also stabilize groundwater levels, protecting agricultural regions from dust storms and rapid soil desiccation. In the long run, these green arteries would soften the continental climate, making summers less sweltering and winters more predictable.

Main Idea:
A future world in which traditional and modern values are both incorporated in environmental conservation and economic development; it will be a method of incorporating SSP 1 (most optimistic view, environmentally friendly) and SSP 5 (most pessimistic, economically friendly). **Transformation of my city, Nairobi, into an environmentally conscious economic center with the use of renewable energy, efficient use of land and water and forest conservation.**

Core Idea: A transition from the "human over nature" model to a "human within nature" model through the integration of high technologies into natural cycles.

Idea: Grant rivers, forests, and ecosystems the status of a "**legal entity**" (Legal Personhood). Currently, courts primarily protect the interests of people affected by pollution. Under this model, lawyers would be able to file a lawsuit on behalf of the river itself, [illegible] rights to purity and health have been violated. This fundamentally shifts corporate accountability

Encouraged habits
- Choosing sustainable mobility
- Connection with Nature
- Collective Responsibility
- Social and environmental empathy
- Adaptability
- Responsable Consumption

Hopes and Dreams

Harmony of technology and nature. Coexistence of man and nature in a healthy balance

I hope for a world where the people and nature coexist in balance, cities run on clean energy, ecosystems are restored, and development no longer comes at the cost of the environment

- I hope for not a perfect world, but a possible one. A future where the story of climate change is no longer one of loss, but of turning, learning, and rebuilding.

- I hope to see Odesa become the global blueprint for the "Eco-Renaissance," where AI serves as the analytical heartbeat and human creativity acts as the soul. My vision is for a world where technology doesn't replace nature but amplifies it, and where young leaders like you turn climate challenges into the most successful brand of the century—the brand of a thriving planet.

My Biggest hope is to have a future where young people in kenya use digital tools and local knowledge together so thst Communities are safer from drought and floods and have enough food and clean water and can live a good life without harming the planet

- My biggest hope is to one day live in a world in which each person takes on the responsibility of environmental conservation upon themselves; a world in which the "bystander effect" is a thing of the past

Photograph 2	Andean Marsupial Frog
Caption	Wildlife Rescue of an Andean marsupial frog perched on the edge of a container
Location	Urban Area
Ecological significance	It plays an important role in controlling insect populations and serves as a bioindicator of environmental health, particularly sensitive to changes such as habitat loss, pollution, and diseases like Chytridiomycosis.

Yachay Tech University is a public University located in San Miguel de Urcuquí, Ecuador. Founded in 2014, it focuses on science, technology, and research. The climate in this area is mild and cool year-round, with temperatures around 17–23 °C. Days are often sunny in the morning, cloudy in the afternoon, with occasional rain and high solar radiation due to the altitude (2037a.s.l)

Photo of the lower part of the university

Through human effort and dedication, a healthy, realistic future can be built. The path may be thorny, but even if we start small, like a group of friends getting together for a birthday party and planting a tree, step by step, their efforts can create a beautiful forest.

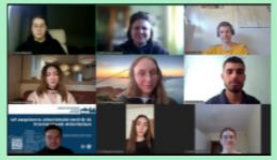
Mod: Artem Fokin (Mod)
Group members: Jorge Jiménez Marharyta Karabetska Marie Kinyanjui Kovtun Daria Clarence Mwangi, Group 21
Anastasia G26 Quint adora G21 Moiseiev Yevhen G21 Sedibelwane Mahlako G26

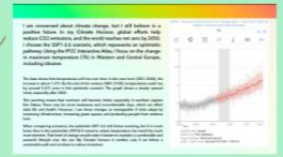
CLUVEX Virtual Exchange

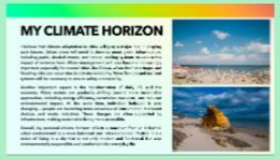
CLIMATE HORIZON

Group 27

Anastasiia Pospieieva
Andrew Zinchenko
Diana Skrybantovych
Nynke Marije Attema
Yelyzaveta Svystunova
Yurii Zalepa







Group 28

COLLECTIVE SUSTAINABILITY UTOPIA

-energy cooperatives
-green transport
-urban planning

governments, regulations, and accessible infrastructure are key

Individual action alone is insufficient without systemic change

Transformation is only possible through global cooperation

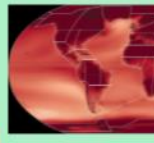
13 CLIMATE ACTION

11 SUSTAINABLE CITIES AND COMMUNITIES

15 LIFE ON LAND

7 AFFORDABLE AND CLEAN ENERGY

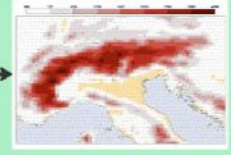
10 REDUCED INEQUALITIES



My climate utopia imagines a city where every new building must be accompanied by a polycultural forest layer. From canopy trees down to ground cover, chosen for what will survive the climate of 2060 and not what grew here in 1900. The forest belongs to the residents who tend it, making ecological literacy a normal part of urban life.

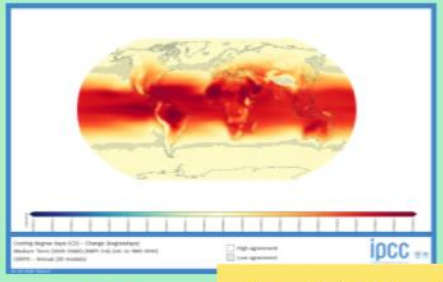
Small steps today, a better world tomorrow.

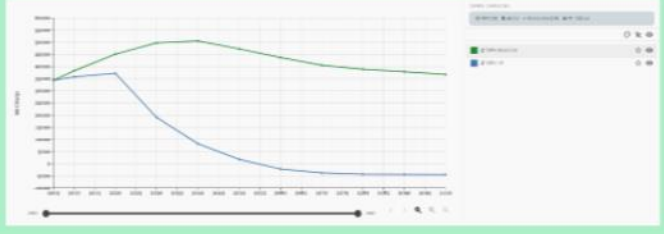
The data is clear: **no** region of the world can **escape climate change**.



The main reason for this fast temperature change is CO_2. It's a gas that traps heat in the atmosphere. When we burn coal, oil, and gas for energy, we release more CO_2 into the air.

We need to reduce pollution, use renewable energy, save natural resources, and act responsibly to protect the environment and avoid these problems.





The world will not change by itself. We must **ACT NOW** – use clean energy, save water, and talk to friends. The **future** depends on what we do today.