



Round table discussion

Environmental Problems of the Mykolaiv Region

Discipline: Vocabulary studies

Group: 3721: Anastasiia Bugai, Kseniia Drozdova, Anastasiia Zelinska, Victoriia Leventyr, Olena Martsyn, Karina Meriutsa, Alina Ostapenko, Nataliia Spichak, Iryna Timofiieva

Supervisor: Natalia Shamanova





Bugai Anastasiia, 3721

are one of the most serious environmental problems in Mykolaiv region and Ukraine as a whole. As of 2025, there are more than 6,000 official landfills in Ukraine, covering a total area of more than 9,000 hectares. Almost 16% of them do not comply with environmental and sanitary standards.



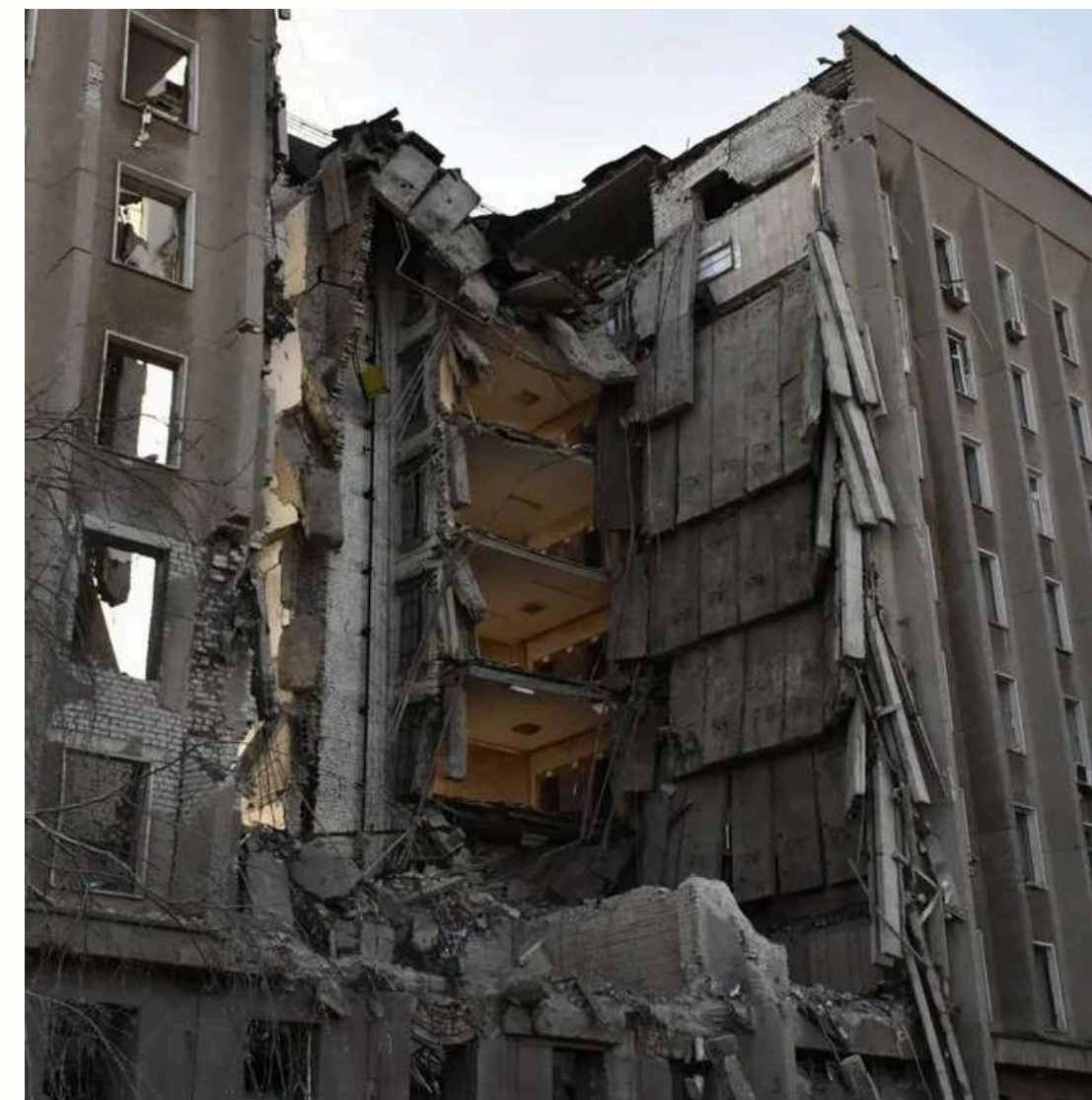
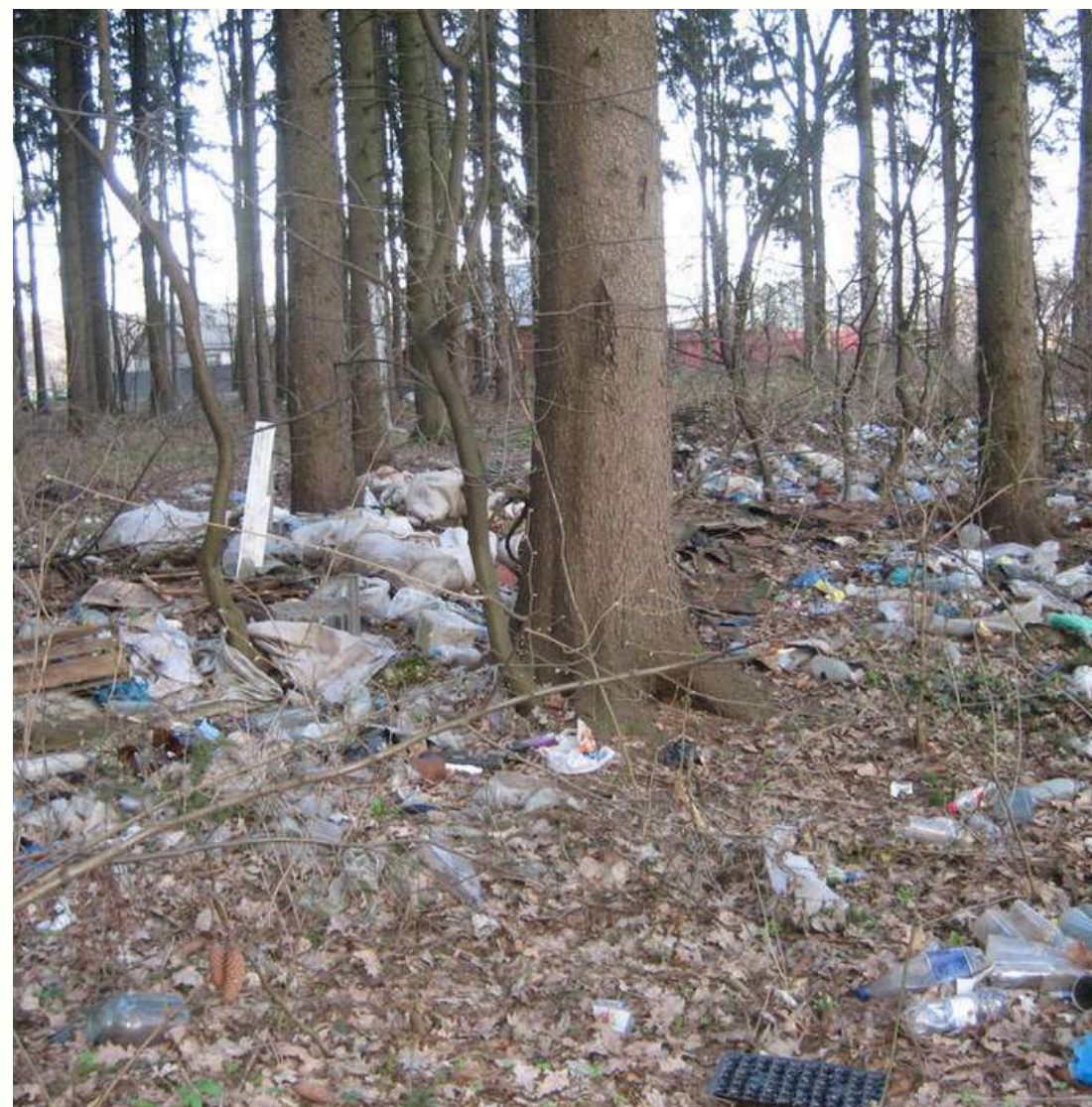


The Ministry of Environmental Protection and Natural Resources of Ukraine estimates that the total amount of waste produced in the country is approximately **12-14 million** tonnes annually, of which only a small percentage is sorted and recycled.

As of 2022, **90.1%** of household waste was left unprocessed. Of the total, only **9.9%** of waste was recycled: **1.7%** was incinerated, and **8.2%** was sent to recycling centres and waste processing plants.

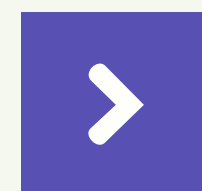


The situation in the Mykolaiv region is also unsatisfactory. There are a number of official landfills in the region, but their condition is concerning. For example, the landfill in Nova Odesa covers about 10 hectares, which exceeds the officially allocated area of 4.5 hectares.

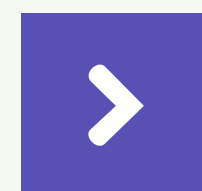




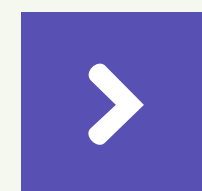
Generally, the level of waste recycling and waste sorting in the region is very low. This leads to the accumulation of waste at landfills and an increased load on them.



Landfill overload



Lack of waste recycling



Emergence of unauthorised landfills



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m

-  EKO RAYON
- KHERSON REGION

MYKOLAIV REGION

POLTAVA REGION
- ODESSA REGION

URTICARIA

News Articles Gallery Poster Blogs All sections

TAPE

Illegal landfills discovered and eliminated in Mykolaiv

February 22, 2024, 10:12



All regions

INTEHT



A landfill has been created on Heroes of Ukraine Avenue in Mykolaiv

1528

СУСПІЛЬНЕ МИКОЛАЇВ

LIVE

LOCAL AUTHORITY ENVIRONMENT ECOLOGY ENVIRONMENT LOCAL GOVERNMENT SOCIAL PROBLEMS

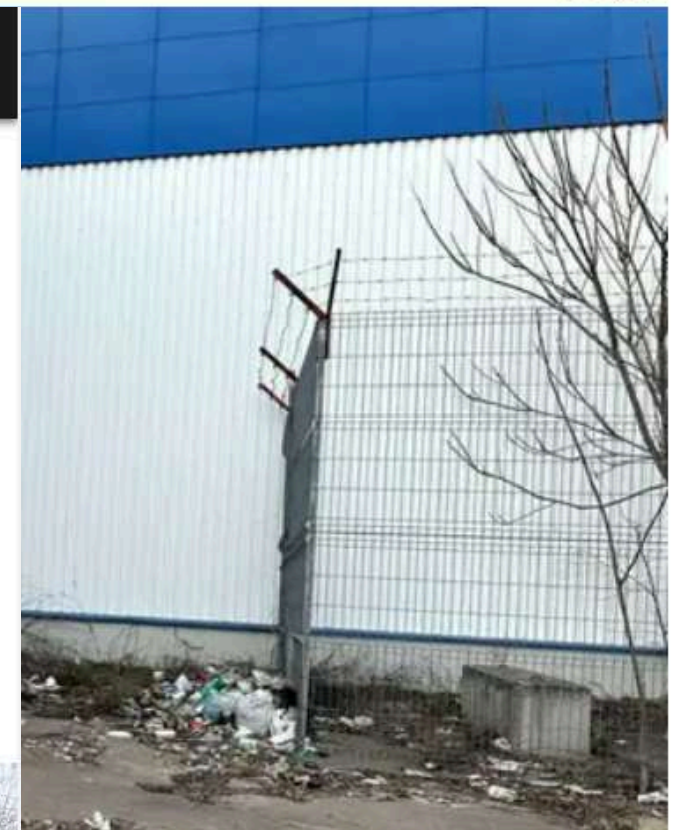
When the natural landfill in the Ternivka microdistrict in Mykolaiv is being liquidated: what did the local administration say?



Kateryna Voloshchenko



Daria Svistukha



PM

Aa



S O S m S S O S

- **Pollution of soil and water resources:** Toxic substances from the waste get into the soil, contaminating it and groundwater, which can lead to a deterioration in the quality of drinking water.
- **Air pollution:** The decay of organic waste releases methane and other harmful gases, which worsens air quality and contributes to the greenhouse effect.
- **Fire hazard:** Landfills can spontaneously burn, leading to massive fires and emissions of toxic substances into the atmosphere.
- **Negative impact on flora and fauna:** Landfills destroy the natural habitats of many species of plants and animals, which leads to a decrease in biodiversity.





1.Strengthening control and responsibility: It is necessary to increase control over compliance with waste disposal rules and establish stricter punishment for violations.

2.Development of waste management infrastructure: Creation of modern landfills, waste processing plants and recycling centres. It should be noted that as of 2025, thanks to our foreign partners, we have some improvements in this situation.

3.Educational programmes and information campaigns: Raising the environmental awareness of the population through educational programmes, information campaigns and public involvement in cleaning up the territories.

4.Establishment of a separate waste collection system: Introduce separate waste collection at the household and industrial levels to reduce the amount of waste to be disposed of.

5.Cooperation with civil society organisations and businesses: Involve civil society organisations and businesses in solving the waste problem through joint projects and initiatives.

