Ministry of the Environment

INITIAL
NATIONAL IMPLEMENTATION
PROGRAMME FOR
THE BALTIC SEA ACTION PLAN

WARSAW

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Prepared by:

Department for Environmental Monitoring and Information
of the Chief Environmental Protection Inspectorate

on the basis of:

- information provided by the National Water Management Authority, General Directorate for Environmental Protection, Ministry of the Environment, Ministry of Economy, Ministry of Infrastructure, Ministry of Agriculture and Rural Development ,
- study entitled: *Initial national implementation programme for BSAP,* ordered by GIOS, performed by IMGW, financed by NFOŚiGW.

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ANNEX 1: TABLE LIST OF TASKS TO BE IMPLEMENTED AS PART OF THE NATIONAL PRELIMINARY PROGRAMME FOR THE IMPLEMENTATION OF THE BALTIC SEA ACTION PLAN (WKPW BSAP)

1. INTRODUCTION

Baltic Sea Action Plan (BSAP) formulated by Helsinki Commission was adopted at the Ministerial Meeting which took place in Krakow on 15 November 2007, under the Convention on the Protection of the Marine Environment of the Baltic Sea Area[1] (hereinafter referred to as Helsinki Convention).

Undertaking works on development of Baltic Sea Action Plan resulted from bad condition of Baltic Sea water and the necessity to reduce phosphorus and nitrogen loads and hazardous substances deposited from land to water.

Baltic Sea Action Plan assumes reaching good ecological condition of the Baltic Sea by 2021. The main actions are focused on eutrophication, hazardous substances, biodiversity and protection of natural environment and activities on sea included in four segments.

The parties by acceptance of BSAP undertake to develop national implementation programmes (KPW) by 2010 with assumption that the programmes will be discussed at the HELCOM ministerial meeting in May 2010 with regard to verified targets of reduction of the eutrophication loads. According to conclusions from 28th meeting of the HELCOM HOD delegation chairmen (9-10 June 2009) the temporary reduction targets accepted in BSAP concerning nutrients will not be verified by the ministerial meeting in 2010. Thus, at the present stage, National Implementation Programme (KPW) of BSAP may be only of initial nature and in such version it will be presented at the HELCOM ministerial meeting in May 2010. Final determination of BSAP objectives will take place at the Ministerial Conference in 2010 which will be addressed to the necessity to develop target implementation plan for BSAP.

[1] The Convention concluded in Helsinki on 9 April 1992 on the Protection of the Marine Environment of the Baltic Sea Area (Dz. U. of 2000, N. 28, item 346).

Implementation of BSAP tasks assigned to Poland requires active participation of not only the Ministry of the Environment but also other ministries, in particular the Ministry of Agriculture, Ministry of Economy and Ministry of Infrastructure.

This active participation of ministries in BSAP implementation including their declaration of activities aiming at adequate reduction of phosphorus and nitrogen loads by 2021 is expected by the Helsinki Commission.

Works on BSAP National Implementation Programme on behalf of the Ministry of Environment are coordinated by the Chief Inspectorate for Environmental Protection.

Materials and information used for development of the initial version of National Implementation Programme of BSAP were provided to the Chief Inspector for Environmental Protection by ministerial units i.e. National Water Management Authority, General Directorate for Environmental Protection and other authorities including Ministry of Agriculture and Rural Development, Ministry of Infrastructure, competent for management with individual categories of pressure on Baltic Sea environment or responsible for protection activities.

Implementation of individual tasks is presented in the 4 segments of BSAP with consideration of the index of actions undertaken or those which should be undertaken to improve sea environment condition, prepared by HELCOM Secretariat (http://meeting.helcom.fi/web/bsap/). Synthetic presentation of tasks with indication of entities participating in their implementation is contained in Annex 1.

The study reflects current level of involvement of individual ministries and their services in reconstructive process of the current, highly non-satisfactory ecological condition of the Baltic Sea. Stoppage of further degradation of its ecosystem requires intensification of activities for reduction of stress from the land and sea and for strengthening direct protective activities. These activities and their effects as well as necessary efforts should be specified by individual sectors of economy in further works on National Implementation Programme of BSAP *inter alia* in the form of extension and specification of tasks index contained in Annex 1.

However, it must be underlined that implementation activities including investments with the highest calculable significance for improvement of the Baltic Sea ecosystem are identical as for implementation of the Community and other international obligations of Poland in the scope of water management in river basins and in the scope of sea management which must be taken into consideration while estimation of BSAP implementation costs, avoiding double calculation of costs.

Direction of further works on this document must be considered also in the view of the requirements of the Marine Strategy Framework Directive 2008/56/EC (MSFD) considering pursuit of the states – parties to the Helsinki Convention, being part of EU, to recognize the actions under Convention as pilot project according to provisions of the Directive.

2. GEOGRAPHIC, SOCIAL-ECONOMIC AND ECOLOGICAL CONDITIONS OF BSAP IMPLEMENTATION

The territory of contemporary Poland is almost fully located in the catchment area of the Baltic Sea which includes river basins of: Odra, Vistula, small rivers with estuaries directly to the Baltic Sea, Pregoła and small part of Niemen river basin through Czarna Hańcza, Świsłocza and Szeszupa rivers. The Baltic Sea catchment area includes 99.7% of the territory of Poland. Small part of Poland's area is located in the catchment area of the North Sea and the Black Sea.

Tab.2.1 Catchment areas and river basins

Catchment areas and river basins	Total	Including in Poland	
	In thousands of km^2		In % of the total area of Poland
Catchment area of the Baltic Sea	**1380,9**	**311,9**	**99,7**
Including:			
Odra river basin	118,9	106,1	33,9
Szczecin Lagoon catchment area [b]	12,1	2,5	0,8
Direct catchment area of the Baltic Sea[c]	X	17,3	5,5
Vistula catchment area[d]	194,4	168,7	54
Vistula Lagoon catchment area[e]	24,2	14,8	4,7
Niemen river basin.....	98,1	2,5	0,8
Catchment area of the North Sea	**519,9**	**0,2**	**0,1**
Catchment area of the Black Sea	**1838,5**	**0,6**	**0,2**

a Area of lands and inland water. *b* Excl. Odra. *c* Incl. Martwa Wisła. *d* Excl. delta.
e Incl. right side part of the delta.

Źródło: GUS – Ochrona Środowiska 2009

The following is the statistic presentation of Poland area management condition according to data of the Central Statistical Office published in 2009.

Tab.2.2 Country area according to use in 2008

	2007	2008

	Thousands of he	Per 1 resident in ha	Thousands of he	Per 1 resident in ha	Increase (+) Or decrease (-) in thousands of ha comp. to 2006
TOTAL AREA OF THE COUNTRY[b]	**31268**	**0,82**	**31268**	**0,82**	**-**
Arable land.....	19025	0,5	18981	0,5	-44
Forest land and wooden land	9463	0,25	9496	0,25	+33
Under water land	638	0,02	640	0,02	+2
Developed and urbanized area.....	1511	0,04	1529	0,04	+18
Ecological land.....	33	0	34	0	+1
Wastelands.....	487	0,01	485	0,01	-2
Various land[d]	111	0	102	0	-9

b Land area (incl. inland water) and part of sea internal water. *d* Land intended for reclamation and unutilised reclaimed land, dikes not adjusted to wheel traffic.
Source: GUS – Environment Protection 2009

The country area reaches 312 685 km^2 and it is the 9th area in Europe. The following table presents areas of catchment areas of 9 Baltic states among which Poland is on 3rd position with respect to area.

Tab.2.3 List of catchment areas of countries located in the Baltic Sea catchment area with direct access to the sea.

No.	State	Area [in km^2]
	1	2
1	Sweden	423.916
2	Russia	330.288
3	Poland	311. 900
4	Finland	305.596
5	Lithuania	66.379
6	Latvia	65.802
7	Estonia	45.958
8	Denmark	33.438
9	Germany	28.488

Source: HELCOM

Poland, according to the Central Statistical Office (Demographic Yearbook 2009), as of 31 December 2008 was inhibited by 38,136 thousand people including: in cities 23,288 thousand people, i.e., 61.1% of Poland's population and in rural areas 14,848 thousand people i.e. 38.9%. An

average number of people per 1 km^2 in Poland is 122. As far as population is concerned, Poland is at 8th position in Europe.

The following table presents number of population in the countries located in the catchment area of the Baltic Sea, among which Poland is at the 1st place in respect of population.

Tab.2.4 Population in countries located in the catchment area of the Baltic Sea

No.	State	Population	Person/km^2
	1	2	3
1	Poland	38.104.473	122
2	Russia	10.158.928	31
3	Sweden	8.511.075	20
4	Finland	5.045.488	17
5	Denmark	4.510.360	135
6	Lithuania	3.686.434	56
7	Germany	3.100.342	109
8	Latvia	2.667.143	41
9	Estonia	1.571.406	34

Source: HELCOM

Industry:

Large concentration of industry, especially in the areas located at the initial parts of Odra and Vistula rivers results in significant changes in water conditions and necessity to outfalls of wastewater to river network with small quantities of water.

In the Vistula river basin the greatest industry concentration is the Krakow district related mostly to mining and processing of zinc and lead ores and metallurgy. The district located in the southern part of the area includes the major metallurgic, mining, electrical and machinery and chemical industry plants. The Śląsk industry district is engaged in hard coal mining. Moreover, among the raw materials and industrial districts is Tarnobrzeg district which exists thanks to sulphur deposits. Other greater industrial districts with a significant impact on environment is Warsaw industrial district located in the central part of river basin which mostly consists of power, electrical and machinery, precision and food industry. Also the Płock industrial centre should be noted with its greatest in Poland refinery and petrochemical plants existing for 60 years . The greatest industrial centre in the northern part of the Vistula river basin is Gdańsk, acting also as a large sea commercial port.

In the Odra river basin the greatest concentration of industry is Śląsk industrial district related mostly to hard coal mining and processing. The district located in the southern part of the river basin includes the major metallurgic, mining, electrical and machinery and chemical industry plants. Moreover, among the raw materials and industrial districts the following districts must be

distinguished: Bełchatów and Legnica districts which exist thanks to brown coal and copper deposits.

Agriculture:

According to GUS data of 2008, the total area of arable land in Poland is 190.25 thousand km^2, covering 61% of country area. In 2008, the area of arable land decreased comparing to 2006 by 0.44 thousand km^2. Number of farms is ca. 1 million 800 thousand and their average area does not exceed 10 ha.

Use of mineral phosphatic fertilizers in 2007/2008 calculated into P_20_5 reached 462.3 thousand tonnes and it was over 38% lower than in 1989/1990. On average, there was 28.6 kg phosphatic fertilizers (P_20_5) per one hectare of arable land in 2007/2008. A significant decrease of phosphatic fertilizers use was related *inter alia* to property changes in rural areas that occurred in Poland in first half of the 90s reaching minimal value of 300 thousand tonnes/year.

In case of mineral nitrogenous fertilizers, their use in 2007/2008 reached 1141.3 thousand tonnes (N) and comparing to 1989/1990 was lower only by 11.3%. On average, there was 70.7 kg nitrogenous fertilizers (N) per one hectare of arable land in 2007/2008.

Since the mid 90s, there is an insignificant growing tendency for use of mineral phosphatic and nitrogenous fertilizers.

Tab.2.5 Use of artificial and lime fertilizers (in clean component)

Specification	1989/90	1995/96	1999/00	2005/06	2006/07	2007/08
	In thousands of tonnes					
Artificial fertilizers (NPK)	3029,0	1511,3	1526,5	1966,1	1970,7	2142,0
Nitrogenous (N)	1274,0	852,0	861,3	996,5	1056,2	1142,3
Phosphatic (P_2O_5)	752,0	301,7	296,8	441,8	411,9	462,3
Potassic (K)	1003,0	357,6	368,4	527,8	502,6	537,4
Lime fertilizers (CaO)	3371,0	2224,8	1693,9	873,7	604,9	622,4
	Per 1 ha of arable land in kg					
Artificial fertilizers (NPK)	163,9	84,5	85,8	123,3	121,8	132,6
Nitrogenous (N)	68,9	47,6	48,4	62,5	65,3	70,7
Phosphatic (P2O5)	40,7	16,9	16,7	27,7	25,5	28,6
Potassic (K)	54,3	20,0	20,7	33,1	31,1	33,3
Lime fertilizers (CaO)	182,4	124,4	95,1	54,8	37,4	38,5

Źródło: GUS – Ochrona Środowiska 2009

Gross domestic product of Poland comparing to Baltic states.

According to data published by EUROSTAT, the Polish gross domestic product per capita according to market prices in 2007 was lowest among the Baltic states (excl. Russia).

Tab.2.6 GDP per 1 resident according to market prices in 2007

No.	State	EUR
	1	2
1	Denmark	41.700
2	Sweden	36.300
3	Finland	34.000
4	Germany	29.500
5	Estonia	11.400
6	Latvia	8.800
7	Lithuania	8.300
8	Poland	8.100
9	Russia	-

Source: Europe in figures – Eurostat yearbook 2009

Changes in total phosphorus and total nitrogen loads deposited from Poland to the Baltic Sea comparing to other Baltic states.

Poland's share in total phosphorus loads deposited to the Baltic Sea in 2005 reached over 30%. At the same time, actions undertaken by Poland resulted in decrease of the total phosphorus load in 2005 comparing to 2000 by over 28% and comparing to 1995 it decreased by over 37%.

Tab.2.7 Size of total phosphorus loads deposited to the Baltic Sea from the Baltic states.

No.	State	Total phosphorus discharge t/year		
		1995[1)]	2000[2)]	2005[3)]
	1	2	3	4
1.	Poland	14208,00	12645,00	8910,70
2.	Russia	7107,00	4623,00	4782,60
3.	Sweden	4718,00	4969,00	3552,40
4.	Finland	3850,00	4840,00	3382,40
5.	Latvia	2184,00	2207,00	2762,30
6.	Estonia	1269,60	965,00	1763,00
7.	Denmark	2598,00	1857,00	1717,70
8.	Lithuania	1405,00	1896,00	1325,70
9.	Germany	578,50	487,00	387,90
10.	**Total**	**37918**	**34489**	**28585**

1) Data according to The Third Baltic Sea Pollution Load Compilation (PLC-3) HELSINKI COMMISSION Baltic Marine Environment Protection Commission
2) Data according to The Fourth Baltic Sea Pollution Load Compilation (PLC-4) HELSINKI COMMISSION Baltic Marine Environment Protection Commission
3) Data according to annual reports provided to HELCOM from 9 Baltic states

I respect of the unit phosphorus load per km^2 of the catchment area, Poland is 3rd among the Baltic states.

Tab.2.8 Size of total phosphorus loads per km^2 of the catchment area of states located in the catchment area of the Baltic Sea.

No.	State	Total phosphorus discharge t/km^2

		1995[1)]	2000[2)]	2005[3)]
	1	2	3	4
1.	Denmark	0,078	0,056	0,051
2.	Estonia	0,029	0,022	0,040
3.	Poland	0,040	0,036	0,025
4.	Latvia	0,017	0,017	0,021
5.	Germany	0,025	0,021	0,017
6.	Finland	0,015	0,019	0,014
7.	Russia	0,020	0,013	0,013
8.	Lithuania	0,012	0,016	0,011
9.	Sweden	0,011	0,012	0,008

1) Data according to The Third Baltic Sea Pollution Load Compilation (PLC-3) HELSINKI COMMISSION Baltic Marine Environment Protection Commission
2) Data according to The Fourth Baltic Sea Pollution Load Compilation (PLC-4 HELSINKI COMMISSION Baltic Marine Environment Protection Commission
3) Data according to annual reports provided to HELCOM from 9 Baltic states

With respect to phosphorus loads per 1 resident of the catchment area, Poland is at 8th position.

Tab.2.9 Size of total phosphorus loads per 1 resident of the catchment area of countries located in the catchment area of the Baltic Sea.

No.	State	Total phosphorus discharge kg/resident		
		1995[1)]	2000[2)]	2005[3)]
	1	2	3	4
1.	Estonia	0,85	0,65	1,18
2.	Finland	0,94	1,18	0,83
3.	Latvia	0,47	0,47	0,59
4.	Russia	0,67	0,44	0,45
5.	Sweden	0,55	0,58	0,42
6.	Denmark	0,58	0,41	0,38
7.	Lithuania	0,23	0,31	0,22
8.	Poland	0,34	0,30	0,21
9.	Germany	0,23	0,20	0,16

1) Data according to The Third Baltic Sea Pollution Load Compilation (PLC-3) HELSINKI COMMISSION Baltic Marine Environment Protection Commission
2) Data according to The Fourth Baltic Sea Pollution Load Compilation (PLC-4) HELSINKI COMMISSION Baltic Marine Environment Protection Commission
3) Data according to annual reports provided to HELCOM from 9 Baltic states

Poland's share in total nitrogen load deposited to Baltic Sea in 2005 reached over 25%. At the same time, actions undertaken by Poland resulted in decrease of the total nitrogen load in 2005 comparing to 2000 by over 23% and comparing to 1995 it decreased by over 30%.

Tab.2.10 Size of total nitrogen load deposited to the Baltic Sea from Baltic states.

