

# Model of transnational cooperation of local authorities for the protection of lakes.

**Interreg**  
Baltic Sea Region



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SUSTAINABLE WATERS

Lakes connect

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## 1. INTRODUCTION

Understanding the importance of environmental protection on a global scale, especially lakes as key water resources, local authorities and scientists from different countries have undertaken a joint initiative. Their goal is the effective protection and sustainable management of these valuable ecosystems to ensure their long-term preservation for future generations.

Developing and disseminating standards, as well as creating a model communication network between entities interested in solutions to reduce the impact of pollution on the quality of inland waters, based on scientific knowledge, is a task facing the modern world.

The project "Building networking hub for units interested in lakes protection in Baltic Sea tourist regions Lakes connect" is an initiative carried out in partnership, which includes:

**The Analytical Expert Center**, being one of the research groups of the Biological and Chemical Research Center of the University of Warsaw. It is a research and scientific center that conducts advanced research of great scientific significance, the results of which are used for the development of new technologies in the fields of energy, analytics, pharmaceuticals, medicine, biotechnology, new materials, environmental protection, and civilizational heritage. It brings together the most talented young scientists and an experienced scientific staff. In the project, it acts as the project leader.

**Latvian partner - Latvian Institute of Aquatic Ecology** - is an institute engaged in basic and applied research in the field of ecology and environmental problems in the ecosystems of the Baltic Sea and freshwater bodies. It has extensive expertise, including in marine environmental monitoring, seasonal cycles of saltwater plankton and benthic communities, invasive species, remote sensing ecotoxicology, and pollution (including microplastics).

**Lithuanian partner - Chamber of Commerce, Industry, and Crafts in Telšiai** - is an institution responsible for raising awareness among decision-makers in the context of environmental pollution. The Chamber's staff has knowledge and experience in microplastic pollution and utilizing the potential gained during the implementation of the Interreg Baltic Sea Region Fanplesstic-Sea project. The Lithuanian Chamber of Commerce has a well-developed network of cooperation with enterprises, government institutions, educational institutions, and non-governmental organizations.

Two entities representing local authorities also participate in the Lakes connect project, which also constitute a target group: the Foundation for the Protection of the Great Masurian Lakes (Poland) and the Gulbene Municipality (Latvia).

**The Foundation for the Protection of the Great Masurian Lakes** is a non-governmental organization acting on behalf and for the benefit of local communities. It brings together 23 cities and municipalities from the region.

**Gulbene Municipality** is located in the northeastern part of Latvia and covers 13 villages and the administrative territory of the city of Gulbene. The tasks of local authorities primarily involve cooperation with scientists on lake pollution, identifying current issues in water pollution, exchanging good practices between countries in terms of local authority cooperation with the scientific community, and sharing knowledge.

## 2. OBJECTIVES OF THE LAKES CONNECT PROJECT

The Lakes connect project aims to achieve several goals, the most important of which are:

- 1.** Creating a model of transnational cooperation between local authorities to improve the level of lake protection;
- 2.** Establishing a communication center for units interested in lake protection;
- 3.** Raising knowledge and awareness about lake pollution.

## 2.1 Lakes connect as an example of successful transnational cooperation

The Lakes connect project, which has supra-regional significance, is an example of successful cooperation among individuals with knowledge and experience, whose common goal is the protection of lakes and education in this area.

Inviting scientific units with knowledge and experience, as well as entities established to protect natural resources, including the Great Masurian Lakes region, draws attention to another problem and attempts to join forces for a common goal.

Due to the differences in the functioning and nature of cooperation between research institutions and local authorities in various countries, including the identification of lake pollution by microplastics and anthropogenic pressure indicators such as total nitrogen, phosphorus, and chloride ions diagnosed in early spring and autumn, indicating the inflow of sewage from agriculture and human activities. Given the received diagnosis, international cooperation and the exchange of experiences are so valuable and allow finding a recipe to stop the gradual destruction of the natural environment.

Joint actions within this project will ensure the possibility of learning from other regions experiencing similar challenges. This will prevent duplication of efforts and optimize costs, and is essential to meet common problems and improve lake water management in tourist regions. The fundamental benefit of joint cross-border partnership is the possibility of exchanging knowledge, experience, and ready, tested solutions among partners. But that's not all: cooperation with a foreign partner significantly increases the potential and reach of the project, and established international contacts can easily be turned into networks of cooperation for subsequent projects.

Thanks to the project implementation, we managed to:

- ❑ Expand the network of national and international contacts - we gained new perspectives of cooperation, access to others' experiences, and a fresh look at our problem;
- ❑ Through organized meetings and conferences, we drew special attention to the lack of unified legal tools available for use by local governments and government units responsible for maintaining the cleanliness of inland waters;

- ❑ We gained access to solutions successfully applied in Europe;
- ❑ Together with partners, we are developing new solutions and can test them in our own area;
- ❑ Through broadly understood education in various forms, we could educate and raise society in the spirit of respect for the natural environment - our environment;
- ❑ We highlighted the occurrence of pollution such as microplastics and high parameters of anthropogenic pressure indicators on the Great Masurian Lakes route, indicating pollution from agriculture and human activities, promoting our region/city/municipality.

## **2.2 The Importance of Lake Protection in a Transnational Context**

In recent decades, there has been a growing awareness of the necessity to protect the natural environment and undertake pro-ecological actions. In the face of the escalating climate crisis and environmental degradation, designing and implementing ecological initiatives have become not only a moral obligation but also a key element of sustainable economic development.

