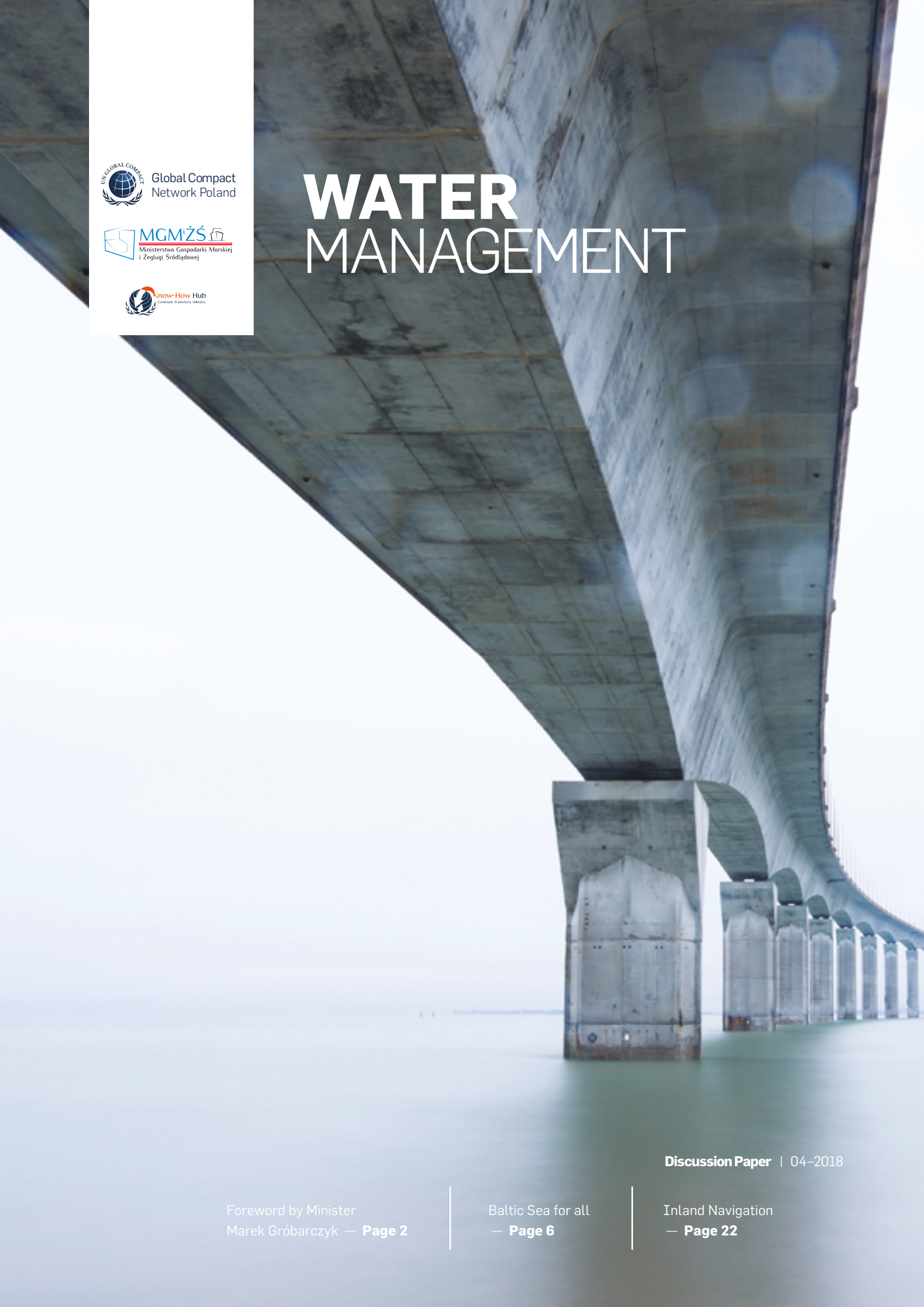
Global Compact Network Poland

MGMiŻŚ Ministerstwo Gospodarki Morskiej i Żeglugi Śródlądowej

Know-How Hub Centrum Transferu Wiedzy

WATER MANAGEMENT



Discussion Paper | 04–2018

(…) It is time to change how we value and manage water. Last week, the High-Level Panel on Water delivered its outcome report "Making every drop count: an agenda for water action". Their work is deep, serious and inspiring for us all. The United Nations stands ready to help countries to implement the Panel's recommendations, including by promoting policy dialogue, exchanging best practices, raising awareness and forging partnerships.

Member States have also asked me to prepare an action plan for the Water Decade, with the support of UN-Water — which I am determined to strengthen. My plan sets forth three core objectives. First, to transform our silo-based approach to water supply, sanitation, water management and disaster risk reduction to better tackle water stress, combat climate change and enhance resilience.

Second, to align existing water and sanitation programmes and projects with the 2030 Agenda. Third, to generate the political will for strengthened cooperation and partnerships. I look forward to implementing this plan. The growing water crisis should be much higher on the world's radar. Let us work collectively towards a more sustainable world and an action-packed Decade of "Water for Sustainable Development".

Antonio Guterres,
UN Secretary-General

22 March 2018 - Secretary-General, at Launch of International Decade for Action, Supports New Approaches for Better Managing Fresh Water Scarcity

FOREWORD

BY MINISTER MAREK GRÓBARCZYK
MINISTRY OF MARITIME ECONOMY AND INLAND NAVIGATION

AS A RESULT OF THE NEW POLICY TOWARDS THE INLAND NAVIGATION SECTOR, THE STRATEGIC PLANS AND PROJECTS PROVIDE FOR THE DEVELOPMENT OF INLAND WATERWAYS AND REACTIVATION OF THE IDEA OF USING RIVERS WHILE MAINTAINING THEIR NATURAL VALUES. THIS APPROACH HAS BEEN CONFIRMED IN THE FIRST PLACE IN THE ASSUMPTIONS FOR THE PLANS FOR THE DEVELOPMENT OF INLAND WATERWAYS IN POLAND IN THE YEARS 2016-2020 WITH A PERSPECTIVE UP TO 2030, AS ADOPTED IN JUNE, 2016, THE AGN CONVENTION RATIFIED IN JANUARY, 2017, THE STRATEGY FOR THE RESPONSIBLE DEVELOPMENT OF FEBRUARY, 2017, AND THE TRANSPORT DEVELOPMENT STRATEGY WHICH WILL BE UPDATED IN 2018.

Activities initiated by the Ministry of Maritime Economy and Inland Navigation on the strategy level were directly accompanied also by individual business initiatives. After many years, regular transport of lignite was restored via inland waterways, including the Gliwice Canal and the upper Oder river, between the port in Gliwice and the heat and power station in Wrocław. 2017 also saw the successful completion of the pilot transport of fertilizers along the Oder Waterway from Kędzierzyn-Koźle to Police as well as the experimental-and-promotional trip with containers along the Vistula river waterway from Gdańsk to Warsaw.

It is probable that in 2019 the construction of the barrage in Malczyce will be finalized. This investment project will protect numerous households, companies and farms against flooding and, at the same time, it will enhance condition of navigation on one of the most crucial stretches of the Oder Waterway. The completion of the Malczyce Barrage at the 200th anniversary of the signing of so-called Bogumin Agreement, which marked the beginning of consistent management of the Oder river, will certainly have symbolic meaning.

Along with business activities and initiatives aimed at overcoming infrastructural backwardness, development plans are made for inland waterways. In a sense, this process takes place in the background but it is of a crucial importance for obtaining data for making decisions concerning modernization of waterways in a manner that takes account of the comprehensive approach based on a reliable multi-variant analysis.

We are developing the Oder Waterway modernization programme together with Port Authority of Szczecin and Świnoujście, which arranged the Oder Waterway Office for the purpose of this task. The digital modelling of the Oder Waterway, as needed

to achieve navigability class IV, has been completed and submitted to consultation in April, 2018. As another result of the work, an initial concept of hydrotechnical structures will be developed, which we expect to be completed at the turn of 2018 and 2019. Studies necessary within the concept of the development of waterway E-40 from Gdańsk to the state boarder with Belarus in Brześć are being carried out by Port Authority of Gdańsk, which intends to present variant solutions for the Vistula river by the end of 2019.

In March, 2018, following the ministry order, work has begun on providing a comprehensive transport analysis aimed at approaching to the answer to the question about the final shape of Poland's transport system, including transport over inland waterways and taking account of the future modernization of the Oder and Vistula waterways. Such a study has never been carried out before. The European Commission has noticed this change in the attitude of Polish Government towards the inland navigation and decided to support the new Polish policy of developing waterways within the Structural Reform Support Program. The first stage of the project to be launched in July, 2018, is the analysis of costs and benefits resulting the modernization of the Oder Waterway.

While working on modernization of waterways, we are already now looking for optimal solutions to issues related to crossing infrastructure - in particular bridges. We are working intensely on solving the issue of the high water level parameter for the Oder river. Establishing a new high navigable water level will be the first result of the modelling of the Oder Waterway to be used in the day-to-day management of the this route; it will affect directly design work carried out by contractors for infrastructure objects that cross waterways as they will have to take into account needs of users of waterways.

We are aware of the magnitude of the challenges we are facing. As of January, 2018, the previously fragmented management of water resources has been brought to a new level: now the complete water management is in the hands of the Ministry of Maritime Economy and Inland Navigation.

We look comprehensively at water related issues addressing subjects connected not only to transport but equally to flood risk and agriculture. However, in the first place we focus on water as the priceless resource the quantity of which in Poland is disturbingly low.

If we want to care for this particular wealth, we need cooperation, education and a serious debate. We are looking forward to fruitful discussion and cooperation towards developing a water management model that meets needs of various stakeholders.

RATIFICATION OF AGN TREATY (EUROPEAN AGREEMENT ON MAIN INLAND WATERWAYS OF INTERNATIONAL IMPORTANCE) IN POLAND IN JANUARY 2017 WAS A REAL MILESTONE ON THE ROAD TO SUSTAINABLE PLANNING AND DEVELOPING OF THE INLAND WATERWAYS.