No.	State	Total nitrogen discharge t/year		
		1995[1)]	2000[2)]	2005[3)]
	1	2	3	4
1.	Poland	214718,00	191166,00	146303,00
2.	Sweden	130872,12	153074,00	103774,30

3.	Finland	70273,00	101659,00	78435,30
4.	Latvia	91065,00	67493,00	59681,10
5.	Russia	84646,00	79188,00	55110,60
6.	Lithuania	36823,00	47885,00	43084,90
7.	Denmark	68680,00	58923,00	42619,80
8.	Estonia	46467,30	26874,00	32583,30
9.	Germany	21371,10	18605,00	17573,90
10.	**Total**	**764916**	**744867**	**579166**

1) Data according to The Third Baltic Sea Pollution Load Compilation (PLC-3) HELSINKI COMMISSION Baltic Marine Environment Protection Commission
2) Data according to The Fourth Baltic Sea Pollution Load Compilation (PLC-4) HELSINKI COMMISSION Baltic Marine Environment Protection Commission
3) Data according to annual reports provided to HELCOM from 9 Baltic states

In respect of the unit nitrogen discharge per km^2 of the catchment area, Poland is 5^{th} among Baltic states.

Tab.2.11 Size of total nitrogen loads per km^2 of the catchment area of states located in the catchment area of the Baltic Sea.

No.	State	Total nitrogen discharge t/km^2		
		1995[1)]	2000[2)]	2005[3)]
	1	2	3	4
1.	Denmark	2,054	1,762	1,275
2.	Germany	0,933	0,813	0,767
3.	Estonia	1,066	0,616	0,747
4.	Latvia	0,708	0,525	0,464
5.	Poland	0,610	0,543	0,415
6.	Lithuania	0,314	0,408	0,367
7.	Finland	0,282	0,408	0,315
8.	Sweden	0,303	0,355	0,241
9.	Russia	0,238	0,222	0,155

1) Data according to The Third Baltic Sea Pollution Load Compilation (PLC-3) HELSINKI COMMISSION Baltic Marine Environment Protection Commission
2) Data according to The Fourth Baltic Sea Pollution Load Compilation (PLC-4) HELSINKI COMMISSION Baltic Marine Environment Protection Commission
3) Data according to annual reports provided to HELCOM from 9 Baltic states

With respect to total nitrogen loads per 1 resident of the catchment area, Poland is at last position.

Tab.2.12 Size of total nitrogen loads per 1 resident of the catchment area of states located in the catchment area of the Baltic Sea.

No.	State	Total nitrogen discharge kg/resident		
		1995[1)]	2000[2)]	2005[3)]
	1	2	3	4
1.	Estonia	31,16	18,02	21,85
2.	Finland	17,18	24,85	19,18
3.	Latvia	18,02	13,36	12,76
4.	Sweden	15,35	17,95	12,17
5.	Denmark	15,23	13,06	9,45
6.	Lithuania	6,05	7,86	7,14

7.	Germany	8,58	7,47	7,05
8.	Russia	7,98	7,47	5,20
9.	Poland	5,11	4,55	3,48

1) Data according to The Third Baltic Sea Pollution Load Compilation (PLC-3) HELSINKI COMMISSION Baltic Marine Environment Protection Commission
2) Data according to The Fourth Baltic Sea Pollution Load Compilation (PLC-4) HELSINKI COMMISSION Baltic Marine Environment Protection Commission
3) Data according to annual reports provided to HELCOM from 9 Baltic states

3. GENERAL ASSUMPTIONS TO INITIAL NATIONAL IMPLEMENTATION PROGRAMME FOR THE BALTIC SEA ACTION PLAN – LINKS WITH OTHER PROCESSES

Poland as the Contracting Party to Helsinki Convention on the Protection of the Marine Environment of the Baltic Sea Area implements at its territory HELCOM recommendations referring to the Baltic Sea and land areas located in its catchment area. Most of these recommendations is compliant with commitments resulting from the Poland membership in the European Union, international agreements, mostly conventions which were ratified by the Republic of Poland and other numerous commitments resulting from programmes and projects of organizations in which our country participates.

Therefore, the assumption of use of complementarity and synergy effect in works on the national BSAP implementation programme, aiming at use of adequate operating instruments and processes related to river basins and sea management in order to obtain calculable improvement of the Baltic Sea ecosystem. At the same time, it was assumed that the BSAP implementation process will be based on competence of adequate ministries and competence of existing authorities and institutions.

In respect of improvement of the water environment quality it is mostly related to the implementation process of the Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy (hereinafter referred to as the Water Framework Directive (RDW)) and related documents.

In the context of reduction of eutrophication, Poland implements *inter alia* the provisions of the Council Directive no. 91/676/EEC of 12 December 1991 concerning the protection of waters against pollution caused by nitrates from agricultural sources (Nitrates Directive), which reflects in establishment of list of areas at particular risk (OSN) and implementation of Code of Good Agricultural Practice in these areas. Coordination and supervisory actions in this respect are undertaken mostly by the Ministry of Agriculture and Rural Development (MRiRW) and the National Water Management Authority (KZGW).

Provisions of the Council Directive no. 91/271/EEC of 21 May 1991 concerning urban waste-water treatment (Wastewater Directive) are implemented on the basis of the National Programme of Urban Wastewater Treatment (KPOŚK). These actions are of inter-ministerial nature. They are handled by the Ministry of Infrastructure (MI), Ministry of Economy (MG), Ministry of Agriculture and Rural Development (MRiRW), National Water Management Authority (KZGW) and the Inspectorate for Environmental Protection in respect of efficiency control of the undertaken

solutions and most of all the local governments implementing investment tasks contained in KPOŚK.

In the scope of reduction of deposition of pollutions from the atmosphere the actions implemented *inter alia* under the Convention on Long-range Transboundary Air Pollution in 1979 are significant. In 1988-2003, eight protocols constituting executive acts for the Geneva Convention were developed and implemented, including the Protocol from Göteborg concerning reduction of emission of acidification and eutrophication of the environment. These actions were strengthened by implementation of the Community law *inter alia* Directive 2001/81/EC of the European Parliament and of the Council of 23 October 2001 on national emission ceilings for certain atmospheric pollutants (Ceilings Directive), Directive 2001/80/EC of the European Parliament and of the Council of 23 October 2001 on the limitation of emissions of certain pollutants into the air from large combustion plants (Large Combustion Plants Directive), Directive 94/63/EC on the control of volatile organic compound (VOC) emissions. Actions in this respect result from inter-ministerial cooperation, in particular of the Ministry of Environment and the Ministry of Economy.

Subsequent acts of the Community and international law, significant for BSAP implementation, especially in the context of reduction of hazardous substances emissions and impact of the waste landfills are Directive 2006/12/EC of the European Parliament and of the Council on waste, Council Directive 91/689/EEC of 12 December 1991 on hazardous waste, Council Directive 1999/31/EC of 26 April 1999 on the landfill of waste or the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal. Issues related to hazardous substances including to industrial waste landfill and management are coordinated by the Ministry of the Environment and the Ministry of Economy. Implementation of provisions resulting from the above mentioned legal acts were reflected *inter alia* in the National Waste Management Plan 2010 (KPGO 2010) the effectiveness of which is verified by the Inspectorate for Environmental Protection.

The requirements of the Directive 2008/1/EC of the European Parliament and of the Council of 15 January 2008 concerning integrated pollution prevention and control (IPPC Directive) were implemented. Gradually, the number of plants and companies introducing Best Available Technology Environmental Management System compliant with ISO increases. The provisions of Seveso Directive 96/82/EC on the control of major-accident hazards involving dangerous substances and Convention on the Transboundary Effects of Industrial Accidents are implemented.

With regard to hazardous substances it is significant to implement Directive 2008/105/EC of the European Parliament and of the Council of 16 December 2008 on environmental quality standards in the field of water policy. Poland also ratified the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade

(works in this respect is mostly carried out by the Ministry of Health) as well as the Stockholm Convention on Persistent Organic Pollutants (POP).

Moreover, it must be noticed that currently intensive actions are carried out aiming at implementation of the REACH regulation (Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) and establishing a European Chemicals Agency) and related legal acts (e.g. Directive 2002/95/EC of the European Parliament and of the Council of 27 January 2003 on the restriction of the use of certain hazardous substances in electrical and electronic equipment, Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures – so called CLP Regulation) with respect to substances and chemical preparations including hazardous which replace or amend most of domestic legal regulations in the given respect. Works in this respect are carried out by the Ministry of Economy and the Ministry of Health.

Business activity on Baltic Sea is mostly supervised by the Ministry of Infrastructure and the Ministry of Regional Development (in respect of CASAB) in cooperation with the Maritime Offices and Port Authorities. The works undertaken in relation to BSAP segment: "Maritime activities" are implemented mostly with consideration of the Convention for the Prevention of Pollution From Ships drawn up on 2 November 1973 in London (MARPOL Convention), Convention on the Control of Harmful Anti-fouling Systems on Ships (AFS Convention), Convention of 2004 for the Control and Management of Ships' Ballast Water and Sediments, Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter of 1997 and Convention on Facilitation of International Maritime Traffic.

Under implementation of the Community law also the provisions of the Council Directive 95/21/EC of 19 June 1995 concerning the enforcement, in respect of shipping using Community ports and sailing in the waters under the jurisdiction of the Member States, of international standards for ship safety, pollution prevention and shipboard living and working conditions, Council Directive 1999/32/EC of 26 April 1999 relating to a reduction in the sulphur content of certain liquid fuels and Directive 2005/35/EC of the European Parliament and of the Council on ship-source pollution and on the introduction of penalties, including criminal penalties, for pollution offences, are met.

Poland meets requirements resulting from participation of the International Maritime Organization IMO. Transport of Polish sea vessels on Baltic is carried out in consideration of the International Ship and Port Facility Security Code.

With regard to objectives related to biodiversity protection the Convention on Biological Diversity of 1992 (CBD), Convention on the Conservation of European Wildlife and Natural

Habitats of 19 September 1979 (Bern Convention), Convention signed in Bonn on 23 June 1979 on the Conservation of Migratory Species of Wild Animals (Bonn Convention) are important. Indication of new Baltic Sea Protected Areas (BSPA) is strictly related to areas protected under Natura 2000 (Council Directive 79/409/EEC of 2 April 1979 on the conservation of wild birds and Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora) and Emerald Network. Activities in this respect are carried out by the General Directorate for Environmental Protection. Poland also takes part in numerous research programmes i.e. ESPON, BEAST, international programmes for reintroduction of species to water habitats and protection of sea vertebrates resulting from e.g. implementation of the ASCOBANS agreement in cooperation with HELCOM and OSPAR.

A wide range of works related to biodiversity and natural environment protection is implemented by the Sea Fisheries Institute, e.g. Programme for Monitoring of Cetacean Incidental Catches on the basis of requirements of the Council Regulation (EC) no. 812/2004 of 26 April laying down measures concerning incidental catches of cetaceans in fisheries and amending Regulation (EC) No. 88/98 (O.J. L 150 of 30.4.2004) in scope of introduction of programmes for monitoring of catches with independent observers on board.

Issues related to fisheries on the Baltic Sea are in competences of the Ministry of Agriculture and Rural Development. Common Fisheries Policy – CFP is implemented in cooperation with the International Council for the Exploration of the Sea – ICES preparing scientific consulting services in respect of living resources of the Baltic Sea for the European Commission.

The processes of preparing opinions for issues related to fisheries management on the Baltic Sea is also participated by the Baltic Sea Regional Advisory Council - BS RAC and HELCOM.

Moreover, Poland implements the Operational Programme “Sustainable Development of the Fisheries Sector and Coastal Fishing Areas 2007-2013” (OP FISH 2007-2013) which was created in the basis of the European Fisheries Found - EFF).
OP FISH 2007—2013 will implement four strategic objectives:

- improvement of competitiveness and sustainability of the basic fisheries sector;
- increase and development of market potential of fisheries sector;
- promotion of sustainable development and improvement of life quality and environmental condition in the fisheries areas;
- implementation of efficient method of OP management and control and improvement of administrative potential quality for implementation of the Common Fisheries Policy.

Implementation of the above mentioned strategic objectives assumes undertaking activities in the following priority axes:

- Priority Axis 1: Measures for the adaptation of the fishing fleet. The main objective of the Axis 1 is adaptation of fishing fleet to available resources through provision of public aid to owners of fishing vessels and fishermen for permanent or temporary cessation of fishing activities. Moreover, the important objective is ensuring social and economic compensation with regard to implementation of requirements of the Common Fisheries Policy.
- Priority Axis 2. Aquaculture, inland fishing, processing and marketing of fishery and aquaculture products. Measures in Axis 2 focus *inter alia* on development or rebuilding fish breeding and farming facilities, investment in fishing vessels in inland waters, investments in the scope of construction, development, equipment and modernization of devices intended for inland fishery and investments in place of dismemberment and harbours. Under this Axis, the financial support is granted also for investments in fish processing and marketing, related to development of existing or construction of new facilities related to fish products processing, improvement of quality and competitiveness of processed and marketed fish products, through investments in new technologies, new equipment and innovative production methods, decreasing of adverse impact of fish products processing on environment and maintenance or growth of employment level in processing industry. Under Axis 2 compensation will be paid to owners of breeding and farming facilities who undertake to meet for 5 years obligations exceeding the basic rules of good fisheries practice under support of use of the traditional or environmental friendly practices and techniques in breeding and farming fish.
- Priority Axis 3: Measures of common interest. Under Axis 3 improvement of fisheries sector organization is supported *inter alia* through creation and restructuring recognized producers' organizations. Also the environmental protection activities are supported, related *inter alia* to reclamation of inland water and reopening the water-courses that constitute routes for migration fish species. Support under Axis 3 includes *inter alia* investments aimed at construction and modernization of broadly defined infrastructure in fishing ports, landing docks and harbours, implementation of publicity campaigns aiming at increase of consumption of fish products in Poland and at testing and implementation of new technologies used *inter alia* to decrease adverse impact of inland fisheries and maritime fisheries on environment.
- Priority Axis 4: Sustainable development of fisheries areas. Implementation of this axis is to contribute activation of society in fisheries areas, through inclusion of social and business partners from specific area to planning and implementing local initiatives which would allow for development of these areas and improvement of life quality of local communities related to fisheries. Within the local strategies prepared by these communities, it will be

possible to implement a wide range of investments and initiatives *inter alia* in the scope of diversification of business and investments in good fishing infrastructure.

- Priority Axis 5: Technical assistance. This Axis aims at administrative support of institutions involved in implementation and execution of the Operational Programme.

Poland actively participates in Marine Spatial Planning MSP programmes - mostly the Ministry of Infrastructure and Maritime Offices) including in VASAB programme implemented with the assistance of the Ministry of Regional Development.

It must be emphasized that next to activities for protection of the Baltic Sea undertaken under Helsinki Convention within EU initiatives of strategic nature are made and legal documents are accepted such as: Marine Strategy Framework Directive (MSFD), EU Strategy for the Baltic Sea region, EU Integrated Marine Policy, which have analogous or complementary objectives.

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4. PRESENTATION OF EACH SEGMENT OF INITIAL NATIONAL IMPLEMENTATION PROGRAMME FOR BALTIC SEA ACTION PLAN

4.1. SEGMENT I: EUTROPHICATION

4.1.1. INTRODUCTION

Eutrophication is the process of enrichment of waters in mineral resources, mostly nutrient elements:

nitrogen and phosphorus, used as nutrients by plants and some microorganisms. This can be natural phenomenon or anthropogenic. In the initial phase the eutrophication growth can be beneficial for ecosystem since it stimulates primary production. As a result of its excessive quantity in water - most in consequence of human activity - different levels of phytocoenoses are disturbed which results in losing the balance on the entire trophic network of the given category of water. Nutrients deposited to the Baltic Sea are caught by the water flora – algae and flowering plants which leads to growth of biomass. Excessive algal bloom, especially creating phytoplankton lead to creation of thick coat these organisms on the surface, which isolate water depth from access to air and rays of light. This limits the photosynthesis with macrophites living in deeper parts of water e.g. *Fucus vesiculosus* to which many heterotrophic species are related including young fish.

In the end, eutrophication leads to oxygen deficiency, cause it is used excessively to decomposition process for dead organic matter (mostly from plants). This leads to changes in

physical and chemical properties of the environment and the content of oxygen dissolved in water becomes critical for most of organisms, in particular for the vertebrates. Additionally, from the dead matter various toxic substances are released i.e. methane, hydrogen, hydrocyanic acid, ammonia, hydrogen sulphide and other toxic substances produced by cyanosis and other microorganisms.

The nutrients content indicator in the reservoir is *inter alia* the ratio of dissolved non-organic nitrogen to dissolved non-organic phosphorus called the molar ratio N:P (Redfield number). An optimum molar ratio N:P for growth of phytoplankton is 16:1. This ratio considers both direct emission of N and P from local sources, deposits from atmosphere, N_2 bonding by cyanosis and nutrients discharged to the sea with inland water. Inflow of nitrogen and phosphorus to the Baltic Sea from external sources causes that the ratio of these elements is disturbed.

In the Baltic Sea, there is limited exchange of waters and the vertical stratification of water mass – which makes the aeration (and oxygenation) of ground layers and sediments difficult. Additionally, low salinity and temporary nature of the Baltic water - which not a true oceanic environment and not freshwater environment causes that the sea is extremely sensitive to nutrient enrichments and consequently to eutrophication - currently the greatest threat for the Baltic Sea.