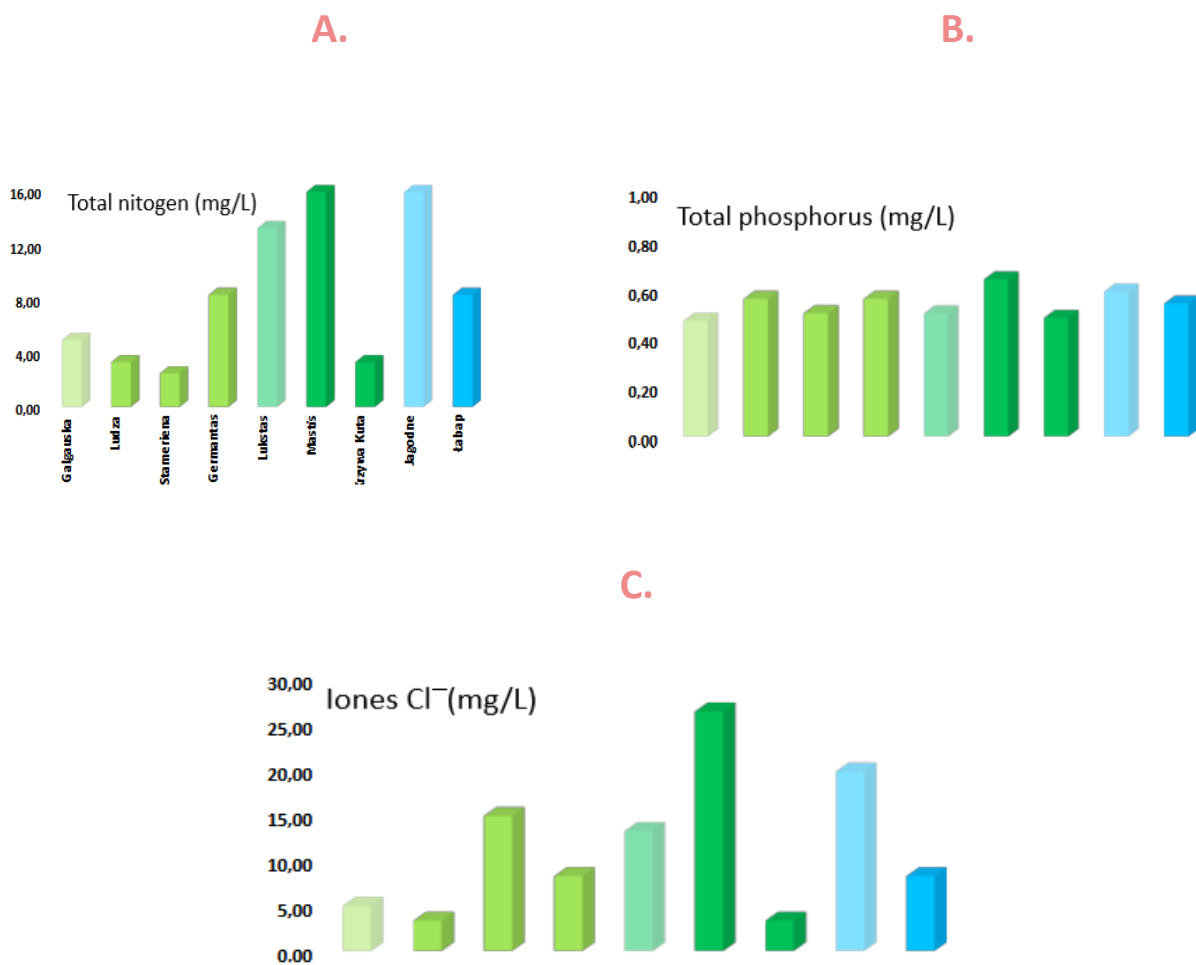
One of the main factors driving the internationalization of environmental policy actions is the increasing interdependence of negative changes in natural resources, which have begun to take on a global character. To effectively curb this process, member states have set the goal of developing common solutions to address environmental risks. This manifests in varying degrees of uniformity in the areas of law, economy, policy, technology, culture, and ideas, as well as in seeking common solutions.

The importance of lake protection in sustainable development is immense. Nowadays, in addition to the functional uses of water reservoirs, their natural and social significance is also appreciated. Lakes improve the water balance in the immediate surroundings, increase surface retention, and stabilize groundwater levels. In this way, they improve water-soil conditions and create a specific local climate with increased humidity. Their role in enhancing biodiversity should also be emphasized.

At the same time, lakes and their surroundings are attractive locations for tourism and recreation. The Masuria region has always been and continues to be a tourist attraction, which leads to an increased influx of tourists who eagerly spend their leisure time on the water. Sailing remains a popular form of relaxation. Lakes connect

### 2.3 Overview of Major Threats

In addition to the diagnosed problem of microplastics in the seas, there is also the issue of their presence in lakes, as confirmed by studies conducted on three water reservoirs in each of the three countries participating in the project. Additionally, samples were also taken to examine total nitrogen, phosphorus, and chloride ions.



**Figure 1.** Average concentrations of total (A) nitrogen, (B) total phosphorus and (C) chloride ions as indicators of anthropopressure on lakes included in the pilot study in Poland, Lithuania and Latvia.

Adding to the challenges are the threats posed by pollution from yachts, which were diagnosed during the update of the strategic document - "Master Plan for the Land of the Great Masurian Lakes 2023-2027". After adding up all the berths in the ports and assuming that 50% of the yachts camp outside them, we get the following summary.

<b>Total number of yachts in ports (pcs.)</b>	<b>9 334</b>
Number of yachts camping in the wild (pcs)	4 667
<b>Total number of yachts (pcs.)</b>	<b>14 001</b>
Average number of people on a yacht	5
<b>Total number of sailors</b>	<b>70 005</b>

During the peak season it is very difficult to find a free place in the port. Analyzing this summary, it can be said that a city of 70,000 people sails on the Great Masurian Lakes during the peak season. In most ports there is access to sanitary facilities. There are also toilets on most yachts.

Two types of toilets are commonly used:

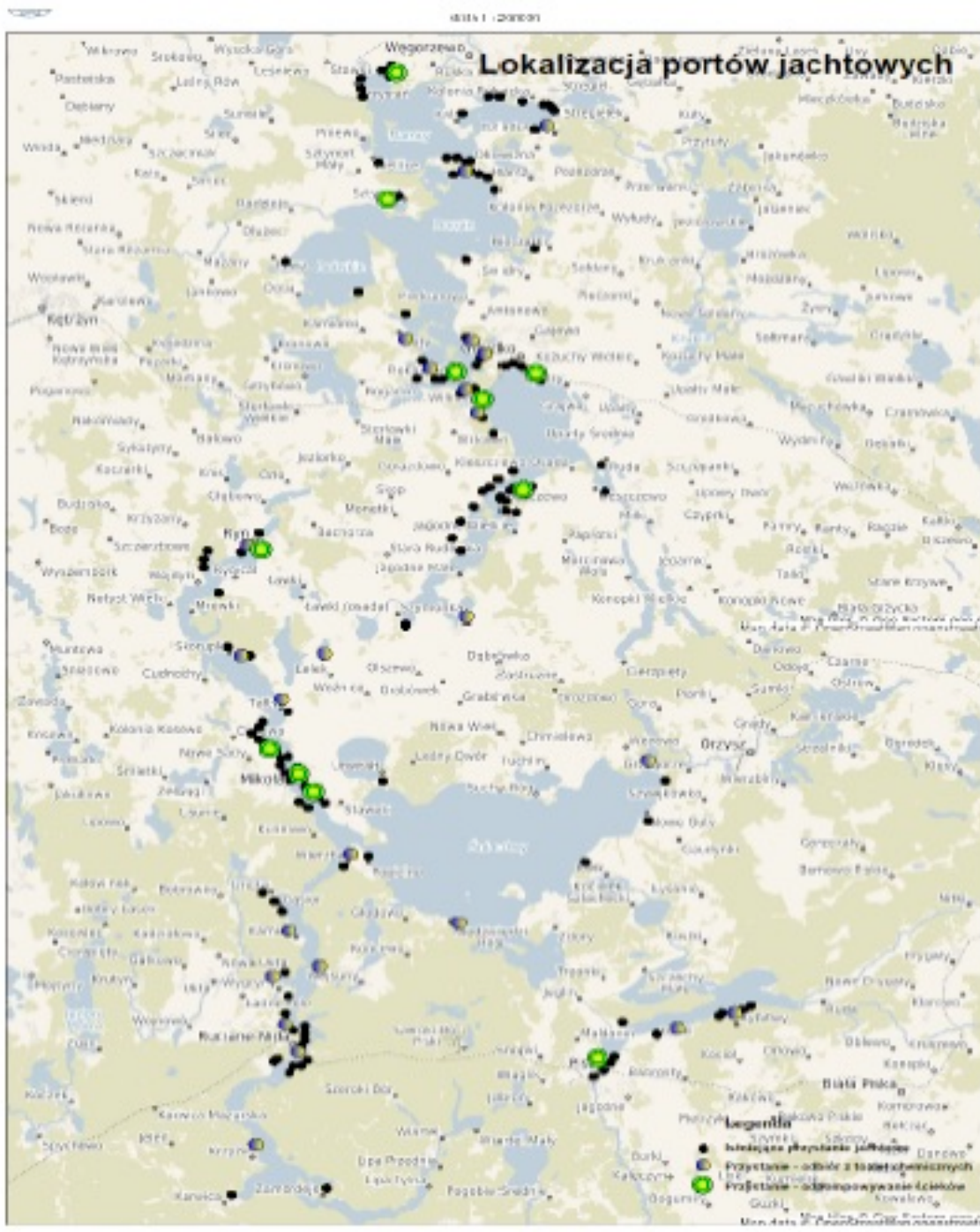
- On smaller sailing yachts, chemical toilets are used.
- Larger yachts, hausboats, are equipped with normal sanitary cabins, while sewage is collected in tanks that sometimes have several hundred liters in volume and are adapted for navigation in marine waters. Out of 161 inventoried ports on the Great Mazurian Lakes Route, only 33 ports have places for emptying chemical toilets.