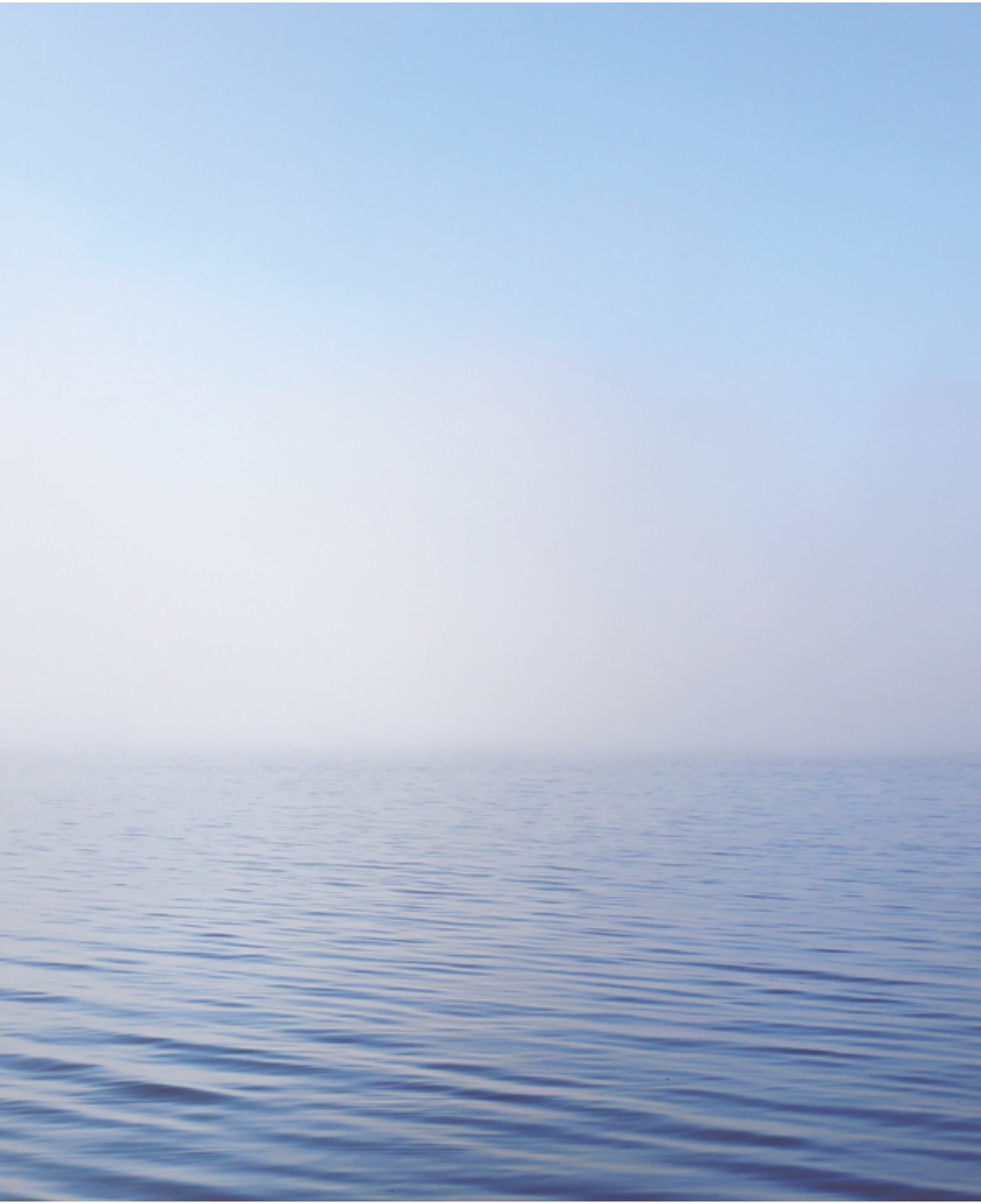
It also stirred a debate on linking water management policies together, to take better care of other important and related issues of maritime transport and port infrastructure, as well as dealing with a serious problem of the scarcity of water in Poland. The Treaty enabled Polish decision-makers to impact international debate on the future of the Baltic region, but also European transportation corridors under TEN-T. The opening statement of Minister Marek Gróbarczyk presents important objectives already accomplished.

The second part of this document presents the starting point of the Water Management program and Global Compact's cooperation with Polish Government on the issue. It consists of an analysis of Mr Jerzy Kwieciński (then the member of the Global Compact Programme Board, and key expert in the reports 'Inland Navigation' and 'Baltic for All', and currently the Minister of Infrastructure and Development), prepared within the framework of the Program. It summarizes a set of detailed reports from 2015 and 2016 focused on the potential of Polish main rivers - Oder and Vistula, and is accompanied with similar analysis of the Baltic Sea as a part of Baltic Initiative.

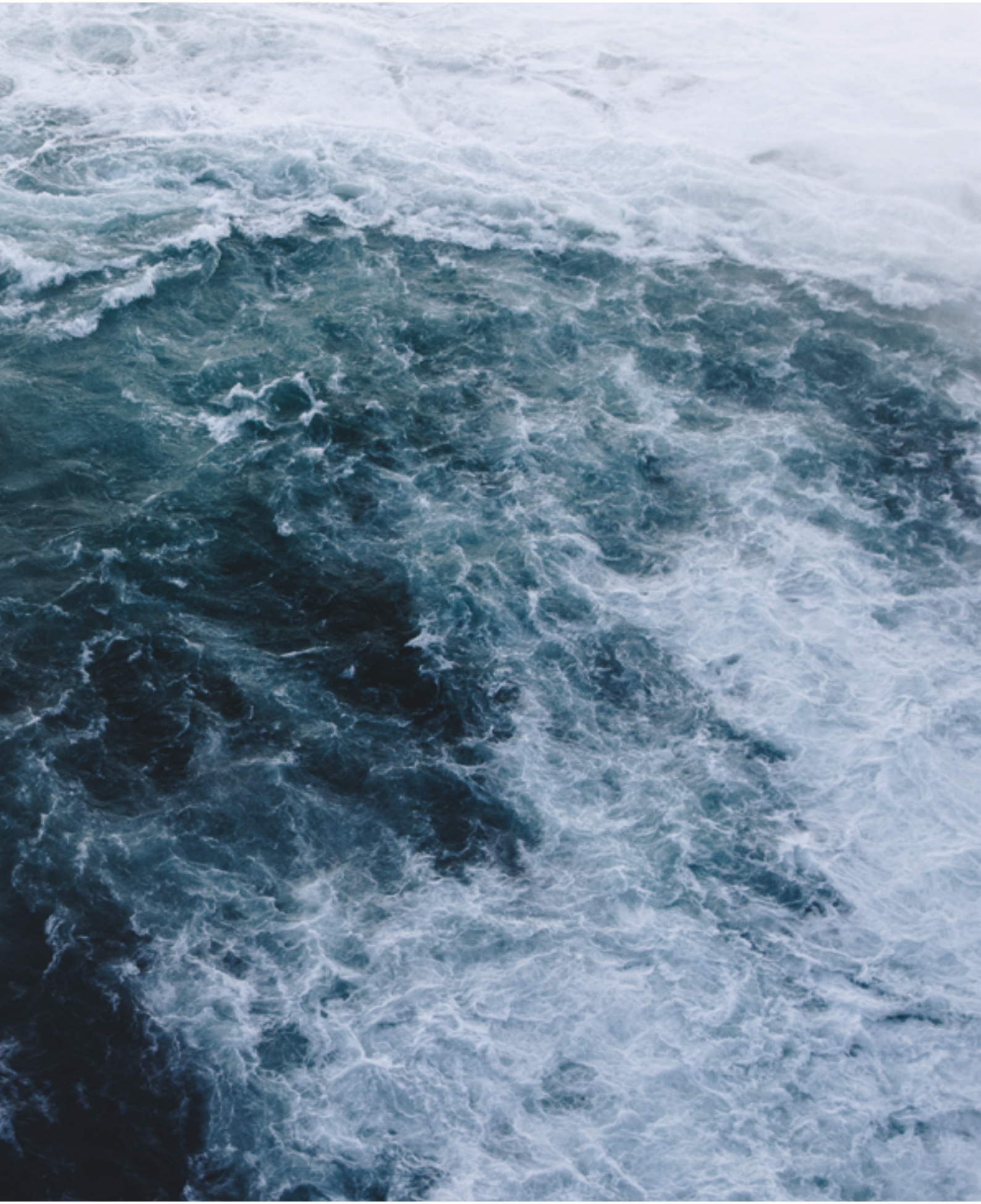
Recommendations from that time, summarized in the following texts, present in synthetic form the enormous challenge but also a real opportunity for sustainable growth and development of Polish regions, which have not taken enough care of their rivers and their sea.

We cordially invite you also to take interest in the full versions of the Reports, accessible in print and on the Global Compact Network Poland webpage. In 2018 we are planning to publish a subsequent document on the issue of water crisis management in Poland with the context of UN Climate Summit (UNFCCC COP 24 in Katowice).

Łukasz Kolano Executive Director
Global Compact Network Poland



BALTIC SEA FOR ALL



BALTIC SEA FOR ALL

Monographed by Dr Jerzy Kwieciński (currently Minister of Investment and Development), on the basis of materials collected in the report "Baltic Sea for All" issued by the Global Compact Network Poland.

THE BALTIC SEA REGION IS ONE OF THE MOST DEVELOPED ECONOMIC AREAS IN THE WORLD, WITH A HIGH LEVEL OF COOPERATION AND INTEGRATION AS WELL AS A HIGH STANDARD AND QUALITY OF LIFE. THE BALTIC REGION INCLUDES NINE COUNTRIES, SO INTERNATIONAL COOPERATION IS ESSENTIAL AND THIS COOPERATION IS ALSO THE SOURCE OF SUCCESS OF THE REGION.

The area has a population of about 85 million people, representing 17% of the total EU population, but generates one third of the total GDP of the European Union. This region represents about 36% of the total EU area, of which largely these are rather areas with difficult climate and with an average level of natural resources. This indicates that the population of the region shows above-average activity and economic efficiency, and that the average level of natural resources at high production requires large amounts of resources to be imported from the outside of the region. The high demand for raw materials and the high production level of exported goods generate a large need for transport.

Geographical conditions mean that the main mode of transport to meet such needs is the sea transport. These features significantly shape the socio-economic relations in the region. It should be stressed that the characteristic feature of trade in the countries of the region is the predominance of trade with the countries that are the closest neighbours (intraregional exchange) and this fact has a significant impact on the traffic flow in the supply chain. Exports to a neighbouring country in the Baltic region often reach 20-35% of the total merchandise exports of the country.

The Baltic Sea is also an exceptional sea. Impeded sea water exchange with the external basins makes it susceptible to contamination. Runoff pollution from land means that environmental activities must be conducted not only on water but also on land - in the area of the whole basin of the Baltic Sea. Given the fact that 99.7% of the Polish area is located in the basin of the Baltic Sea, our country is facing a major challenge of reconciling economic and social development with environmental protection. In the area of regional cohesion and sustainable economic growth for the countries and regions of the Baltic Sea, the main challenge remains in overcoming disparities of development. Although these differences are being reduced, the process of reaching the level of development of the countries and regions of Central - Eastern Europe to the Scandinavian countries and Germany will take more than one generation. On average, the level of development, as measured by GDP per capita, is almost twice as high in the countries and regions of the old Union.

The coming years will also bring the struggle with the effects of the recent economic crisis in Europe, which effects are still felt. Countries of the Baltic Sea itself fared significantly better with the economic crisis, especially if compared to the Southern Europe, but the crisis has seen the release of economic growth. Activities related to the development of the transport network in the Baltic Sea region and the development of innovation should contribute to the improvement of the competitiveness of the whole of the region and the reduction of disparities in development.

A particularly important challenge in the coming years will be to increase innovation combined with reindustrialization (including shipbuilding), which is a key factor for enhancing the competitiveness of the region. In the region we have, at the same time, countries such as Sweden, Denmark, Finland and Germany, which are among the most innovative in Europe and the world, on the other hand, countries like Poland, Latvia and Lithuania, which have a significant innovation gap.

Cooperation within the Baltic Sea, particularly capitalizing on good examples and practices in the transfer of knowledge and cooperation between the science and business sectors, should support bridging this gap. The use of clusters, joint international projects and working with sectors heavily knowledge-based, should lead to more innovative economy, and consequently to the improvement of its competitiveness. In the region, there are very important issues related to the energy security. Ensuring energy supplies and electricity for a growing economy will be an important challenge for the countries of the region. Building and modernization of the energy infrastructure, including connections between countries will also be one of the key challenges and next to the construction of infrastructure for the transport network this will absorb significant financial resources. The effects of climate change are also evident in the Baltic Sea, hence many of the activities will be aimed at counteracting these effects. In this regard, efforts to increase the share of renewable energy sources and increasing the energy efficiency will be a priority. Here too, the Scandinavian countries and Germany will be the perfect model for Poland and Baltic Countries.

For the inhabitants of the region, the development of tourism will be of a great importance. Because of the climate and the need to ensure the provision of attractive services throughout the period of the whole year, maritime tourism, business tourism, medical and health oriented tourism will gain more importance. The Baltic Sea Region also includes the territories belonging to the Russian Federation. On one hand there is cooperation with Russian districts bordering the Baltic Sea, but on the other hand, Russia's imperial aspirations related to the annexation of the Crimea and activities in Ukraine have also resulted in

rising security risks in the Baltic region.

This is very important, because many countries of the region have already forgotten about safety issues and it seemed that peace is durable and given once and for all. This peace has been disturbed and European countries of the Baltic Sea region, particularly those lying closer to Russia, must revise their security policies and rebuild its military potential, which will be important for economic development.