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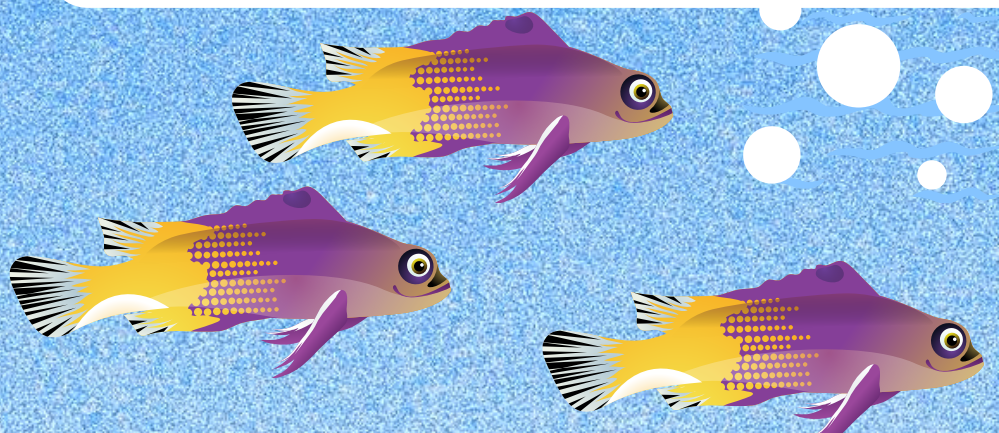
Big changes start with small steps, and each of us can influence the world we leave to our future generations.

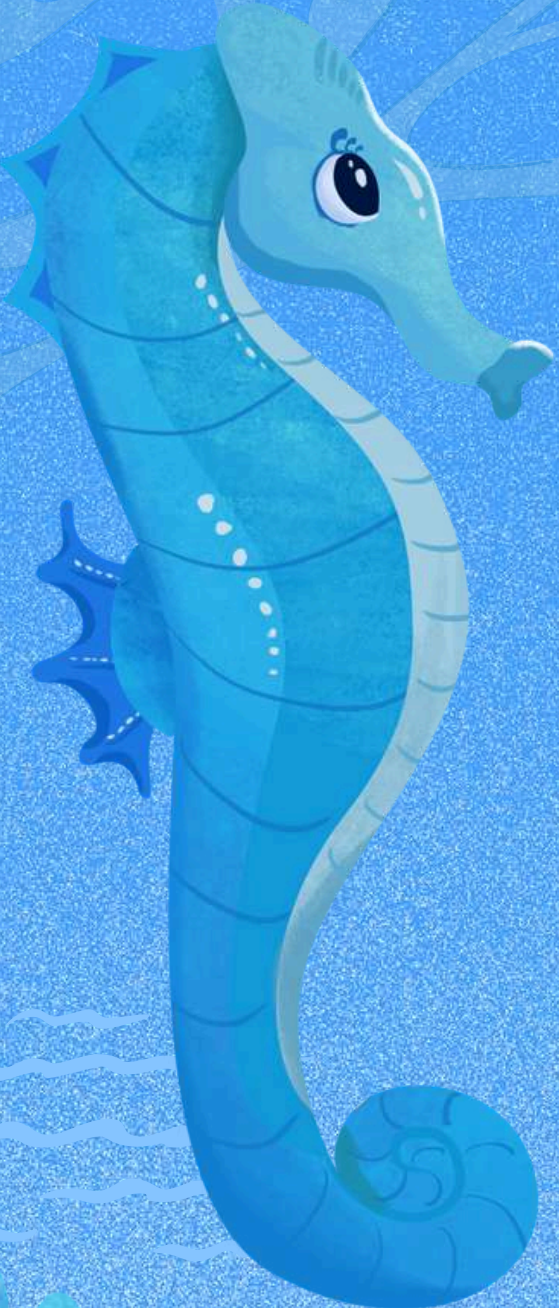




SUNFLOWER OIL LEAKAGE INTO THE SOUTHERN BUG

3721 ANASTASIIA ZELINSKA



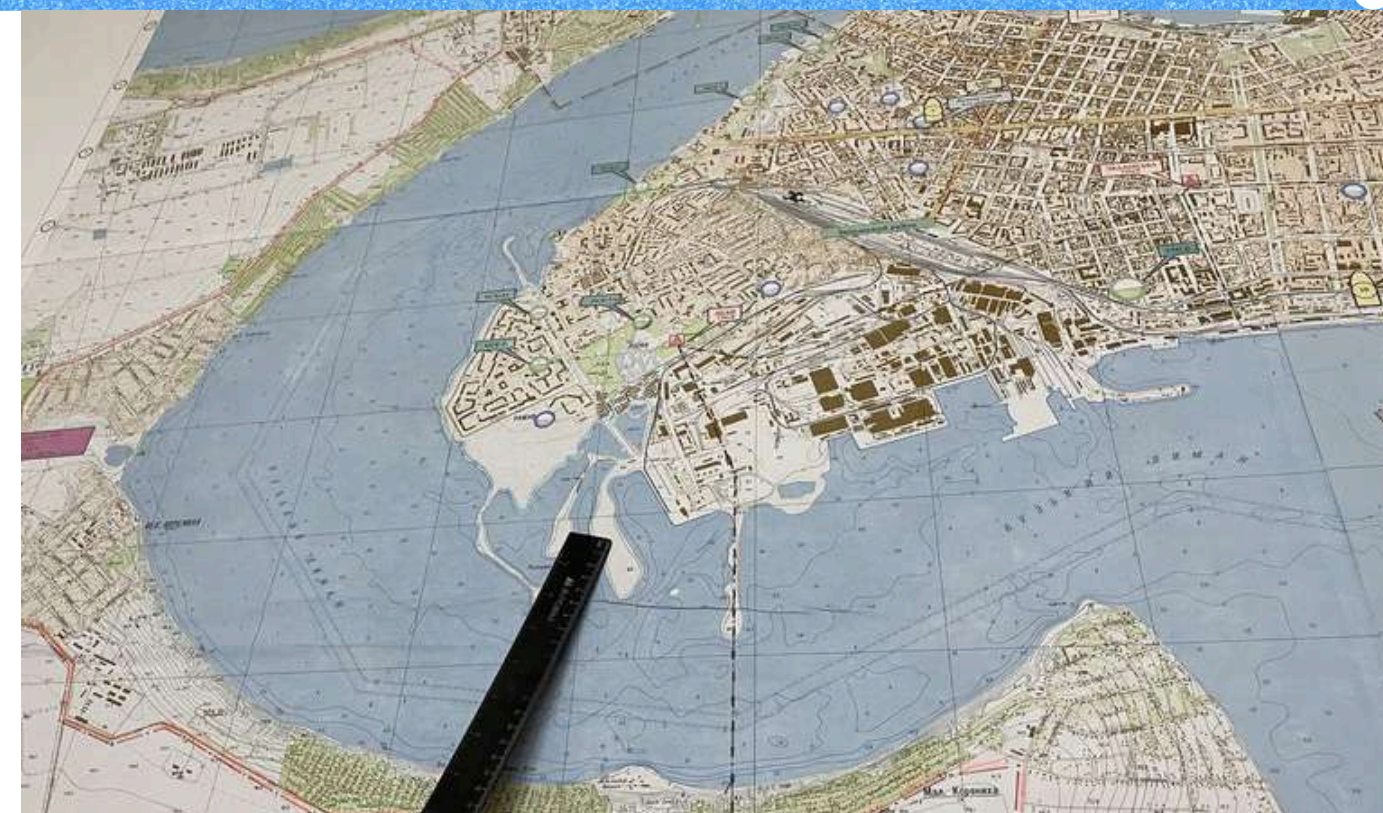


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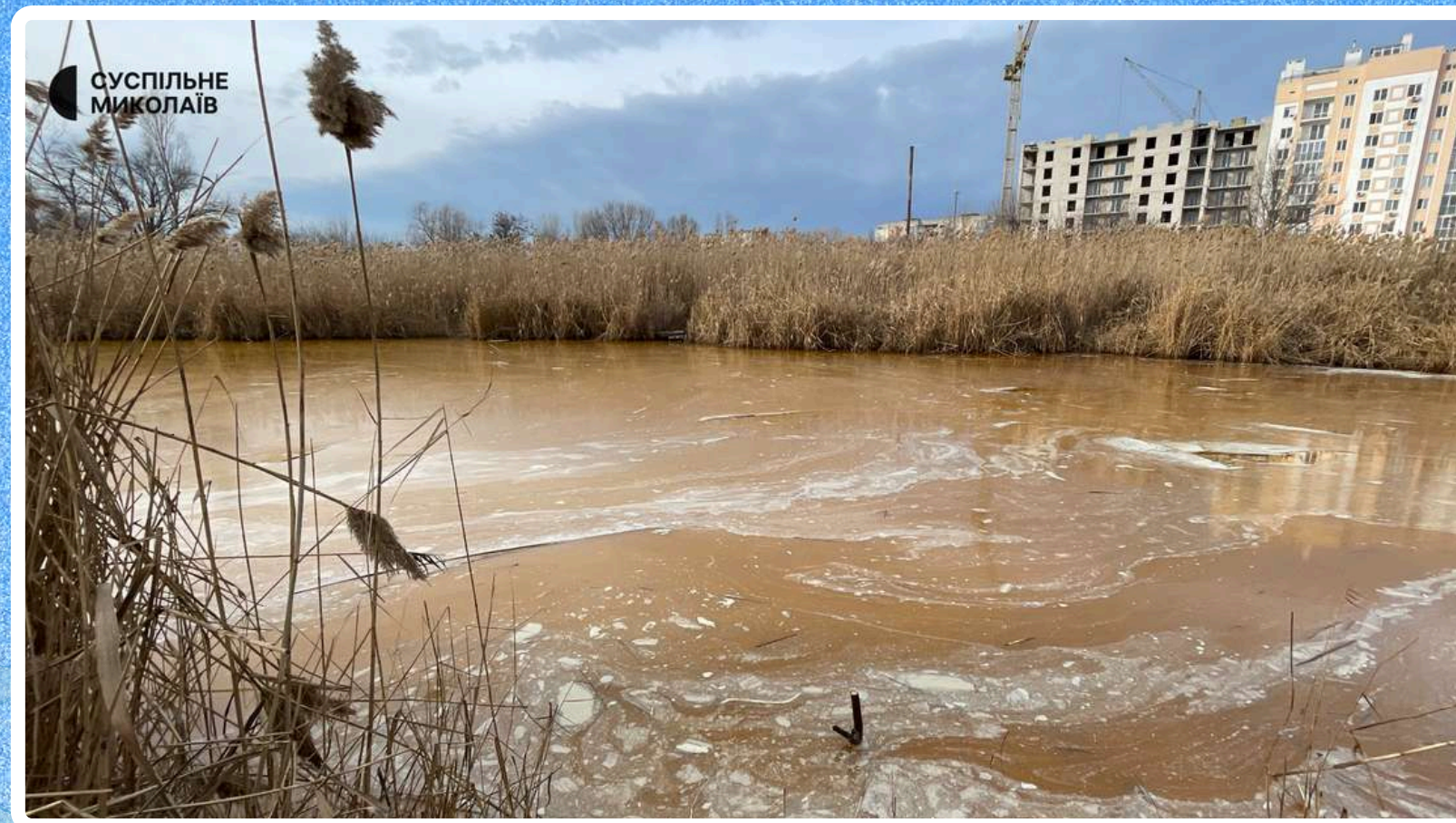
- **Introduction. Causes of the incident**
 - **Scale of the problem**
 - **Environmental consequences**
 - **Ways to solve the problem**
 - **Conclusion**
 - **List of references**
- 

INTRODUCTION

Night of December 28, 2024, Mykolaiv. There was a leak of sunflower oil into the soil and the Southern Bug River. The cause was a Russian attack, where a drone fragment damaged a reservoir of one of the companies. In total, 1800 tons of sunflower oil leaked, and the contamination covered an area of 9000 square meters.

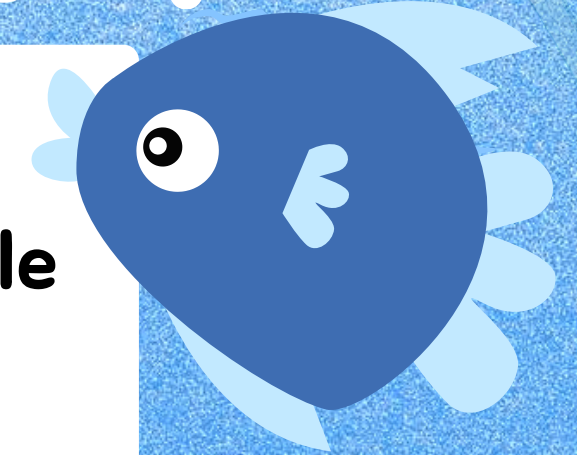


As a result of a Russian drone strike on a sunflower oil reservoir in the Mykolaiv region, an accident occurred that caused contamination of soil and the waters of the Bug estuary bays with approximately 1800 tons of sunflower oil,"
— Mykolaiv authorities



ENVIRONMENTAL CONSEQUENCES

Specialists collected water and soil samples at the contamination site. Analysis showed that the concentration of substances exceeded permissible levels by 100-200 times.



You need to understand these fats are almost insoluble in water. This means that whatever is not collected will eventually settle on the bottom. And this local impact will be quite significant,

— Zinkin (Head of the Laboratory Control Department)



aquatic environment

the oil forms a film on the water surface, which prevents oxygen from entering, disrupting the natural metabolism in the water environment. This can lead to mass death of fish and other aquatic organisms due to oxygen starvation.