Where is this waste water discharged then? Boaters who have minimal respect for the environment empty this waste water on shore. If they empty them in a place where the ground water level is more than 1.5 meters below the land Environmental pollution will be low. But carrying these rather heavy containers ashore is a nuisance. It is easier to pour them directly into the lake, and unfortunately this is how it is most often done, or to open the valve. Toilets with a tank can only be emptied in ports that are equipped with a sewage suction and

pump. There are only 12 ports on the entire Great Mazurian Lakes route equipped with such pumps. The location of these ports is shown on the map attached below. There are too few



of them to serve all the yachts sailing on the Mazurian Lakes. How are these tanks emptied?



**Picture:** Location of yacht ports. **Black points** - existing yacht marinas  
**Blue-yellow points** - marinas with chemical toilet disposal, **Green points** - marinas with sewage pumping facilities

During the development of the Master Plan update, we held several meetings with marina managers, during which we identified an additional problem. In the ports, most of the large vessels are owned by charter companies, which manage from a few to dozens of vessels.



The exchange of crews usually takes place on Saturdays, which gives the employees of the charter companies only a few hours to clean and wash the yachts. As a result, they do not have time to travel several kilometers to empty the sewage tanks. As a result, wastewater is directly discharged into the lake by opening the lower valve. Although significant progress has been made in treating municipal and industrial wastewater in our region, the problem of collecting wastewater from yachts still remains unsolved. This is a significant challenge, given the number of tourists using sailing and motoryachts.

Each sewage tank has a valve at the bottom with which the sewage is drained to zero before the winter period. When the tank fills up and there is no port nearby with a self-priming pump, the easiest way is to open the valve and drain the wastewater into the lake. This is done frequently. With a small number of such pumps, there are never queues to empty the tank.

The situation in Partner counties looks different, those counties have less exploited lakes. However, they can still learn from problems experienced in Poland.

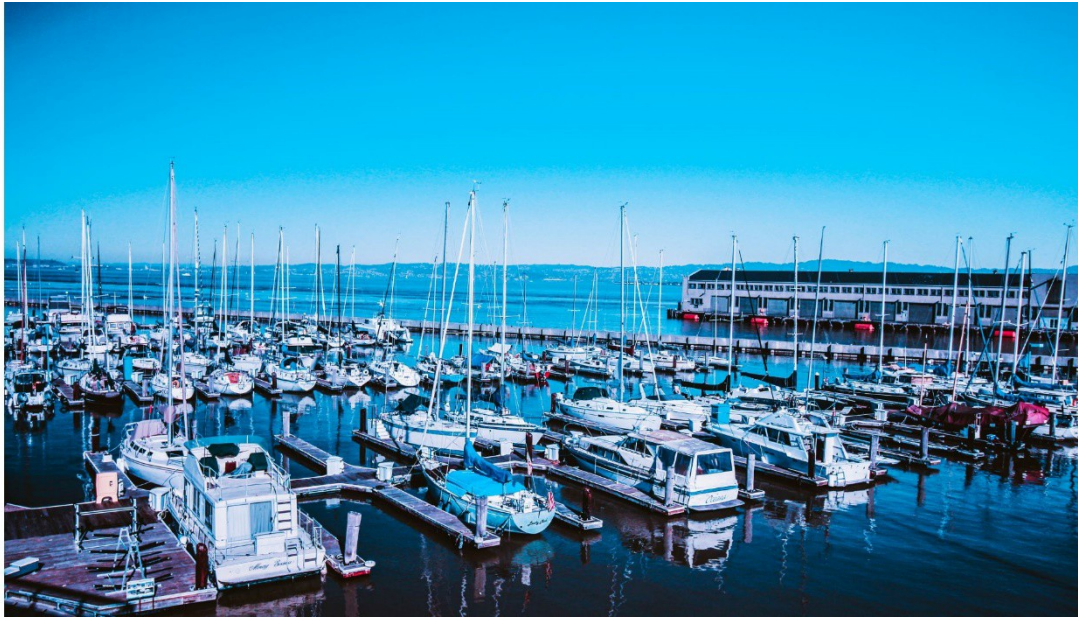
Key lake tourism location in Latvia:

- **Lake Pinteja** (reference lake) is surrounded by forest lands and agricultural lands, and several households. We do not consider tourism impact there.

- **Lake Galgauskas** is another reference lakes chosen in the project. The lake is surrounded by forest lands and a national road (P 27 Smiltene - Gulbene) runs along the N side. Important microplastics source is this road, but there aren't significant recreation areas around the lake, neither we consider tourism impact there.

- **Lake Stāmeriena** is the smallest of the study lakes chosen for the project. On the N shore of the lake is village Stāmeriena (155 inhabitants 2021) and on the S shore of the lake is village of Vecstāmeriena (249 inhabitants in 2021). The lake is surrounded by agricultural lands and runoff from agricultural land is considered an important source of diffuse pollution to this lake. One of the major sources of linear pollution are roads. Stāmeriena lake is affected by the road V420 Stāmeriena – Pļavnieki - Zeltaleja running from the N to S along the W shore to the lake.

We consider tourism impact there since around the lake there are several well-equipped recreation areas, bathing areas and a beach with a boat dock. In the summer time it is possible to rent SUP boards, catamarans and boats.



**Source:**  
Canva

There is a walking trail around lake Stāmeriena and on the E shore of the lake there is a historical trail of the Stāmeriena castle. The castle attracts tourists throughout the season and it is an important cultural place for concerts, exhibitions and private events.