The countries of southern Europe are now flooded with a powerful, illegal influx of immigrants from the areas of North Africa and the Middle East, which are shattered by the war. This process intensifies. It means that not tens of thousands, but who knows if not millions of immigrants will try to break into Europe. Their targets are mostly Scandinavian countries and Germany as countries open to the outsiders. So far, this process has occurred naturally, because the influx of immigrants was controlled and these countries themselves fared with this influx. But the scale of this problem is now increasing exponentially and it will concern not only the south of Europe, but also it touches the Baltic Sea Region. A significant proportion of public investment in the coming years related to the development of the Baltic Sea Region will take place in the Polish regions. Therefore, ensuring the efficient management of these investments and appropriate coordination will be important for the whole region. The role of transport in the economy, especially for the Baltic Sea Region, is obvious and cannot be underestimated. Transport is the bloodstream for production, trade and services in the region and perceived as a separate and very complex sector of the economy which, through the strong cooperation with sub-suppliers of products and services, raw materials, rolling stock and fuel, is an important demand factor of the whole economy. On the other hand, transportation provides the supply side of the market, for the smooth functioning of all markets by commuting workers to jobs (passenger transport), and the supply of raw materials, semi-finished and finished products to the places of their processing and marketing. It is estimated that in the Baltic region a total of about four hundred ports and harbours operate, of which about 130 handle cargo or passengers, and thus have an impact on the transport system in the region.

In other cases they are fishing ports or touristic ports, of which the largest operates in Scandinavia. Baltic Sea ports ransshipped 828 million tonnes in 2014, of which the largest share have Russian ports (27.0%), Swedish (19.6%) and Finnish (11.9%). Polish ports with a share of 8.2% are sixth. The largest ports out of the Baltic ports are in Russia, which in 2014 won the first three positions. New market leader has been established in 2008 – port of Ust-Luga with a result of 75.7 million tonnes. The biggest seaport of EU is Klaipeda, which is ahead of Riga and Goeteborg.

Baltic region is one of the world's best examples of the regional cooperation and integration, and this applies to the both, countries and regions situated around the Baltic Sea. Integration promotes development and thus this is one of the places in the world with the highest standard of living and development

To ensure harmonious and sustainable growth in the Baltic Sea region, much better trans-regional cooperation will be needed, to which initiatives such as the Baltic Sea Program under Global Compact Network Poland can significantly contribute.

REGIONAL INTEGRATION

Baltic region is one of the world's best examples of the regional cooperation and integration, and this applies to the both, countries and regions situated around the Baltic Sea. Integration promotes development and thus this is one of the places in the world with the highest standard of living and development. Hence, it is a model of cooperation for the other countries and regions in the world, but it also attracts many immigrants from all over the world. The roots of cooperation in this area date back to the Middle Ages and the famous collaboration of commercial cities of Northern Europe, which then formed Hansa (also called Hanseatic League and the Association of Hanseatic), to ensure that those cities develop, flourish and lead not only to the economic development but also to the increase of the political significance and the military.

It is worth noting that the first European macro-regional strategy - EU Strategy for the Baltic Sea region, the so-called Baltic Strategy - was founded right here in 2009 and is the best example of cooperation between countries and regions for regional integration. It became a model for the preparation of further macro-regional strategies in Europe. What's more, in the new financial perspective 2014-2020, the European Union is promoting this form of cooperation as the EU's good practice and encourages other countries and regions to a similar form of cooperation. The strategy focuses on the economic development, which has led to the development of the region, better transport links and access to the region, the environment and climate policy. The principle activities under the strategy are not to create new institutions, not to create new laws and

Baltic Sea Program 2015-2020, becomes another important instrument of regional cooperation and integration, as a platform for the exchange of knowledge.

not to build new funds, but to utilize and coordinate existing programmes, projects and funds, based on the existing legal system and institutions.

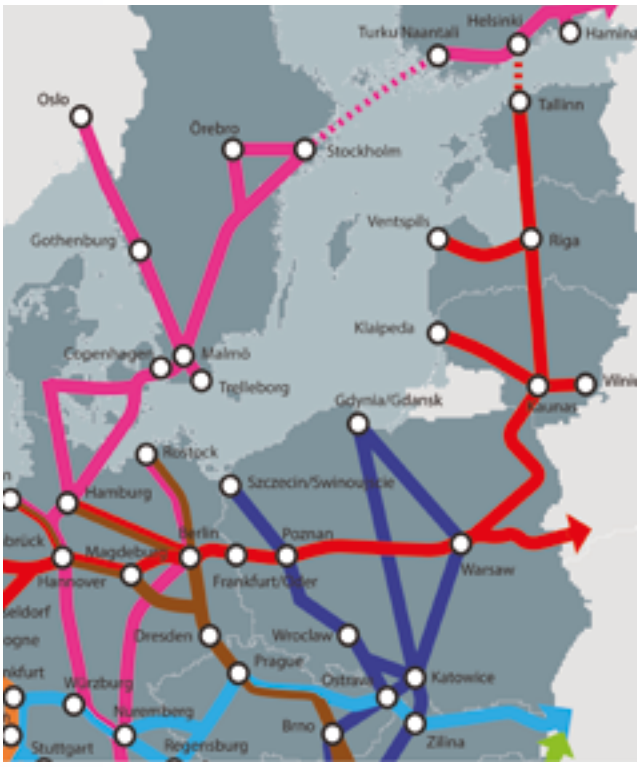
A constant element of cooperation at the intergovernmental level is also the Council of Baltic Sea States which was established in 1992. Poland now holds the Presidency within the framework of the Council. Another initiative in the framework of the regional integration is the HELCOM, known as the Helsinki Commission (HELCOM), established by the Convention for the Protection of the Marine Environment of the Baltic Sea Area 1974 (known as the Helsinki Convention) as its executive body. Its main tasks are to monitor and protect the environment of the Baltic Sea.

Poland acceded to the Convention in 1980. Another initiative in the framework of regional cooperation and integration in the Baltic Sea area is the Northern Dimension. It is an initiative of the European Union that in 1997 engaged in shaping policy towards the Northern Europe, to strengthen stability and support the economic integration, competitiveness and sustainable development in the Northern Europe. Baltic Sea Program 2015-2020, becomes another important instrument of regional cooperation and integration, as a platform for the exchange of knowledge. Specific areas of interest of the programme, relating to regional integration, are the development of the Baltic sea motorways in the frames of the Trans-European Transport Network TEN-T, the use of innovative technologies and solutions for marine and intermodal transport and logistics development. The program provides recommendations addressed mainly to the public administration, state and local governments, but also to other stakeholders such as business, the world of science, experts and the wider civil society to make this region even more competitive.

Another sector of the economy next to transport, which naturally requires the cooperation of countries and regions of the Baltic Sea, is tourism and especially maritime tourism. This is an industry that over the past two decades has become one of the fastest growing sectors of the global economy.

This phenomenon is due to a number of conditions, including the growth of the income of people,

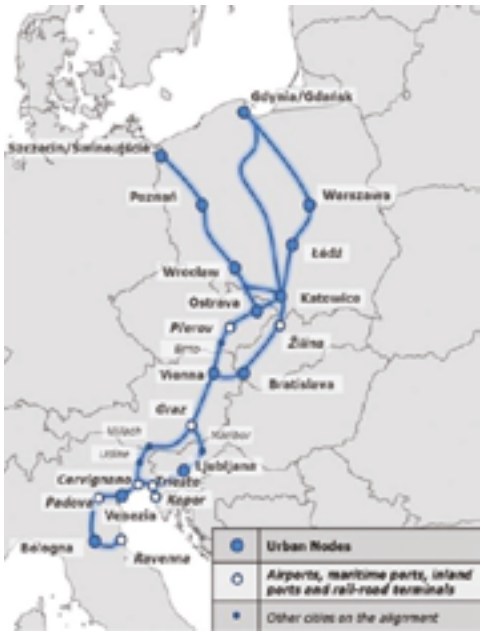
Source: Regulation of the European Parliament and of the Council (EU) No 1316/2013 of 11 December 2013, establishing the „Connecting Europe Facility"



increasing mobility of people in Europe, USA, Canada, Japan, China, Australia, the progressive integration, which manifests itself, among others, in the facilitation of tourism and improvement of the security of the areas where it is developed. Maritime tourism includes various forms of sea travel, mostly on cruise ships, marine ferries, cargo ships, as well as coastal shipping vessels and yachts. Because of the varying factors, every form of marine tourism has its own characteristics and different impact on the market of services serving tourists.

In 2013 the European Union adopted its new policy on transport infrastructure. The main objective of this policy is to transform the current network of roads, railways, airports and waterways into a single, multimodal system of the Trans-European Transport Network (TEN-T). This policy defines the network of 9 major transport corridors. This network connects the main economic centres and ports in Europe. It is assumed that the network will fully start functioning by 2030, but it is estimated that this will require investments up to 500 billion euros. Such large investments will become important factors to stimulate the further economic development of Europe in the coming years. Transport corridors, economic centres and ports will become multimodal transport - logistics platforms.

The network of transport corridors TEN-T in Europe, is not only a multi-modal, network infrastructure of nodes and communication links between them. It is primarily a network of main centres and axes of socio-economic development in Europe. This network is also conducive to environmental protection and climate policy. So the perception of the TEN-T network is changing as not only the transport network, but primarily as a core development network in Europe. Efficient and effective, multi-modal transport network is one of the key factors, which aims at providing better development in the European Union. There is no doubt that in the area of network nodes and connections between the nodes, there are much better conditions for development.



Transport corridor Baltic - Adriatic
Source: Baltic-Adriatic corridor study consortium (2014)

Thus, the development of networks will promote better regional integration leading to a more stable and potentially faster development of regions in the EU and to increasing their competitiveness. Development of the network will also promote transnational and trans-regional socio-economic cooperation and implementation of the principles of the EU single market, including free movement of people, goods, services and capital.

Nowadays, for the first time, the European Union has such a significant budget to conduct its transport policy in the form of an instrument of the Connecting Europe Facility with a budget of 24 billion euros. That is about three times more money from the EU budget for the development of Trans-European Transport Network than in the passing financial perspective. In the first call of proposals, the results of which were announced in 2015, selected projects accounted for 13.1 billion euros. For example, these funds will finance the missing part of the Rail Baltica railway line in Poland and the Baltic Countries. Two of the nine main transport corridors of the EU pass Poland, which are also important for the Baltic Sea Region: corridor North Sea - Baltic and corridor Baltic - Adriatic. Both of these corridors are of a great importance for the Baltic Sea Region and for the Polish regions. Unfortunate for the regional development and integration that this network does not include the proposed transport corridor along the eastern

Baltic Sea Program under the United Nations Secretary General Initiative Global Compact Poland will support activities in the construction of a uniform system of the Trans-European Transport Networks.

border of the European Union, linking Klaipeda in Lithuania with Thessalonica in Greece, known as the Via Carpathia.

A third corridor, very important for the Baltic, the corridor Scandinavia - Mediterranean Sea that bypasses Poland and in some ways competes for the corridor Baltic - Adriatic. It is worth mentioning that one of the two sea motorways set out on the Baltic Sea is a highway Gdynia - Karlskrona; the second is a highway Klaipeda - Karlshamn. Corridor North Sea - Baltic Sea is about 3200 km long and begins in Helsinki, and ends in the Dutch ports. It passes through Finland, Estonia, Latvia, Lithuania, Poland, Germany, the Netherlands and Belgium. It has both sea and land transport corridors. Forecasts indicate a significant increase of transport by sea, for the benefit of the Polish sea ports. The main missing link in this corridor is a Polish railway connection with the Baltic Countries.

The corridor Baltic - Adriatic is a so-called old, historical Amber Road. It has approximately 2,400 km and passes through 6 countries: Poland, Czech Republic, Slovakia, Austria, Italy and Slovenia. In the south of the corridor, there are well-developed regions of Austria, Italy and Slovenia, while in the north there are rapidly developing regions of Slovakia, Czech and Poland. This situation will allow for the development of the corridor area. Network nodes on Polish territory are: Gdańsk / Gdynia, Szczecin / Świnoujście, Warsaw, Łódź, Poznań, Wrocław and Katowice. Baltic Sea Program under the United Nations Secretary General Initiative Global Compact Poland will support activities in the construction of a uniform system of the Trans-European Transport Networks.