ENVIRONMENTAL CONSEQUENCES



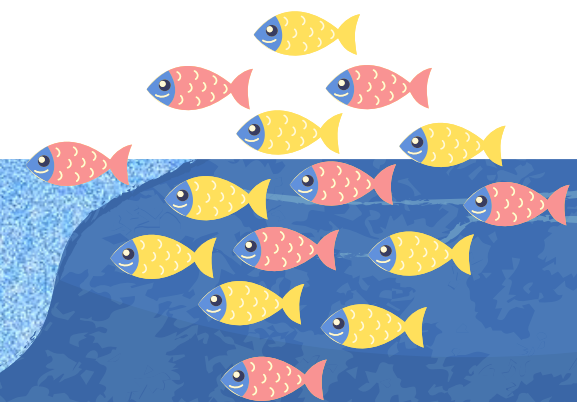
soil

oil contamination of the soil disrupts its structure. Microorganisms important for fertility die. Areas may become unsuitable for agriculture for a long time.



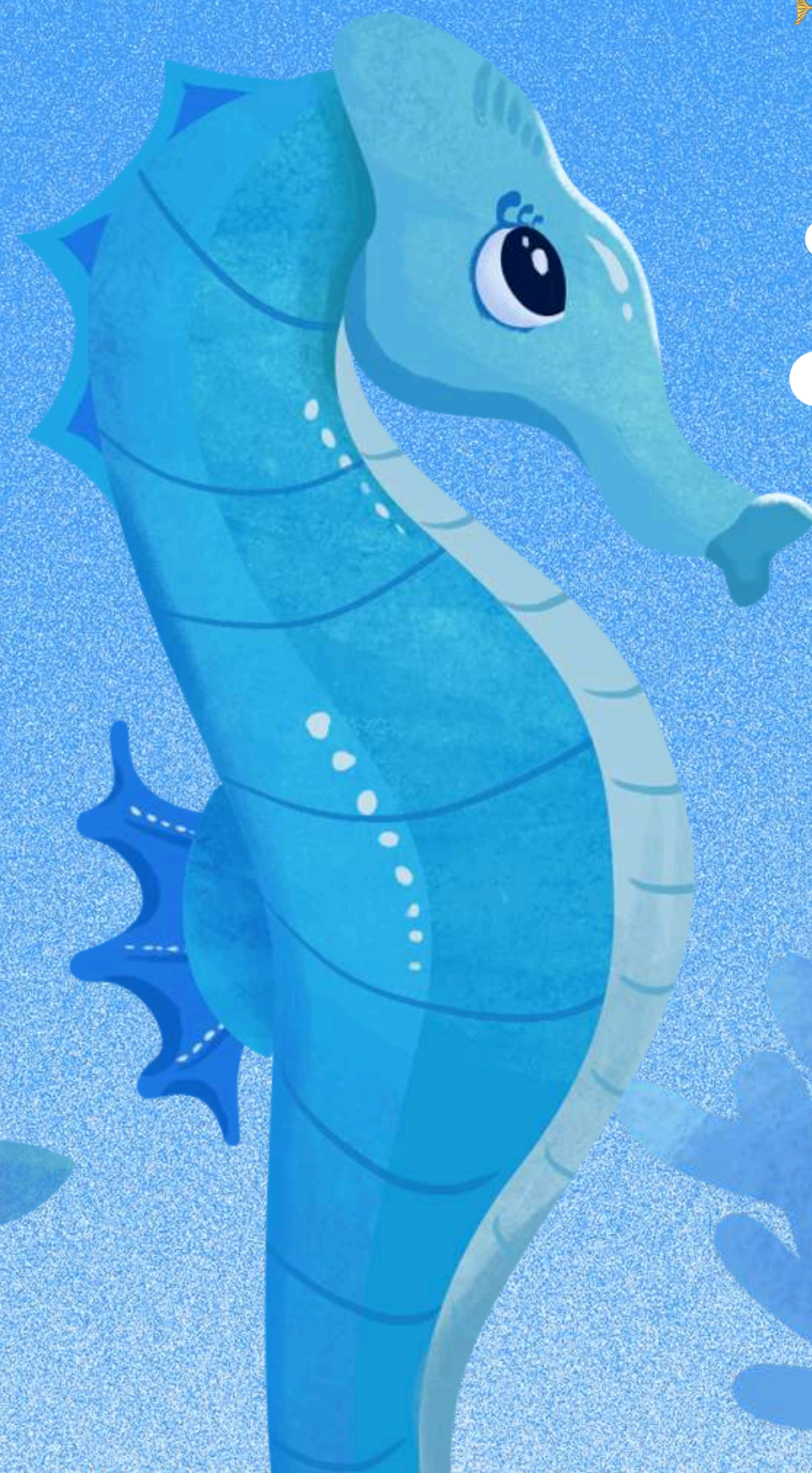
WAYS TO SOLVE THE PROBLEM

- 20 rescue workers were involved in the cleanup operations. They installed containment booms to localize the spill, and special units began pumping out the oil. As of January, 110 tons of oil had already been pumped out.
- criminal proceedings have also been opened under the article on violation of the rules and customs of war, within which an investigation has been launched.
- according to the Ministry of Environmental Protection and Natural Resources of Ukraine, calculations estimate the damages at approximately 45 billion hryvnias.



CONCLUSION

This incident highlights the often-overlooked environmental casualties of armed conflict and emphasizes the need for increased protection of critical infrastructure to prevent similar environmental catastrophes in the future.



LIST OF REFERENCES

1. **Суспільне Миколаїв** <https://suspilne.media/amp/mykolaiv/917279-zbitki-u-45-milardiv-griven-u-mikolaevi-vitekli-tonni-olii-cerez-obstril-agropidpriemstva-ak-likvidovuut-naslidki/>
2. **Новини nv** <https://nv.ua/ukr/amp/vitik-oliji-v-pivdenniy-bug-u-mikolayevi-viteklo-1800-tonn-oliji-u-richku-cherez-obstril-50478971.html>
3. **УНН:** <https://unn.ua/amp/vytik-olii-v-pivdennyi-buh-pislia-ataky-rf-u-mykolaievi-vidkachaly-vzhe-ponad-100-tonn>

THANK YOU





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IMPACT OF WAR ON WATER SUPPLY AND ECOSYSTEM

Victoriia Leventyr
Tkach Alina, 3721





Introduction

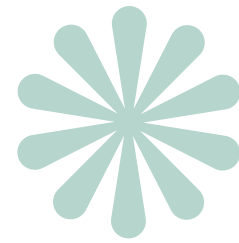


- The war has dramatically worsened water pollution in Mykolaiv, leading to an urgent crisis.
 - Extensive damage to water infrastructure has resulted in contamination of drinking water and natural water sources.
 - Lack of access to clean water poses severe risks to public health and the environment.
 - Restoring water safety and access is a significant challenge due to ongoing military actions.

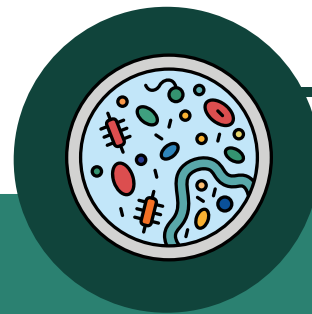


Causes of Water Pollution





Impact on Human Health



Waterborne Diseases

Increased outbreaks of cholera, typhoid, and diarrhea due to contaminated drinking water.



Poor Sanitation

Lack of clean water prevents proper hygiene, leading to infections, skin diseases, and other health problems



Impact on the Ecosystem

Contamination of Rivers and Lakes



Oil spills, sewage, and heavy metals enter local waterways, endangering aquatic life.

Loss of Biodiversity



Many fish and plant species are dying due to high pollution levels.

Damage to Agriculture



Polluted water used for irrigation leads to soil degradation and crop contamination.

Impact on Fishing Industry

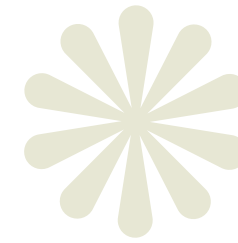


Decreased fish populations threaten food security and the local economy.





Measures Taken to Address Water Shortage



Water Distribution Points

Emergency water stations have been set up in key areas.

Mobile Purification Units

Portable filtration systems help provide safe drinking water.

Drilling of Deep Wells

Efforts are being made to tap into underground water sources.

Humanitarian Aid

Organizations distribute bottled water and hygiene kits to affected populations.



Remaining Challenges



Ongoing Conflict

Continued attacks make it difficult to fully restore water systems.



Risk of Further Damage

Repaired pipelines and stations remain vulnerable to future strikes.



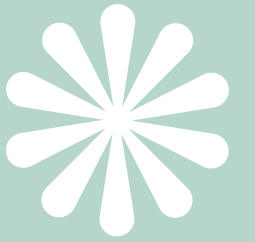
Need for Long-Term Solutions

Emergency measures are not enough—sustainable water infrastructure is essential.

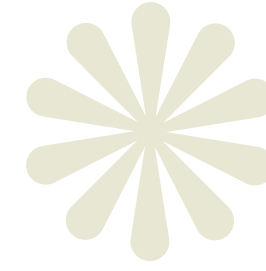


Coordination Issues

Humanitarian organizations and local authorities face logistical challenges in water distribution



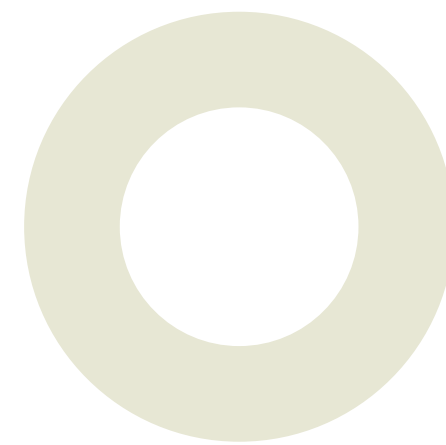
Conclusion



- Water pollution and shortages in Mykolaiv are critical humanitarian and environmental issues.
 - Immediate and long-term efforts are needed to restore safe and reliable water access.
 - Stronger international support, investment in infrastructure, and community involvement are essential for recovery.
 - Ensuring clean water is a fundamental step in rebuilding Mykolaiv's future.