**Source:** <https://www.atrastalatvija.lv/en/objekts/stameriena-castle/>

57.229288, 26.893609 - recreation area "Lāčauss"

57.21741315633147, 26.90056619596331 - Stāmeriena castle and park, tourists attraction point

57.21628616252723, 26.89262685736246 - church, tourists attraction point

57.21628616252723, 26.89262685736246 - boat dock and recreation spot, bathing place

57.21628616252723, 26.89262685736246 - a narrow-gauge railway station, tourists attraction point

57°14'09.9"N 26°53'11.6"E - view platform near lake, tourists attraction point

57°12'52.7"N 26°53'54.5"E - recreation area "Sonāte"

57°13'01.2"N 26°54'01.2"E - summer cafe "Valle"

- **Ludza Lake** is the biggest lake from the chosen lakes for the project. The lake is surrounded by overground agricultural lands and the N and E shores of the lake are swampy. On the S shore of the Ludza lake are located villages Namsadi and Skolas (36 inhabitants), as well as the area of land used for agriculture is increasing. A road of local importance (V388 Alūksne-Kalniena-Gulbene) passes by 200 m away from the lake. There are two recreation complexes (Zušu nams and Vonadziņi) and one swimming area (belonging to Vonadziņi) by the shore of Lake Ludza. These recreation complexes are located on the S shore of the lake and are considered to be some of the lake polluting points. The recreation area Vonadziņi has biological wastewater treatment facility, which injects 5 - 20 m<sup>3</sup>/24 h of treated wastewater into the lake through the county ditch (VVD s.a.). Lake Ludza is categorized as public lake and tourism is obvious.

57°15'10.7"N 26°53'43.9"E - recreation area "Vonadziņi" and bathing place

57°15'03.1"N 26°53'26.7"E - recreation area "Zušu nams"

57°14'57.0"N 26°52'43.1"E - motopark raceway "Dimanti"

The city and municipality of Telšiai, Lithuania, face serious environmental challenges due to the pollution of Lake Mastis with microplastics, nitrogen, phosphorus, and chlorides. Historically, Lake Mastis has been significantly polluted by industrial activities and sewage from individual homes. Additionally, stormwater runoff is discharged directly into the lake. It also poses polluting floating islands on styrofoam rafts. Lakes Germantas and Lukstas are also located in the Telšiai region. Lake Germantas, situated in a forested, protected landscape area and surrounded by a small population, features several beaches popular with local tourists. It serves as a reference lake due to its relatively pristine condition. Lake Lukstas, located in a protected natural area, has a beach with infrastructure and hosts several large, nationally known summer festivals.

#### **Key lake tourism location in Lithuania:**

Lakes Mastis

Luokės g. 10A, Telšiai, 87150 Telšių r. sav.,

disco: Telšės g. 16, Telšiai, 87150 Telšių r. sav.,

playground: Vilniaus g. 10 Telšiai 87150, Telšiai, 87150 Telšių r. sav.,

#### **Lake Germantas:**

The lake Germantas, reference lake, is surrounded by forest. There aren't significant recreation areas around the lake, however is surrounded by a small population, features several beaches popular with local tourists. It serves as a reference lake due to its relatively pristine condition.

#### **Lake Lukstas:**

160, 88324 Didysis Palūkstis, LitwaUngurių g. 9, Graužai, Varnių sen., Telšių r. sav, 88316

Graužai, Litwa Jonikaičiai, 88316 Varniai, Litwa

To get this problem under control, many institutions must work together:

- ✓ Governmental;
- ✓ Ministry of Climate I Environment;
- ✓ Provincial government;
- ✓ Municipalities;
- ✓ District and provincial environmental inspector;
- ✓ Inland Navigation;
- ✓ Foundation for the Protection of the Great Masurian Lakes.

As a first step, an information and promotional campaign should be conducted among marina managers and charter companies. It must be brought about that the obligation to empty sewage from yachts should be transferred to yachtmen and motorboat sailors. Charter contracts should be structured this way, so that before the boat is ready the tanks are to be emptied. Those chartering the equipment when handing over the equipment should settle the bills for the performance of this service.

In many countries, yachts with sewage tanks have sealed drain valves.

In our reality, this can be done by sanitary services. Breaking such a seal in Switzerland results in a fine of several thousand euros.

Sanitary inspections need to be introduced especially on Saturdays when crews are exchanged.

To be strict with water equipment users, conditions must be created for them to easily empty their tanks. The position for the discharge of sewage from portable toilets should be in every port. Self-priming pumps should be in ports suitable for mooring larger yachts, that is, in about 50 ports.

## 2.4 Overview of challenges in local government cooperation on lake protection

Cooperation between local authorities on lake protection can face a variety of challenges that can impede effective action and the realization of common goals.

Here are some of the main challenges in this regard:

- ❑ **Lack of unified approach and coordination:** Each local government unit may have its own priorities, goals and strategies for lake protection, which can lead to a lack of a unified approach. Cooperation can be hampered by a lack of coordination between different levels of local government and by competition for resources and funding.
- ❑ **Division of powers and jurisdiction:** In many cases, responsibility for lake protection is divided among various local government units, government agencies and other institutions. As a result, there may be ambiguity about the division of powers and jurisdiction, which can lead to conflicts and delays in decision-making and in the implementation of activities.
- ❑ **Political differences and local interests:** Political differences and local interests can affect cooperation between local authorities on lake protection. Political conflicts and divisions can impede joint decision-making and implementation of water conservation measures.
- ❑ **Limited financial resources:** Many local government units have limited financial resources to implement lake protection programs and related activities. Lack of sufficient resources can be a serious obstacle to effective cooperation and efficient lake management.
- ❑ **Lack of technical capacity and expertise:** Some local government units may have limited technical capacity and expertise in lake protection, which can make it difficult to plan, implement and monitor water conservation efforts.
- ❑ **Communication challenges:** Effective cooperation among local authorities requires effective communication and information sharing. Communication between different local government units, government institutions, NGOs and the local community can be a challenge.



Solving these challenges requires the commitment and cooperation of all stakeholders, clear governance structures, effective coordination mechanisms, and adequate financial and technical support. Creating partnerships and trust-building between different local government units is key to achieving success in protecting lakes and managing their resources sustainably.

### **3. AWARENESS-BUILDING**

#### **3.1 Awareness of the role of municipal government in local development and pro-development activity of local authorities.**

The administrative division of Poland into provinces, districts and municipalities also determines the competencies vested in the various local government entities. It is the local government that is largely responsible for planning and coordinating the activities of local environment and climate protection. In turn, awareness of the identified challenges, local environmental development, is an important determinant of whether these challenges will be addressed.

For, on the one hand, there are specific framework regulations that indicate the issues that local governments should deal with, but on the other hand, there are specific regulations in operation that narrow many of the framework powers. For several years, there has been an opinion that the scope of activities that can be decided by local governments independently is being significantly reduced, which is related, among other things, to changes in local government revenues and expenditures.

Development challenges require the involvement of the entire community and a variety of instruments.

According to the European Charter of Local Self-Government: in general, responsibility for public affairs should be borne primarily by those authorities that are closest to the citizens. It is the residents who are the center of the local government's activities, so all projects undertaken are focused on meeting their needs. Municipal authorities are responsible for local development and increasingly have a very conscious influence on the socio-economic situation of the region.

Environmental protection is one of the most urgent tasks facing mankind in the near future. In order to effectively curb the observed negative climate change, it is necessary to take



multidirectional pro-ecological measures.

A sustainable development process should take into account care for the natural environment, improve the quality of discharged wastewater or take measures to increase the use of renewable energy sources.

### **3.2 Openness to cooperation, willingness to build partnerships, creation of social capital.**

The cornerstone in the pursuit of global sustainability should be partnerships involving the public sector, business and NGOs.

There are many types and definitions of partnership, but their common denominator boils down to viewing this initiative as a common tool of people, institutions and organizations to solve specific social problems.