SECURITY IN THE BALTIC SEA

The Baltic Sea is one of the most frequently passed maritime areas in the world. It is estimated that at any moment, there are more than 2 to 4.5 thousands ships staying in the maritime waters of the Baltic, carrying annually about 800 million tons of

Moreover, Poland is a party to the Convention on the Protection of the Marine Environment of the Baltic Sea Area (Helsinki Convention), which objectives are to reverse the environmental degradation of the Baltic Sea and the achievement of its good ecological status by 2021.

cargo and 14 million containers, including various goods, minerals and chemicals, which increase the risk of maritime disasters and are a threat for the residents and for the whole ecosystem. The waters of the Baltic Sea record around 350,000 passes of offshore units through the so-called reference lines; in the case of the Polish coast, this intensity is slightly smaller and has 15,000 passes, annually. The Baltic Sea is also not the easiest to navigate basin, it is relatively shallow, the access is very narrow, and the Danish straits are the busiest sea route in the world. In addition, part of the Baltic Sea in winter freezes and makes it difficult to navigate, what affects the level of security and poses a major challenge for managing traffic on the Baltic Sea.

Thanks to the good cooperation and the establishment of security as a major priority, it makes it possible to maintain a relatively high level of security in the Baltic Sea. This cooperation is implemented at various levels and concerns all of stakeholders such as Baltic security and maritime authorities, academics, regional organizations, creators and implementers of projects. Many of the activities and projects that aim to improve the safety on the Baltic Sea are supported by the European Union, such as for example the e-Navigation, projects concerning the exchange of information and monitoring using the latest technology, or transport of dangerous substances. The development and introduction of intelligent monitoring systems and risk management navigation on waters and ports are therefore necessary. One such example of this type of systems in maritime navigation system NAVDEC - navigational decision support system for a marine vessel, which is deployed on the Baltic Sea. Its usefulness, in particular new functionalities in the analysis, evaluation, and generated solutions to dangerous situations at sea are confirmed by the increasing number of installations on vessels shipowners worldwide. Such system is not only the navigation information system, but above all the decision support system. Baltic Sea Program 2015-2020 wants to contribute to the security of maritime transport.

PROTECTION OF THE BALTIC SEA ECOSYSTEM

There is no coincident that protection of the Baltic Sea ecosystem has been recognized as one of the key priorities of the Baltic Sea Programme 2015-2020. The development of the mining industry, fishing, shipping, tourism associated with the use of marine space increases the risks to the ecosystem of the Baltic Sea. Hence the Baltic Sea has been given the status of Particularly Sensitive Sea Area (PSSA) on the decision of the International Maritime Organisation (IMO), a specialized agency of the United Nations on seas and oceans. As a result, the Baltic Sea was covered by a special environmental protection. Taking effective measures to improve the environmental status of the Baltic Sea requires international cooperation both on a regional and global levels. Poland, as a member of the International Maritime Organisation (IMO), is involved in works related to the sea safety and protection of the marine environment from pollution by ships.

This cooperation resulted in a number of international conventions and codes, including - important from an environmental perspective - the International Convention for the Prevention of Pollution from Ships (MARPOL). Moreover, Poland is a party to the Convention on the Protection of the Marine Environment of the Baltic Sea Area (Helsinki Convention), which objectives are to reverse the environmental degradation of the Baltic Sea and the achievement of its good ecological status by 2021. These objectives are being met through agreements, decisions and recommendations within the framework of coordinated cooperation at national and international levels. They are then implemented through the appropriate legal and administrative actions, investments, education and training, testing, monitoring, and others. Parties to the Convention committed themselves to cooperate in the fields of science, technology and other research, and to exchange data and other scientific information relating to the objectives of the Convention.

The Helsinki Commission (HELCOM) as the executive body of the Helsinki Convention, conducts observations of implementation of the Convention and takes the decisions for implementing the goals. An important document which was developed in the framework of the Helsinki Commission and adopted in 2007 by the nine Baltic states and the European Community is the Baltic Sea Action Plan, which operates on the basis of recommendations and focuses on four strategic goals: preventing eutrophication, preventing discharges of hazardous substances, ensuring environmentally friendly marine transport and protection of biodiversity. As part of the measures taken by the Member States of the European Union, one seeks to achieve good

status of marine waters through legal and economic instruments and planning put through the normative acts, including Directive of the European Parliament and Council 2008/56 / EC of 17 June 2008, establishing a framework Community action in the field of marine environmental policy (Framework Directive on the Marine Strategy), Directive of the European Parliament and Council 2000/60 / EC (WFD) of 23 October 2000, establishing a framework for Community action in the field of water policy (Water Framework Directive), Council Directive 91/676 / EEC of 12 December 1991 concerning the protection of waters against pollution caused by nitrates from agricultural sources (Nitrates Directive), Directive of the European Parliament and Council 2009/147 / EC of 30 November 2009 on the conservation of wild birds (Birds Directive) and Council Directive 92/43 / EEC on the conservation of natural habitats and of wild fauna and flora (Habitats Directive).

From the maritime policy point of view, in the context of environmental protection, an extremely important document of the EU is the Framework Directive on the Marine Strategy. This normative act has been transposed into national law and commits Poland to develop and implement marine strategy which elements are preliminary assessment of the environmental status of marine waters, a set of characteristics for good environmental status of marine waters, a set of environmental objectives for the marine waters, monitoring program of marine waters and the national program for the protection of marine waters. The first three documents have already been developed, a set of environmental targets is at the final stage, and the national programme for the protection of marine waters is at an early stage of development.

Poland is also taking intensive actions to reduce emissions from point sources. This allowed the deletion of a substantial number of major sources of pollution in Poland as identified by HELCOM. Activities to improve water and wastewater were also of high importance. In the years 2003-2013 in Poland, there were more than 360 new wastewater treatment plants built, as well as over 1100 investments in existing sewage treatment plants were conducted, consisting of upgrading or increasing bandwidth. As well, there were nearly 70,000 km of new sewage network built. The implementation of the above investments, which received a considerable sum of over 50 billion PLN, was financed thanks to the combined efforts of the state budget, local governments budgets, environmental protection funds at national, regional and local levels as well as through funds obtained from abroad, particularly from the funds of the European Union. These actions resulted in a clear improvement of water quality in Polish rivers.

As a part of the already functioning initiative, in the frame of the Helsinki Commission, a team of experts collects information and materials about the state of the environment and of pollutants discharged into the sea. These data are analysed and on the basis of this analysis the recommendations are developed to Member States of this initiative, committing them to specific measures to protect the Baltic Sea area.

One of the main problems of the marine environment of the Baltic Sea is the euthropication caused by too high content of nutrients in marine waters. As the main sources of pollution from land, which follow the river rafting, were identified: agriculture sector, public utilities and industry. The main sources of pollution of the agricultural origin are beyond the atmospheric emissions of ammonia from manures and pesticides leaching of nitrogen and phosphorus from arable land and improperly stored manure.

Due to the seriousness of the problem, which is the outflow of nitrogen from agricultural sources to surface and groundwater, European Union worked out the Nitrates Directive, requiring Member States to take measures to reduce this phenomenon. In connection with the implementation of the Directive in Poland, there are areas identified that are particularly vulnerable to pollution by nitrates from agricultural sources, which are then fed with action programs aimed at reducing the outflow of nitrogen from agricultural sources. In 2016, it is planned to implement such a program of activities across the country, which should have a significant impact on reducing nitrogen discharge from agriculture into the Baltic Sea. In connection with the works of the European Union on the „phosphate" directive, in the future, one can expect similar programmes to be introduced in Poland with activities aimed at reducing phosphorus runoff from agricultural sources.

As a part of the already functioning initiative, in the frame of the Helsinki Commission, a team of experts collects information and materials about the state of the environment and of pollutants discharged into the sea. These data are analysed and on the basis of this analysis the recommendations

are developed to Member States of this initiative, committing them to specific measures to protect the Baltic Sea area. Still not resolved is the problem of the German weapons resting on the bottom of the Baltic Sea, particularly chemical, discharged into the sea by Allied forces in 1946. Estimates say that about 350 thousand tons of classical ammunition and at least 50 thousand tons of chemical weapons. About onethird of chemical weapons constitute chemical warfare whose action causes trash, cancer or genetic changes in living organisms, leading also to a permanent degradation of the natural environment. Global Compact Network Poland also wants to focus on this problem.

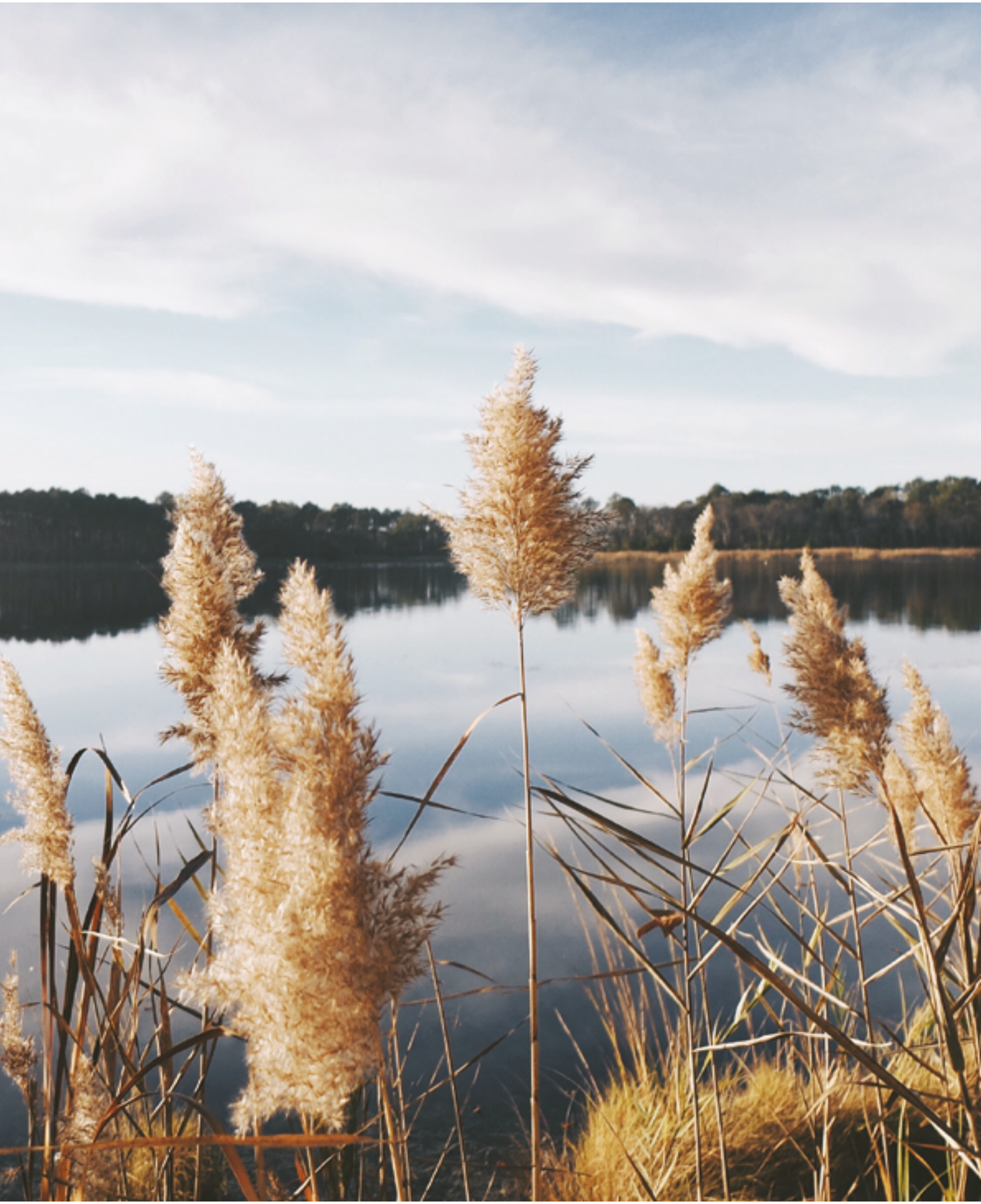
Every year in the Baltic, there are approximately 150 cases of collisions and accidents that pose a potential threat to the natural environment. The development of modern navigation systems will allow to reduce the causes of these conflicts, which is often a human error. Although maritime transport, properly run and managed, it is the most environmentally friendly mode of transport because it emits 5 times less carbon dioxide per tonne of transported goods than road transport and 1.5 times less than rail, due to the relatively closed nature of the Baltic Sea and poor water exchange with the waters outside the Baltic Sea, as well as the relatively shallow waters and densely populated coast, the threats to the natural environment are very serious, both with regard to the pollution of air and water. The further, anticipated development of maritime transport in the Baltic Sea will see these threats intensified. In this respect, the importance of efforts to become more environmentally friendly in use of fuel in maritime transport and efficient cleaning of ships using modern technology, is growing. The marine ecosystem of the Baltic Sea requires constant monitoring.