A superior strategic objective of this segment of the Baltic Sea Action Plan is the Baltic Sea not threatened by eutrophication. Implementation of this objective depends mostly on gradual reduction of nitrogen and phosphorus loads discharged to the Baltic Sea by States – Parties to the HELCOM Convention the territory of which is located fully or partially in the catchment area of the given reservoir. The following table contains initial estimated total values of reduction of the nitrogen and phosphorus loads (considering all the nutrients sources of origin in the sea waters) for individual countries and which will be verified by 2013.

Tab.4.1 Total initial sizes of nitrogen and phosphorus loads specified in BSAP to be reduced by individual states - parties to the Helsinki Convention by 2021.

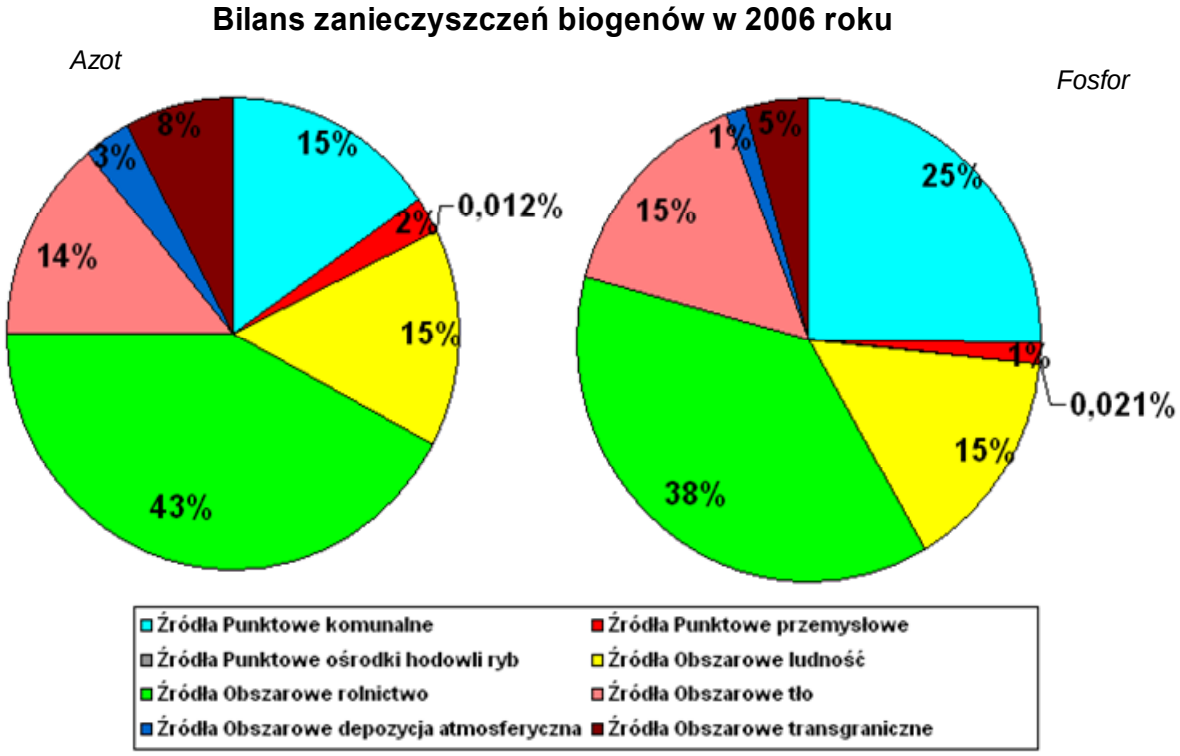
No.	State	Size of nutrients loads discharged to the Baltic Sea with waters from inland sources in 2000		Total initial sizes of reduction of nutrients loads in the Baltic Sea waters to be reached in BSAP by 2021	
		Phosphorus [t]	Nitrogen [t]	Phosphorus [t] and %	Nitrogen [t] and %
	1	2	3	4	5
1	Denmark	1860	58920	16 0,86%	17210 29,21 %
2	Estonia	970	26870	220 22,68 %	900 3,35 %
3	Finland	4840	101660	150 3,10 %	1200 1,18 %
4	Germany	490	18610	240	5620

No.	State	Size of nutrients loads discharged to the Baltic Sea with waters from inland sources in 2000		Total initial sizes of reduction of nutrients loads in the Baltic Sea waters to be reached in BSAP by 2021	
		Phosphorus [t]	Nitrogen [t]	Phosphorus [t] and %	Nitrogen [t] and %
	1	2	3	4	5
				48,98 %	30,20 %
5	Latvia	2210	67490	300 13,57 %	2560 3,80 %
6	Lithuania	1900	47890	880 46,31 %	11750 24,53 %
7	***Poland***	*12650*	*191170*	*8760* *69,25 %*	*62400* *32,64 %*
8	Russia	4620	79190	2500 54,11 %	6970 8,80 %
9	Sweden	4970	153070	290 5,83 %	20780 13,57 %
	Σ	34510	744870	13356 38,70 %	129390 17,37 %
10	**Transboundary common load**			1660	3780

Size of phosphorus and nitrogen loads deposited from Poland to the Baltic Sea is presented in Chapter II in tables 2.7. - 2.11. of this study.

It is estimated that in total ca. 75% of nitrogen load and at least 95% phosphorus load is discharged to the Baltic Sea through rivers and so called direct discharge with waters. Ca. 25% of the nitrogen load comes from atmospheric deposition. Various economic sectors contribute to that, e.g. power sector and transport sector (mostly through NOx emission to atmosphere), fisheries.

In case of Poland, it is estimated that agriculture and forestry have a significant meaning , especially the use of fertilizers containing nutrients with a type of plant production and household sewage. Changes in use of artificial fertilizers in 1990-2008 in statistical presentation are presented in the table 2.5.



Źródło: The fifth Baltic Sea Pollution Load Compilation (PLC-5)

Diagram translation:

Bilans zanieczyszczeń biogenów	Nutrients pollutions balance
Azot	Nitrogen
Fosfor	Phosphorus
Źródła punktowe komunalne	Point sources – urban
Źródła punktowe ośrodki hodowli ryb	Point sources – fish breeding centres
Źródła punktowe przemysłowe	Point sources –industrial
Źrodła Obszarowe rolnictwo	Area sources – agriculture
Źródła Obszarowe depozycja atmospferyczna	Area sources – atmospheric deposition
Źródła Obszarowe ludność	Area sources – population
Źródła Obszarowe tło	Area sources – background
Źródła Obszarowe	Area sources – transboundary

To reduce eutrophication the following operational ecological objectives are implemented:

- Concentrations of nutrients close to natural levels,
- Clear water,
- Natural distribution and occurrence of plants and animals,
- Natural oxygen levels.

The above mentioned objectives will be implemented *inter alia* through determination in 2013 maximum acceptable nutrients inflows and reaching these sizes by 2021 through implementation of national programmes of nutrients reduction and periodical assessment of their effectiveness. These measures refer to both the nutrients loads discharged with water, brought with municipal and industrial sewage originating from point discharges and distributed from various economic sectors (especially agriculture, forestry) as well as atmospheric deposition. The main role in respect of decrease of nutrient substances loads discharged with waters will be played by activities contained in the national water and environmental programme (incl. KPOŚK), in water management plans in the river basins areas and conditions of use of water from water regions and catchment areas, developed according to Water Law Act, transposing provisions of the Water Framework Directive.

The international cooperation will be extended to reduce loads coming to the Baltic Sea with transboundary from Ukraine and mostly from Belarus (estimated quantities are 1660 tonnes of phosphorus and 3780 tonnes of nitrogen originating from the territory of this country). Common initiatives will be undertaken *inter alia* under bilateral projects or multinational and through other existing financing mechanisms and international agreements such as EKG/UN Convention of 1992 on the Protection and Use of Transboundary Watercourses and International Lakes.

4.1.2. DESCRIPTION CONCERNING PREVIOUS AND PLANNED ACTIONS UNDER IMPLEMENTATION OF INDIVIDUAL OBJECTIVES OF THE SEGMENT I: EUTROPHICATION (according to BSAP index)

I. DETERMINATION OF ACCEPTABLE INFLOWS OF NUTRIENTS AND PLANNING OF MEASURES

E-5, E-9: Development of the national programme and assessment of its effectiveness
Deadline: development of initial national programme – 2010, effectiveness assessment review of reduction objectives – 2013, implementation – by 2016 at the latest, reaching goals - 2021

Previous measures:

In cooperation with competent ministries responsible for individual aspects of water environment quality, the stock taking of legal acts regulating measures for reduction of eutrophication was carried out, including those resulting from the Community commitments as well as other documents and information sources. These measures are at the review stage, especially for

the following sectors: agricultural, forestry and municipal wastewater treatment sector as well as those contributing to emission of N and P compounds to atmosphere – which is discussed further in the study.

Planned measures:

Poland will participate in discussion on approach to assess the effectiveness of national programmes, in particular stressing the need to perform the assessment of biological effects over longer periods of time to ensure the objectivity of the obtained data as well as taking into account the reservation on validity of cost monitoring in regard to the differences in economical development of the Contracting Parties.

Actions to reduce nutrient load are consecutively undertaken in relation to EU obligations. However, their effects in the aspect of reduction of loads disposed to the Baltic Sea need to be estimated. Good ecological status of water bodies, including transitional and coastal waters should be reached in 2015 which should translate into decrease of pollution loads disposed from river basins areas.

E-10: Identification and inclusion of required and appropriate measures into River Basin Management Plans of the EU Water Framework Directive
Deadline: 2008 – 2009

Previous measures:

River basin management plans and the programmes of measures contained in the National Water-Environmental Programme are the basic planning documents related to implementation of the provisions of the Water Framework Directive 2000/60/EC. They constitute the basis for making decision that have impact both on the condition of water resources and future water management rules as well as on conditions of social and economic development for the entire country and individual regions. Pursuant to provisions of Article 119 of the Act of 18 July 2001 Water Law (Dz. U. of 2005, No. 239, item 2019 as amended) water management plans on the river basins area are developed and updated by the President of the National Water Management Authority in agreement with the minister competent for water management and then they are approved by the Council of Ministers and are published in the Official Journal of the Republic of Poland "Monitor Polski". Since 2009, also the Ordinance of the Council of Ministers of 18 June 2009 on detailed scope of development of water management plans on river basins areas (Dz. U. of 2009, No. 106, item 882) is binding.

The national water and environmental programme contains a wide range of measures resulting from EU regulations including the Sewage Directive (National Programme for Municipal

Waste Water Treatment) and Nitrates Directive, planned to be implemented also in respect of the catchment areas of rivers inflowing directly to the Baltic Sea. Implementation of measures aiming at improvement of all water bodiess to be at least at good level (or aiming at maintenance of such condition) will result in reduction of nutrients emissions to water and consequently it will reduce the load deposited from Poland to the Baltic Sea.

II. REDUCTION OF NUTRIENT LOAD FROM WATERBORNE INPUT

E-11, E-12: Advances municipal wastewater treatment HELCOM recommendations 28E/5 for PE: > 200000; > 100000; 10000 - 100000; 2000 - 10000; 300-2000
Deadline: 2010 – 2018 (depending on PE).

Previous measures:

For agglomeration > 100000 PE – implementation of measures is carried out pursuant to the National Programme for Municipal Waste Water Treatment (KPOŚK) adopted on 16 December 2003 by the Council of Ministers. The programme was introduced to the Polish legal system by Water Law act. The programme aims at implementation of the Directive 91/271/EEC with consideration of transitional periods. Putting water and sewage management in order and meeting the population needs in respect of sewage discharge lies in the gmina competences, on the other hand the major State's tasks is creation of legal, organizational and financial instruments supporting local governments measures - in this scope measures are implemented by the President of KZGW in cooperation with the Minister of the Environment, Chief Sanitary Inspector, Minister of Regional Development and voivodships marshals acting as coordinators in respect to gminas. To ensure conditions for implementation of the KPOŚK, an Inter-Ministerial Team was established for National municipal waster-water treatment programme.

The National Programme for Municipal Waste Water Treatment was developed on the basis of “Information on condition and plans referring to implementation of undertakings by gmina in respect of equipping the developed areas and areas intended for development, with collective sewage systems and municipal waste-water treatment plans (as of the end of 2002)" obtained from gmina 2003. So far KPOŚK was updated twice for the purpose of verification and updating of entries in the scope of investments planning referring to construction of collective sewage systems and construction as well as extension or modernization of waste-water treatment plant.

Tab.4.1.2.1 . Costs of KPOŚK implementation and its subsequent updates [PLN million].

Investment object:	KPOŚK	AKPOŚK 2005	AKPOŚK 2009
Sewage systems	24 086	32 130	19 166

Investment object:	KPOŚK	AKPOŚK 2005	AKPOŚK 2009
Waste-water treatment plants	11 292	10 511	11 359
Sediments management			1 313
Total	**35 378**	**42 642**	**31 838**

Source: www.kzgw.gov.pl

Pollution loads in municipal waste-water, input after treatment to surface water decreased in years: 1995 – 2007 (according to GUS data):

- content of total nitrogen decreased from 30.2 to 21.4 [thousand tonnes/year];
- content of total phosphorus decreased from 6.9 to 1.7 [thousand tonnes/year].

This decreasing tendency is reflected in results obtained during PLC studies:

- PLC-4 of 2000 results indicate that total N load in municipal waste-water discharged after treatment to water reached 38.3 [thousand tones/year] and total P 5.1 [thousand tonnes/years];
- PLC-5 of 2006 results indicate that total N load in municipal waste-water discharged after treatment to water reached 35.0 [thousand tones/year] and total P 3.6 [thousand tonnes/years].

Actions related to water supply system, sewage system are implemented on on-going basis, including construction of in-house of waste-water treatment plant, mostly in rural areas.

Number of water-treatment plants in towns and rural areas increases gradually from the 90s and during: 2000-2008 increased in total from 2475 to 3142 in towns, an from 1510 to 2213 on rural areas, including number of waster-water treatment plant with increased removal of nutrients (according to GUS data):

- in towns it increased from 256 to 419;
- in rural areas it increased from 170 to 389.

On the other hand the number of population (in thousands) using waste-water treatment plant in the above mentioned changed (according to GUS data 2009) in the following manner:

- total number in towns increased from 20488.6 to 24056.2; including number of residents using from waste-water treatment plants with increased removal of nutrients increased from 7329.0 to 16159.1;
- total number in rural areas increased from 1560.5 to 3822.1; including number of residents using from waste-water treatment plants with increased removal of nutrients increased from 335.4 to 1603.6.

Total number of industrial waste-water treatment plants decreased in total from 1626 to 1154, however, the number of waste-water treatment plants with increased removal of nutrients increased from 32 to 55.
On the other hand, the total number of municipal waste-water treatment plants increased in total in

the above mentioned period from 2417 to 3090, including the number of waste-water treatment plants with increased removal of nutrients increased from 421 to 797.

According to MRiRW data, the process of equipping rural areas in water supply system carried out in last years is very intensive and effective - in 2008 density of water supply systems in Poland reached 84 km per 100 km^2, where on rural areas in reached 70.1 km/100 km^2. Process of equipping the rural areas (as well as towns) in sewage system will be continued. In 2008, 61% of population used sewage systems with 85.5% in towns and 22.6% in rural areas. At the end of 2008, 2213 collective waste-water treatment plants were operating in rural areas with total capacity of 1 million m^3/24h and 51943 individual waste-water treatment plants which partly result from the system of existing buildings (distributed settlement on rural areas hinders provision of sewage system mostly due to large capital intensity of this type of investments).

It is forecast that in subsequent years percentage of rural population using water supply system will increase and will reach in 2015 ca. 98%, on the other hand the percentage of rural population using sewage system in 2015 will reach ca. 75%.

The last assessment of the level of investments implementation, included in KPOŚK, carried out by GIOŚ in 2008 shows that number of agglomerations ≥ 15000 PE which did not completed tasks in the scope of waste-water treatment plants planned by the end of 2005 reached 48 (as of 2007). The assessment indicated that the level of efficiency of most of existing waste-water treatment plants is satisfactory in the scope of removal of the pollution loads.

Constant supervision of KPOŚK implementation lies within competences of KZGW. Moreover, KZGW prepared a programme for industrial plants disposing waste-water subject to biodegradation "Programme for equipping agricultural and food industry plants not smaller than 4000 PE disposing waste-water directly to water with devices ensuring water protection standards required by Polish law". 114 plants disposing waste-water directly to water or ground was covered by the programme.

Planned measures:

Further effective and on time implementation of KPOŚK tasks is necessary. After implementation of KPOŚĆ analysis will be carried out which will enable assessment of reached reduction of nutrients load in the country. Further steps will be undertaken according to needs and possibilities.

It is necessary to obtain exact data on effects of treatment of new and planned municipal waste-water treatment plants and identification of places for deposition of treated waste-water to receiver.