Individual attempts to solve problems often prove ineffective. Building partnerships provides a fresh perspective by combining the competencies and capabilities that characterize each sector. The main goal of partnerships in social development is to strategically combine efforts for a diagnosed problem.

Collaboration, partnership building and creating social capital are key elements in creating positive social change. Acting together, we can achieve more than acting alone. By building partnerships, we can leverage diverse skills, resources and perspectives, allowing us to take more comprehensive action and achieve greater impact.

Creating social capital is about building trust, relationships and community, which is crucial for social, economic and environmental development. Therefore, by relying on cooperation and partnership, and investing in knowledge and development, we can create lasting and positive changes that will benefit everyone.

### **3.3 Education and awareness raising on lake protection**

Due to the increasing degradation of the natural environment caused by anthropogenic factors, the meaning of the term "ecology" has expanded to include actions taken to protect

the environment and issues related to human-nature relations. The growth of interest in environmental problems and the emergence of numerous discussions on environmental and ecological risks have resulted in the assimilation of these issues and their dissemination. Man is an integral and inseparable part of the natural environment, so any of his activities has an impact on the environment - it can be positive or negative. Therefore, it is important to make the public aware of this impact and to promote methods of operating in ways that are least harmful to the environment and its resources. It is also important to emphasize the need for a forward-looking approach to assessing and understanding the consequences of our actions.

Education and raising awareness of lake conservation are key elements in ensuring the long-term preservation of these valuable ecosystems. Through education, whether of kindergarten children, elementary school students, high school students, and the local community or through ongoing campaigns for tourists as well, we can raise awareness of the importance of lakes as a source of drinking water, habitat for diverse life forms, and a place for recreation and tourism.

As part of environmental education on lake protection, the Great Mazurian Lakes Protection Foundation promotes and encourages responsible use of the lakes through actions such as annual clean-up campaigns, organizing environmental cruises, holding workshops, lectures, conferences and information campaigns on the lakes. All this creates public awareness, exchange of experiences and readiness to take action to preserve these valuable ecosystems. In addition, cooperation with local authorities, social organizations and the private sector lead to effective action to protect the lakes through joint initiatives, conservation programs or joint events.

Through education in its broadest sense in various forms, we can educate and educate the public in the spirit of respect for the environment - our environment. We have established a transnational educational network through several key initiatives. This network is essential for implementing the relevant legal acts or solutions that allow for a better understanding of the scale and importance of the inland water environment.

- ✓ **Information-Educational Banners:** In each of the three countries participating in the project, we have placed information-educational banners around the diagnosed lakes. These banners increase public awareness about the state and importance of inland

waters, which is crucial for understanding and supporting new legal regulations concerning water environment protection;

- ❑ **Discussion Panels and Environmental Conferences:** We actively share our experiences through discussion panels and environmental conferences. These events provide platforms for experts, scientists, policymakers, and community representatives to exchange knowledge, discuss challenges, and identify legal needs. The insights gained from these discussions can influence the creation of effective and evidence-based legal acts;
- ❑ **Youth Exchanges, Erasmus Projects, and Educational Events:** We utilize youth exchanges, Erasmus projects, and similar initiatives to educate and disseminate the results of the project. These educational activities promote international cooperation and understanding, raising awareness among young people about the importance of protecting the water environment. For example, on March 20, 2024, at the Hydrological Station in Pilchach, we hosted youth from Turkey, Greece, and Poland (<https://interreg-baltic.eu/project-posts/lakes-connect/in-the-plastic-world-educational-activities-for-youth-as-part-of-lakes-connect/>, <https://jeziora.com.pl/2024/03/22/ekologiczne-dzialania-w-ramach-lakes-connect/>). Such events are practical demonstrations of the transnational educational network in action, showing how different countries can collaborate to protect inland waters. These young participants, as future leaders and decision-makers, will be better equipped to implement and support relevant legal acts. Additionally, these events serve as models and inspirations for legislators, demonstrating that effective transnational actions are possible;
- ❑ **Knowledge Network and Contact Database:** An integral part of our transnational educational network is a comprehensive contact database of institutions (<https://jeziora.com.pl/baza-kontaktow/>). Each of these institutions possesses
- ❑ knowledge and resources they are ready to share within the framework of cooperation. This database facilitates collaboration and resource sharing, further supporting the implementation of relevant legal acts;

- ❑ **Capacity Building for Decision-Makers and Future Leaders:** Through education and exchange of experiences, we prepare young people and current decision-makers to better understand the legal and environmental needs. This preparation ensures they are more competent and ready to create and support effective legal acts in the future. These combined efforts contribute significantly to the creation and sustainability of the transnational educational network necessary for the implementation of the relevant legal acts or solutions.
- ❑ **Black points** - existing yacht marinas
- ❑ **Blue-yellow points** - marinas with chemical toilet disposal;
- ❑ **Green points** - marinas with sewage pumping facilities.



Information and educational board at Sztynorcki lake, near Lake Labap (Poland)





Information and educational board at Mastis in Telsia lake (Lithuania)



Information and educational board in Gulbene ( Latvia)

## 4. RECOMMENDATIONS AND SUGGESTIONS FOR LOCAL AUTHORITIES

### 4.1 Creating the structured framework

The structured framework is a comprehensive approach designed to unify the efforts of various stakeholders, including municipalities, NGOs, and research institutions, in addressing environmental challenges.

The framework includes:

- **Integrated Approach:** By bringing together different stakeholders, the framework ensures a holistic approach to problem-solving. Each group contributes its unique perspectives, resources, and skills, leading to more comprehensive and effective solutions.
- **Common Goals and Activities:** The framework facilitates the establishment of shared objectives and coordinated activities among stakeholders. This alignment helps avoid the dispersion of efforts and duplication of activities, enhancing the effectiveness of initiatives.
- **Resource Optimization:** Collaboration allows for the better utilization of available human and technical resources, ensuring they are used more efficiently. - **Knowledge and Technology Exchange:** The framework promotes international and cross-sectoral cooperation, fostering the exchange of knowledge, technology, and best practices. This encourages the adaptation of proven methods to address diagnosed problems.
- **Increased Accountability and Transparency:** Regular reporting and monitoring of progress foster better control and evaluation of the initiatives, leading to increased accountability and transparency. We added to the model the scheme of the cooperation process.

## 4.2 Creating network structures

In an era of high management complexity, every organization must cooperate with many other entities, building around itself a network of dependencies of an economic and social nature. Within the various forms of cooperation and partnership, network organizations (structures) play a large role. The very concept of networks originates from the sphere of human relations and can be defined as "a system of connections between people or organizational units, formed for the purpose of exchanging information, ideas, ideas and resources."

An excellent example of cooperation, creating a network between local authorities and a non-governmental entity to improve the condition of the lakes, is the Foundation for the Protection of the Great Masurian Lakes, based in Gizycko. It is a voluntary, purposeful organization a non-governmental organization of the region's local governments, operating since 1991. The great importance of the lakes in the overall natural resources of the region contributed to the establishment of the Foundation. A strategic document, the Master Plan for the Great Masurian Lakes Region, was developed in 1993 on behalf of the Great Masurian Lakes Protection Foundation. The document covered a wide range of environmental issues and is treated as a strategic planning document and an instrument for obtaining funds for investments in broad environmental protection. It is updated every prospect. Thus was formed a structure bringing together 23 local governments along the route of the Great Masurian Lakes, which in order to meet social needs (construction of sewerage networks, water supply systems, sewage treatment plants) and, above all, to protect the precious natural environment has been going on continuously for more than 30 years.