Full report "Baltic sea for all"
is available through www.ungc.org.pl

We value maritime transport as a cost-effective and energy-efficient link in the global supply chain. We should reaffirm our commitment to optimize the management of maritime transport to support sustainable development

Ban Ki-moon,
former UN Secretary General

INLAND NAVIGATION



INLAND NAVIGATION

Monographed by Dr Jerzy Kwieciński (currently Minister of Investment and Development), on the basis of materials collected in the reports "Inland Navigation" issued by the Global Compact Network Poland

ALL THE ANALYSES AND OPINIONS PRESENTED IN THE REPORT CONFIRM THAT POLAND HAS A LARGE POTENTIAL FOR THE DEVELOPMENT OF INLAND WATERWAY TRANSPORT, BUT NOW INLAND WATERWAY TRANSPORT IN POLAND IS ALMOST NON-EXISTENT. INLAND WATERWAY TRANSPORT IN POLAND BECOMES LESS IMPORTANT, ALTHOUGH ALL GOVERNMENT DOCUMENTS, DEFINING THE TRANSPORT POLICY AFTER 2000, ASSUMED ITS DEVELOPMENT.

Most clearly the situation has been described by the Supreme Board of Control by stating that the poor condition of the waterways, steadily aging fleet owners, as well as the slowness of authorities responsible for this mode of transport, means that despite the favourable natural conditions, Polish inland waterways are not attractive economically. In Poland, both freight inland waterways and their share in total transport fall. Without a clearly formulated and effectively implemented state policy to support the development of inland waterway transport as an important mode of transport, while providing financial support, we will fail to stop the degradation of waterways and marginalization of this branch of transport. Although water transport is much more efficient and environmentally friendly than for e.g. road transport, such investment in inland waterway transport in Poland has much lower priority than highway construction or modernization of railway lines. Many years of neglection in the construction and modernization of this infrastructure has led to a state, in which only 10% of the total length of the network of waterways in Poland meets the applicable technical and operational requirements for navigation, including a little over 5% meets the standards imposed for water roads of international importance.

An important cause of progressive decapitalisation of inland waterway infrastructure were also insufficient financial resources allocated to combating this situation. The volume of financing routine for maintenance of waterways is not even sufficient to ensure simple reproduction of that infrastructure. Moreover, no funds were acquired for the development of inland waterway transport in the framework of EU assistance programs for the years 2004 - 2006, and the funds raised for this purpose in the financial perspective in 2007 - 2013, amounted only 0.44% of their total allocation. According to the data from the Central Statistical Office, the network of inland waterways in Poland in 2014 was 3.655 km of regulated navigable rivers, lakes, navigable canals and canalized river sections. Compared to the state in 2000 it was about 502 km less (12%). Then dominated the regulated navigable rivers (66%). Only 5.9% (214 km) of waterways in Poland

met the requirements for aquatic roads of international importance and that has not changed since 2007. Steadily deteriorating navigational conditions, affect basic design parameters of the rolling stock, including the relatively low capacity barges. As per 1000 km2 area of the country, this amounts to 11.7 km of waterways, while the EU average is 9.3 km. More than twice as high network density indicators characterise countries such as the Netherlands, Belgium, Finland and Germany.

Table 1. Navigable inland waterways in Poland

		2006	2010	2013	2013
					2006 = 100
		[1]	[2]	[3]	[4]
Lp		km			%
Together		3 659,3	3 659,3	3 654,6	99,9
1	Rivers	2 412,9	2 412,8	2 416,6	100,2
2	Lakes	258,6	258,6	258,6	100,0
3	Channels	987,9	987,9	979,4	99,1

Vistula basic network consists of:

1. Rivers: Biebrza, Brda, Still Vistula, Nogat, Szkarpowa, Pisa and Wisla
2. Channels: Augustow, Bartnicki, Bydgoszcz, Elblag, Jagiellonian, Łączański and Żerański
3. Lakes: in this system Mazurian Lakes and the lakes linked by rivers and canals.

In the Vistula basin there are 7 ports and 3 yards river Elblag, Plock and Krakow.

Table 2. The structure of inland freight transport in the EU in 2012

		Transport		
		Rail	Road	Inland Waterways
		[1]	[2]	[3]
Lp		%	%	km
EU 28		18,2	75,1	6,7
1	Netherlands	5,1	56,2	38,7
2	Belgium	17,5	58,3	24,3
3	Romania	24,2	53,3	22,5
4	Bulgaria	8,9	74,7	16,4
5	Germany	23,1	64,6	12,3
6	Poland	18,0	81,9	0,1

The structure of the Polish barrage fleet in 2014 was dominated by the pushed system units (86.4% barrage fleet and 72.4% freight) - 583 barges. The towed fleet was almost completely decommissioned. Inhibition of the development of the barrage stock started in the 80s, and continued in the 90s of the last century. This stopped the work on further qualitative changes in transport technology and caused a systematic decline in barrage stock and increasing depreciation. The average age of barrage stock in Poland greatly exceeds the standard period of use, and its operation is only possible thanks to the constant modernization. The share of freight transport by inland waterways in the whole of inland transport for many years has been negligible - 0.4% (0.8% in 2000), whereas in the Netherlands it amounts to 38.7%, Belgium - 24.3%, Romania - 22,5%, Germany - 12.3% (table 2). In 2014 Polish shipowners transported by boat just over 7.6 million tons of cargo (779 million ton-km), which represents a decrease of 21.5% when compared to 2006.

Table 3. Inland waterway transport in selected EU countries

		2007	2010	2013	2013
					2007 = 100
		(1)	(2)	(3)	(4)
Lp		mln ton			%
1	Netherlands	324,1	346,9	356,1	109,9
2	Belgium	134,6	161,6	187,4	139,2
3	Romania	29,4	32,1	26,9	91,5
4	Bulgaria	6,6	18,4	16,7	253,0
5	Germany	249,0	229,6	226,9	91,1
6	Poland	9,8	5,1	5,0	51,5

In the EU, inland waterway transport in 2006-2013 have generally demonstrated a rising trend, e.g. in Belgium by 39% (2013/2006), the Netherlands by 10%, but in Germany, a decrease of 8%. In Bulgaria, the traffic increased by 153%.

Table 4. Transportation of goods by inland waterways in Poland in domestic and international transport

		2006		2010		2013		2013	
								2006 = 100	
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Lp		ths ton	mln tkm	ths ton	mln tkm	ths ton	mln tkm	ths ton	mln tkm
Together		9 271	1 237	5 141	1 030	5 044	768	54,4	62,1
1	Domestic transport	4 460	184	1 548	70	2 229	57	2 229	57
2	International transport	4 810	1 053	3 594	960	2 815	711	2 815	711
Average distance of 1t in km									
3	Domestic transport		41		45		26		63,4
4	International transport		219		267		253		115,5

Transportation in domestic transport accounts for 44% of the total inland waterway transport, which admittedly increased when compared to 2010, but at the same time decreased in comparison to 2006 by almost 50%. Transport in the international traffic accounts for 54%, but also showed a decrease (by 41.5%). In domestic transport, the average distance of transport traffic has been reduced (26 km), while the international - increased (up to 253 km) (Table 4). In 2014, when compared with 2013, there was a record high growth of domestic transport - by 117%, to 4.8 million tonnes, which was associated with the project of Modernization of Wroclaw Floodway System. In the context of transport in international traffic (2,815 ths. tonnes), 25% is exported, while 70% are services between foreign ports.

Table 5. Transportation of international cargo in inland waterway transport in Poland

		2006		2010		2013		2013	
								2006=100	
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Lp		ths ton	mln tkm	ths ton	mln tkm	ths ton	mln tkm	ths ton	mln tkm
Together		4 810	1 053	3 594	960	2 815	711	58,5	67,5
1	Exports	1 824	432	994	254	700	148	38,4	34,3
2	Imports	300	81	210	51	136	25	45,3	30,9
3	Transit	24	7	1	1	3	1	12,5	14,3
4	Between foreign ports	2 662	533	2 389	654	1 976	537	74,2	100,8

-

The main direction of export of goods by inland waterways was Germany (92%). By groups of goods: 2014 - 65.6% transport were ore and other mining products (2007 - 55%), 14.9% - coal (2007 - 19%). In the dynamic approach: an overall decline in traffic of 48.5%, was recorded in transportation of metals and chemicals (fivefold), coal (nearly three times). Among the most important items, only grain shipments showed growth: 16.5% in relation to 2007.

Table 6. Inland waterways transport of goods in Poland by groups of goods

		2007	2010	2013	2013
					2007=100
		[1]	[2]	[3]	[4]
Lp		ths ton			%
Together		9 792	5 142	5 044	51,5
1	Black coal	1 834	1 080	688	37,5
2	Ore	5 339	1 969	2 462	46,1
3	Metals	923	297	155	16,8
4	Cement	458	305	257	56,1
5	Chemicals	603	261	118	19,6
6	Grain	273	289	318	116,5
7	Wood	241	131	131	54,4

In 2014, 1.6 million passengers were transported, an increase of transport if compared to 2006 by 81%; and the average distance approx. 12 km have been recorded (Table 7). The fleet of passenger ships in the same year consisted of 99 units with 8.4 ths. of passenger seats.

Table 7. Transportation of passengers in inland waterways in Poland

		2006	2010	2014	2014
					2006=100
		[1]	[2]	[3]	[4]
Lp					%
1	Number of passengers in thousands	884	879	1 600	181,0
2	Passenger – km	12 887	13 199	12 789	99,2
3	Average distance in km	14	17	12	85,7

According to GUS (Table 8) in inland waterway transport in 2013 there were 67 entities functioning (in 2006 - 130) employing more than 9 and approximately 140 - up to 9 people. This means a clear drop in the number of entities in the period, as a result of the liquidation or pass under a foreign flag ship owners (mostly German). In enterprises with more than 9 people, there were 209 employees (about 40% less than in 2006). Average salaries in that year amounted to 4,335 PLN and were higher than in 2010 by 19%.

Table 8. Inland waterway transport in Poland - entities, employment and investments

			2006	2010	2013	2013
						2006=100
			[1]	[2]	[3]	[4]
Lp						%
1	Entities		130	83	67	51,5
2	Employment	persons	351	211	209	59,5
3	Investments	ths PLN	14 189	2 890	3 774	26,6

The level of capital expenditures underwent large fluctuations. In 2013 they totalled 3.8 million PLN, of which 3.3 million PLN for the means of transport, whereas, for example in 2006 - 14.1 million PLN. One should note that in addition, the government and local governments committed substantial capital expenditures on fixed assets for water management (reservoirs and barrages, adjustment and installation of rivers and flood embankments and pump stations) - in 2010-2013 - an average of approx. 3 billion PLN annually, of which 25% are funds from abroad. Revenues of entities totalled in 2013 177 million PLN and were higher than in 2005 by 36.3% in this period and continued to grow. The financial results were positive in 2013 at 32 million PLN, at the rate of gross profit margin of 18.2% (in 2006 - 7.7%) (Table 9).