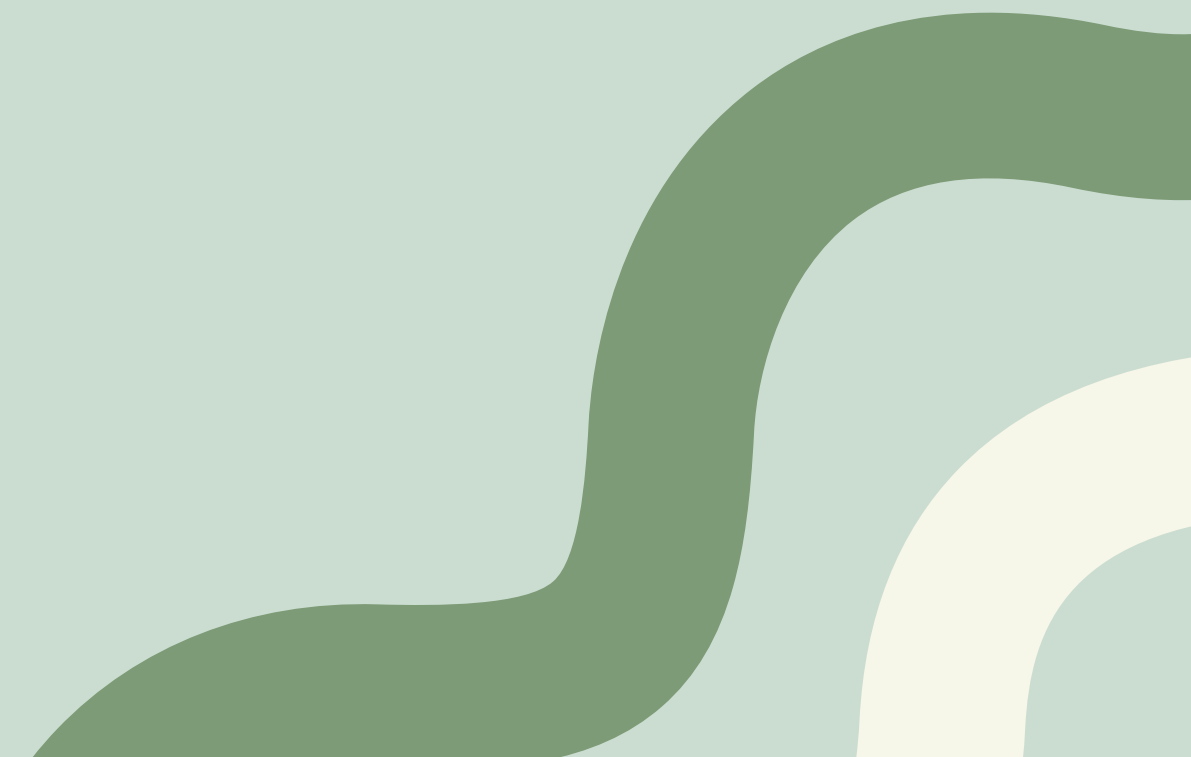
**THANK
YOU!**





Tree pruning in Mykolaiv

Olena Martsyn, 3721

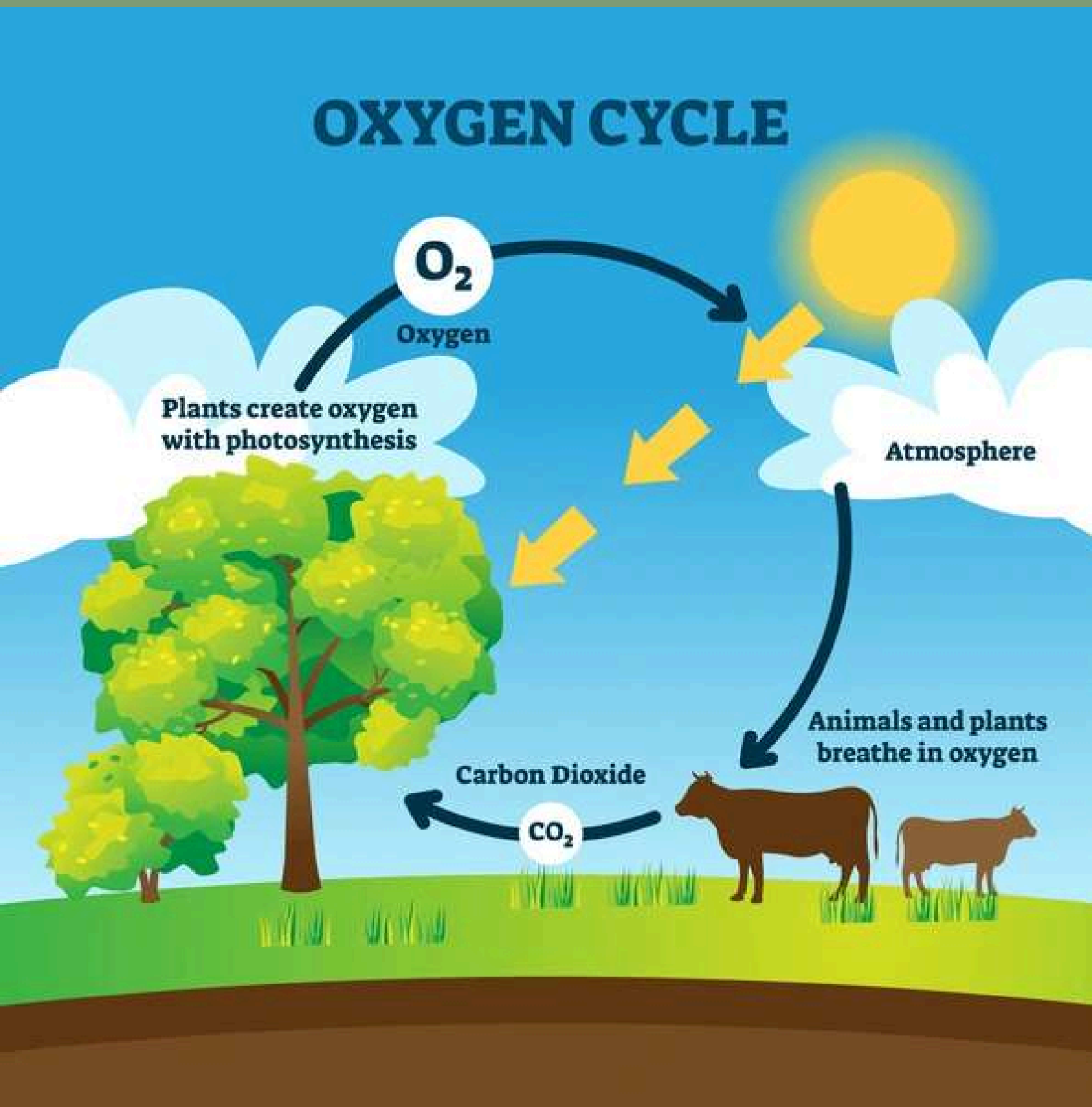


PLAN

1. Introduction.
2. Current situation in Mykolaiv.
3. Recent scandal involving "Mykolaivparks".
4. Possible solutions and recommendations.
5. Conclusion.



1. Introduction



Petrovsky Park, Mykolaiv

2. Current situation in Mykolaiv

In Mykolaiv, tree pruning has become an urgent issue due to overgrown and damaged trees in many public areas



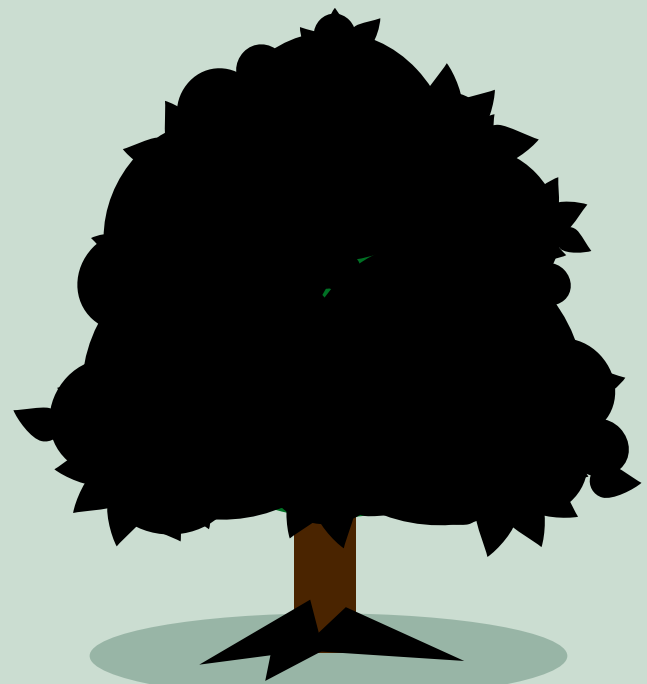
3. Recent Scandal Involving "Mykolaivparks"



The scandal centers on tree maintenance activities conducted by Mykolaivoblenergo, which trimmed trees within the security zones of power grids

4. Possible solutions and recommendations.

To solve the tree pruning problem in Mykolaiv, the city needs better funding, clear rules, and teamwork between local services.



5. Conclusion.



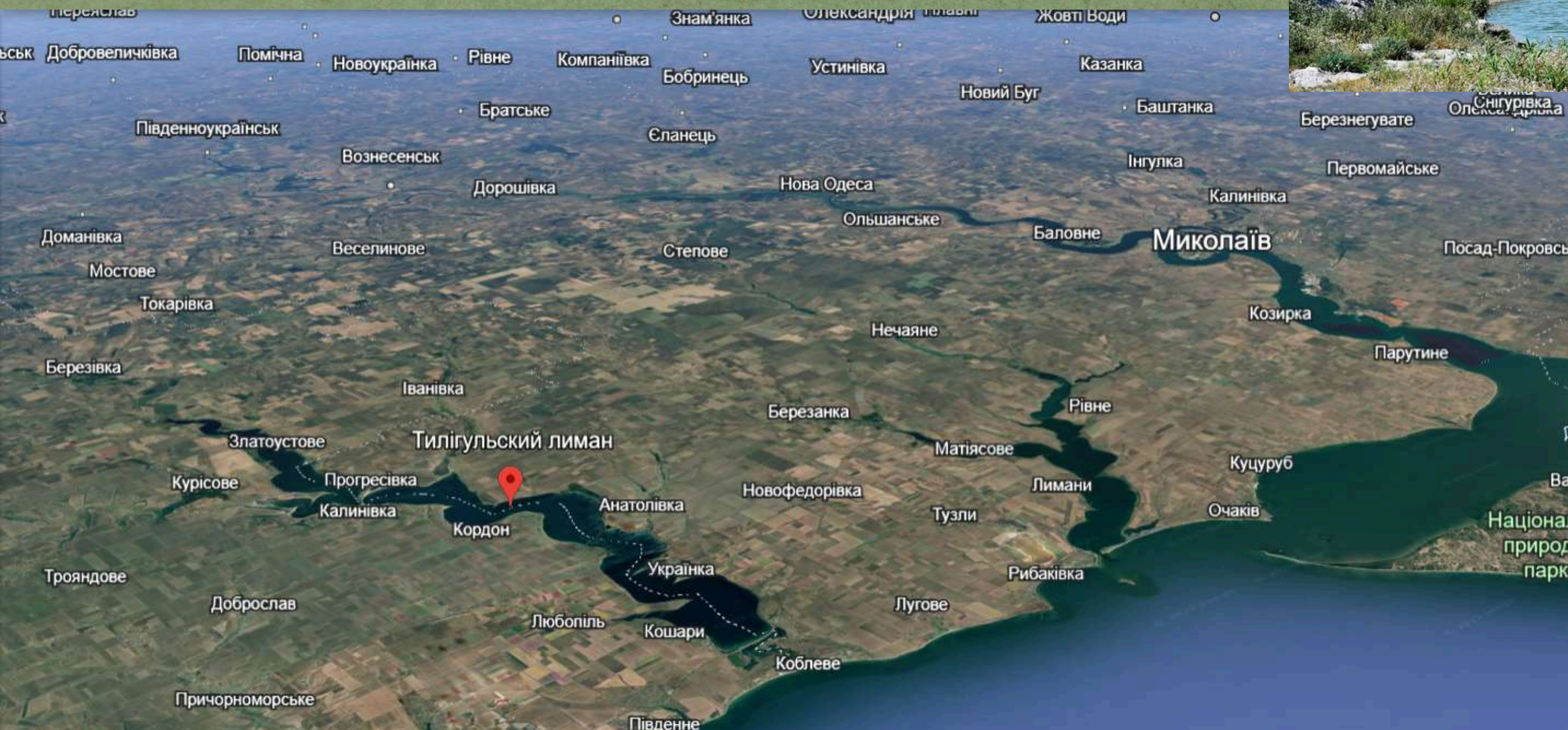
Everyone has a role to play in keeping Mykolaiv green and safe!

Ecological problem of the Tylihul estuary

BY KARINA MERIUTSA, GROUP 3721



What is Tilihul Estuary?



Located on the border of Odesa and Mykolaiv region in the south of Ukraine, the estuary includes an ornithological game reserve and the Tylihulskyi Regional Landscape Park situated on the East coast

Drying Up of the Estuary

2015-2017



Useful vocabulary

- lack of freshwater inflow – *брак припливу прісної води*
- drop in the level – *зниження рівня*
- decreasing precipitation – *зменшення кількості опадів*
- increased evaporation – *підвищене випаровування*
- increase in salinity – *зростання солоності*
- shallowing – *обміління*
- salinization – *засолення*
- siltation – *замулення*
- biodiversity loss – *втрата біорізноманіття*
- waterfowl populations –



2016
-
2017



Photos from
local e-
newspaper

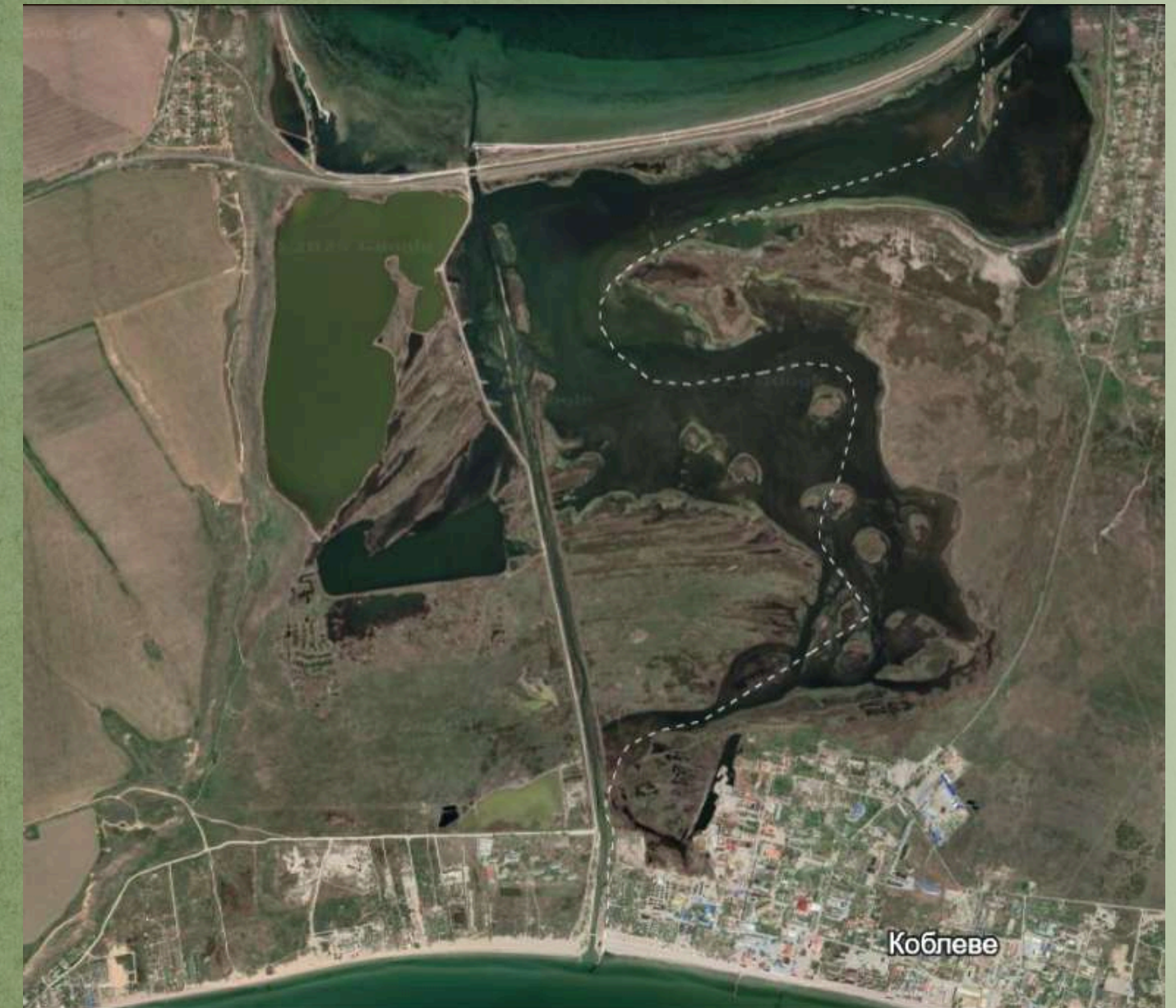


2020
-
2021



Solution

- restoration work – відновлювальні роботи
- connecting channel – з'єднувальний канал
- pedestrian bridge-crossing – пішохідний міст-перехід
- fish-holding lock infrastructure – інфраструктура рибозатримного шлюзу
- small vessels with low draft – малі судна з невеликою осадкою
- salinity indices – показники солоності



Happy News!