Network structures - networking - is a structure based on mutual relations between local governments. Local governments in the Foundation participate in establishing long-term cooperation for environmental protection, including the protection of the Great Mazurian Lakes. In addition, the scope of activities is expanding every year and increasing its scope of strategic activities. At the same time, which is extremely important from the point of view of



the creation of network structures themselves, they are based on social ties. It can be said that it is for the satisfaction of social needs that network structures grow, thanks to them they last or transform into competitive groups.

### 4.3 Initiating Partnerships - Establishing Cooperation

The partnership model requires all parties involved - institutions and organizations - to be willing to cooperate, which manifests itself in clearly structured agreements that define the rights and obligations of individual partners and establish some mutually acceptable framework for action and response when new problem situations arise. Such an agreement is a means that ensures the full involvement, in predetermined forms, of all parties to the partnership in the implementation of individual tasks.

Partnerships are also people and organizations from neighboring regions and countries, representing the public, private and social or scientific sectors, who engage in a voluntary, mutually beneficial, innovative relationship to address common social goals by pooling their resources and knowledge. Another definition states that: "a partnership is an association between organizations of two or more sectors that commit to working together to undertake projects for sustainable development. Such a partnership involves sharing risks and benefits, regularly monitoring the relationship and adjusting the partnership arrangement as necessary." Collaboration is a process involving individual actors or entire groups of actors interested in solving a jointly perceived development field (issue), understood in positive or negative terms.

Not all interactions that occur between organizations can be called cooperation. Five key determinants of this process can be distinguished:

- ✓ **Cooperation creates interdependence between actors** - the sovereignty of actors is a condition for initiating cooperation, as it translates into the ability to make independent decisions, voluntary commitment and mutual respect. The price for

- ✓ achieving the benefits created by cooperation, which would not be created by individual initiatives, is the partial reduction of autonomy and the need to accept dependence on other entities. When entering into cooperation, organizations should first of all determine the reasons for and the extent of their expectations and needs from each other.
- ✓ **Joint decisions and actions** arise as a result of the clash of different perspectives on a common development field (issue) or perception of a problem. Individual partners perceive different aspects of the issue to which cooperation relates, have a variety of resources and tools for action, and report different interests and expectations related to it, so the direct benefit for all actors involved in the process under discussion is the possibility of multilateral analysis of the subject of cooperation. Respecting differing attitudes and decisions is a prerequisite for reaching agreement.
- ✓ **Decisions are made jointly** - the responsibility for reaching an agreement rests with all the entities that make up the partnership, so the participation of none of them can be rejected or minimized. This applies both to the selection of issues to be addressed by the cooperation and to the agreement of its principles, norms and structures.
- ✓ **The cooperating entities assume direct collective responsibility** for the agreed course of action - during the process of cooperation, a network of partnerships is formed between the entities, which is constantly changing depending on the direction of its development.
- ✓ **Cooperation is a process** - it should be viewed in dynamic terms, not as a state of an organizational or formal legal nature. It is characterized by continuous development and variability.

A well-functioning partnership makes it possible not only to achieve planned goals, but also to achieve so-called added value, i.e. positive yet unplanned effects.

These effects may include:

- ✓ Innovation;
- ✓ Credibility and increased prestige of partners in local communities; - Sustainable development of localities;
- ✓ Increased activity and civic awareness of local residents;
- ✓ Participation in transnational projects, e.g. Lithuania-Poland, Mecklenburg-Vorpommern/Brandenburg-Poland, Brandenburg Poland, Czech Republic Poland,

Central Europe and the Baltic Sea Region;

✓Participation in interregional projects, e.g., INTERACT, URBACT, ESPON and Interreg Europe, Interreg BSR.

#### **4.4 Knowledge, experience, technology**

Cooperation with local authorities, authorities of neighboring regions or countries can bring numerous benefits, such as mutual support, exchange of knowledge and experience, and increasing the effectiveness of lake protection and sustainable management activities waters. All participants in this process complement each other, and through cooperation there is a synergy effect and added value, impossible to achieve with actions taken individually.

Cooperation is an integral part of the process of building a culture of social dialogue and public participation, and is constantly evolving and adapting to the needs of all participants. One such example is the established contact database called Lakes Pollution Stakeholder platform - as a model of cooperation between local governments.

<https://jeziora.com.pl/baza-kontaktow/>

This is an excellent tool that can significantly improve operations and increase efficiency. The database, is also a faster way to reach local governments, institutions with which we would like to cooperate, which is especially important when solving local problems, not only in the field of environmental protection.

It is also a place where we can find information about sources of funding and find a list of contacts to funding institutions:

- modern economy;
- eastern poland;
- Phoenix;
- National plan to rebuild and enhance resilience.

<https://programrita.org/projekty-partnerskie/>

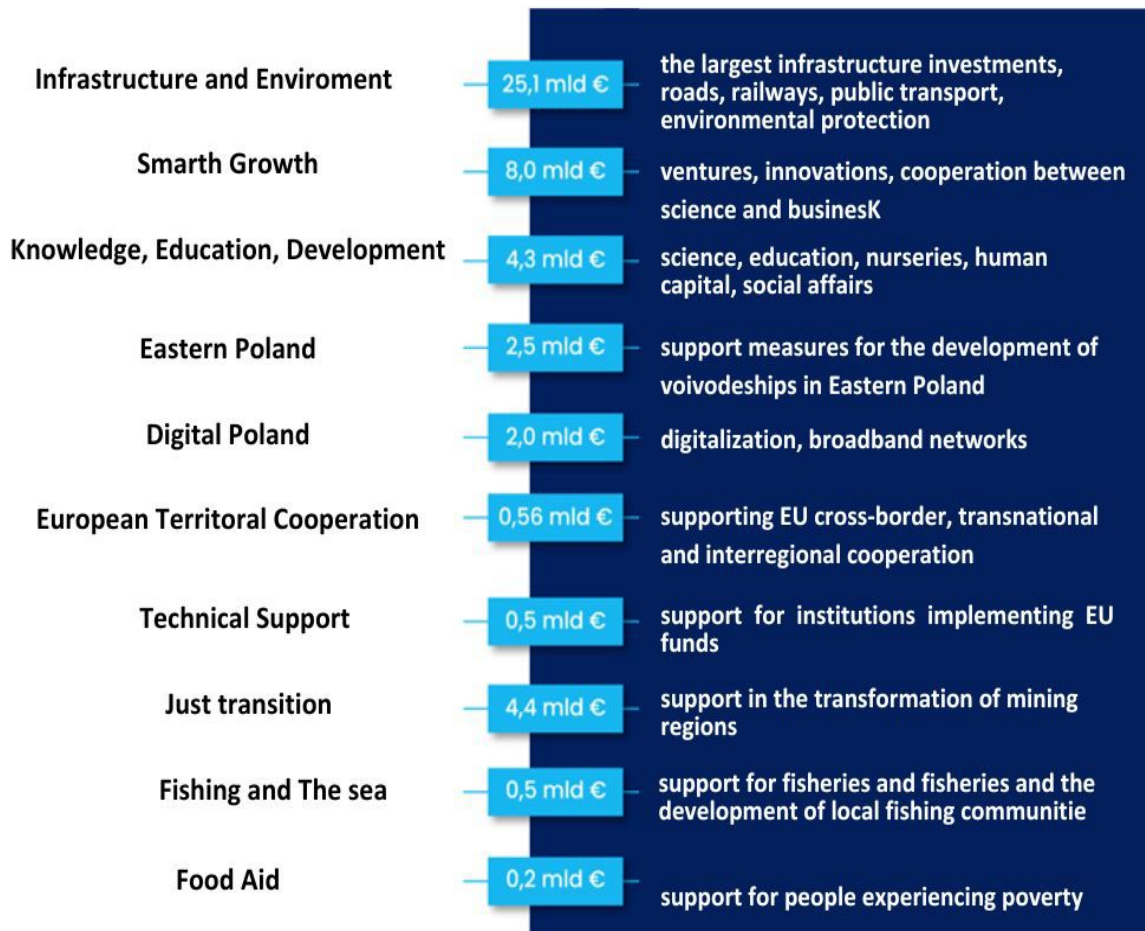
<https://nowedotacjeunijne.eu/programy-2021-2027/fundusze-europejskie-dla-nowoczesnej-gospodarki/>