Table 9. Revenues and gross turnover profitability rate of operators in the inland waterways in Poland

			2006	2010	2013	2013
						2006=100
Lp			[1]	[2]	[3]	[4]
1	Revenues	mln PLN	129,7	148,8	176,9	136,4
2	Costs	mln PLN	123,8	135,6	149,4	120,7
3	Profit before taxes	mln PLN	10,0	14,6	32,2	322,0
4	Gross turnover profitability rate	%	7,7	9,8	18,2	

In addition, waterways, rivers, canals and reservoirs, are a very good basis for the development of not only transport but also tourism and recreation, with particular importance for urban areas.

As it can be seen from the table, despite many adverse conditions, Polish enterprises of inland waterway sector 2006-2013 were trying to develop and take care of positive earnings and investments.

CONNECTING REGIONS

Inland waterway transport typically involves a number of countries and regions for the given waterway, acting as very effective instrument for inter-regional integration. By its nature, its operation requires the cooperation of many public and private institutions and hence is an effective tool to stimulate regional development. Because it is a cheap and environmentally friendly mode of transport, so essential to the development of various sectors of the economy such as transport, including intermodal transport, tourism, logistics, but also modern sectors such as industry, energy, including bioenergy and wind power, automotive industry. It may be part of the urban transport system and river ports and transport companies are major economic players, generating new jobs. It is not without significance that the EU strongly supports the development of inland waterways as part of regional development.

Projects in this area can be funded both at the national level from the Cohesion Fund (those associated with the European Transport Network TEN-T), as well as at the regional level by the European Regional Development Fund. In addition, waterways, rivers, canals and reservoirs, are a very good basis for the development of not only transport but also tourism and recreation, with particular importance for urban areas. In Poland one can observe a very positive trend towards returning cities to rivers, reservoirs and other watercourses, the use of their assets to strengthen the various functions of metropolitan cities.

A good example would be the revitalization of riverside areas and the restoration of water transport in the form of water trams, e.g. in Bydgoszcz and Gdansk. There is a positive symptom of networking of provincial governments in Poland on joint ventures on the Vistula River. It applies to all aspects of

the functions of the river. These investments will be crucial for the river, as it will help to increase the flood protection. Floods that reappear periodically can generate huge losses, in billions of PLN. Hydropower infrastructure can provide significant support for the electricity system as a very effective means for generating renewable energy. By their nature, hydropowerplants have a significantly higher rate of utilization of installed capacity and thus can stabilize the system.

In Poland, we still have a very low level of hydropower potential of rivers used at one-fifth, one of the lowest in Europe. The level of energy produced does not change over the years, although it increases significantly in the case of other types of renewable energy.

An important issue related to renewable energy sources remains the predictability of production and the level of use during the year nominal installed capacity. Hydropower stands close to 50-60% of installed capacity utilization rate in the year, compared to 30-40% for offshore wind energy, 20-25% for onshore wind and up to 10% for solar energy. Also predictability of production and the rate of change in the production of hydropower is the most advantageous of all fuelfree renewable energy technologies. Hydropower is, basically inexhaustible, renewable and clean source of energy. Inexhaustible, it does not mean that we can take advantage of the environment without limits.

We still need sustainable development held in compliance with the entire environment, rational use of available water resources. Of great importance, in the context of a rational use of resources, is the efficiency of energy conversion, which for conversion of mechanical energy of water into electrical energy exceeds 90%, which in turn, in case of thermal cycles, that are used in the fossil fuel fired power plants, is the value of conversion efficiency even theoretically impossible. For years hydropower has been a secure and reliable source of renewable energy. Hydro-systems in some hydropower plants operate essentially without interruption for almost 100 years. Each barrage with the accompanying power plant and lock are an object that brings tangible benefits in terms of: electricity; economy: shipping, transport, tourism and recreation; flood protection; the impact on the environment and improvement of hydrological conditions. Although the construction of barrages that are integrated with hydro power plants, brings many tangible benefits and synergies for the entire environment, in Poland utilization of the technical potential of rivers is still small, and yet there are only a few projects that radically alter this state of affairs.

Table 10. The use of technical potential of hydropower plants in Poland

Potential		Power installed	Annual production	Use of capacity
Theoretical	Technical			
[TWh]	[TWh]	[GW]	[TWh]	%
25,0	12,0	0,95	2,4	19,8

Hydroelectric potential of the Vistula River alone is estimated at around 6.5 TWh with the ability to install hydro-systems with a total capacity exceeding 2.0 GW, of which the Lower Vistula Cascade - 1.3 GW. After many years of the investment boom, again, the future of Polish hydropower industry does not look bright. The level of use of technical hydropower potential of the country does not reach 20% and is one of the lowest in Europe.

After 1971, no new classic hydroelectric power plant than 5 MW was put in motion. In the years 1990-2010, there had been an increase in the average electricity production from natural flow of about 1400 to almost 2400 GWh, that resulted from the construction of over 500 small hydropower plants with a total capacity and production in excess of 120 MW and 400 GWh / year, commissioning EW Niedzica with a capacity of 92 MW and production of approximately 90 GWh / year, as well as modernization and change in principles of movement in the power industry. Currently, the average annual production growth does not exceed the 20 GWh and resulted only from investments in small hydropower plants. The exception will likely be the effects of the planned in 2016 launch of EW Malczyce (9 MW), and a year later Swinna Poreba reservoir of the power plant with a capacity of 4.7 MW. Both investments are carried out by water management. Due to financial difficulties they have lasted for decades.

Hydropower sector has a limited capacity to use aid funds and structural funds. Support focuses on investment directly related to environmental protection (eg. fish ladders). Initially, own resources of professional power sector came from remuneration for sold energy and system services. After 2004, an important stimulus for the whole sector was an income from property rights to certificates of origin (green certificates). In this financially favourable period, however, it failed to resume or start any investments related to the construction of large hydroelectric power stations. At the same time administrative difficulties associated with the investment in the small hydropower plants grew. In these circumstances, the opponents of hydro-electric sector put forward the slogan over support of large hydroelectric power stations.

Despite of all of the upgrades, many of them, are back in the amortization period. In Poland, a leader of hydro energy is ENERGA Group, which owns 47 hydroelectric power plants, including the country's largest Wloclawek hydroelectric power station with a capacity of 160.2 MW and pumped storage power station in Żydów of installed capacity 150 MW. ENERGA Group has in its assets of 45 small low-head hydropower (SHP) with a capacity exceeding 1 ÷ 2 MW and low heads gross 2 to 4m, which was located in the lowland rivers. These are flow power plant, built next to the weir, which is part of damming. The total installed capacity of small hydro in the Group ENERGA is 42.4 MW. Energa Group intends to build a hydroelectric power plant integrated with a new step on the Vistula River, is the part of the discussed over decades Lower Vistula Cascade. Planned capacity of the proposed plant is 70-90 MW and its estimated production of electricity during the year will be at least 350 GWh. It is a project which in addition to the protection of the operation of hydropower plant in Wloclawek by the support of the existing barrage and the improvement of transport conditions on the Vistula river, will significantly improve the safety conditions.

ENVIRONMENTAL SAFETY

Rivers are ecosystems with a very high biodiversity. They are also natural, very important ecological corridors that allow for migration of plants, animals and fungi. In Europe, Vistula is one of the few large rivers, which remains close to nature and are located on the NATURA 2000 sites, nature reserves and protected landscape areas. Therefore, all activities related to the development of river transport need to take into account the legal and environmental issues. To ensure navigability of the rivers, it is necessary to carry out regulatory activities, and these undoubtedly interfere with the natural order. Man carries out such activities for thousands of years. Regulatory actions consist of shaping the riverbeds to get the right depth navigable. Adjustment should not affect the natural character of the river and the current rules were established in the early nineteenth century. They assume that the route of the river should coincide with the natural course of the river bed. Shortening the river is an undesirable process. The route of the river should be curved without straights. Meanders of the river should correspond to their natural shape. The route should take into account fluctuations of water levels from low to high and not disturb their natural course. You should create the conditions for maintaining and developing the biodiversity of the river and ensure the free movement of aquatic organisms. The construction of hydro and hydroelectric infrastructure in the rivers violates of the natural state of the river and hence the compensation process should be carried to counteract the negative impacts of this infrastructure on the river ecosystem.

Rivers are ecosystems with a very high biodiversity. They are also natural, very important ecological corridors that allow for migration of plants, animals and fungi.

Inland Navigation Program 2015-2020, will contribute to increasing ecological safety.

LEGAL AND ECONOMIC CONDITIONS

Because of the threat to the environment, investments in the area of inland waterways are subject to strict European and national legal requirements, especially related to environmental protection.

They belong to those basic legal requirements of the European ecological network Natura 2000 and the Water Framework Directive. Polish accession to the European Union created a new situation, factual and legal basis for the operation of the national system of water management, resulting in the need for the government take measures aimed at adapting structures and systems of water management to the new tasks imposed on Poland in the accession treaty, as well as from new pieces of EU legislation. The relevant requirements in these areas shall be defined primarily by the Directive of the European Parliament and of the Council of 23 October 2000 (2000/60/EC) establishing a framework for Community action in the field of water policy, called the „Water Framework Directive".

The Water Framework Directive introduces comprehensive management of water resources at the river basin districts and creates instruments of water management across Europe. The main objective of the Water Framework Directive is to ensure good water status for all their categories in all European Union countries. For all types of waters, Directive establishes a framework that aims at preventing further deterioration of water resources, enhancing the protection and improvement of the water environment. In the Water Framework Directive, there are new aspects not found in other acts relating to the water management, which is the equal treatment of the various water users, it is the municipal sector, industry and agriculture; introduction to water management public participation, which will better identify the problems of water management in the catchment area; the use of economic instruments by adopting the principle of full cost recovery of water services, including the environmental and resource costs.

New approach introduced by the Water Framework Directive is the treatment of water resources, not only as a part of a system of water-economic development, but also as a factor in creating ecosystems, which state depends on the directions of activities throughout the basin. Particular emphasis Water Framework Directive puts on two courses of action: to reduce water pollution by reducing missions of pollutants and maintain an adequate water quality through the use of various instruments: legal, organizational and technical. The purpose of the proposed amendments should be the implementation of the Water Framework Directive in the Polish system of water management.

Unfortunately, in recent years there have been no significant changes in the Polish water management, in addition to those that have been forced by the terms and conditions enshrined in EU Directives, in particular the Water Framework Directive 2000/60 / EC (WFD), Flood Directive 2007/60 / EC, the Nitrates Directive 91/676 / EEC, whose implementation into national law and implementation raises many objections. In addition, the European Commission (EC) has not approved the so-called water management plans (sent by the Polish side in 2009), then supplemented by so called Master Plans, against the threat of withdrawal of Poland, EU subsidies for investments in water management area. On the other hand, flood hazard maps and flood risk maps required by the Floods Directive were not properly prepared and it resulted in a referral to the ECJ lawsuit, because of the exclusion of flooding in urban areas. By 22 December 2015, Poland must provide the EC with the update of water management plans and water-environmental program of the country, as well as flood risk management plans.

The quality and the merits of the preparation of these documents will decide whether they are accepted by the European Commission, on one hand, or allow for the development of the country in accordance with the principle of sustainable development, on the other hand. The EC also puts Poland with charges of misinterpreting the reimbursement of water services, recorded in the WFD. A reform of water management structures was also not conducted, adapting them to the requirements of the EU. A crucial shortcoming of the Polish economy is a dispersion of powers between the various institutions of the state responsible for water management.

A striking example is the river with an embankment, where the river is managed by a government institution (Regional Water Management) and the shafts by self-government (management board of drainage and water facilities, which is a voivodship marshal unit). Another example is waterways - their

development and maintenance is the responsibility of the Ministry of the Environment through the National Water Management Authority (KZGW) and Regional Water Management Authority (RZGW), and for traffic and transportation on waterways, Minister of Infrastructure through the Offices of Inland Waterways. Another example of distraction of competence is a privilege of district governors and the marshals to issue water permits, while appeal bodies are RZGW and KZGW. It should also be noted that the board of water management at the National Water Management Authority and the Regional Water Management Authority are the only opinion-making bodies without a significant influence on the planning and control of these institutions.