The last update of the National Programme for Municipal Waste Water Treatment (AKPOŚK 2009) took place in 2009. Measures carried out under KPOŚK must ensure that by 31 December 2015 all agglomerations ≥ 2000 PE will be equipped in collective sewage systems and waste-water treatment plants with the treatment effect depending on the size of treatment plant and ensuring 75% reduction of total nitrogen and phosphorus compounds originating from municipal sources in Poland. Additionally, agglomerations < 2000 PE equipped with sewage systems on the Poland accession day should be equipped with waste-water treatment plants ensuring proper treatment of waste-water. On the other hand, by 31 December 2010 agricultural and food industry plants of ≥ 4000 PE are obliged to reduce biodegradable pollutions.

AKPOŚK 2009, annex 1, contains index of 1313 agglomerations with PE reaching 44 161 819, which constitute priority for meeting requirements of the Accession Treaty. Under implementation of tasks covered with annex 1 it is necessary to:

- build 30 641 km of sewage network,
- modernize 2 883 km of sewage network,
- modernize or extend 569 waste-water treatment plants,
- build 177 new waste-water treatment plants.

Moreover, for agglomeration of <10 00 PE it must be ensured that efficiency of the treatment plant measured with PE, with assumption of acceptable overload will equal at least 80% of biodegradable pollution load generated by residents, tourists and industrial plants (of small and medium sizes) and that the sewage systems will provide services to at least 50% of agglomerations in 2015.

For all newly built treatment plants, ensuring efficiency of treatment plants not less than loads generated by agglomeration or its part for which services are provided by the treatment plant.

It is anticipated that for priority agglomerations, AKPOŚL 2009 will ensure:

Tab.4.1.2.2. Services for agglomeration by sewage systems, previous and expected as a result of KPOŚK implementation and its subsequent updates.

Size of agglomeration according to PE	Level of services for agglomeration by sewage system in 2006 %PE	Level of services for agglomeration by sewage system in 2015 %PE
≥100 000	91,4	95,4
≥15 000 <100 000	80,2	93,1
≥10 000 <15 000	52,1	84,0
≥2 000 <10 000	53,7	90,2
Average from agglomerations:	**82,8**	**93,7**

Source: www.kzgw.gov.pl

Tab.4.1.2.3. Estimates of ecological effects of removal of biodegradable pollutions as a result of KPOŚK implementation and its updating.

Deadline for balancing the effects - end of year	Provisions of Accession Treaty		Agglomerations meeting requirements of legal provisions*			Treatment plants meeting requirements of legal provisions *		
	Number of agglomerations meeting requirements	% PE	Number of agglomerations meeting requirements*	PE	% PE	Number of treatment plants	Efficiency of PE	% PE
2005	674	69	-	-	-	-	-	-
2008	-	-	628	19 647 966	44,8	719	23 582 545	50,6
2010	1069	86	1007	41 928 926	95,7	1138	44 996 053	96,5
2013	1165	91	1117	42 729 004	97,4	1274	45 894 911	98,4
2015	-	100	1313	44 161 819	100	1465	46 630 903	100

Source: www.kzgw.gov.pl

An expected ecological effect of AKPOŚK 2009 implementation at the end of 2015 will be removal of 75% of loads of: total nitrogen and total phosphorus originating from municipal sources within the territory of Poland and deposited to water. Reduction of this load is the priority tasks for surface water protection, flowing water and the Baltic Sea water against pollution resulting from the municipal waste-water.

This load will be removed by treatment plants providing services for 1313 agglomerations ≥ 2000 PE, generating biodegradable pollutions load equal to 44 161 819 PE. In 459 agglomerations with PE ≥ 15 000 covering over 500 gminas equipped with developed and modernized collective sewage and waste-water treatment plants with full biological treatment and increased nutrients removal there will be removed 87% of that load and in case of total nitrogen and phosphorus almost 75%. Sewage discharged from 198 agglomerations from the range of >10000 PE ≤15000 PE, and also 978 agglomerations <10000 PE constituting 13% of biodegradable pollutions load and insignificant part of total nitrogen and total phosphorus load originating from municipal sources within the territory of Poland and discharged to water may constitute a threat for clearness of water flowing from the entire country and the Baltic Sea water.

E-11, E-12: Reduction of discharges from in-house waste-water treatment – recommendation HELCOM 28E/6 On-site wastewater treatment of single family homes, small businesses and distributed settlements (temporary and final recommendation)
Deadline: 2017 (for temporary recommendation) and 2021 (for final recommendation)

Previous measures:

The recommendation refers to promotion of the following practices in respect of on-site wastewater treatment for single family homes, small business and settlements up to 300 person equivalents PE:

- it is recommended that untreated wastewaters shall not be led directly to natural water systems in areas that are not connected to sewers.
- it is recommended that wastewaters from single family homes, small businesses and settlements should be treated so that emissions per capita to the environment reach at most the values set in Table 4.1.2.4.

For a high standard household with warm water, showers, laundry and dishwashing machines and flush toilets this would mean approximately a significant reduction of 80% of BOD_5, 70% of total phosphorus and 29% of total nitrogen.

Requirements indicated in recommendation (Alternative 2) are compliant with the Sewage Directive EU 91/271/EEC.

Tab. 4.1.2.4. Maximum permissible daily load per capita for biological oxygen demand over five days (BOD_5), total phosphorus (P_{tot}) and total nitrogen (N_{tot}) of the treated wastewater.

Parameter	Permissible load of treated wastewater (g person^{-1} d^{-1})*
BOD_5	8
P_{tot}	0,65
N_{tot}	10

*** g person^{-1} d^{-1} is grams per person per day**

Alternative 2: the requirements based on emissions per capita need not apply where it can be shown that an on-site wastewater treatment plant using the Best Available Technology (BAT) is installed and operated so that the treatment results in at most a concentration of BOD_5 of 40 mg/l and 150 mg/l COD in the effluent of the treatment plant.

Planned measures:

The Update of National Programme for Municipal Waste Water Treatment (AKPOŚK) 2009 of October 2008 contained information that gminas suggested, in the scope of sewage systems development were extensive plans of sewage system construction also covering the distributed settlements areas. These plans require optimizing since the areas *inter alia* due to high costs of sewage system construction should be excluded from the sewage network services and there should be individual systems applied. Application of these systems of wastewater treatment must ensure sustainable level of environment protection, the same level as in case of collective sewage system.

E-13: HELCOM Recommendation 28E/7 – Measures aimed at the substitution of polyphosphates in detergents.
Deadline: 2010

Previous measures:

Since January 1995 Poland has binding law limiting to 6% content of phosphorus in washing powders accepted for marketing in the country, according to the Ordinance of the Minister of Industry and Trade of 30.11.1994 on requirements to be met by products due to health and environment protection needs (Dz. U. of 1994, No. 133, item 690). Washing powders must be marked as holding certificate of phosphorus content not exceeding 6% of the product weigh.

Planned measures:

In Poland, on the basis of carried out consultations with poly-phosphates producers and carried out analysis of washing powders market, the provisions of HELCOM Recommendation 28E/7 will be implementing by introduction of strict restrictions in application of poly-phosphates as fillers in washing powders for consumers use starting from 2015. The five-year adaptation period for Poland is necessary to make changes in production profile in poly-phosphate production plants and due to small companies producing washing powders which require relatively long time for changing production from poly-phosphate detergents to non-phosphate.

E-13: HELCOM Recommendation 28E/7 – Measures aimed at the substitution of polyphosphates in dishwashes.
Deadline: 2010

Planned measures:

So far, there are no plans referring to introduction of legal ban to apply phosphates in dishwash and cleaning detergents and fillers in detergents for dishwashing on consumers market. In this scope Poland will wait for EU legislation.

E-23: Common measures directed to transboundary pollutions from Belarus and Ukraine through EKG UN Convention on Transboundary Watercourses and International Lakes and Catchment Areas Management Plans under WFD
Deadline: 2008 – 2009

Previous measures:

Poland, on the basis of bilateral agreement implements cooperation on boundary water with Ukrainian side. This cooperation includes also issues related to water protection against pollution

(common monitoring). In 2008/9, under Poland-Belarus-Ukraine Neighbouring Programme the trilateral project "Building of Polish-Belarusian-Ukrainian water policy in the Bug catchment area" was implemented. One of the effects of the project is preparation of the experts' project of the agreement giving basis for creation of the International Bug Protection Commission (equivalent of the International Commission for Odra Protection against Pollution).

Planned measures:

Belarus was invited by HELCOM to present national data which can be included to PLC and will be considered in measures including the list of priority projects such as municipal and rural hot spots.

Cooperation under VASAB Programme (Vision and Strategy Around Baltic) the members of which are *inter alia* Poland and Belarus in the field of spatial planning. Programme is implemented in Poland by the Ministry of Regional Development. Three working groups were established including for planning on the sea and integrated coastal areas management.

Experts project of the Agreement assuming creation of the International Commission of Bug Protection after its agreement by adequate authorities of Polish administration will be subject to negotiations by representatives of the interested parties (Poland, Belarus, Ukraine and the European Commission representing the European Union).

E-16: Designation of relevant parts of agricultural land as zones vulnerable to nitrogen
Deadline: -

Previous measures:

Areas vulnerable to nitrogen pollutions from agricultural sources were have already been designated for the implementation of the Nitrates Directive 91/676/EEC and a list of areas at particular risk (OSN). Actions in this respect are undertaken mostly by the Ministry of Agriculture and Rural Development (MRiRW) and the National Water Management Authority (KZGW). Under these activities KZGW prepared a report for the European Commission from the four-year period of implementation of the above mentioned Directive (2004-2008) so called "I National Report from implementation of the Nitrates Directive (91/676/EEC) in Poland". Additional legal basis are the Ordinance of the Minister of Environment of 23 December 2002 on criteria for designation of water sensitive to nitrogen compounds pollution from agricultural sources (Dz. U. of 2003, No. 4, item 44). The basis were also assessments of water pollution with nitrates on the basis of PMŚ results for surface and underground water and GUS data referring to use of fertilizers and condition of the farm animals stock.

The initial impact assessment of the nitrates pollutions on water and ground environment in Poland was carried out in 2000-2001. In 2000 initial zones vulnerable to nitrates pollution of agricultural origin, accepting the maximum values existing in these sections with regard to 50 mgNO_3/l. In case of underground water, the analysis covered data from 1998-1999. Also the eutrophication of inland water was assessed with consideration of results of tests for 788 lakes from 1991-2000. Also the impact of farming was analysed with consideration results of analyses of soil profiles at 30cm, 60cm and 90cm.

Further analyses were carried out at end of 2003 and beginning of 2004. 21 OSN were determined which covered 2% of the country area. These are were legally established pursuant to 11 regulations of the directors of individual RZGW published in Official Journals of individual voivodships. OSN with the largest area was determined in the water region of central Odra (2823.31 km^2) the smallest in the region of High Odra (317.14km^2).

In 2008 OSN were verified, and the results of verification are now being settled with the European Commission.

Planned measures

Strengthening of action programmes effectiveness aiming at reduction of outflow of nitrogen from agricultural sources within the areas of particular risk *inter alia* through further educational and consulting activities in respect of application of good agricultural practice.

Under implementation of Rural Development Programmes PROW 2007-2013 the projects in the following packages will be continued: “Sustainable agriculture”, “Ecological agriculture”, “Soil and water protection” and “Buffer zones”.

E-17: HELCOM Recommendation 28E/4 Amendments to Annex III “Criteria and measures concerning the prevention of pollution from land-based sources” of the 1992 Helsinki Convention – Part II Prevention of pollution from agriculture

Previous measures:

Poland implements the recommendation according to the Community obligations including those resulting from IPPC Directive (Directive 2008/1/EC of the European Parliament and of the Council of 15 January 2008 concerning integrated pollution prevention and control and Nitrates Directive 91/676/EEC. Measures in this respect are mostly implemented by MRiRW and KZGW.

The requirements for solid manure, liquid manure and slurry in building with capacity equal to minimum 6-month production of this fertilizer was introduced in farms located within areas of particular risk of agriculture-origin nitrates pollution (OSN) covering 1.49% area of the country.

According to the Act on fertilizers and fertilizing (Dz.U. of 2007, No. 147, item 1033) there is a requirements to store liquid manure and slurry exclusively in tight tanks with capacity enabling at least 4-month production of this fertilizer and storage of the solid manure with on impermeable boards, protected in such way that the leakage would not be input to the ground by entities that breed or farm poultry above 40 000 stands or breed or farm pigs above 2 000 stands for pigs with weigh above 30 kg or 750 stands for sows.

As a result of Sectoral Operational Programme "Restructuring and modernizing of food sector and rural areas development 2004-2006" by the end of 2007 562 projects were implemented which allowed for save storage of solid manure in the area of 38 553 m^2 and liquid manure and slurry at the area of 28 841 m^3 .

Under the above mentioned programme SAPARD, 408 projects were implemented in Poland with total number of investment reaching 827 including construction of manure boards and tanks for liquid manure or slurry with total capacity of 51 664 m^2 (storage of liquid manure and slurry) and the capacity of 55 281 m^2 for storage of solid manures.

Previous financial aid granted under the rural areas development programme PROW 2004-2006 for adaptation of farms to requirements related to storage of natural fertilizers and fertilizing (manure boards, tanks for liquid manure or slurry) covered above 69 thousand farms. It must be underlined that investments in this scope significantly contribute to reduction of outflow of pollutions which result from improper storage of natural fertilizers to water. This is of priority importance for areas of particular risk from which the outflow of nitrogen from agricultural sources to water must be limited (OSN). In these areas aid was granted to ca. 3.5 thousand of farm.

Investments consisting in equipping farms with devices for storage of natural fertilizers, in particular under PROW 2004-2006 were implemented in Kujawsko-Pomorskie Voivodship, Wielkopolskie Voivodship, Mazowieckie Voivodship and Podlaskie Voivodship i.e. in the regions of highest concentration of animal production. Construction of devices to storage of natural fertilizers was less distributed in voivodships with fragmented structure and low level of commodities production - Podkarpackie, Lubelskie, Świętokrzyskie and Małopolskie Voivodships. Smaller pressure to development of this infrastructure was also put in regions with large commodities production but with less animal quantity such as: Opolskie, Dolnośląskie, Lubuskie, Zachodniopomorskie Voivodships. Less activity of beneficiaries from these regions can be explained by better condition of infrastructure before launching of programme.

Improvement of natural environment and rural areas are also carried out through implementation of the Rural Development Programme for 2007-2013. Axis II of the Programme contains measures aiming at improvement of natural environment and rural areas. Implementation of these financial instruments prevents the process of water degradation. One of measures under

Axis II which effectively contributes to natural environment protection, including improvement of soil and water, is the Agri-environment Programme (Article 39 of the Council Regulation (EC) No 1698/2005 of 20 September 2005 on support for rural development by the European Agricultural Fund for Rural Development (EAFRD) as amended) under which various packages are implemented including: Package. 1. Sustainable farming, Package. 2. Ecological farming, Package. 8. Protection of soil and water and Package. 9. Buffer zones and the packages in the scope of extensive management on permanent green land. These packages included specific requirements and bans, meeting of which aims *inter alia* on protection of water against agricultural pollution. Moreover, in the agri-environment programme implemented in 2007-2013 Package 4 was launched and Package 5, implementation of which is to contribute to maintenance of valuable natural habitats and birds species in danger within the area of Natura 2000 as well as beyond it. „

Controls of obeying the provisions on applications and storage of fertilizers are carried out according to Nitrates Directive. Act of 10 July 2007 on fertilizers and fertilizing (Dz.U. of 2007, No. 116, item 1033) imposes on the Environment Protection Inspection and Voivodship Environment Protection Inspectorates the control obligation specified in Article 32, 33, 34 and 35.
Also the cross compliance instrument assumptions are implemented under the direct payments system. Cross compliance requirements in the scope of the Article 4 and 5 of Nitrates Directive are binding from 2009.

System of special monitoring of mineral nitrogen in soil up to the depth of 90 cm under surface was implemented in the area of arable land in Poland and system of monitoring of nitrogen and phosphorus in water. The monitoring is performed by the National Chemical and Agricultural Station and district chemical and agricultural stations with technical support of the Technical and Environmental Institute in Falenty (IT-P) - (former IMUZ Falenty). This monitoring in the new form covering arable lands and green land was implemented in 2008. Results of the monitoring allow for better control of condition of the ground water pollution in the aspect of agricultural activity.

The monitoring is included in requirements covered by the Provision 5. Monitoring of environment, of the amended Annex III to the HELCOM Recommendation 28E/4.

Planned measures:

Introduction of proper legal actions and executive actions for increase of level of the proper disabling/managing wastes originating from animal slaughter. This also refers to equipping of meat processing plants and/or animal slaughter houses with wastewater treatment plants or sub-wastewater treatment or other solutions compliant with environmental protection provisions.

Development of financial support programmes for construction and modernization of inventory facilities refers to *inter alia* facilities intended for collections and storage of solid manure, manure boards and tanks for slurry. Further promoting of Code of Good Agricultural Practice application.

Development of modern techniques of obtaining biogas on the basis of solid manure and other metabolic products of animal origin.

Further extension and modernization of water infrastructure related to farming will contribute to better water management – *inter alia* by construction of tanks for collection and retention of rain water. This also concerns development of arable lands irrigation system by creation/restoration/conservation of wetlands.