- bird Islands eco-project – екопроект «Острови птахів»
- artificial nesting islands for rare waterfowl – штучні гніздові острови для рідкісних водоплавних птахів
- crucial migration hub – важливий міграційний вузол
- sustainability and biodiversity conservation – сталий розвиток і збереження біорізноманіття
- avian inhabitants – пташині мешканці

Current situation



Thank you for
attention!

Take care of the environment!



Extraction of Minerals Without Permits in Mykolaiv Region

This presentation addresses the critical issue of illegal mineral extraction in the Mykolaiv region of Ukraine. The unregulated extraction of sand, limestone, and granite poses significant environmental and economic threats. We will examine the legal framework, identify the key areas affected, explore the consequences, and discuss potential solutions to address this pressing concern. Our goal is to inform the public, engage environmental advocates, and urge law enforcement to take decisive action.

Iryna Timofiieva, 3721



The Importance of Regulated Mineral Extraction

Economic

Minerals are essential for construction, infrastructure, and industrial use, driving economic growth by providing raw materials for roads, buildings, and production industries. When mineral extraction follows the laws and regulations it can greatly support society.

Environmental

Regulations are vital to prevent environmental degradation, ensuring responsible use of natural resources. Unregulated extraction leads to soil erosion, water pollution, and habitat destruction and must be controlled and monitored carefully.

Fair Competition

Legal frameworks level the playing field, preventing unfair competition from illegal businesses that bypass permit requirements and environmental standards. The legal businesses that do things the right way are at a great disadvantage due to illegal extraction.

A stack of books with legal titles, including 'UKRAINIAN LAW OF' and 'THE UKRAINIAN LAW', is shown next to a wooden gavel resting on a wooden surface. The background is dark and moody, with a warm light source creating a glow on the books and the gavel.

Legal Framework and Requirements for Mineral Extraction

1

Subsoil Code of Ukraine

This regulates the use and protection of subsoil resources, setting permit requirements for mineral extraction. It is the main law regulating the mineral extraction.

2

Law "On Environmental Protection"

This law ensures the responsible use of natural resources to prevent environmental harm, mandating environmental impact assessments before operations commence. This law requires the environment to be protected.

3

Permit Requirements and Standards

Companies must obtain permits from local authorities, conduct environmental impact assessments, and comply with safety and ecological standards. Safety is the most important and must be carefully maintained.

Illegal Extraction in Mykolaiv Region: Resources and Locations



Sand

Illegally extracted sand is commonly used in construction and road building, leading to riverbank erosion and habitat destruction.



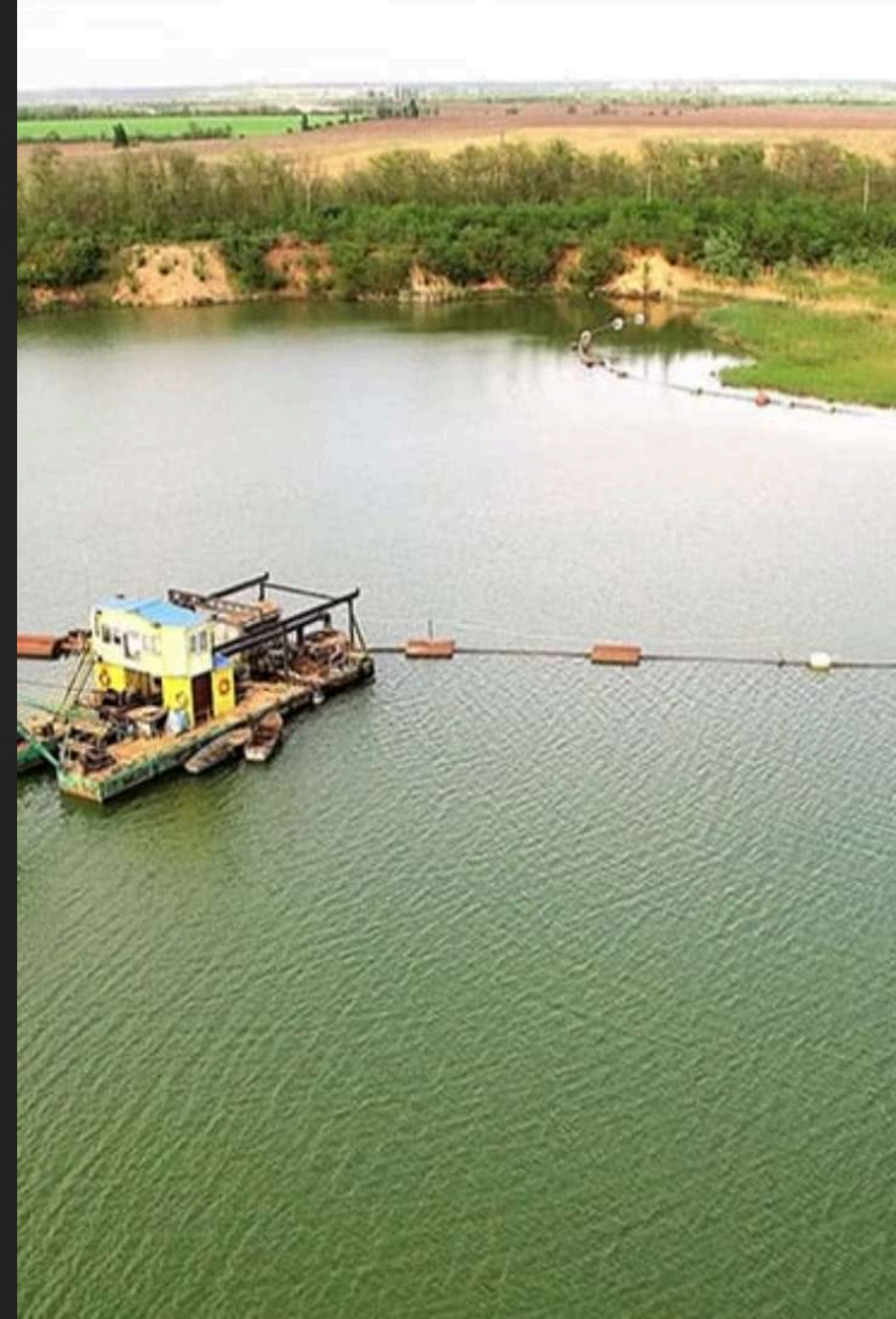
Limestone

Essential for cement and concrete production, illegal limestone extraction causes quarry scars and dust pollution.



Granite

Frequently used for infrastructure projects, illegal granite mining results in deforestation and soil degradation.





Environmental Consequences of Illegal Mineral

Soil Degradation

Excessive extraction disrupts land structure, leading to erosion and loss of agricultural productivity.

1

Deforestation

Large areas of land are cleared to extract minerals, destroying habitats and reducing biodiversity.

2

Water Pollution

Illegal sand mining damages river ecosystems, contaminating water sources and harming aquatic life.

3



Economic Consequences of Illegal Mineral Extraction

Loss of State Revenue

No taxes or fees are paid for illegally extracted materials, depriving the state of crucial funds.

Damage to

Over-extraction weakens land stability, affecting roads and bridges, leading to costly repairs.

Unfair Competition

Legal businesses suffer when illegal operators sell materials at lower prices, undermining economic stability.



Law Enforcement and Challenges in Combating Illegal Mining

1

Corruption

Some officials accept bribes to ignore violations, hindering effective enforcement.

2

Lack of Resources

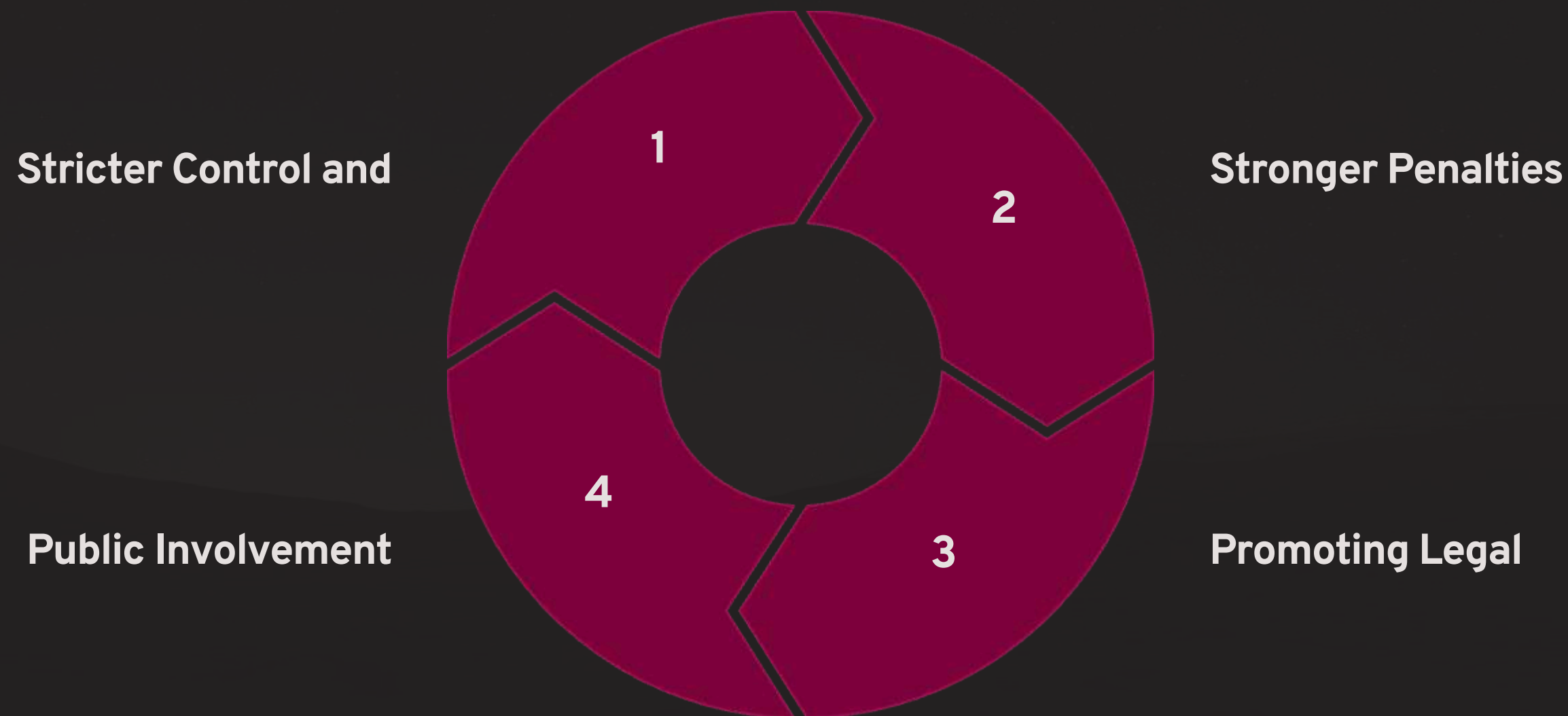
Authorities often lack the manpower and equipment to inspect all mining sites adequately.

3

Difficulty in Prosecution

Many illegal miners operate under fake identities or relocate frequently, making prosecution challenging.

Conclusion and Solutions for Combating Illegal Mineral Extraction



Combating illegal mineral extraction requires a multi-faceted approach, including stricter control and monitoring using advanced technology, stronger penalties for violators, promoting legal extraction through incentives and education, and encouraging public involvement in reporting illegal activities. Only through collaborative efforts can we protect the environment, ensure economic stability, and uphold the rule of law in the Mykolaiv region.

The background image shows a turbulent Black Sea coastline. In the foreground, dark, choppy water with white foam from breaking waves is visible. A dark, low pier or breakwater extends from the left side into the sea. In the background, across the water, there is a shoreline with several large industrial cranes and structures, likely remnants of the destroyed Kakhovka Hydroelectric Power Station. The sky is overcast and grey.

Ecocide

The Black Sea after the Destruction of the
Kakhovka Hydroelectric Power Station

Kseniia Drozdova, 3721

On June 6, 2023

**russian occupation forces committed a terrorist act by blowing up the
Kakhovka Hydroelectric Power Station**

- Fuel and lubricants
- machine oil from the hydroelectric power station (400–600 tons)
- pesticides and chemicals
- remains of dead domestic and wild animals
- sewage
- landfill waste