In order to meet its obligations towards the European Union, while enabling dynamic and sustainable development of Poland in the area of water economy, a number of changes and actions should be taken, some of which are listed below:

1. Protection of public ownership of all the flowing waters and the principle of universal access to water, while allowing economic use of water for various entities on an equal rights.

2. Review of the implementation of EU directives into Polish law, in particular the Water Law.

3. Review of planning documents (plans for water management in the area of river basins, flood risk management plans) for compliance with the directives on the one hand and the interests of Poland on the other. In the water management plans in a river basin there should be derogations considered resulting from the intended construction of water reservoirs, mainly related to the importance of flood protection in the upper parts of the river basin and the construction of waterways of international importance.

4. Polish accession to the Convention AGN (UN Economic Commission for Europe, European Agreement on Inland Waterways of International Importance).

5. Development of a strategy for water management by 2030, with regard to the improvement of flood security, the development of inland waterway transport, water energy, tourism and recreation, agriculture and sectors of the economy dependent on water, while taking into account EU law and the protection of natural resources and improvement of the ecological status of waters.

6. Structural reform of the administration of water management should be based on the integration of distributed structures, with improved financing on the principle of reimbursement of the costs of water services. This rule will allow for fair remuneration of the employees of water management and the maintenance and modernization of the water management infrastructure. It is worth to consider a creation of a State Farm Water „Polish Waters",

along the lines of „State Forests" (the project was prepared in 2007). Water management should be carried out solely on the principle of river basin, rather than territorial administration - in accordance with the Water Framework Directive. The integration of water management should not rely on its centralization, but on the establishment of coherent plans implemented by the smallest organizational units - managements of river basins. The boards of the river basins whose core personnel would constitute of the existing administrative staff of water administration of different levels, would be responsible not only for the proper maintenance of water infrastructure, but also for collecting charges for the use of the infrastructure and charges for the use of water resources, in accordance with the principle of reimbursement of the cost of water services. Some of these measures would remain on the boards of river basins, part would be redistributed by the central authorities on the implementation of strategic objectives. For socialization of the water management it is proposed to introduce water management councils, at all levels with the high level of competences in planning and control.

7. The accurate determination of competence of the authorities in the interpretation of the provisions of the Water Act. Currently, the Regional Directorates for Environmental Protection at the stage of issuing an environmental decision ventures relate to the provisions of the Water Law, while it should take place on the stage of a water permit. Enabling economic use of water in the NATURA 2000 areas in the waters flowing should be made. The introduction of the institution of deposit of the possible benefits lost by NGOs during the participation in administrative proceedings and appeals from them.

8. Review of the maintenance arrangements of water, not only in terms of nature, but also economic (these plans are not a requirement of the EU).

9. The deregulation of the provisions of the Water Act, including the application forms of applications for simple actions (eg. bridges, culverts in ditches etc.) instead of the bureaucratic procedures for water permits.

10. The introduction, on Scandinavian model, right of free access to public waters and areas close to them, in order to allow recreation and rest.

11. The introduction of the regulations relating to the Law on Navigation on inland waters a possibility of navigation of any units of low speed (up to 15 km / h) without permission.

The above catalogue of measures covers only a part of the problems associated with water economy. This is a directory that should be made more detailed at the phase of the implementation. The regulations should be guided by the principle of maximum access to water resources for citizens and economic activities, in accordance with the principles of sustainable development and EU legislation.

In Poland we got used to the fact that land transport is dominated by road transport accounting for 4/5 of transport, and the remaining 1/5 of this is railway, which is also steadily losing year on year to road transport.

Investments related to inland waterways are very capital intensive, and also the payback period is usually very long. Thus such ventures are supported with public funds, including through the National Fund for Environmental Protection and Water Economy and the EU Structural Funds and the Cohesion Fund. Also, National Economy Bank (Bank Gospodarstwa Krajowego) can support such projects in Poland in the form of a preferential loan from the Fund for Inland Waterways. It is estimated that, for example, bringing the 400 km section of the Vistula River to the international requirements of class IV of waterway transit with a depth of 2.8 m (AGN Convention), which would allow for navigation on this stretch, would cost about 12 billion PLN, which is that 1 km waterway Vistula would cost about 30 million PLN. It's slightly less than the average cost of building 1 km of motorway. Currently Vistula is hardly used for cargo shipping or for tourism and recreation, not to mention regular passenger transport. Local governments implement point-like investments, financed from EU funds, such as marinas, ports, tourist infrastructure and try to restore passenger services within the city public transport or regional services.

Although water transport, properly run and managed, is the most environmentally friendly because it emits 5 times less carbon dioxide per tonne of transported goods than road transport and 1.5 times less than rail, inland waterways, unfortunately, lose out competition with transport by road or rail in seeking financial support.

EUROPEAN TRANSPORT CORRIDORS AND INLAND WATERWAYS

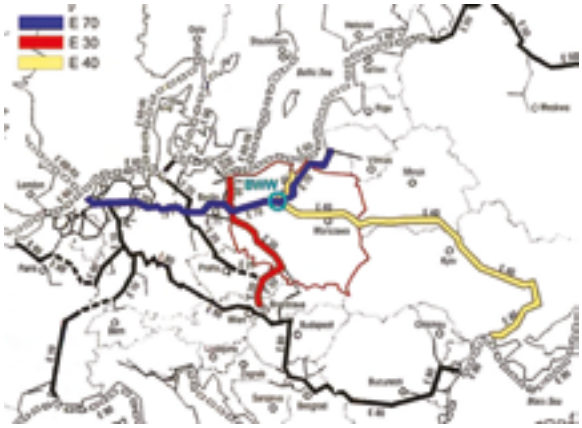
In Poland we got used to the fact that land transport is dominated by road transport accounting for 4/5 of transport, and the remaining 1/5 of this is railway, which is also steadily losing year on year to road transport. Poland has one of the highest in Europe shares of road transport in general. River transport almost does not exist in our consciousness and falls even worse in statistics, although we have one of the best developed river network in Europe and over 3600 km of waterways potentially to be used

in inland waterways. We associate inland waterway transport more with the historical times, when for instance, Vistula and its tributaries was the main transport artery of the country during the Golden Age of the Republic in the sixteenth and seventeenth centuries. Already existing inland waterway transport can be very inexpensive, 4-5 times cheaper than road or rail. Inland waterways have a huge untapped potential in the EU. About half of the EU population lives near the coast and inland waterways. Most European industrial centres can be reached via waterways. It covers more than 37,000 km of waterways, and in Poland accounts for about 10% of this potential. But in the European Union only 6.7% of goods is transported by inland waterways.

It is worth noting that in the case of Poland inland waterway transport is the mode of transport, which was the least developed in the period from the beginning of the Polish transformation. One may even be tempted to declare that there has been rather regress than progress in the development of river transport. The findings of NIK (Supreme Board of Control) show that over 90% of inland waterways in Poland do not meet the legally required conditions of use - operational parameters. The lack of funding, which covers only 30% of needs, is given as a the root cause. Yet in 1980, 9 million passengers were transported annually on inland waterways and today this number fluctuates around 1.5 million passengers a year.

Although on average, inland waterway transport in the EU works much better than in Poland, and

The system of projected international inland waterways in Poland



in some EU countries such as the Netherlands, Belgium and Germany inland waterways play quite a significant role in the transport, in general the entire European Union is also in trouble in building an effective system of inland waterway transport. River transport, with some exceptions, is generally losing out to other modes of land transport, despite the priority given by the EU and the EU support. In its report published in March 2015, the European Court of Auditors notes that, in recent years, since 2001, the EU support by European funds has had little impact on improving the functioning of inland waterways. In 2007-2013, 1.3 billion was directed from European funds to support projects relating to inland waterways. The Court points out that one of the key reasons for the lack of effects is the lack of progress in removing bottlenecks in

the river transport, which often are too low bridges, inefficient locks, or too narrow sections of water in relation to the traffic flow. Of great importance for the development of inland waterway transport is a European agreement on the establishment of the main inland waterways in Europe of international importance which was concluded in Geneva in 1996 at a meeting of the UN Economic Commission for Europe and called the Convention AGN. Poland is the only country in Central and Eastern Europe that has not yet ratified the Convention.

In the Polish territory, there are three waterways within the European system of inland waterways of international importance. These are:

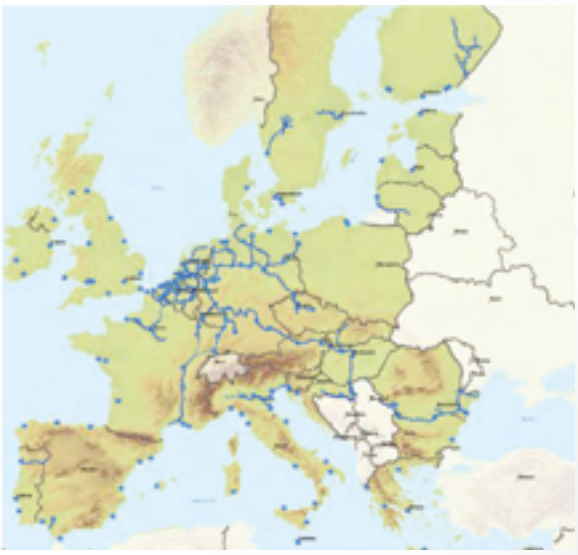
1. waterway E40, connecting the Baltic Sea from Gdansk to the Black Sea in Odessa,

2. waterway E30, which runs Odra waterway, linking the Baltic Sea in Świnoujście with the Danube River in Bratislava,

3. waterway E70, which connects the Oder River with the Vistula Lagoon and forming part of European transport route east-west connecting Klaipeda with Rotterdam.

Unfortunately, these ways on the Polish territory, except for short sections on the lower Oder and the lower Vistula, do not meet minimum international navigability conditions laid down by the Convention AGN (IV class navigability). In 2013 the European Union adopted its new policy ontransport infrastructure. The main objective of this policy is to transform the current network of roads, railways, airports and waterways into a single, multimodal system of the Trans-European Transport Network (TEN-T). This policy defines the network of 9 major transport corridors. This network connects the main economic centres and ports in Europe. It is assumed that the network will be fully functional by 2030, but it is estimated that this will require investments to 500 billion euros. Such large investments will be one of the important factors of stimulation and then improve the economic development of Europe in the coming years. Transport corridors and economic centres and ports will become multimodal transport-logistics platforms, covering all modes of transport, including inland waterway transport.

European transport network TEN-T - inland waterways and ports



The network of transport corridors TEN-T in Europe is not only multi-modal, network infrastructure nodes and communication links between them. It is primarily a network of main centres and axes of socio-economic development in Europe. This network is also conducive to environmental protection and climate policy. So changing the perception of the TEN-T network as not only the transport network, but primarily as a core network of socio-economic development in Europe. Efficient and effective, multi-modal transport network is one of the key factors, which aims at providing better development in the European Union. There is no doubt that in the area of network nodes and connections between the nodes, there are much better conditions for development.

Thus, the development of networks will promote better regional integration leading to a more stable and potentially faster development of regions in the EU and to the increase of their competitiveness. Development of the network will also promote transnational and trans-regional socio-economic cooperation and implementation of the principles of the EU single market, including free movement of persons, goods, services and capital. From this point of view, the relevance of navigable waterways becomes more important, which this network covers. Two of the nine main EU transport corridors pass Poland, which are also important for the Baltic Sea Region: corridor North Sea - Baltic and corridor Baltic - Adriatic. Corridor North Sea - Baltic Sea is about 3200 km long and begins in Helsinki, and ends in the Dutch ports. It passes through Finland, Estonia, Latvia, Lithuania, Poland, Germany, the Netherlands and Belgium. It has both sea and land, including the inland waterway, transport corridors.