Promotion of planting plants absorbing and storing (biocummulation) pollutants including catching the excess of nutrients so called "Catch plants", accompanying main crops. The alternative method is planting accompanying plants with extensive root system which decreases soil erosion (and consequently washing away the nutrients and their inflow to water) and it causes accumulation of the excess of nitrogen and phosphorus in part of these plants.

Promotion of proper cultivation of soil including application of crop rotation and proper dates for planting and fertilizing.

E-19: Establishment of hot sports list concerning animal farms for intensive breeding of cattle, poultry and pigs.
Deadline: 2009

Previous measures:

Entities breeding or farming poultry above 40 000 stands and breeding or farming of pigs above 2 000 stands for pigs weighing above 30 kg or 750 stand for sows are the same as the agricultural entities indicated in Directive 96/61/EC concerning integrated pollution prevention and control and as particularly difficult they are subject to procedure of obtaining integrated permits. Detailed catalogue of information to be contained in application for granting integrated permit is specified by the Environmental Protection Law. The legal basis in this scope are: Ordinance of the Minister of Environment of 26 July 2002 on installation which can cause significant pollution in individual natural elements or environment in total (Dz. U. of 2002, No. 122, item 1055). Detailed schedule for obtaining integrated permits was specified in the Ordinance of the Minister of Environment of 26 September 2003 on subsequent deadlines for obtaining integrated permit (Dz. U. No. 177, item 1736, as amended).

The obligation to ensure capacity of storage for natural fertilizers allowing for at least 6-month storage is binding for farms located in areas at risk of pollution with nitrogen compounds from agricultural sources indicated on the basis of the Nitrates Directive 91/676/EEc.

Planned measures:

The stocktaking will be carried out for cattle farms with size exceeding 400 DPJ under MRiRW activities.

With regard to criteria for inclusion/removal of agricultural hot spots, Poland maintains objection in the scope of necessity to comply with the storage capacity requirements for collection of natural fertilizers allowing for at least 6-month storage.

III. REDUCTION OF NUTRIENT LOADS FROM AIRBORNE INPUTS

E-25: Consideration in the revision process of acceptable levels of emission for nitrogen, carried out under CLRTAP, effects of impact of airborne nitrogen on eco-systems in the Baltic Sea.
Deadline: -

Previous measures:

Annual reports are sent to the Executive Body of the CLRTAP and the EMEP Steering Body, containing data that allow to calculate the deposition loads on land as well as on the Baltic Sea in the scale of the continent.

Implementation of measures related to air protection is discussed in the document accepted by the Council of Ministers in October 2003 entitled "Climate policy of Poland - greenhouse gas emission reduction strategies in Poland by 2020". According to the strategy concerning air pollution (COM (2005) 446) it is assumed that ammonium emission should be decreased by 27% by 2020 comparing to the emission level from 2000.

Content of nutrients deposited from air to surface water decreases year by year which is confirmed in results of measurements of pollution discharges from distributed sources, carried out under PLC-4 and PLC-5 programmes and EMEP.

According to data of the Environmental Protection Inspection on the basis of results of controls carried out by the National Administrator of the Trade System for Rights to Emission, Poland met the obligations for 2008 concerning emission of the nitric oxide from all objects of energy combustion (243 267 tonnes comparing to required value: 254 000 tonnes).

E-26, E-27: Joint input to strengthen the emission targets for nitrogen under the Ceiling Directive and Göteborg Protocol under CLRTAP"
Deadline: in constant review

Previous measures:

According to information provided by the Ministry of Environment towards SO_2, NOx, NH_3 and LZO (pollution subject to NEC Directive), emissions in 2007 were lower from the limit for Poland resulting from the Directive and the emission tendencies show decrease or stabilization of tendency. Therefore, it was not necessary to develop programme of additional measures concerning reduction of national pollutions emission referred to in Article 6(1) and (2) of the Directive. Due to the fact that NEC Directive assumes that full implementation of its requirements may last until 2010 (this does not exclude earlier meeting of requirements), Poland is at the stand that it will use full period accepted in Directive. The above mentioned emission tendencies indicated that Poland will not exceed required levels of SO_2, NH_3 and NMLZO emission in 2010. The result of the carried out calculations indicates that emission of NOx in Poland in 2010 will reach 894 676 Mg i.e. there will be an increase by 3.8% comparing to 2007 and exceeding of acceptable limit in 2010. This results from the following reasons – first of all from modification of methodological calculations and second of all from demanding verifications of optimistic forecasts of economic activities accepted in 2006. Considering the decreasing tendency of nitric oxides emission in Poland (2006-2007) it must be noticed that in the changed economic situation of the country and Europe one must put on hold assessments even of short term forecasts of pollutants emission by the time of development and acceptance of new assumptions of the economic growth of individual countries.

State of works progress in the scope of revision of the obligations implementation process resulting from provisions of the Ceiling Directive EC NEC and Göteborg Protocol is carried out by the Ministry of Environment the Department of Climate Changes and Atmosphere Protection with participation of the Ministry of Economy.

Moreover:

- National Coordinating Centre for Modelling and Charting Critical Loads (located in IOŚ) determines loads (depositions) critical acidification and eutrophication for land eco-systems in Poland and it develops their maps and provides forecasts of environmental pollution with sulphur and nitrogen compounds using dynamic models. Results of forecasts are used for development of perspective strategies for reduction of sulphur and nitrogen emissions to air,
- under the National Monitoring of Environment (subsystem of air quality monitoring) tests and assessments of air quality are carried out, as well as chemism of precipitation and deposition of pollution to ground, including studies at the level of the pollutions background addressed to tracking continental nature phenomena (transboundary pollutions, acidification) including studies in EMEP stations, and studies aiming at observation of global phenomena such as depletion of ozone layer.

- reports are submitted annually to the Convention Executive Body and Steering Body EMEP with data on pollution emission in which two periods could be distinguished. first one (1980-1989) in which emission of all discussed types of pollutions was maintained on the constant, high level and second one (from 1989 - being a year of political and economic breakthrough for Poland) characterizing with systematic decrease of mass of emitted pollutions to air. Documents concerning ecological policy of the state and power policy of Poland by 2025 was developed and accepted, as well as voivodship, poviat and gmina programmes for environmental protection and repair programmes for air protection, Poland participates in international technology exchange.

Planned measures:

It will be necessary to update forecasts of emissions with relation to expected changes in economic activities. The following aspects must be considered, which in the end will result in reduction of nitric oxides emission i.e.

- covering the group of industrial sources (in most cases) with the procedure of integrated permits and best available technology (IPPC Directive),
- application of the Directive of the European Parliament and of the Council No. 2001/80/EC of 23 October 2001 on the limitation of emissions of certain pollutants into the air from large combustion plants (LCP Directive),
- application of emission standards on the basis of the Ordinance of the Minister of Environment of 20 December 2005 on emission standards from installations (Dz. U. of 2005, No. 260, item 2181) which refers to specific group of technological processes *inter alia* : energetic fuel combustion,
- limitation of nitric oxides emissions as a result of installation of low-emissions burners in power plants,
- reduction of nitric oxides impact (source of transport, source of "low emission" from agriculture and residential industry and municipal heating industry) resulting from requirements of repair programmes for air protection.

Tab.4.1.2.5.

Type of substance	Emission in reports concerning NEC Directive (Gg)				Limits for Poland according to NEC Directive for 2010 (Gg)
	2005	2006	2007	Forecast for 2010	
SO_2	1222	1203	1128	878	1397
NO_x	811	879	861	895	879
NH_3	326	287	291	302	468
Anthropogenic NMLZO	585	600	584	646	800

Limitation of NOx and NH_3 emission of agricultural origin through application of alternative sources of energy and growing energy crops (intended for biomass and biofuels). According to PROW 2007-2013 it is anticipated that share of renewable energy in fuel-energy balance of the country by 2010 will reach 7.5%. Poland has large potential in the scope of renewable energy production through agriculture, in particular it is worth to underline increasing area of arable lands on which energy crops are grown. It is accepted that plant is intended for energy purpose if the agricultural producer signed contract for its receipt with the purchasing entity or processing unit on condition that such entity was verified and approved by in field division director of the Agricultural Market Agency. Second possibility to intend plants for energy purpose is use of plants on farm by agricultural producer growing plants *inter alia* activity in the scope of energy materials production from biomass (production of briquette).

Development of additional payments system for companies specialized in implementation of projects of biofuels production (in particular biofuels of second generation).

It is necessary to equip installation with catalytic denitriding systems to reach required standards of NOx emission in exhaust gases by 2016. It is necessary to replaced worn out installations in the national power plants and power and heating plants - unfortunately this is an expensive and long-lasting process (it is necessary for the company to get investment credit).

4.2. SEGMENT II: HAZARDOUS SUBSTANCES.

4.2.1. INTRODUCTION

The strategic goal of this segment of the Baltic Sea Action Plan BSAP is elimination of threats for live resources of the Baltic Sea with hazardous substances.

The superior goal is implemented by four operational ecological objectives:

concentrations of hazardous substances close to natural levels,

- reaching such condition of the environment in which fish would not contain hazardous substances,
- healthy wildlife,
- radioactivity at pre-Chernobyl level.

Within HELCOM, substances are defined as hazardous if in total:

they are toxic, degradation resistant (persistent) and bioaccumulating (PBT-substances [Persistent-Bioaccumulating-Toxic]), or very persistent and very bioaccumulating (vPvB [veryPersistent-veryBioaccumulating]).

Moreover, substances which affect hormonal and immune systems are also considered hazardous substances and are of equal concern.

Since the term hazardous substances is very general and not precise, HELCOM prepared a temporary list of 11 priority hazardous substances/groups of substances stating that they are currently the greatest threat for maritime environment of the Baltic Sea:

Tab.4.2.1.1. 11 priority hazardous substances/substances groups of HELCOM.

Substances or substances groups of specific concern in the Baltic Sea	
1.	**Dioxins (PCDD), furans (PCDF) & dioxin-like polychlorinated biphenyls**
2a.	**Tributyltin compounds (TBT)**
2b.	**Triphenyltin compounds (TPhT)**
3a.	**Pentabromodiphenyl ether (pentaBDE)**
3b.	**Octabromodiphenyl ether (octaBDE)**
3c.	**Decabromodiphenyl ether (decaBDE)**
4a.	**Perfluorooctonoic acid (PFOS)**
4b.	**Perfluoroctanoic acid (PFOA)**
5.	**Hexabromocyclododecane (HBCDD)**
6a.	**Nonylphenols (NP)**
6b.	**Nonylphenol ethoxylates (NPE)**
7a.	**Octylphenols (OP)**
7b.	**Octylphenol ethoxylates (OPE)**
8a.	**Short-chain chlorinated paraffin (SCCP or chloroalkanes, C_{10-13})**
8b.	**Medium-chain chlorinated paraffin (MCCP or chloroalkanes, C_{14-17})**
9.	**Endosulfan**
10.	**Mercury (Hg)**
11.	**Cadmium (Cd)**

Some of them is also listed in hazardous substances indexes (including with priority meaning) contained in the Water Framework Directive of the EU.

Exposure to the above mentioned substances is dangerous for life and health of living organisms inhabiting the Baltic Sea, but their toxicity depends on many factors i.e. penetration path to internal structures (digestive, respiratory, skin); concentration and period of exposure; organic and sub-cellar distribution; place of impact, form of storage and deactivation, interaction with other substances; concentration and period of exposure of organism and chemic form of occurrence. Physiological condition of organism and age, gender and other features resulting from life history and behaviours are of decisive nature. Additional problem is the ability of most of pollutions to bioaccumulation in organisms tissues and magnification – increase of concentration in subsequent links of the trophic chain. Their toxicity increases for the end consumers including many top predators, mostly vertebrates.

It must be underlined that despite stoppage in application of some substances in industrial production many of them will be present in environment even for tens of years, stored in soil and sediments, thus they will be "available" for plants, animals and microorganisms. It happens in case of many plants protection agents and active substances which they contain - e.g. Endosulfan or applied as fungicides and anti-lichen agents, compounds containing tin (Tributyltin, Triphenyltin).

Most of compounds contain atoms of chlorine, bromine, fluorine or iodine. Halogenation increases their persistence (with increase of number of substituents), however, also their lipophility and toxicity. This particularly refers to ethers derivatives and hydrocarbons (e.g. chlorinated paraffin, Nonylphenol / Octophenol etc.) containing at least three chlorine atoms in the element. For example PCB (poly-chlorinated biphenyl) contribute to thyroid disorders, they penetrate through barrier of placenta of small vertebrates, causing development disorders. Pollution of Baltic water by PCB and anther chloral-organic substances significantly contributed to decrease of population of the Baltic species of seals, mostly by damage of womb making fertilization impossible.

Dioxides is a large number of compounds which includes dinenzo-p-dioxides (PCDDs) and dibenzo-p-furanes (PCDFs) They are one of most toxic chemicals, they are by-products in various technological processes, mostly during combustion. Toxicity of these substances mostly depends on the number and places of putting chlorine. Acting in mutagenic and cancerogenic manner, contributing to liver damages, hormonal dysfunction. The mutagenic effects that they cause influence the subsequent generations of organisms which in extreme cases may lead to total extinction of the given species. In water environment, fish die with concentration of 0,1-0,3 $\mu g/dm^3$ 2,3,7,8-TCDD[2]

The mercury and cadmium are heavy xenophobic metals and unnecessary in proper operation of most of living creatures (cadmium is a necessary co-factor of enzyme existing in

[2] P. Migula, 2004: „Ekotoksykologia."

diatoms). They contribute to numerous health disorders, including cardiovascular, reproductive genes expression dysfunctions and many other including homeostasis. Currently, works are carried out to appoint a Negotiation Committee under UNEP to develop global convention on mercury.

According to carried out survey of various industrial sectors in Poland, a significant part of HELCOM 11 priority substances or groups of substances is not applied in Poland nor produced in production processes. The exceptions include most of all: Hexabromocyclododecane (HBCDD), medium-chain chlorinated paraffin (MCCP) and mercury. Cessation of their application currently depends on finding alternative less hazardous for environment but comparable in respect of effectiveness and costs related to its application. Works on finding this substitute are carried out under *inter alia* COHIBA programme, in which Poland participates. Results of this project will be very useful for possible introduction of ban of application for the above mentioned hazardous substances.

4.2.2 DESCRIPTION CONCERNING PREVIOUS AND PLANNED ACTIONS UNDER IMPLEMENTATION OF INDIVIDUAL OBJECTIVES OF THE SEGMENT II: HAZARDOUS SUBSTANCES (according to BSAP index)

H-5, H-6: Development of the national programme and assessment of its effectiveness
Deadline: development of initial national programme – 2010, effectiveness assessment – 2013,

Previous measures:

In cooperation with competent ministries responsible for individual economic sectors, the stock taking of legal acts regulating measures for reduction of hazardous substances pollution was carried out, including those resulting from the Community commitments as well as other documents and information sources.

Planned measures

Poland will take part in discussion on approach to effectiveness assessment of the national programmes, paying particular attention to the necessity to carry out assessment of ecological effects in longer periods to ensure objectiveness of obtained data, also considering the objection about legitimacy of costs monitoring in situation of diversity in the states economic development level - Contracting Parties and difficulties related to obtaining information from business and local administration bodies.

H-1, H-2: **HELCOM Recommendation 28E/8; Reduction of dioxins and other hazardous substances from small-scale combustion 0 ELV Study (emission levels)**

Deadline: 2008

Previous measures:

During the 14th meeting of HELCOM LAND no decision concerning determination of emission limits was made. By the time of determination of emission values by HELCOM LAND, the implementation works will concern general measures resulting from the recommendation content.

Inventory programme was carried out for dioxins sources to atmosphere. CEN/TC 264 „Air Quality – Dioxins" – sub-programme The DG ENV European Dioxins Emission Inventory – Stage II: entitled : "Dioxins in exhaust gases from combustion and food".

Planned measures:

Poland will still work on the shape of the recommendation concerning limitation of emission from small-scale combustion appliances and fuel combustion installations.

H-3: Implementation of HELCOM recommendations proper handling of waste/landfilling (HELCOM Recommendation 24/5)
Deadline: -

Previous measures:

Most important domestic regulations in this scope:

- Act of 27 April 2001 on waste (Dz.U. of 2007, No. 39 item 251 as amended)
- Ordinance of the Minister of Environment of 16 June 2005 on underground landfill (Dz.U. of 2005, No. 110, item 935 of 22 June 2005)
- Ordinance of the Minister of Economy of 7 September 2005 on criteria and procedures for acceptance of waste to landfilling on landfill for given type of waste (Dz.U. of 2005, No. 186, item 1553 as amended)
- Ordinance of the Minister of Environment of 24 March 2003 on specific requirements concerning location, construction, exploitation and closing to which individual types of waste landfill should meet (Dz.U. of 2003, No. 61, item 549 as amended)
- Ordinance of the Minister of Environment of 21 March 2006 on recycling or disposal of waste beyond installations and appliances (Dz.U. of 2006, No. 49, item 356).
- Resolution of the Council of Ministers No. 233 of 29 December 2006 on "National waste management plan 2010" (M.P. of 2006, No. 90, item 946).
- Ordinance of the Minister of Environment of 09.12.2002 r. on scope, time, manner and conditions of landfill monitoring (Dz.U. of 2002, No. 220, item 1858).