<https://nowedotacjeunijne.eu/#start>

<https://interreg.eu/about-interreg/>

In the new perspective of the EU funds budget for 2021-2027, Poland will receive the largest funds since the beginning of its membership in the European Union. In total, we will receive €76 billion, including €72.2 billion in cohesion policy funds and €3.8 billion from the Fair Transition Fund - this gives us a total of more than PLN 770 billion.

The distribution of funds will follow the approximate methodology that was used in the 2014-2020 budget, that is, about 60% of EU funds will be distributed at the national level and the remaining 40% will go to the marshals of the 16 provinces for Regional Programs.



**Table 1:** Tools and strategies to support cooperation in lake conservation

Exchange of knowledge and experience	Tools and technologies to support collaboration
<p>Organize meetings, seminars or workshops where representatives from different regions and countries, institutions and organizations can share their experiences in lake protection, share best practices and discuss effective water management strategies.</p>	<p>Online collaboration tools, such as project management platforms, cloud-based collaboration systems and video conferencing tools, facilitate communication, coordination of activities and cooperation between different entities, regardless of location.</p>
<p>Carry out joint research projects, including in transnational programs on lake ecology in the broadest sense, water quality, the impact of climate change or the effectiveness of conservation measures. Collaboration on research can lead to a better understanding of lake issues and the development of more effective lake management strategies.</p>	<p>Technologies that enable real-time monitoring of lake conditions and water quality using sensors, probes, GIS maps of monitoring stations and telemetry systems. These tools provide up-to-the-minute data that is crucial for water management decisions.</p> <p>Mobile applications can be used to collect field data, monitor the condition of lakes, report on environmental problems, inform local communities and conduct educational activities on lake protection.</p>
<p>Exchange and internship programs: to enable local and regional government representatives and regional authorities and environmental professionals to participate in exchange, internship or training programs in other countries to gain new skills, experiences and perspectives.</p>	<p>Web portals or online platforms, communication, meetings, exchanges.</p>

#### 4.5 Recommendation to local authorities

One of the key recommendations for local authorities is to hold regular meetings, conferences or workshops that allow the exchange of ideas, experiences and best practices among different local authorities. It is also important to establish clear structures for cooperation, including appointing appropriate coordinators or teams to manage joint projects together,

and regularly monitoring progress and evaluating the effectiveness of collaborative efforts. In addition, it is worth investing in building relationships between local authorities through active communication and trust-building.

#### **4.6 Good practices in establishing cooperation**

Good practices for establishing and maintaining cooperation include:

- ❑ **Identify Common Goals and Objectives:** The foundation of effective cooperation is the identification of shared goals. By aligning the objectives of local authorities and their neighboring regions, the collaboration can be more focused and purpose-driven.
- ❑ **Strengthen Mutual Support:** Cooperation between local authorities and neighboring regions can foster mutual support. This includes sharing resources, providing technical and administrative assistance, and supporting each other in policy implementation and enforcement.
- ❑ **Facilitate Knowledge and Experience Exchange:** Regular exchange of knowledge and experiences among local authorities is crucial. This can be achieved through workshops, seminars, conferences, and collaborative research projects. Such exchanges enhance the collective expertise and lead to innovative solutions.
- ❑ **Promote Effective Communication Channels:** Establishing robust communication channels ensures that information flows smoothly among all local authorities involved. This includes setting up joint communication platforms, regular meetings, and transparent reporting mechanisms.
- ❑ **Increase Effectiveness of Protection Measures:** By working together, local authorities can implement more effective protection and sustainable management measures. Collaborative actions in lake protection and water management, for instance, can result in more significant environmental benefits than isolated efforts.

- ✓ Create Synergies and Added Value: Cooperation between local authorities creates synergies that amplify the impact of individual actions. When local authorities collaborate, they can leverage each other's strengths, share resources, and achieve outcomes that would be impossible independently.
  
- 🔗 Adapt to Evolving Needs: The process of cooperation should be dynamic and adaptable. Continuous evolution and adaptation to the needs of all local authorities involved ensure that the cooperation remains relevant and effective. This involves regularly reviewing and updating strategies and practices based on feedback and changing circumstances.
  
- 🔗 Build a Culture of Social Dialogue and Participation: Encouraging a culture of social dialogue and participation among local authorities is vital. Involving community members, local organizations, and other stakeholders in the decision-making process fosters a sense of ownership and accountability. It also enhances the legitimacy and acceptance of the measures implemented.

These best practices aim to create a robust framework for cooperation between local authorities that maximizes the benefits for all parties involved. They help in building trust, enhancing efficiency, and achieving sustainable outcomes in environmental management and other areas of common interest.

### **Summary of good practices presented in Figure 1:**

1. Communication and Cooperation:



- Developing open and regular communication between local authorities; - Establish clear objectives for cooperation and joint projects.

2. Community Involvement:

- Involving local communities in decision-making and conservation efforts;
- Organizing education and information campaigns targeting residents and tourists.

3. Monitoring and evaluation:

- Introducing a system for monitoring the effects of joint activities;
- regularly evaluating progress and adapting strategies to changing conditions.

## 5. CONCLUSIONS

The model facilitates transnational political dialogue through the following activities and steps:

- ✓ **Standardized Data Collection and Analysis:** By standardizing methods for data collection and analysis, the model enables the comparison of environmental conditions across different countries. This shared data helps identify global trends and local issues, raising awareness and urgency among policymakers.
- ✓ **Joint Projects and Initiatives:** Collaborative projects between countries ensure that efforts are aligned and resources are pooled together for greater impact. For example, a joint initiative might involve coordinated efforts to reduce pollution in a shared water body, leveraging expertise and resources from multiple countries.
- ✓ **Policy Harmonization:** The model encourages the development of uniform environmental regulations and minimum standards for lake protection. This harmonization can facilitate compliance and enforcement across borders.
- ✓ **Monitoring and Compliance Mechanisms:** Establishing mechanisms for ongoing monitoring and compliance ensures that all participating countries adhere to agreed-upon standards and practices, leading to more effective pollution prevention and control.