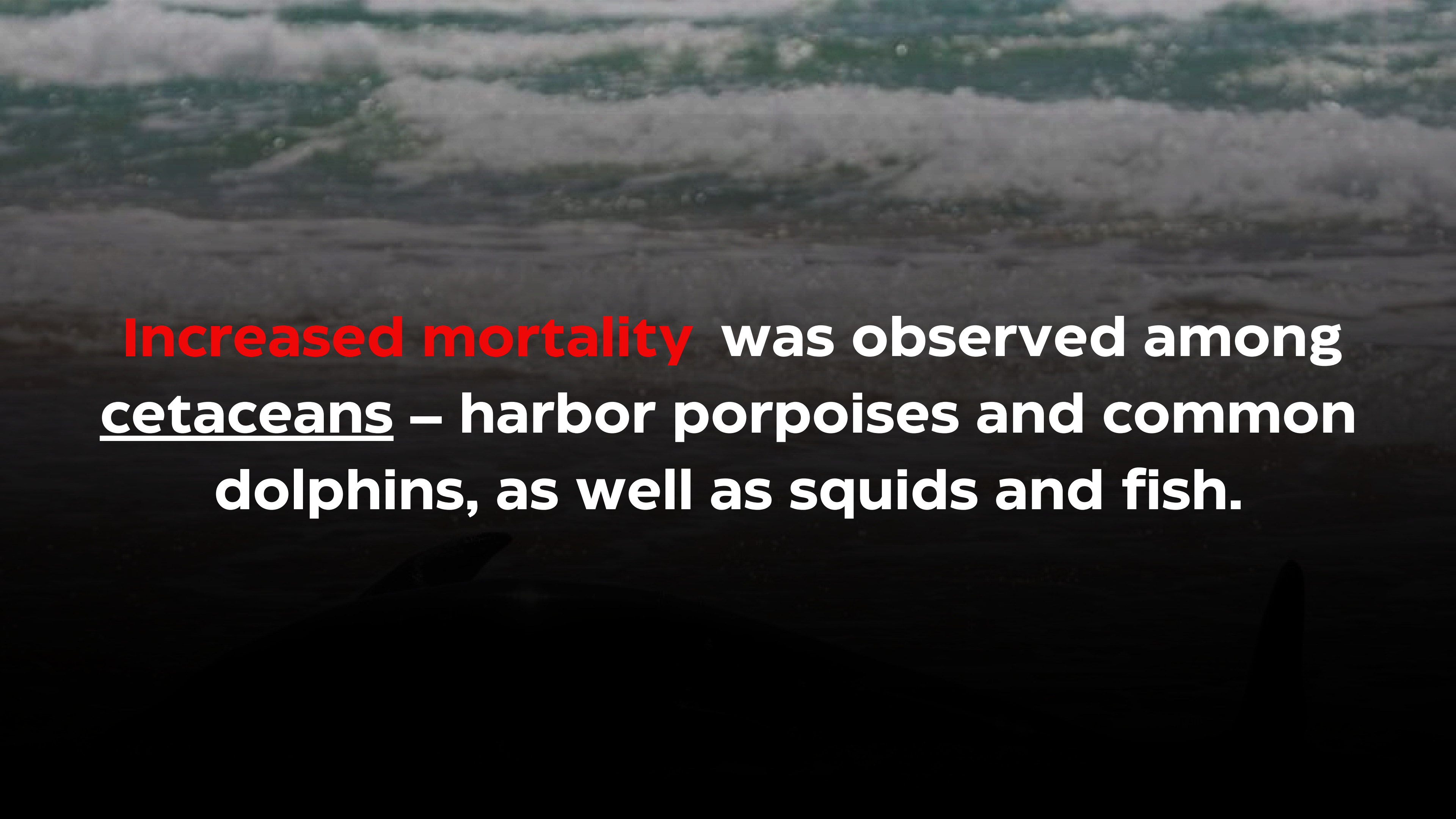
The bottom of the Black Sea after the Destruction of the Kakhovka Hydroelectric Power Station



**serious
environmental
consequences**

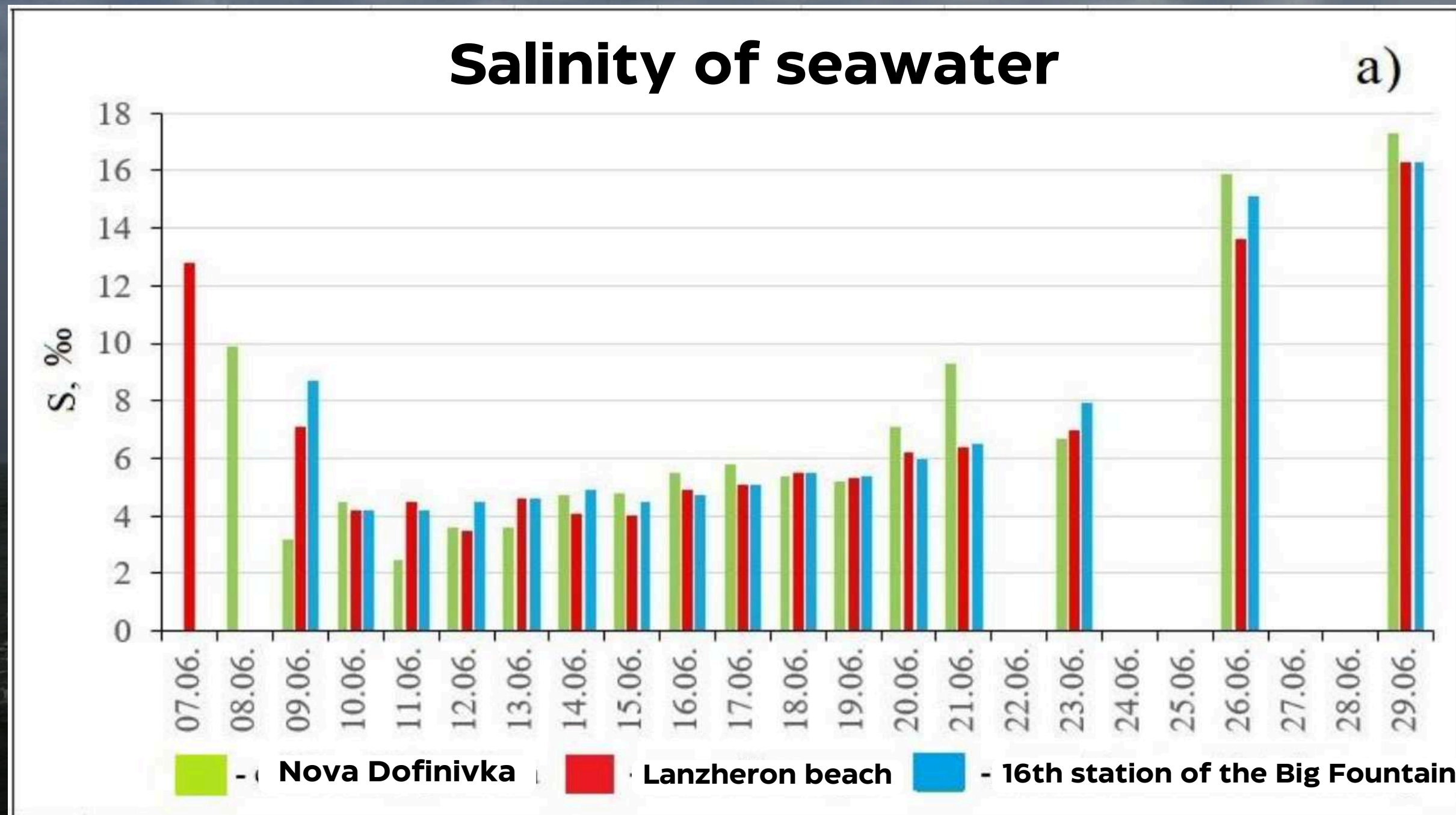
**Water samples
revealed 68 organic
pollutants, as well as
high levels of heavy
metals.**





Increased mortality was observed among cetaceans – harbor porpoises and common dolphins, as well as squids and fish.

Temporary **desalination** of the seawater



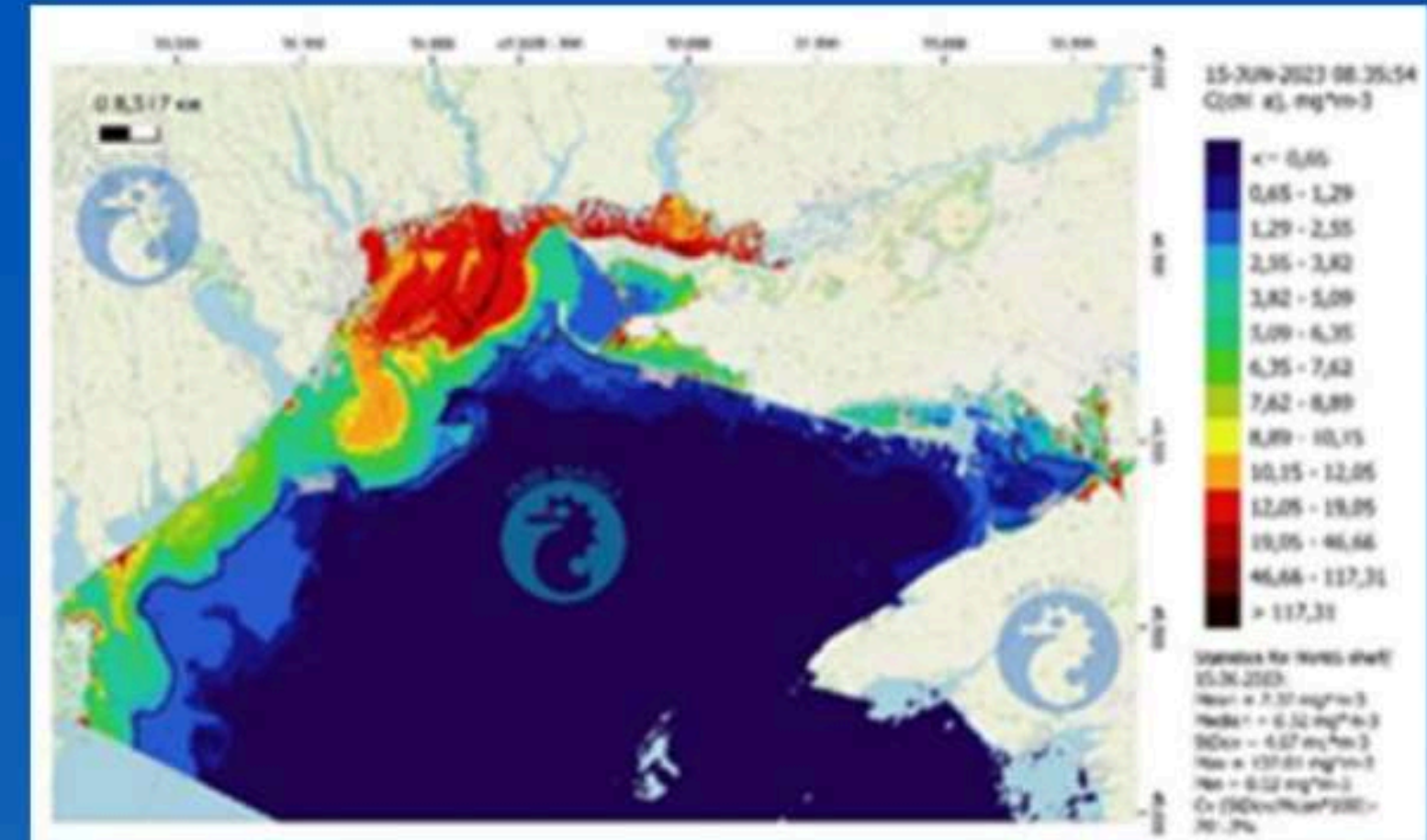


As a result, there was a mass die-off of mussels

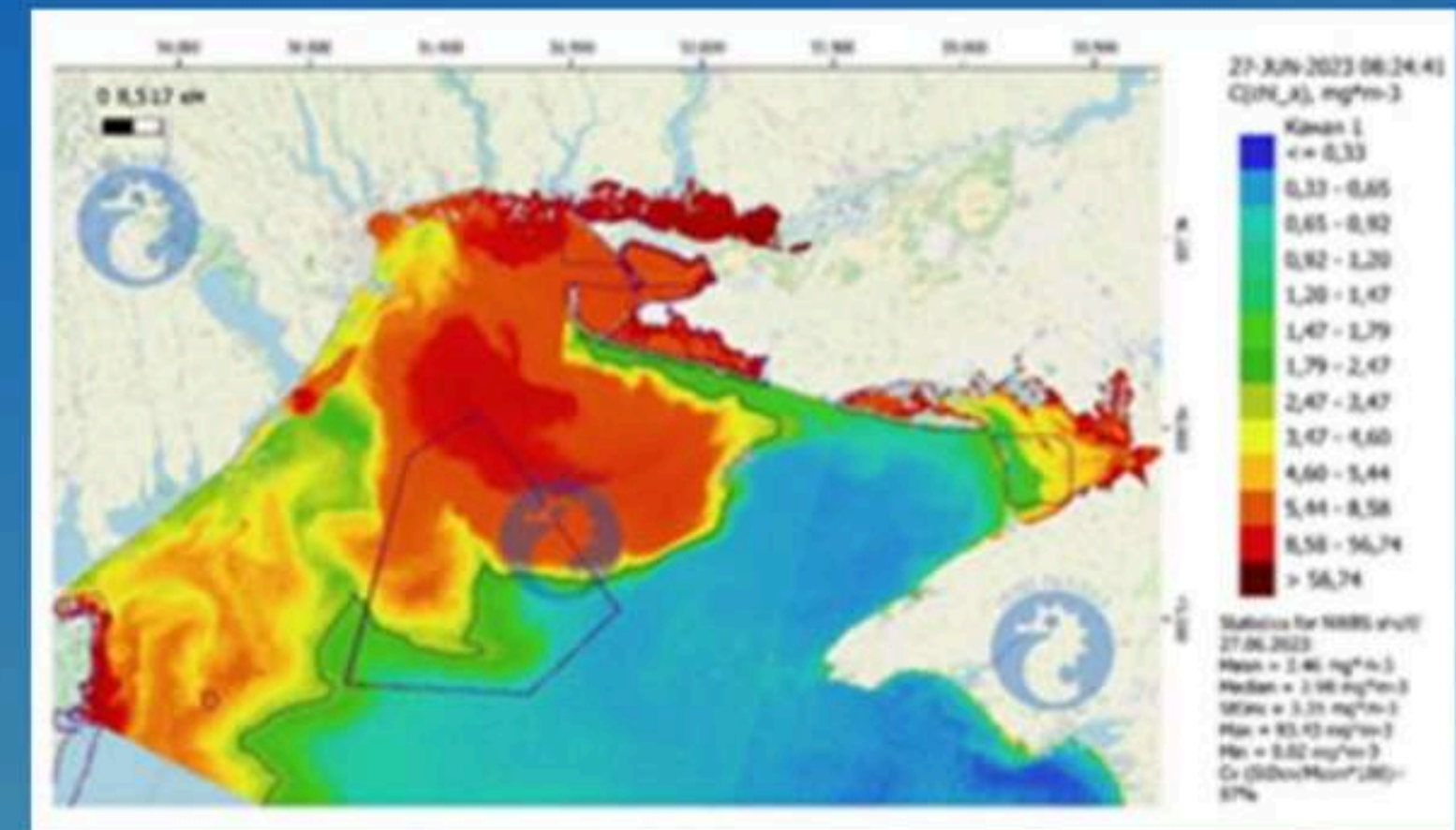
**The number of
blue-green algae
phytoplankton
increased 2000-
fold.**



The concentration of chlorophyll "a" in the northwestern part of the Black Sea increased by 280% compared to the regional norm.