Currently, the National waste management plan 2010 is implemented by the Ministry of Environment (KPGO 2010). Under KPGO 2010, 3-year control cycles were carried out for the landfills managers under IOŚ with regard of compliance with the legal provisions concerning environmental protection and level of adaptation of installation to pro-environmental requirements.

According to reports prepared in May 2008 by the Ministry of Environment (on the basis of carried out by the Environment Protection Inspection) it might be assumed that Poland reached the indirect goals in the scope of municipal waste landfilling in 2006 in respect of recycling of packagings wastes, resulting from EU membership.

Planned measures:

Participation in amendment of HELCOM Recommendation 24/5.

It will be necessary to decrease the number of waste landfills in Poland (D5 process) including for hazardous waste, promotion of "no-waste" production techniques and recycling methods (R14 process), more effective monitoring of existing and closed landfills in respect of applied protections against emission to air and inflows to water, their capacity and manner of exploitation and limitation of their adverse impact on environment.

It is worth to introduce means for more effective execution of legal provisions concerning landfilling, rules "pollutant pays" and the obligation imposed on "waste producer" to manage them (disposal/recycling)

Lack of proper standards and act regulating content of individual compounds emitted from closed (non-operative) landfills - it is necessary to introduce proper legal provisions in this respect.

It is necessary to introduce proper legal regulations with regard to sampling method to check the landfill of deposited waste on non-operative landfills.

In Poland (according to GUS data) there are over 765 legal landfills which proves the necessity to introduce additional measures of control and preventive nature in this respect. All the installations used for landfilling excluding inert waste with capacity to store above 10 tonnes of wastes per 24h or with total capacity of above 25000 tonnes must obtain integrated permit which will meet the environmental protection conditions with application of best available technology (BAT).

European IPPC Office does not provide for BREF study for landfills.

Monitoring and verification of inert layer on existing landfills (proper thickness) and mass balance of a landfill and document confirming holding of integrated permit (if required for the given landfill).

More effective monitoring of closed landfills (*inter alia* once a month measurement of emission of volatile pollution, oxygen, carbon dioxide, content of methane and ammonium – if there is de-gasing installation).

Landfills for hazardous waste and landfill for other waste and inert waste must be equipped with system of drainage system, designed in manner ensuring its reliable operation during use of landfill and for at least 30 years after its closing.

H-4: Assessment of the need to develop further requirements for reduction of emission of the heavy metals and other hazardous substances from production of energy and industrial facilities for combustion
Deadline: 2008

Previous measures:

According to decision made during meeting of HELCOM LAND 13/2008, Poland carried out assessment of the need to develop further requirements for reduction of emission of the heavy metals and other substances from production of energy and industrial facilities for combustion appliances.

On the basis of carried out assessment, all the States, Contracting Parties to Helsinki Convention, including Poland did not provide consent for introduction of stricter requirements with regard to reduction of heavy metals originating from large combustion facilities, over those which are required with the EU legislation.

Acceptable values of emission from large combustion facilities of energy combustion are specified *inter alia* in Directive 2001/80/EC. All large facilities of energy combustion provided to use after 27 November 2003 must meet requirements of the Directive 2001/80/EC, with consideration of transitional periods negotiated for Poland for its implementation (for main Polish power plants concerning only emission of SO_2 and NOx).

Energy installation with nominal heating power exceeding 50 MW must be applicable also to provisions of the Directive 96/61/EC (IPPC Directive), finally by 2010 for selected 121 installations (mostly heating plants). Existing heating plants and power plants should obtain by 1 January 2008 permit guaranteeing obedience of acceptable values of emission. For emission of dust (containing heavy metals) failure to reach acceptable values was accepted for 29 municipal heating plants by 2017 at the latest.
Due to above mentioned transitional period for implementation of the IPPC Directive possible changes in provisions of the national law should be settled after 2017. It is required to apply BAT; towards heavy metals it mostly refers to application of fibre filters and electrostatic dedusters (for

plants combusting heavy fuels) and additionally wet technique of desulphuring of exhaust gases (for facilities with power of the 300 MW).

Planned measures:

Measures for support of development and implementation of clear carbonic technologies.

H-7: Screening of occurrence of selected of hazardous substances
Deadline: 2008 – 2009

Previous measures:

Among others, there were implemented programmes for reduction of risk related to application of plant protection measures developed by the Plant Protection Institute. Provisions of Article 22 of the Regulation no. 396/2005 in case of some substances permitting application of national highest acceptable levels of pesticides residues (NDP). Ordinance of the Minister of Health of 16 May 2007 on most important acceptable pesticides levels which may be contained in foodstuff or on their surface (Dz. U. of 2007, No. 119, item 817 as amended) contains national NDP in foodstuff or on their surface determined by the Minister of Agriculture and Rural Development on the basis of risk and impact of the pesticide and its residues on human and animal health, carried out by the National Institute of Public Health - National Institute of Hygiene with *inter alia* Directive 91/414/EEC concerning marketing of plants protection means.

Poland participated in project "Screening study on occurrence of hazardous substances in the eastern Baltic Sea" under which water samples were provided and biotas originating from Gulf of Gdańsk and Szczecin Lagoon. Projects results will be available at the end of 2009.

Sea Fisheries Institute in Gdynia implemented the project under Sectoral Operational Programme SPO – Fisheries: Monitoring of Baltic fishing raw materials safety to determine their fitness for marketing on the basis of acceptable limits for pollution with dioxins and dioxin-like compounds (SPO-3). Project implementation deadline: 17.05.2005 until 30.04.2007.

The project aims at determination of pollution level for Baltic fish with dioxins and dioxin-like polychlorinated biphenyl PCB with respect to acceptable contents determined in the EU directives. Commission Regulation (EC) No 199/2006 of 19 December 2006 setting maximum levels for dioxins in fish tissue and dioxins dl-BCB 8 pg WHO-PCDD/F +dl-PCB-TEQ/g of fish tissue. Maximum content of dioxins in fish is 4 pg WHO-PCDD/F-TEQ/g of fish. To determine acceptable levels of dioxin content in food, EU Member States are obliged to collect and prepare data on content of these pollutions in i.a. Baltic fish. The issue of dioxins content in tissue of Baltic fish, in particular from its northern part, is significant and may threaten fisheries in the future.

In Poland, in 2006-2009, control checks of fish tissue were carried out with respect of presence of dioxins, furans and dioxin-like PCB on the basis of the Regulation of the European

Commission of 19 December 2006 setting sampling methods and analysis methods for purpose of official control of dioxins and dioxin-like PCB in foodstuff. National Monitoring of the dioxin concentration and dl-PCB i.a. in fish is run by the National Veterinary Institute in Puławy since 2007.

Planned measures:

Development of studies on estimation of toxicity of dioxin mixtures – toxicity equivalent quotient on the basis of concentration quotients and value of toxicity equivalent factor for individual congeners of dibenzo dioxin with biphenyl and dibenzo furans.

H-8: Screening of sources of selected of hazardous substances
Deadline: 2009

Previous measures:

Poland takes part in “Control of hazardous substances in the Baltic Sea region (COHIBA)” project. Under cooperation in implementation of COHIBA project – Polish partner of the project i.e. Institute of Industrial Areas Ecology (IETU) carried out sampling from 4 wastewater treatment plants (3 municipal and 1 industrial) at the estuary of Vistula and Odra.

Moreover, Poland runs project "Analysis of occurrence of priority substances in water ecosystems", which aims i.a. at identification of sources of priority substances according to the Water Framework Directive.

Environment Protection Inspection (under individual WIOŚ) continues post-control activities in respect of plants without water-legal permits for discharge of wastewater containing hazardous substances.

Planned measures:

Increase of control and preventive actions towards installations applying heavy heating oil in order to meet quality requirements specified in adequate legal regulations, including Ordinance of the Minister of Economy of 4 May 2007 on quality requirements concerning contents of sulphur for oils and types of installations and conditions in which heavy heating oil will be applied (Dz. U. of 2007, No. 4, item 3).

KZGW plans to carry out inventory of hazardous substances discharge places (with their location).

Support of measures carried out under the EU Strategy for the Baltic Sea region in the scope of location and further proceedings with chemical weapon sunken in the Baltic Sea, mostly by

Ministry of Infrastructure (MI), Maritime Offices and Ministry of the National Defence. Consideration of results of the Finnish MERCW project on modelling of ecological risk related to deposition of chemical weapon on the bottom of the Baltic Sea.

More effective control of risk of accidents with hazardous substances - Council Directive 96/82/EC of 9 December 1996 on the control of major-accident hazards involving dangerous substances, referred to as the Seveso II Directive, amended by the Directive of the European Parliament and of the Council no. 2003/105/EC of 16 December 2003.

Some provisions of the above mentioned Seveso II Directive and the Helsinki Convention slightly differ with regard to acceptable applied ceiling values of Qi for some hazardous substances for the environment which is marked as R50, R50-53, R51-53 on charts of hazardous substances characteristics. However, as a result of qualification criteria of the Seveso II Directive, the ceiling values of Qi introduced by the Directive of the European Parliament and of the Council No. 2003/105/EC for hazardous substances for the environment characterising R40 and R50-53 term determined in Seveso II Directive and in the Helsinki Convention currently are not different from each other and they are 200 tonnes. The difference occurs in respect of hazardous substances for the environment characterised with the term R51-53 (Seveso II Directive - Qi -= 500 tonnes; Helsinki Convention - Qi = 200 tonnes).

H-9: **Introduction of Whole Effluent Approach (WEA)**
Deadline: 2009

Previous measures:

Measures in the scope of WEA will depend on results presented by Finland. Also identification activities are carried out for presence and effects of hazardous substances in water environment, supplemented with identification of source of inflow of selected substances from wastewater treatment plants – municipal and industrial, as well as outflows from landfills and ditches. Practical implementation of consideration of WEA in monitoring of complex discharges of hazardous substances in the area of HELCOM activity and carrying out of pilot project for testing some suggested methods by checking municipal wastewater treatment plants and selected specific sectors of industry in HELCOM countries. Establishing of ceiling values for PBT substances discharges on the basis of WEA assessment (persistent, bioaccumulative and toxic).

H-10, H-11: **Establishment of chemical products registers to be built upon e.g. EU regulatory framework for Registration, Evaluation, Authorisation and Restriction of Chemical substances REACH (EC1907/2006)**
Deadline: 2010

Previous measures:

In Poland, competent authority for REACH issues (EC Regulation No. 1907/2006 of the European Parliament and of the Council of 18 October 2006 on Registration, Evaluation, Authorisation and Restriction of Chemical substances (REACH) and establishment of the European Chemical Substances Agency) is the Office for Chemical Substances and Preparations in Łódź. The authority supervising the Office is Minister of Health. The Office keeps register of preparations introduced to marketing in the territory of Poland.

Since 2007, the Information Centre - REACH HELP DESK operates in Poland at the Office for Chemical Substances and Preparations, a at the Ministry of Economy consulting point for REACH. Both places provide free-of-charge support to entrepreneurs.

The registration of substances subject to registration according to REACH and index of all hazardous substances is kept by the European Chemical Substances Agency in Helsinki.
Environment Protection Inspection supervises i.a. obedience of obligation to register substances pursuant to REACH.

H-14: Staring works on strict restrictions of use for Perfluorooctane sulfonate (PFOS), Nonylphenol/Nonylphenol ethoxylate (ethylene), short chain chlorinated paraffins (SCCPs)
Deadline: 2008

Previous measures:

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) and establishing a European Chemicals Agency, amending the Directive No. 199/45/EC and repealing Council Regulation (EEC) No. 793/93 and the Commission Regulation (EC) No. 1488/94 as well as Council Directive 76/769/EEC and Commission Directive 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC (Annex XVII) introduces restrictions in production, marketing and application of some hazardous substances, mixtures and products including Perfluorooctane sulfonate (PFOS) - item 53, Nonylphenol – item 46a, Nonylphenolethoxylates – item 46b, short chain chlorinated paraffins (SCCP) – item 42).

Medium chain chlorinated paraffin (MCCP) will be subject to (REACH) permits procedure with regard to current proposal for inclusion of this substance to annex XIV of REACH.

Planned measures:

Introduction of further legal restrictions concerning application of these chemicals in industry will depend on the European Union law.

H-12: Introduction of restrictions for application and substances, if assessments indicate the need to start adequate measures for: medium chains of chlorinated paraffin (MCCP) Octylphenols (OP)/Octyphenol ethoxylates (ethylene) (OPE), Perfluoroctanoic acid (PFOA), Decabromodiphenyl ether (decaBDE) and Hexabromocyclododecane (HBCDD)
Deadline: 2009

Planned measures:

Introduction of legal regulations in Poland concerning restriction of application of the above mentioned chemicals in industry will depend on the European Union law in this respect.

According to initial analysis, it will not be possible in Poland to ban totally the production and use of MCCP (medium chain chlorinated paraffin) and HBCDD (Hexabromocyclododecane). These substance may be subject to permits procedure pursuant to
Regulation (EC) No. 1907/2006 (REACH).

H-13: Introduction of ban on the use, production, commercial processing of endosulfan, Pentabromodiphenyl ether (pentaBDE) and Octabromodiphenyl ether (octaBDE)
Deadline: 2010

Previous measures:

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) and establishing a European Chemicals Agency, amending the Directive No. 199/45/EC and repealing Council Regulation (EEC) No. 793/93 and the Commission Regulation (EC) No. 1488/94 as well as Council Directive 76/769/EEC and Commission Directive 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC (Annex XVII) introduces strict restrictions in marketing or application of: Biphenyl ether, pentabromo derivative - item 44, Biphenyl ether, octabromo derivative - item 45.

Ban for application and marketing of endosulfan is specified by the Commission Decision of 2 December 2005 on non-inclusion of endosulfan to Annex I of the Council Directive 91/414/EEC and withdrawal of permits for pesticides containing this active substance. Restriction in application of endosulfan in Poland is also introduced by the Ordinance of the Minister of Agriculture and Rural Development of 12 February 2008 on acceptable contents of other pesticides in feed materials and feed mixtures (Dz.U. of 2008, No. 35, item 201).

Poland ratified on 14 September 2005 the Rotterdam Convention accepted on 10 September 1998 on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade (it entered into force on 24 February 2004).

Planned measures:

Introduction of further legal restrictions concerning application of these chemicals in industry will depend on the European Union law.

Replacement of synthetic pesticides with alternative methods such as: biological, physical and agrotechnical or application of synthetic modern pesticides and use of sustainable technical and biological progress in growing, protection of plants and fertilization will reduce the threat for human, animal health and for the environment.

In activities for substitution of pesticides recognized as hazardous substances with substitutes more friendly for environment, it is possible to consider the results of studies of Pesticides Action Network (PAN Europe), which aims exactly at replacement of hazardous pesticides with more ecologic alternatives and reduction of [pesticides use in the Central and Eastern Europe. Reduction of pesticides application was important assumption of the Fifth Action Plan of EU in the Environment. The issue was also included in the Sixth Action Plan of EU for 2001-2010 where it was indicated that it is necessary to reach sustainable level of pesticides and reduction of risk resulting from their application and undertaking paneuropean actions to reduce impact of these substances and preparation on human health and the environment ("Strategy for sustainable application of pesticides"). These issues are also mentioned in the Common Agricultural Policy (CAP). Moreover, the actions for implementation of integrated pests management (IPM) must be continued by professional pesticides users and promotion of implementation of IPM rules before they become obligatory in 2014.

Measures for implementation of integrated pests management (IPM) rules and results of HAIR project (Harmonised environmental indicators for pesticide risk) which is financed under 6 Community framework programme (6EAP) in the scope of research and development. It is also necessary to include information on MRLs (Maximum Residue Limits) in foodstuff, especially by the European Food Safety Authority (EFSA).

Additional legal acts:

- Directive 91/414/EEC concerning marketing of plants protection means.
- Directive 98/8/EC on the placing on the market of biocidal products.
- Regulation (EC) 396/2005 of the European Parliament and of the Council on Maximum Residue Levels 2005 and amending Commission Regulation (EC) No. 839/2008 of 31 July 2008 with regard to Annexes II, III and IV concerning maximum residue levels in specific products and on their surface.
- These issues are regulated also under the Rotterdam Convention (PIC) accepted on 10 September 1998 on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade (it entered into force on 24 February 2004). and Stockholm Convention (PO) on permanent organic pollutions drawn up in Stockholm on 22 May 2001 and

WFD (Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy).

- Intensification of actions for water protection against hazardous substance in individual aspect for farm and parcel.
- Actions under "arable lands merging works" contribute to permanent rural development including to create more beneficial management conditions.
- Introduction of minimum standards for ecological production regulated by the Council Regulation (EC) No. 834/2007 of 28 June 2007 on ecological production and marking of ecological products and repealing the Regulation (EEC) No. 2092/91 (Dz. U. L 181/1 of 20.07.2007) repealing Council Regulation (EEC) No. 2092/91 of the Council of Europe of 24 June 1991 on ecological production of agricultural products and marking agricultural products and feedstuff, as of 1 January 2009.

H-15: Assessment of possibility to introduce restrictions on cadmium content in fertilizers
Deadline: 2009

Previous measures:

During the HELCOM LAND meeting 15/2010 all the Contracting Parties of the Helsinki Convention accepted HELCOM Recommendations on cadmium in fertilizers.