In practice, the model will unite local authorities from various countries through the following steps:

- Foundation Support: on the use of the model, informing people about it, completing the list of available contacts to stakeholders who might be interested in using the model.
- The Foundation Board will also discuss new aspects that may arise as a result of stakeholder contact.

## **6. SUMMARY**

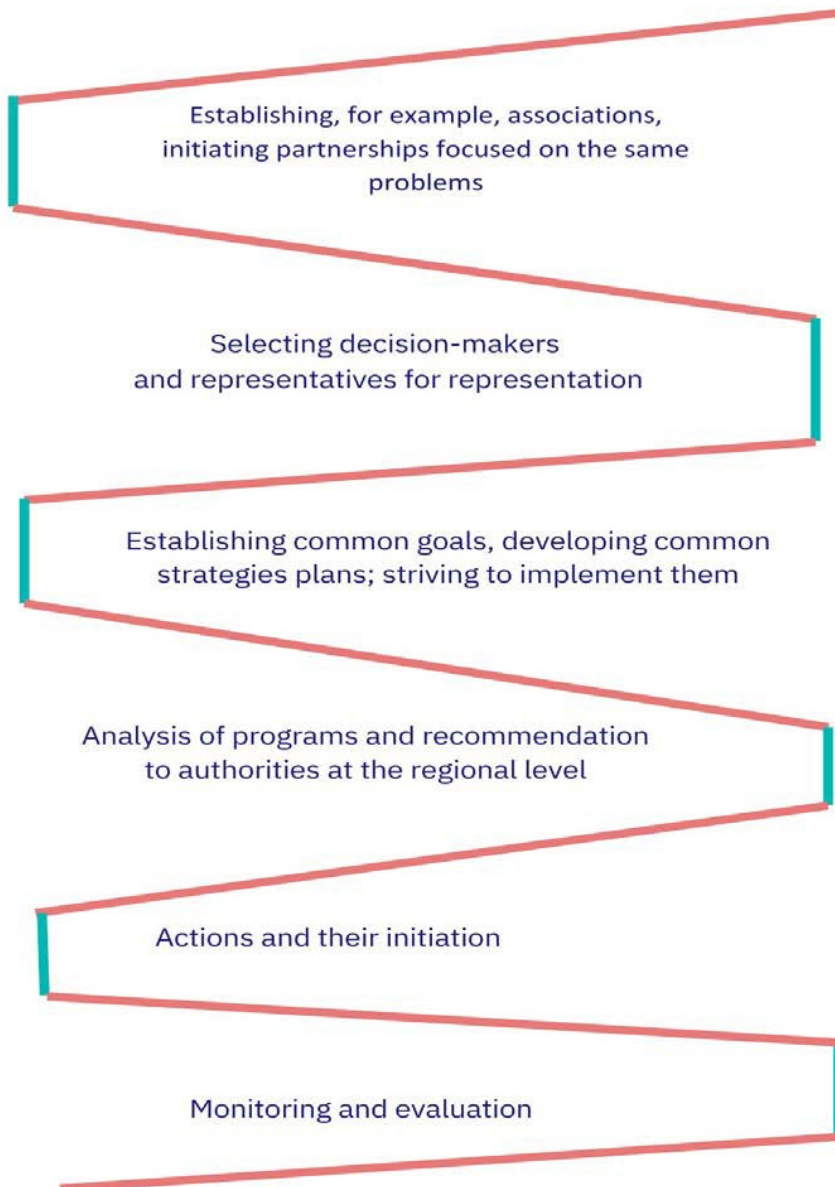
Protection of lakes and water resources Water conservation is a complex challenge that requires cooperation at various levels - from local communities to institutions with an international scope. The Lakes connect project and the involvement of of diverse partners and stakeholders are a key element iin building effective management and protection of our priceless water resources.

Although model is presented as a simplified diagram, it does not cover all the relevant aspects that can be considered crucial in achieving success in collaboration. Creating partnerships relationships, both within the public sector, as well as private and social sectors, is an important course of action in the context of specific goals and objectives.

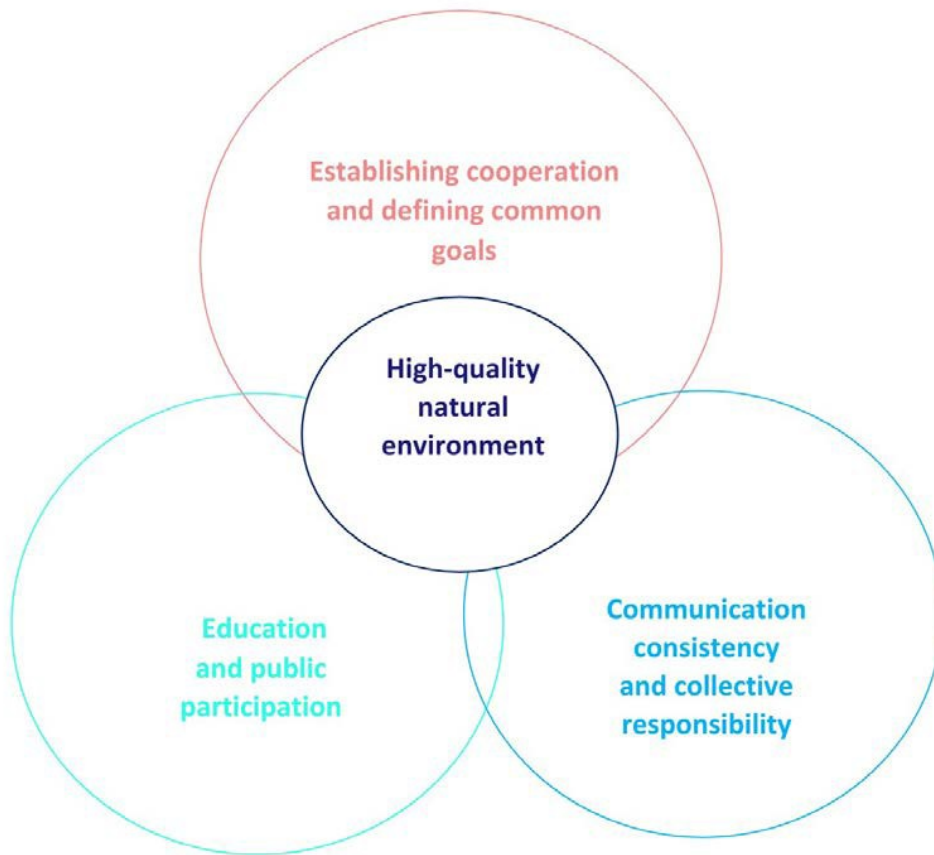
Cooperation should be multidimensional, constantly evolving and adapting to changing conditions.

It is worth emphasize that cooperation always increases the effectiveness of actions taken, laying a solid foundation for sustainable and sustainable management of water resources. .

**Diagram 1:** Diagram of the model of cooperation between local authorities.



**Figure 1:** Goals of cooperation between local authorities





[www.interreg-baltic.eu/project/lakes-connect](http://www.interreg-baltic.eu/project/lakes-connect)