15.06.2023

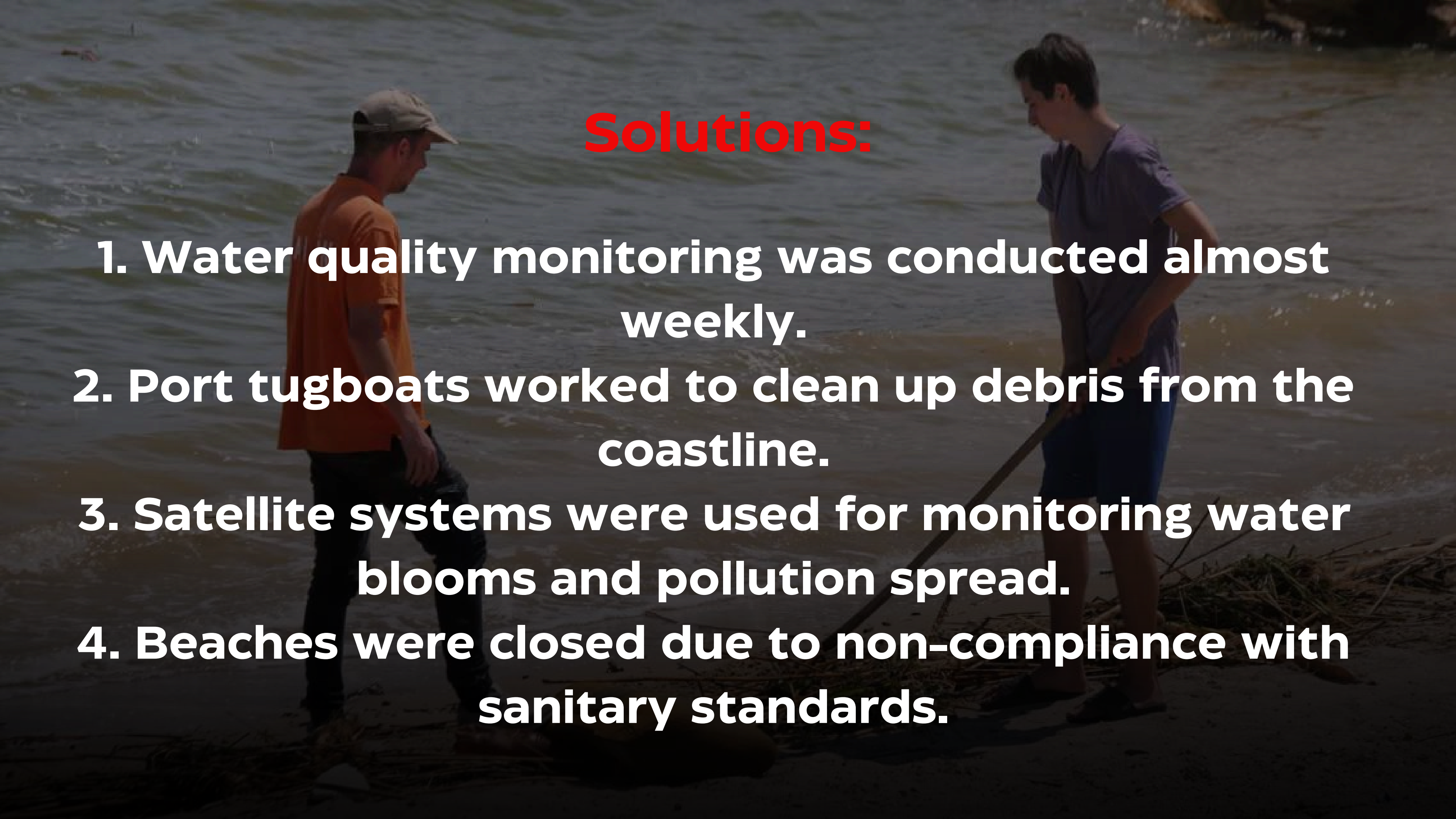


27.06.2023



Rare species of Black Sea fauna returned to the seashore for the first time in 20 years: marble crabs and seahorses.



A background image showing two men standing on a sandy beach. The man on the left is wearing an orange shirt and a cap, looking towards the water. The man on the right is wearing a blue shirt and shorts, holding a long-handled tool. The water is calm and extends to the horizon.

Solutions:

- 1. Water quality monitoring was conducted almost weekly.**
- 2. Port tugboats worked to clean up debris from the coastline.**
- 3. Satellite systems were used for monitoring water blooms and pollution spread.**
- 4. Beaches were closed due to non-compliance with sanitary standards.**

List of references

1. Ukrainska Pravda. Black Sea desalination begins due to explosion at Kakhovka HPP – State Ecological Inspectorate. Ukrainska Pravda. URL: <https://www.pravda.com.ua/eng/news/2023/06/11/7406338/> (date of access: 01.03.2025).
2. Explosion of the Kakhovka Hydropower Plant: What are the environmental consequences? – URL: <https://uwecworkgroup.info/explosion-of-the-kakhovka-hydropower-plant-what-are-the-environmental-consequences/> (date of access: 01.03.2025).
3. Consequences of the Kakhovka Dam explosion: what diseases threaten Ukraine and the world. Visit Ukraine – SERVICE PORTAL ABOUT UKRAINE 24/7. URL: <https://visitukraine.today/blog/2042/consequences-of-the-kakhovka-dam-explosion-what-diseases-threaten-ukraine-and-the-world?srsId=AfmBOooJCHXYCCpwM9UfNUecHg4hbGjwJsoCzYfBoP-5BPj9i0tJV5fh#threat-of-anthrax-outbreak> (date of access: 01.03.2025).
4. Destruction of the Kakhovka Dam – Wikipedia. Wikipedia, the free encyclopedia. URL: https://en.wikipedia.org/wiki/Destruction_of_the_Kakhovka_Dam (date of access: 01.03.2025).

**THANK YOU
FOR YOUR
ATTENTION!**

Air pollution as an environmental problem in Zhyrardov



by Alina Ostapenko, 3721



THE ENVIRONMENTAL PROBLEMS OF POLAND

The environmental situation in Poland is a serious concern for residents. Air and water pollution, industrial emissions and problems with waste disposal affect not only nature but also human health.



Air pollution (smog)



Water pollution



Industrial pollution



Deforestation



AIR POLLUTION

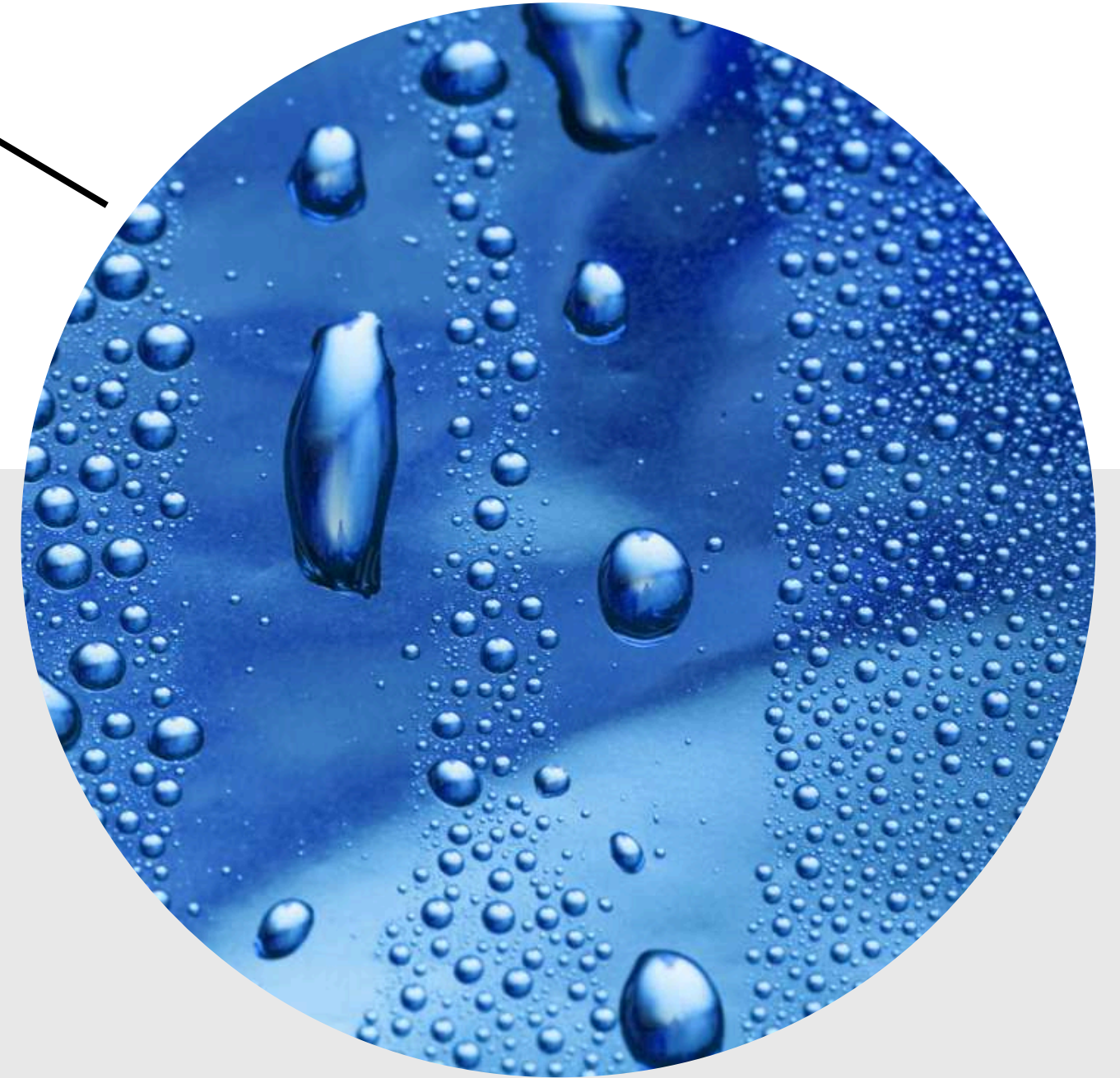
Air pollution is one of the most important environmental problems in Poland, with serious consequences for public health. High levels of pollution negatively affect air quality and cause chronic diseases.



CAUSES OF AIR POLLUTION (SMOG) IN POLAND



Human factors



Natural factors

INDUSTRIAL EMISSIONS

Emissions SO_2 , NO_x
and heavy metals

Accumulation of toxic
substances in the air
and soil

Partial modernisation
of industrial filters
and cleaning systems

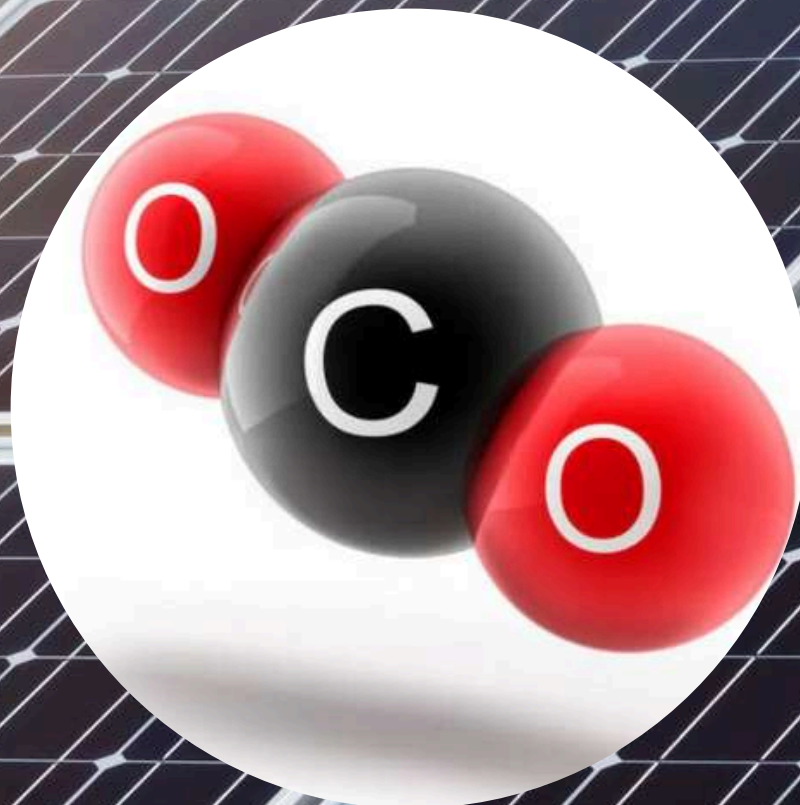


ROAD TRANSPORT

**Old diesel engines
with high emissions**

**Pollution by carbon
dioxide (CO₂) and
nitrogen oxides**

**Limits on the use of
diesel cars**

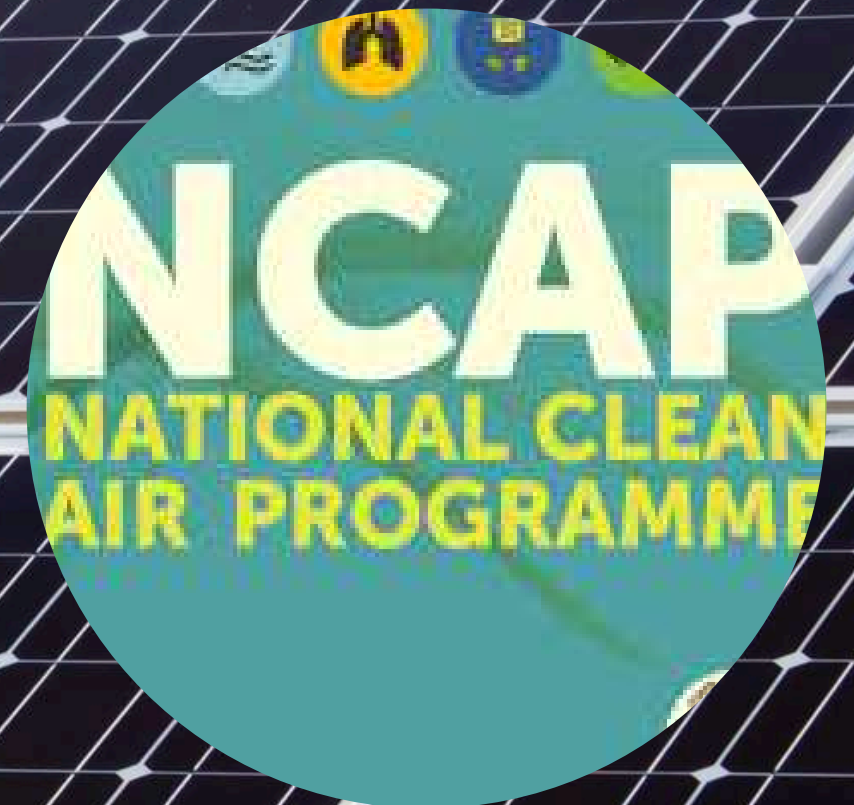


USE OF COAL FOR HEATING

Harmful gas emissions

**Deterioration of public
health (respiratory
diseases, allergies).**

**The Clean Air
programme was
introduced (subsidies
for the modernisation
of heating systems)**







AIR POLLUTION IN ZHYRARDOW IS A SERIOUS PROBLEM

The introduction of environmental technologies, modernisation of industry and transport infrastructure, and raising the level of environmental culture of the population will help to significantly improve air quality.