Planned measures:

On 13 January 2009 the Directive 2008/105/EC entered into force, which determined environmental quality standards for priority substances and some other substances polluting surface water with regard to cadmium and its compounds. This Directive should be implemented in EC Member States by 13 July 2010 (KZGW competences).

H-16: Application of strict restrictions on the use of mercury in products and from processes and support the work towards further limiting and where feasible totally banning mercury in products and from processes .

Deadline: from 2010 in constant review

Previous measures:

Regulation REACH (EC Regulation No. 1907/2006), Annex XVII introduces restrictions with regard to application of: mercury compounds - item 18 and mercury in products - item 18a.
Further actions in this respect will depend on decisions made in 2010 during meeting of the ministers of Contracting Parties to Convention.

Restrictions related to application of mercury in products were also introduced by:

- Directive 2002/95/EC of the European Parliament and of the Council of 27 January 2003 on the restriction of the use of certain hazardous substances in electrical and electronic equipment which was transposed to Polish law with the provisions of the Ordinance of the Minister of Economy of 27 March 2007 on specific requirements concerning use of some substances with possible adverse impact on the environment in electrical and electronic equipment (Dz. U. of 2007, No. 69, item 457) (competences of MG),
- Directive 2006/66/EC on batteries and accumulators and waste batteries and accumulators as regards placing batteries and accumulators on the market and re[pealing Directive 91/157/EEC which was transposed to Polish law by provisions of the Act of 24 April 2009 on batteries and accumulators. (Dz. U. of 2009, No. 79, item 666).

Planned measures:

. National Monitoring of the dioxin concentration and dl-PCB i.a. in fish is run by the National Veterinary Institute in Puławy since 2007 and of mixing mercury with other substances including mercury alloys with concentration of at least 95% of weighs. Pursuant to provisions of this Regulation the metallic mercury not used in chlorine-alkaline industry and obtained during the ground gas cleaning and as a by-product in mining of non-ferrous metals and melting operations and also from mercury cores from 15 March 2011 will be recognized as a waste and therefore it will be covered with the regime of the Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste.

On 13 January 2009 the Directive 2008/105/EC of the European Parliament and of the Council of 16 December 2008 entered into force, which determined environmental quality standards for priority substances and some other substances polluting surface water with regard to mercury and its compounds. This Directive should be implemented in EC Member States by 13 July 2010.

Currently works are initiated on new international legal instrument - convention on mercury which will cover the whole issue in a comprehensive manner. Works on convention, pursuant to Decision 25/5 UNEP should be completed before 27th Session of the UNEP Managerial Council in February 2013. The Decision concerning priority areas will be made during the meeting of the Intergovernmental Negotiation Committee in June 2010.

The verification and minimizing of hazardous substances application in motor vehicles (mostly with regard to cadmium, mercury, lead and six value chrome - is banned by Article 44 of the Act of 20 January 2005 on recycling of vehicles withdrawn from use (Dz. U. of 2005, No. 25, item 202 as amended)

In 2009 Environment Protection Inspection (under individual WIOŚ) carried out in controls for plants discharging mercury (and cadmium) in wastewater, which were not controlled in 2007 and 2008 and controlled in 2008 which did not meet legal provisions in this respect.

H-18: Implementation of Globally Harmonised System (GHS) to classification and marking of chemical substances
Deadline: as soon as possible

Previous measures:

In December 2008 the Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures – so called CLP Regulation) was accepted. It implements Globally Harmonised System in EU Member States.

In Poland the competent authority for CLP/GHS is the Office for Chemical Substances and Preparations.

Planned measures:

Measures depending on HELCOM decision.

H-21: Ratification of Stockholm Convention
Deadline: 2010

Previous measures:

On 30 September 2008, Poland ratified the Stockholm Convention on Persistent Organic Pollutants drawn up in Stockholm on 22 May 2001. Date of entering into force of the provisions referring to Poland was 21 January 2009.

The Ministry of Environment implements the National Programme for Implementation of Stockholm Convention (KPWKS) financed under the Global Environment Found (contract concluded between the United Nations Industry Development Organization UNIDO, and the Environment Protection Institute – IOŚ). This refers to measures aiming at ban to apply and market and disposal of solid reserves and wastes of persistent organic pollutions. The programme also aims at limitation of their emission/release of unintended production and monitoring and control of presence in the environment.

Location in the country, control and disposal of persistent organic pollutions deposited on landfills, in particular stored in burials. A particular procedure is required for waste from overdue pesticides. Currently, in individual voivodships, there is a systematic liquidation of burials within the territory of Poland.

An assessment of Polish companies potential in respect of liquidation of landfills for overdue pesticides and disposal of pesticide wastes through combustion was carried out. It concluded that the technical potential for disposal of the POP with traditional methods is currently sufficient, however, they all are based on combustion.

The analysis carried out in the country allowed to assume that (economically) effective process of decontamination of Poland with regard to PCB will be completed by 2010. Requirements in this respect are regulated by the Ordinance of the Minister of Economy, Labour and Social Policy of 24 June 2002 on requirements for use and moving substances which constitute particular risk for environment and using and cleaning installations and devices in which the substances constituting particular risk for environment were or are used (Dz. U. of 2002, No. 62, item 860) issued on the basis of delegation contained in Article 163(1) of the Environment Protection Law of 27 April 2001 (Dz. U. of 2001, No. 62, item 627).

. National Monitoring of the dioxin concentration and dl-PCB i.a. in fish is run by the National Veterinary Institute in Puławy since 2007.

The provisions of Stockholm Convention are compliant with the domestic regulations. However, the existing measurement system and emission controls of all POP contained in the Convention should be extended. It is necessary to supplement standards related to dioxins, furans, PCB and HCB in foodstuff and emission standards from existing industrial sources.

As far as PCB is concerned, also the provisions of the Ordinance of the Minister of Economy, Labour and Social Policy of 24 June 2002 on requirements for use and moving substances which constitute particular risk for environment and using and cleaning installations and devices in which the substances constituting particular risk for environment were or are used (Dz. U. of 2002, No. 96, item 860) are applied.

For which group of compounds: PCBs, DDT and PCDD/PCDF, a separate counteracting programme should be developed.

- PCBs – Ministry of Economy keeps full inventory for this compound, research works are carried out for development of methods for disposal of these hazardous compounds.
- DDT – it is impossible to remove technologically all of this compound, its metabolites from the environment, it is necessary to carry out permanent controls of these pollutions, especially in sea environment.
- PCDDs/PCDFs – it is necessary to apply safer technologies of waste combustion, eliminating emission of these compounds.
- Pesticides: aldrin, dieldrin, chlordan, endrin, heptachlor, mirex, tokafen are noted at very low concentration, it is not necessary to dispose them. It is necessary to carry out control and monitoring within competences of Ministry of Environment.

Planned measures:

Implementation of amendments to Annex A, B and C to Stockholm Convention which will enter into force on 26 August 2010, referring to pentaBDE and PFOS. In order to improve the PCB withdrawal process and devices containing PCB in Poland on the basis of delegation contained in Article 163(1) of the Environment Protection Law, new Ordinance of the Minister of Economy on requirements for use and moving substances which constitute particular risk for environment is finalized.

H-23: Development of biological effects monitoring.
Deadline: 2008

Previous measures:

Poland expects the results of BEAST project and guidelines for implementation of biological effects monitoring.

Sea Fisheries Institute in Gdynia implements the project financed by EU. "Biological effects of anthropogenic chemical stress: Tools for the assessment of ecosystem health (BEAST; BONUS 114)". Project implementation period: 01.01.2009 till 31.12.2011. The project objective is development of integrated tools for assessment of ecosystem health in the Baltic Sea on the basis of the measurements of anthropogenic origin contamination content and measurements of their biological effects. Considering hydro-chemical and biological diversification of each sub-region of the Baltic Sea, the project covers development and validation of bio-markers of pollutions effect at the molecular level, sub-cellar and individual in organisms from different trophic levels. Project is significant for understanding anthropogenic stress on ecosystem and for development of protection strategy and sustainable social and ecological management with natural Baltic resources. 17 scientific institutes from EU and Russia take part in the project.

H-24: Continuation of HELCOM's works with regard to radioactivity, including monitoring of discharges, emissions from nuclear power plants as well as their effects in the marine environment in order to reach the targets for radioactivity.
Deadline: -

Previous measures:

Poland implements studies for radionuclide according to MORS. It must be underlined that Poland does not have any nuclear power plants.

Planned measures:

Strengthening cooperation with respect to nuclear energy, especially to increase safety level with regard to this source of power.

Legal provisions in this respect are contained *inter alia* in the Nuclear Law Act (Dz. U. of 2001, No. 3, item 18 as amended)

4.3. SEGMENT III: BIODIVERSITY AND NATURE CONSERVATION

4.3.1. INTRODUCTION

The main strategic objective of this segment of the Baltic Sea Action Plan is ensuring beneficial condition of biodiversity conservation in the Baltic Sea.

The Baltic Sea is stated to be poor ecosystem with respect of species diversity and with low level of biodiversity, hover, it is unique in respect on specificity of ecology of the flora and fauna and the structure of conglomerations. Biodiversity is shaped not only under pressure from the catchment area but also diverse actions in the same reservoir.

Biodiversity and nature conservation in the Baltic Sea is strictly related to implementation of assumptions of other BSAP segments, especially reduction of nutrients and hazardous substances deposited to water. Oxygen deficit caused by eutrophication in the bottom layers contributes to increased mortality of benthic fauna.

The operational ecological objectives accepted by HELCOM for reaching better biodiversity conservation condition are compliant with the Convention on Biological Diversity (CBD) accepted at the Earth Summit in Rio de Janeioro in 1992 and the Bern Convention on the Conservation of European Wildlife and Natural Habitats of 19 September 1979. They are addressed to undertaking proper measures in the area of 3 basic issues i.e.

- natural marine and land landscapes (coastal);
- well operating and balanced plant and animal populations;
- lively populations of species.

The above mentioned assumptions are implemented through recreation and maintenance of integrity of sea bottom at the level ensuring functioning of ecosystems, proper determination of inter-Sectoral assumptions of marine spatial planning on the basis of the ecosystem approach, creation of protected areas, creation of detailed landscape maps. It is necessary to chart, complement and updating of classification system for marine habitats/biotopes and creation and permanent supplementation of Red Lists of endangered species.

Information are gathered referring to habitats and their species in the scope of settlement, number and condition, with consideration of physic-graphic, geographic and climate conditions. Under BSAP it is also necessary to carry out periodic tests of water quality, enabling ensuring of integrity, structure and functioning of ecosystems to restore them or to maintain them.

A significant part in ensuring species balance plays sustainable fishing policy, protection of endangered ichthyofauna species (especially: cod, sea trout, pelagic and wandering species: eel and salmon).

4.3.2 DESCRIPTION CONCERNING PREVIOUS AND PLANNED ACTIONS UNDER IMPLEMENTATION OF INDIVIDUAL OBJECTIVES OF THE SEGMENT III: BIODIVERSITY AND NATURE CONSERVATION (according to BSAP index)

I. NATURAL MARINE AND COASTAL LANDSCAPES

B-1, B-2, B-3: Joint elaboration of broad-scale, cross-sectoral, marine spatial planning principles based on the ecosystem approach
Deadline: Development of rules – 2010; testing and assessment - 2012

Previous measures:

Since 2003, there is a certain legal possibility to develop marine spatial management plans in Poland on the basis of Article 37a of the Act on Marine Area of the Republic of Poland and Marine Administration (consolidated text in Dz. U. of 2003, No. 153, item 1502) PlanCoast Partner Marine Office in Gdynia in cooperation with the Marine Institute in Gdańsk prepared (with active participation of many stakeholders) the first Polish spatial development plan for sea water (MSP) for western part of Gulf of Gdańsk – total planned sea area is 291 400 ha (see also: www.plancoast.eu.)

The Ministry of Regional Development participates in the VASAB (Vision and Strategy around Baltic Sea) programme under which Long-term Perspective on Spatial Development in the Baltic Sea Region (LTP/BSR) is being developed. In April 2009, there was second round of national consultations for the LPT document. A conference of Ministers competent for spatial planning and development was held on 16 October 2009 in Vilnius. A common Declaration of Ministers and the above mentioned programme document were accepted at the Conference.

Participation in the EU "HERMES" project – results of social and economical analysis and research analysis for deep-sea areas.

Planned measures:

Performance of strategic impact assessment for MSP.

Change of Act on marine spatial planning is planned for the beginning of 2010, it will enable full official approval of complete MSP.

Poland is partner in the EU BaltSeaPlan (Baltic Sea Use Planning) the project entitled "Introduction of marine spatial planning for the Baltic Sea" implemented in 2009-2012.

In the future measures for spatial planning it is necessary to consider results of the INTERREG-IIB BALANCE Project and works implemented under Helsinki Commission -Draft Marine Spatial Planning Principles for VASAB and HELCOM.

B-4: Designation of HELCOM Baltic Sea Protected Areas (BSPA)
Deadline: newBSPA by 2010

Previous measures:

By 2009 Poland submitted 4 Baltic Sea Protection Areas – BSPAs, with area corresponding to two national parks: Woliński and Słowiński National Park and two landscape parks: Nadmorski Landscape Park and Vistula Spit Landscape Park. On 31 December 2009, the Minister of Environment nominated other Baltic Areas of Natura 2000 selected so far in Polish area of the Baltic Sea as HELCOM BSPAs:

1. PLH320018 Estuary of Odra and Szczeciński Lagoon
2. PLB990003 Gulf of Pomerania
3. PLB990002 Baltic Sea Coastal Waters
4. PLC990001 Ławica Słupska
5. PLB220004 Vistula estuary

At the same time the updated borders of Natura 2000 areas overlapping with HELCOM BSPAs were submitted:

1. PLH320019 Wolin and Uznam (areas overlapping the Woliński National Park, BSPA ID 86)
2. PLH220023 Ostoja Słowińska (area overlapping Słowiński National Park, BSPA ID 85)
3. PLB220005 Gulf of Puck (area overlapping Nadmorski Landscape Park, BSPA ID 84)
4. PLH280007 Vistula Lagoon and Vistula Spit (area overlapping Vistula Spit Landscape Park, BSPA ID 83).

B-5a: Assessment of ecological coherence of the BSPA/MPA network (Joint Programme of HELCOM/OSPAR Works)
Deadline: 2010

Previous measures:

On 23-25 November 2009, there was bio-geographic seminar held Natura 2000 for the Baltic Sea region in Poland - the main objective was verification whether a sufficient level of protection and ecological coherence in ensured in respect on indicated stands of the Baltic Natura 2000 for the EU Member States. The meeting was participated by over 60 people – representatives

of the European Commission, European Topic Centre - Biological Diversity, delegates of eight Baltic Member States (Denmark, Estonia, Finland, Lithuania, Latvia, Germany, Poland, Sweden), representatives of pro-ecology NGOs and observers.

Planned measures:

As a result of experts discussion, representatives of the European Commission settled that in the Polish part of the Baltic Sea is it necessary to enlarge two area (PLH220032 Gulf of Puck and Hel Peninsula and PLH220022 Ostoja Słowińska) and it is necessary to create one new area covering reef structures next to Kępa Redłowska. Moreover, it is necessary to supplement and correct assessment of habitats and species in Standard Data Forms of some areas and carry out studies to check the presence of the sea lamprey and lampem and porpoise in selected parts of the Polish Baltic Sea.

B-5b: Finalisation and where possible implementation of management plans for Baltic Sea Protected Areas (BSPAs)
Deadline: 2010

Previous measures:

The authorities managing all four national protected areas (2 national parks and 2 landscape parks) overlapping to four indicates BSPAs prepare the management plans.

Planned measures:

Completed development of protection plans for both national parks and landscape parks as well as development of protection plans or protection tasks plans for all marine areas of Natura 2000.

B-7c: Further development of detailed landscape maps
Deadline: -

Previous measures:

"Atlas siedlisk polskiego obszaru dna morskiego - waloryzacja przyrodnicza siedlisk morskich" (Atlas of habitats in the Polish sea bottom – nature valorisation of sea habitats) prepared within partnership of all Polish research institutes (Institute of Oceanology of PAM, Oceanography Institute of PAN, Marine Institute in Gdańsk, Marine Institute of Fisheries and National Geological Institute) and published in 2009. It was part of the greater project entitled "Ecosystem approach to marine spatial planning – Polish marine areas and the Natura 2000 network" (www.pom-

habitaty.eu), during which the methodology and inventory of ecosystem resources were developed on the basis of the European standards (classification of habitats according to modified EUNIS system). Applied techniques contain up-to-date technologies for identification of marine habitats which enables creation of first complete set of maps for Polish marine areas. The atlas contains maps presenting e.g. bathymetry, sediments, temperature, salinity, PAR radiation and bottom currents which allow to create clear and detailed landscape maps in Polish Baltic Sea.

Three areas (Gulf of Puck, Ławica Słupska, part of coast from Stilo to Ustka, all in the area of Natura 2000) were studied in detail using all available methods.

II. THRIVING AND BALANCED COMMUNITIES OF PLANT AND ANIMALS

B-7a: Updating of a complete classification system for Baltic Sea marine habitats/biotopes
Deadline: 2011

Planned measures:

It is planned to develop classification system of marine habitats according to requirements of the Habitat Directive.

