SUSTAINABLE DEVELOPMENT GOAL NO. 14 «LIFE BELOW WATER»

Marine ecosystems are among the least noticeable in everyday human life,
yet they are one of the most important components of the biosphere. They regulate the climate,
ensure oxygen balance, support biodiversity, and serve as a source of resources for billions of people.

In the 21st century, oceans and seas have come under increasing anthropogenic pressure: plastic pollution,
overfishing, rising water temperatures, degradation of coastal zones, and the consequences of climate change
are shaping a new environmental reality.

For Ukraine in 2025, the issue of marine ecosystem preservation is particularly important in the context of the Black Sea,
which is simultaneously an ecological system, an economic resource, and a space of security.

In these conditions, universities play a key role in research, monitoring, and the development of scientific understanding of marine processes.

In 2025, V. N. Karazin Kharkiv National University continued implementing
Sustainable Development Goal No. 14 “Life Below Water” through:

- scientific research of aquatic systems;
- interdisciplinary projects;
- educational programs;
- international cooperation.

For Karazin University, marine ecosystems are part of a global life system, where local actions have planetary consequences.

RESEARCH ON AQUATIC AND COASTAL ECOSYSTEMS

In 2025, the university continued scientific research related to marine and coastal ecosystems.

Main areas included:

- the state of Black Sea aquatic ecosystems;
- biodiversity of marine organisms;
- the impact of climate change on marine systems;
- studies of coastal zones.

These studies aim to understand long-term changes in marine ecosystems.

ENVIRONMENTAL CONDITION OF THE BLACK SEA

In 2025, special attention was given to the environmental condition of the Black Sea as a key regional water ecosystem.

The following issues were examined:

- water pollution levels;
- impact of industrial and urban wastewater;
- changes in biodiversity.

The Black Sea is considered a sensitive ecosystem requiring systematic monitoring.

ANTHROPOGENIC IMPACT ON MARINE SYSTEMS

In 2025, the university continued studying the impact of human activity on marine ecosystems.

Main factors included:

- plastic pollution;
- industrial and domestic waste;
- intensive use of coastal areas;
- transport pressure;
- consequences of military actions.

Analysis of these factors allows assessment of the scale of environmental risks.





EDUCATION IN MARINE ECOLOGY

In 2025, the university continued integrating marine ecology into educational programs.

Students studied:

- marine ecology;
- environmental safety of aquatic systems;
- climate impacts on oceans;
- sustainable development of coastal areas.

Education is aimed at fostering environmental responsibility toward water resources.

INTERDISCIPLINARY RESEARCH ON MARINE SYSTEMS

In 2025, Karazin University continued interdisciplinary research combining biology, geography, ecology, and climatology.

Main directions included:

- modeling of marine processes;
- analysis of environmental risks;
- assessment of climate impacts;
- study of land–sea interactions.

This approach allows marine ecosystems to be viewed as complex integrated systems.

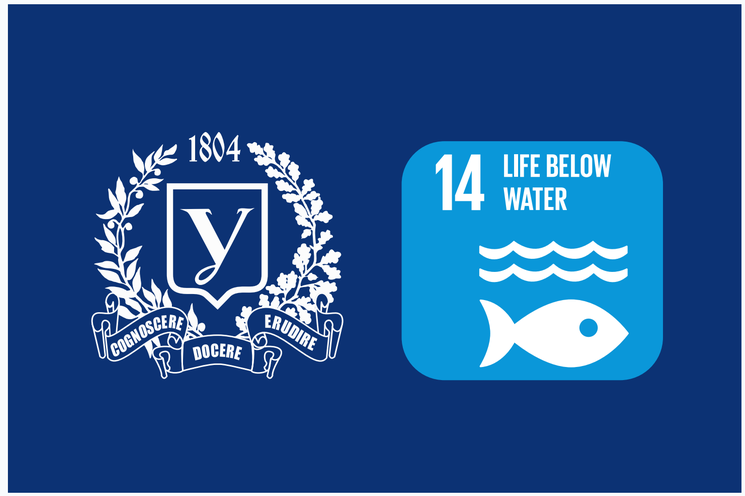
INTERNATIONAL COOPERATION IN MARINE ECOLOGY

In 2025, the university continued participation in international scientific initiatives.

Main directions included:

- exchange of environmental data;
- integration into international scientific networks.

Marine ecosystems are considered a global common heritage of humanity.



ENVIRONMENTAL AWARENESS AND PROTECTION OF WATER ENVIRONMENTS

In 2025, the university continued awareness-raising activities in the field of water resource protection.

Activities included:

- environmental lectures;
- student projects;
- popular science events.

An understanding is being formed that marine ecosystems are vulnerable and require responsible stewardship.

CONCLUSIONS

In 2025, V. N. Karazin Kharkiv National University continued implementing Sustainable Development Goal No. 14 “Life Below Water” through:

- research on aquatic systems;
- educational programs;
- interdisciplinary studies;
- international cooperation;
- development of environmental awareness.

The university views marine ecosystems as an integral part of the global ecological balance. In this context, the preservation of oceans and seas represents a sign of deep human responsibility toward nature and future generations.