The corridor Baltic - Adriatic resumes an old, historical Amber Road. It is approximately 2,400 km long and passes through 6 countries: Poland, Czech Republic, Slovakia, Austria, Italy and Slovenia. Network nodes on Polish territory are: Gdansk / Gdynia, Szczecin / Swinoujscie, Warsaw, Lodz, Poznan, Wrocław and Katowice. Unfortunately, the share of inland waterways in these corridors on Polish territory is minimal. For example, the Rhine-Alpes corridor includes inland waterways of over 1,500 km and a record 54% of cross-border transport corridors falls on inland waterways. On the Polish stretch of the waterways only lower Oder is a part of the European inland waterway network TEN-T. In its White Paper on Transport of 2011, the European Commission envisages to ensure the sustainable development of transport and pointed to the goal that by 2030 there was a transfer of 30% of road transport for distances above 300 km to other modes of transport more environmentally friendly such as rail or water. For this purpose, among others, the European Action Programme for Inland Waterways NAIADES was set up. At the present financial perspective 2014-2020, the European

The network of transport corridors TEN-T in Europe is not only multi-modal, network infrastructure nodes and communication links between them. It is primarily a network of main centres and axes of socio-economic development in Europe.

Union for the first time has such a significant budget to conduct its transport policy with an instrument: the Connecting Europe Facility, with a budget of 24 billion euros. This is about three times more money from the EU budget for the development of Trans-European Transport Network than in the passing 2007-2013 financial perspective. Projects in the area of inland waterways can also be funded by this instrument. In the first call for proposals, the results of which were announced this year, there have already been selected projects for 13.1 billion euros. Unfortunately, there are no Polish projects from the inland waterway area.

Supreme Board of Control (NIK) points out the need to take appropriate action to improve the technical 25 SUMMARY GLOBAL COMPACT Water / Transport conditions of the inland waterways infrastructure in Poland and improve conditions for owners of inland waterways. The realization of this goal requires, in the opinion of the NIK, the minister responsible for transport, i.e. the Minister of Infrastructure and Development, to take appropriate action to:

a) develop - in cooperation with the President of the National Water Management - multi-annual programme of investment in infrastructure of inland waterway transport, taking into account the possibility of its funding;

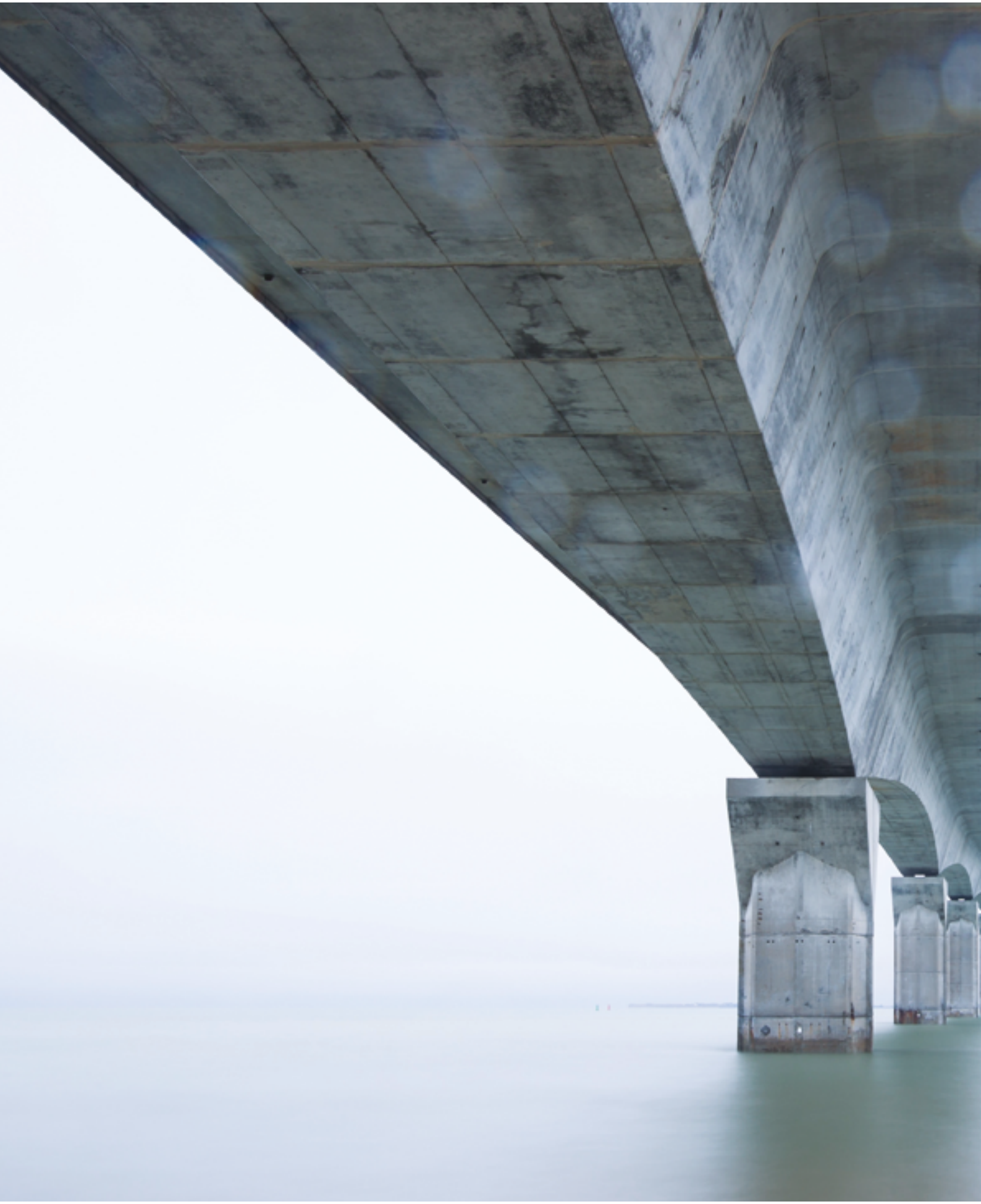
b) expand the scope of support for inland waterway shipping companies in the framework of the current provisions of the Act of 28 October 2002 on Inland Waterways Fund and Reserve Fund;

c) the amendment of the Resolution of the Council of Ministers of 7 May 2002 on the classification of inland waterways (in cooperation with the minister responsible for water management), the effect of which will upgrade the operating parameters of these roads.

Especially, the lower Vistula is a very important element in the economic exploitation of the region and at the same time it shows the natural values included in Natura 2000. Significant economic

advantages of the lower Vistula are inland waterways, hydropower, flood protection, mitigating the effects of drought and water supply. Past practice and research associated with reducing the impact of floods on the lower Vistula River indicate that damming of the river through a series of barrages and use of the storage capacity of the reservoirs created is highly efficient. Given the presence of the Natura 2000 programme in this area, we can conclude that this is the effect of overriding public interest. Moreover, this solution makes it possible to use the ecologically clean and renewable energy of the lower Vistula, production of ecologically clean and renewable energy, as well as the use of marine lower Vistula transit by creating a depth corresponding to at least the fourth international class. Wloclawek reservoir also shows that this solution favours the development of recreation, tourism and water sports. The creation of reservoirs on the lower Vistula River in a place of free flowing river also regulates the formation of ice phenomena and thus reduces the risk of congestive flooding. Such a solution, however, requires debate and many compromises with environmentalists.

Full reports "Inland Navigation" for Vistula and Oder is available through www.ungc.org.pl



UNITED NATIONS GLOBAL COMPACT

It was launched in July 2000 on the initiative of United Nations Secretary-General Kofi Annan. **The UN Global Compact** calls on the private sector worldwide to align their business strategies with universally accepted principles in the areas of human rights, labor, environment and anti-corruption, and to take action in support of UN goals. **The UN Global Compact** is the world's largest business initiative with over 13,500 members in 170 countries. It coordinates activities within the UN Business Action Hub, where the United Nations partners with business to implement the Sustainable Development Goals.

GLOBAL COMPACT NETWORK POLAND

A national network operating under the official authorization of **the United Nations Global Compact.** In Poland, it was launched in July 2001 under the United Nations Development Program, and since 2013 it has been run and managed with the support of **the Global Compact Poland Foundation**. It is the secretariat of the UN Global Compact members, the UN Global Compact's project office, its local contact and information point. Its mission is to promote and implement global initiatives of the UN Global Compact and UN objectives in Poland. All initiatives of the Global Compact Poland are conducted in partnership with the world of business, administration and academic communities.

KNOW-HOW HUB

A think-tank and scientific foundation. Created under the UNDP in Poland in 2011, it groups together experts who create and implement development projects. Currently, KHH also acts as **the Scientific Council to the Global Compact Network Poland.**

UN GLOBAL COMPACT Global Compact Network Poland

Know-How Hub Centrum Transferu Wiedzy

NOTATKI

Network Poland

Global Compact Network Poland
ul. Emilii Plater 25/64, 00-688 Warszawa

PUBLISHER

Know-How Hub
Centrum Transferu Wiedzy

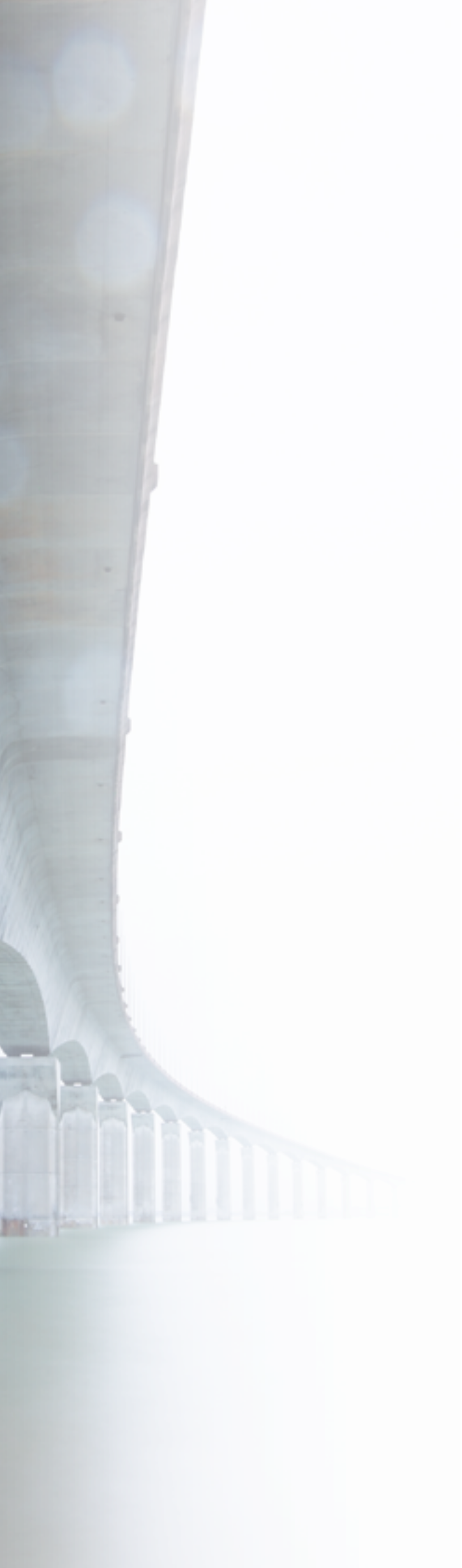
CONTENT INPUT | Łukasz Kolano, **Executive Director**
| Olga Siedlanowska-Chałuda, **Head of Programme Section**

SUPERVISION | Kamil Wyszkowski, **Representative**

GRAPHIC DESIGN AND TYPESETTING | RebelZOO.eu

PHOTOS | Stock photographs underthe Creative Commons/ Creative Commons Zero (CC0) license

PRINT | Mazowieckie Centrum Poligrafii Warszawa 2018



MOBILIZE A GLOBAL MOVEMENT OF SUSTAINABLE COMPANIES AND STAKEHOLDERS TO CREATE A WORLD WE WANT

FROM THE MISSION OF THE UN GLOBAL COMPACT

PROGRAM ACTIVITIES SUPPORTING IMPLEMENTATION OF SDG TARGETS:

6.4.1
Change in water-use efficiency over time

9.1
Develop quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all

14.A.1
Proportion of total research budget allocated to research in the field of marine technology

17.14
Enhance policy coherence for sustainable development

Global Compact Network Poland

ul. Emilii Plater 25/64
00-688 Warszawa
www.ungc.org.pl