**THANK YOU
FOR YOUR
ATTENTION!**

Air Pollution in Kryvyi Rih

MADE BY STUDENT OF
GROUP 3521

SPICHAK NATALIYA

STATE OF AIR POLLUTION

In the first half of 2023, compared to the same period last year, air pollution decreased

- nitrogen oxide - 40%
- dust and nitrogen dioxide - 33%
- formaldehyde - 27%
- sulfur dioxide - 5%



THE MAIN PROBLEMS AND CAUSES

High concentrations of harmful substances

Low air quality

Negative impact on public health

Industrial enterprises

Emergency situations at enterprises

Uncontrolled cutting down or lopping of trees in the city

Insufficient environmental control



THE LARGEST POLLUTERS IN KRYVYI RIH

ArcelorMittal Kryvyi Rih



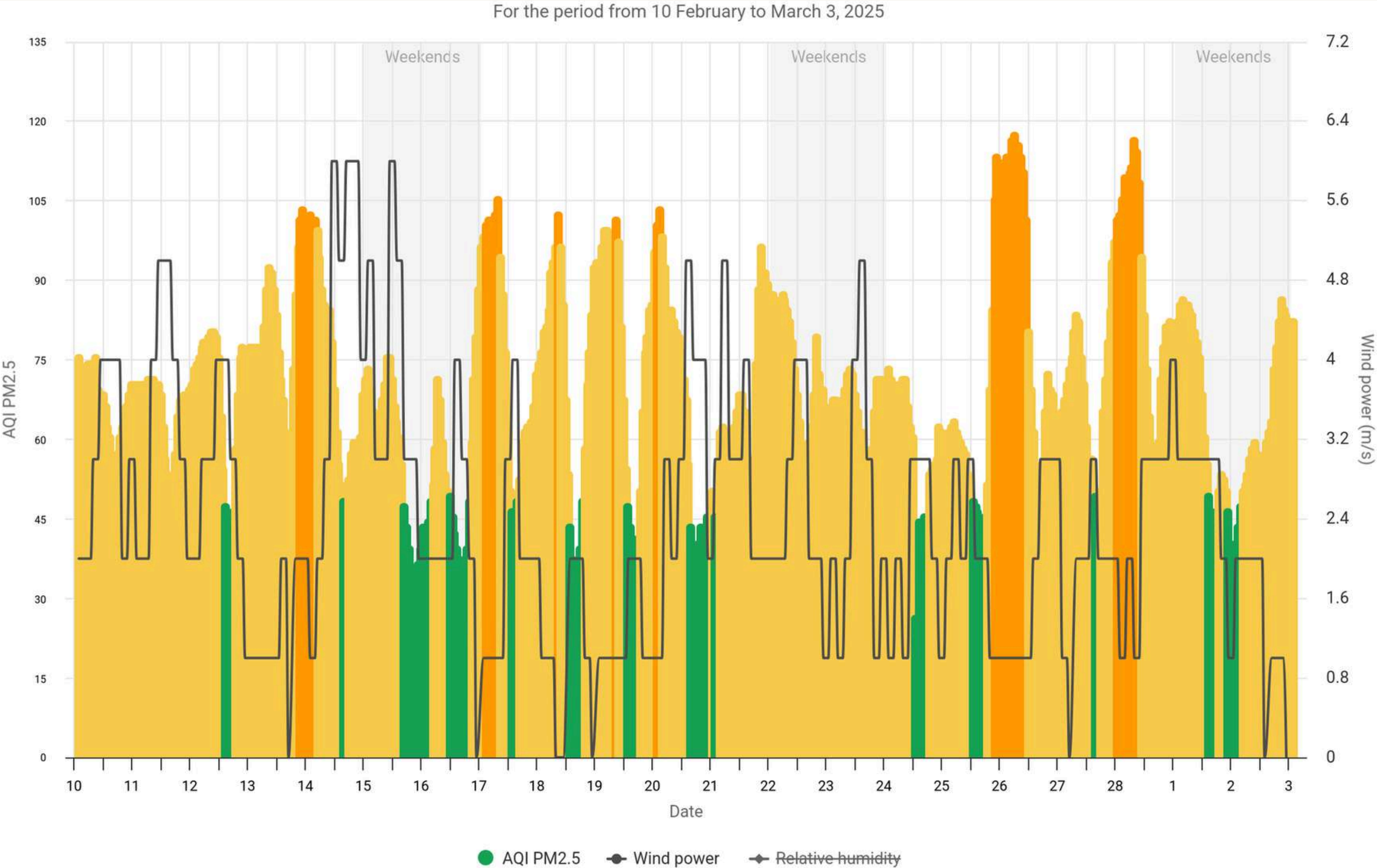
Mining and Processing Plants



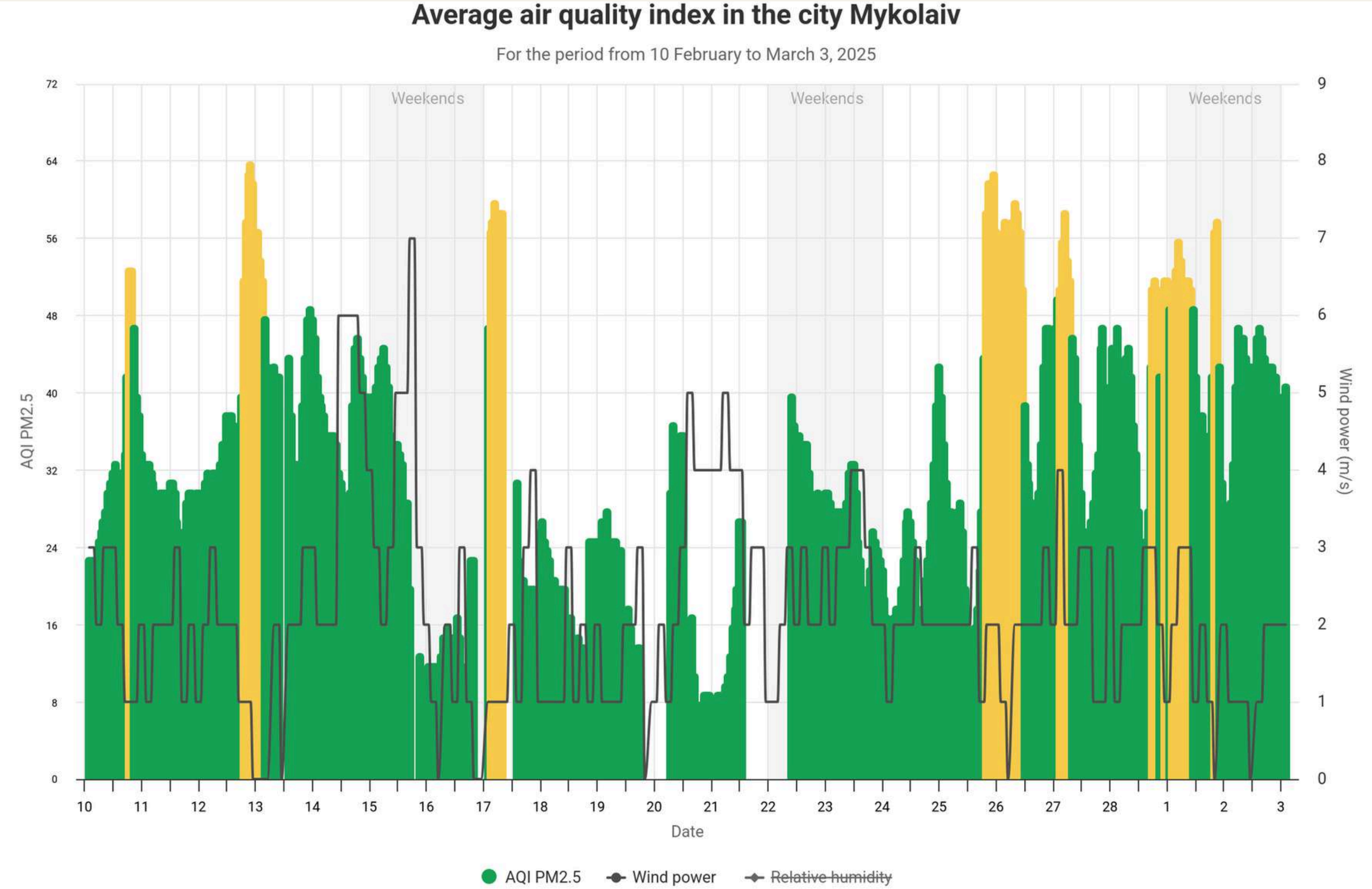
Rudomine LLC



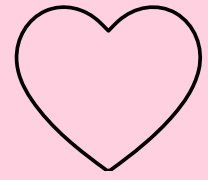
AVERAGE AIR QUALITY INDEX IN KRYVYI RIH



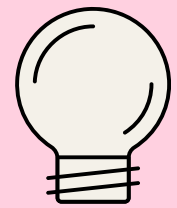
AVERAGE AIR QUALITY INDEX IN MYKOLAIV



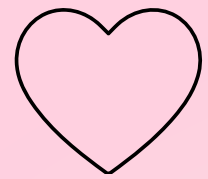
SOLUTION



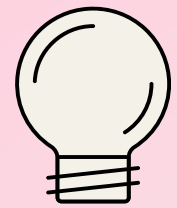
Coalition of public organisations
“Stop poisoning Kryvyi Rih”.



Mobile application that reports on
air quality in real time.



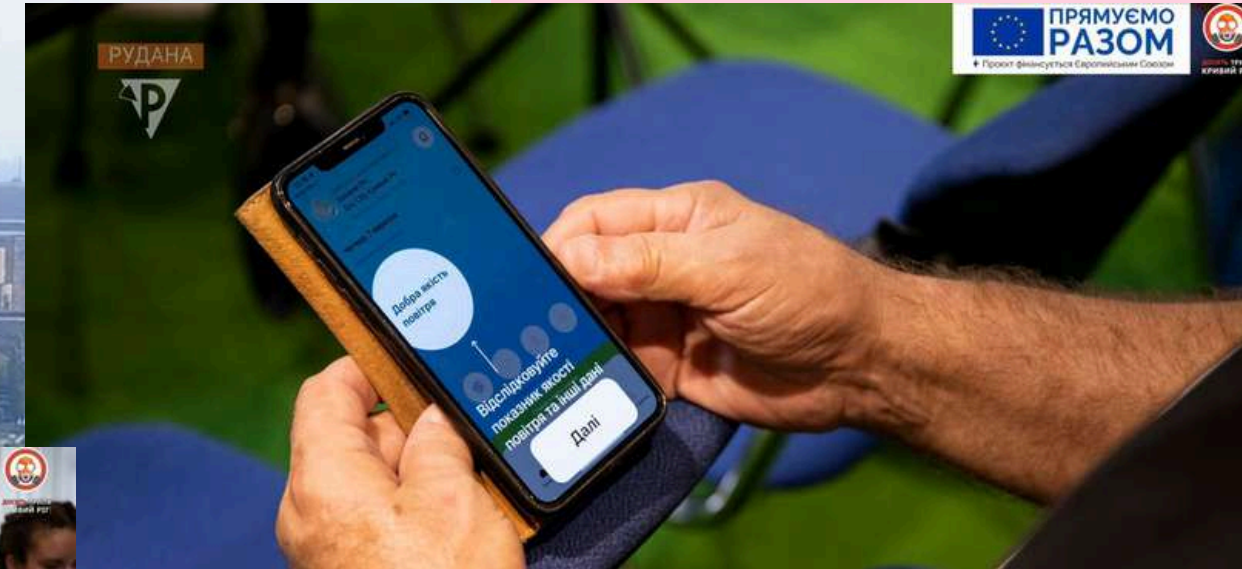
The Eco Dome startup project.



The city's enterprises changed
equipment, developed and
implemented dust removal
measures.



Implemented projects for
landscaping the city.



I HANK YOU FOR
ATTENTION!