B-7b: Updating of HELCOM Red lists of Baltic habitats/biotopes and biotope complexes
Deadline: 2013

Previous measures:

HELCOM Working Groups were established; their task is to develop Red Lists of habitats and species for the Baltic Sea.

Planned measures:

It is necessary to extend participation of Polish experts in the above mentioned works.

B-7d: Identification and mapping of potential and actual habitats of habitat forming species such as bladder wrack, eelgrass, blue mussel, metzgeria and charophyceae and development of common approach for mitigation of negative impact
Deadline: 2013

Previous measures:

Current habitats of selected species were mapped in the "Atlas of habitats of the Polish marine bottom area".

Mapping of the specific habitats and species in the area of selected parts of the Polish Baltic Sea was carried out during project called “Protection and balancing of natural resources use in the system of marine protected areas of the Baltic Sea under Polish jurisdiction”; in 2006-2007.

III. VIABLE POPULATIONS OF SPECIES

B-7f: Production of an assessment of the conservation status of non-commercial fish species
Deadline: 2011

Previous measures:

Assessment of protection condition of non-commercial fish species in Poland is contained in two publications:

- Red List of Endangered Animals in Poland (Głowaciński ed. 2002) – full list of species.
- Polish Red Book of Animals - Vertebrates (Głowaciński ed. 2001) – descriptions of selected species.

Assessment was carried out pursuant to IUCN (International Union for Conservation of Nature) standards and recommendations.

Poland participates in HELCOM FISH project and FISH/ENV Forum.

B-7g: Further development of a coordinated reporting system and database on harbour porpoise sightings, by-catches and strandings
Deadline: 2010

Previous measures:

HELCOM SEAL – setting experts links for the Jastarnia Group/ASCOBANS to use works of Jastarnia Group and to avoid works overlapping, possibility to incorporate databases on porpoises developed by the project for porpoises of the Baltic Sea stored in the Forschungs-und-Technologiezentrum Westkuste, Germany, for HELCOM databases studies by Secretariat.

Marine Station on Hel, in-field station of Gdański University (member of the Marine Networks) carried out studies on open sea and in the coastal area. It also has many research obligations (including international such as the ASCOBANS Contract) and it is particularly well adjusted to studies of functioning and protection of life in the Baltic Sea. The station is the national centre for sea mammals studies which live in the Polish part of the Baltic Sea and it keeps database for stands of porpoise, bycatches and shallows. More information: www.morswin.pl.

B-7h: Promotion of research on developing methods for assessing and reporting on impacts of fisheries on biodiversity

Deadline: permanent task

Previous measures:

Poland implements the Operational Programme "Sustainable Development of the Fisheries Sector and Coastal Fishing Areas 2007-2013" which specifies national strategic objectives common with the Common Fishing Policy in respect of development of fisheries in 2007-2013 mostly considering sustainable exploitation of fisheries resources, supply and market balance, sustainable development of aquaculture, development and competitiveness of fisheries sector, human resources and territorial aspect of the fisheries policy, environment protection with particular consideration of the water environment, proper management with fishing policy.

MIR implemented project financed by the EU „Critical interactions between species and their implications for a precautionary fisheries management in a variable environment - a modelling approach (BECAUSE) (EU-18)". Implementation period: 01.03.2004 until 28.02.2007.

In the BECAUSE project the interspecies interactions were studies from the quantity perspective and their role in ecosystem to implement environmental approach in resources management. Works were focused on most important interactions in the field of higher trophic levels of marine ecosystems. The study focused in particular on the dependence between exploited predator fish populations, birds and sea mammals and planktonophagous fish as preys of large fish, birds and mammals. The object of the studies was i.a. correlations between cod and herring, sprat, capelin, sand eel and hake with its main preys and the cannibalism of cod and hake. The studies also covered ecosystems of the Baltic Sea, the North Sea, the Mediterranean Sea and Iberian Shelf and the region of Iceland and Norway.

Other project implemented by MIR is: „Operational evaluation tools for fisheries management options (EFIMAS) (EU-19)". Implementation period: 01.04.2004 until 31.03.2008.

The EFIMAS project objective was development of tool enabling assessment of various fisheries management options. They enable assessment of biological, economic and social effects of the management options in the EU and they apply to more important EU fisheries objectives including to cod and salmon fishing in the Baltic Sea. It includes dynamics of fisheries and random components in modelled processes which enables risk assessment for each of the management options.

Adaptation of fishing efforts to resources in 2004-2006 was implemented through Sectoral Operational Programme "Fisheries and fish processing 2004-2006" (SOP Fish 2004-2006) which was created on the basis of structural funds. The main objective of the SOP Fish 2004-2006 programme was: rational management with viable water resources and improvement of fisheries sector effectiveness and improvement of competitiveness of the Polish fisheries and fish processing. As a result of the above mentioned Programme, 442 fishing units were permanently withdrawn from fisheries. This number includes scrapping and transfer of ship to different type of activity.

The Marine Station on Hel is specialized in studying effects of fisheries on condition of resources available for Baltic marine mammals: seals and porpoises. More information: www.hel.univ.gda.pl.

B-7i: Development and implementation of effective monitoring and reporting systems for by-caught birds and mammals
Deadline: -

Previous measures:

At the order of the MRiRW, Sea Fisheries Institute runs Programme for Monitoring of Cetacean Incidental Catches on the basis of requirements of the Council Regulation (EC) no. 812/2004 of 26 April in the scope of introduction of catches monitoring programmes with independent observers on the deck 6 recital and Article 4 and 5 of the Regulation).

Poland runs the cetaceans observation programme on fishing vessels since 2006. Additionally, in 2007 and 2009 an incidental sea birds during fishing was observed.

Planned measures:

There must be greater stress put on collection and verification of data on incidental catches of vertebrates, especially mammals (grey seal, porpoise) and sea birds. In future reliable data on catches of non target species should constitute the basis for decision on application of individual fishing tools in marine protected areas.

B-8: Development and implementation of fisheries management measures for fisheries inside marine protected areas
Deadline: 2010

Planned measures:

The measures must be considered in the plans of Natura 2000 marine areas protection. The European Commission in cooperation with BS RAC (The Baltic Sea Regional Advisory Council) develops long-term plans for fish populations management in the Baltic Sea, started in 2007.

Sea Fisheries Institute in Gdynia implemented research project financed by EU. „Marine protected areas as a tool for ecosystem conservation and fisheries management (PROTECT) (EU-22)". Implementation period: 01.01.2005 until 30.09.2008.

The objective of these studies was i.a. identification of young cod population presence regions as the potential protected areas, determination of co-presence of adult cods and species important for fisheries and studying their occurrence due to hydrological conditions. Results of the studies indicate that in POM a stable region for young cod specimen occurrence (in the context of the cruises carried out) is Gulf of Gdańsk (including coastal water of Hel Peninsula from the open sea side) and fisheries of Władysławowo and region of the Bornholm Basin. Also consultations with fishing organizations representatives were carried out on marine protection areas.

B-9: Protection of survival rate of Baltic seals and implementation of non-lethal mitigations for seals – fisheries interactions (HELCOM Recommendation 27-28/2)"
Deadline: 2012

Planned measures:

Development and application where possible non-lethal mitigation measures for seals to reduce bycatch and damage to fishing gear, as well as to support and coordinate the development of efficient mitigation measures; (HELCOM Recommendation 27-28/2)

B-10, B-11: Baltic Sea shall become a model of good management of human activities based on the Ecosystem Approach in order to enhance the balance between the sustainable use and protection of marine resources
Deadline: -

Previous measures:

Sea Fisheries Institute in Gdynia implemented research project financed by EU. „Incorporating the extrinsic drivers into fisheries management (IN EX FISH) (EU-28)". Implementation period: 01.01.2006 until 31.12.2008.

The project aimed at increase of natural factors and anthropogenic factors use, influencing biological processes in fisheries and fish shoals management.

Planned measures:

The EU BaltSeaPlan Project entitled "Introduction to marine planning for the Baltic Sea" in Poland participates may significantly contribute to reaching the goals.

B-12: The competent fisheries authorities to take all the necessary measures to ensure that populations of all commercially exploited fish species are within safe biological limits, reach Maximum Sustainable Yield, and are distributed through their natural range, and contain full size/age range
Deadline: 2021

Previous measures:

Within framework work of EFF for 2004-2006 and 2007-2013, the Ministry of Agriculture and Rural Development undertook significant efforts to adapt Polish fishing efforts to fishing possibilities (40% of sea vessels were withdrawn in 2004) therefore more vessels with be scrapped in future. Moreover, the right to catch cod was limited to selected fishermen in 2009 to reduce catching stress for Baltic cod population and to reduce risk of to extensive exploitation of Polish cod population. An effective system for Polish fisheries management and its implementation in 2011 is currently developed by MRiRW.

B-13a: Development of long-term management plans for commercially exploited fish species (salmon, brown trout, pelagic species and flatfish)
Deadline: 2010

Previous measures:

A draft act amending the act on inland fisheries was prepared. Its entering into force will enable introduction by an legal act (regulation) a long-term fisheries protection and restoration programmes for fish commercially exploited, especially bi-environmental fish.

The European Commission in cooperation with BS RAC - develops long-term management plans for industrial fish population in the Baltic Sea starting with 2007.

Long-term management plans are developed by MRiRW. Polish Eel Management Plan was developed which was approved by the European Commission in 2010.

Planned measures:

Similar implementing measures as in case of eel management will be undertaken after the regulation on long-term Atlantic salmon management plan will enter into force.

In case of fish species the management of which is not regulated with special EU regulations, adequate measures and programme may refer at first to zarte, Atlantic sturgeon or brown trout.

B-13b: Introduction of additional fisheries management measures
Deadline: 2012

Previous measures:

In 2008, Poland equipped Polish fishermen that fish in subregion 24.

ICES on vessels above 12 m, with cetacean deterring devices – pingers AQUAmark Aquatec 100 (17 sea vessels) to decrease bycatches of cetaceans pursuant to Council Regulation EC No. 812/2004 adapted in April 2004 on cetacean incidental catches in fisheries and amending Regulation (EC) No. 88/98).

Additionally, a pilot project using the above mentioned devices deterring cetacean was carried out by the Marine Station IO UG in Hel.

Consultations carried out in all Baltic states aim at introduction of ban of throwing in the Baltic Sea in near future.

Development of quick and temporary alarm systems for detection of young specimen of given species (in too early life stadium) – based on methods developed in Scotland and Norway. Possible determination of areas in which a total ban of fishing exists.

Adequate restrictions with respect of size of meshes and length of shells in fishing nets.

Sea Fisheries Institute (MIR) in Gdynia implemented research project of EU: „Fisheries independent survey based operational assessment tools (FISBOAT) (EU-20)". Implementation period: 01.03.2004 until 28.02.2007.

The FISBOAT project objective was creation and development of methods based on studies allowing for independent assessments of fisheries. It is expected that direct survey methods will be development and their results will be implemented to models and that there will be assessment of final procedures. Direct estimates of resources, mortality rate, spatial location will be improved by application of spatial statistics method. In survey catches, the catching rate will be tested using combination of various methods. Population estimation models will be developed towards application of survey results as the data source. 11 research institutes from EU took part in the project.

MIR in Gdynia also runs Long-tern Fisheries Data Collection Programme for 2007-2013.

Planned measures:

Poland stand on reform of the Common Fisheries Policy in 2012 will contain proposals of measures which aim i.a. at minimizing rejects and at increase of requirements for better selectivity of fishing tools and introduction of fisheries management tool for fish commercially exploited on the basis of ecosystem approach. .

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B-14a: Elimination of illegal, unregulated and not reported (IUU) fisheries
Deadline: 2012

Previous measures:

There is fisheries, landing and first sale control carried out by marine fisheries inspectors. Marin fisheries information system is used (SIRM) and Vessel Monitoring System (VMS).

Starting with the beginning of 2010, monitoring of fishing activity was introduced pursuant to requirements of he Regulation (EC) 1005/2008.

Moreover, from the beginning of 2009 all cods landing in Polish ports and harbours were controlled by fisheries inspectors.

The following documents are developed on annual basis:

- National Control Plan on the Baltic Sea,
- Polish Programme for Control, Inspection and Supervision of Fisheries.

Moreover a new control vessel was purchased, number of controls in ports was increase, a cycle of seminars for administration and fishing environment were carried out, a newVMS system was implemented and investments in technical means for marine fisheries inspectors were carried out.

Planned measures:

Implementation of provisions of the Regulation no. 1005/2008 and no. 1010/2009.

Strengthening of catches control system and fish landing by marine fisheries inspectorates in cooperation with the Marine Division of Boarder Guard.

Introduction of electronic logs.

Control of commercial catches reports, especially with respect to information contained in sheets from catches logs and documents from first sale and current VMS.

Strengthening cooperation with marine fisheries inspection services in the Baltic Sea countries and Community Marine Fisheries Agency.

B-14b and B-15: Implementation of long-term management plans for cod and eel and other species.
Deadline: 2012

Previous/planned measures:

Long-term cod management plan was developed in 2007 by the EU Council and it has been implemented since 2008. As a result of this strict implementation by the EU MS including Poland cod resources in the Baltic Sea significantly improved.
In particular this takes place in the eastern shoals of the Baltic cod, the mortality rate of which (F) is currently at the level of 0.18 – significantly lower than the goal assumed by the above mentioned long-term plan (0.3).

At the EU level there are preparatory works carried out on long-term management plans for Baltic pelagic species and salmon.

Since 2010 it is planned to implement Polish Eel Management Plan through execution of proper technical regulations specified in the Plan and carried out scientific monitoring to evaluate and report the Plan in question. To implemented measures provided for in the developed Eel management plan in Poland and other types of programmes a cooperation of authorities and other entities must cooperate while carry out tasks within their competences and imposed obligations.

The Baltic Sea ichthyofauna condition from the economic point of view has been stated to be in crisis for last years due to low biomass of cod and decreasing population of pelagic fish and low increase in natural shoal of salmon. In respect of increase of fishing tools selectivity, the Marine Fisheries Institute in Gdynia implemented the project. “T90 Bag = ecological cod catches (Sectoral Operational Programme Fisheries SOP-11)”. Implementation deadline: 7.04.2007 until 15.12.2008.

The objective was promotion and popularization of cod bag technique made of net fabric with meshes rotated by 90 degrees among fishermen. Provisions concerning this technique were reflected in the Council Regulation (EC) No. 2187 of 21 December 2005 and entered in to force since 1 January 2006 for cod catches in the Baltic Sea simultaneously to the method based on

application of Bacoma type bag). 15 T90 bags were provided to fishermen. After a long protective period and after receiving catching permits, cod catches using T90 bag technique interchangeably with the Bacoma bag were started 0 these actions were initiated in the third decade of January 2008.

The new construction of cod bag was presented during General Meeting of Fishermen form Marine Fishermen Association organized in Jastrzębia Góra on 6 September 2007 and during seminar organized by the Model Survey Station at the Agricultural Academy where benefits of T90 bag were presented in four papers comparing to the standard bag and Bacoma type bag.

To popularize T90 bag information and publicity materials were prepared and short film presenting economic and ecological benefits of the new T90 bag construction.

Other project concerning the given issues consist in observations in the period of cod catching season, division of length of codes caught with bags with meshes rotated by 90 degrees on industrial fishing vessels i.e. without constructions used in typical selectivity surveys (e.g. shells). In the period of the entire cod catching season the captains of fishing vessels which obtained permit for application of bags with rotated meshes will be obliged to keep up-to-date records of catches in special notebooks. A final result of the project will be determination of protective features (possibility to release young and too small cods from the bag) of this construction of the cod bag and their comparing to protective features of Bacoma type bag.

B-16: A joint submission by EU Member States to the review of EU Common Fisheries PolicyCFP)
Deadline: 2012

Previous measures:

Sea Fisheries Institute in Gdynia implements the programme financed by EU. „Understanding the mechanisms of stock recovery (UNCOVER) (EU-24)". Implementation period: 01.03.2006 until 28.02.2010.

The project objective is familiarizing with mechanisms determining fisheries condition (cods, hakes, herrings, plaice, sprat, anchovy, capelin) so far intensively exploited and endangered with over catching in the Barents Sea, the Norway Sea, the North Sea, the Bay of Biscay and the Baltic Sea and development of strategies aiming at revitalizing fishery of these species. MIR task is development of electronic base of Polish multiannual data from biological analyses of sprat and cod and measurements of abiotic parameters of the southern Baltic Sea environment as the basis for planning long-term management strategy for sprats and to familiarize with processes steering with changes of cod shoals sizes. In 2007, MIR developed, verified and provided in electronic form most of required data from 1977-2006 mostly collected in Polish sea area.

Other project implemented by MIR are„Knowledge-based Sustainable Management for Europe's Seas. (KnowSeas) (EU-39)".

Implementation period: 01.04.2009 until 31.03.2013.
The project objective is provision of comprehensive scientific knowledge and practical directions to apply ecosystem approach in sustainable development of the European seas: the Baltic Sea, the North Sea, the Mediterranean Sea and the Black Sea. The project will be based on experiences from European Lifestyles and Marine Ecosystems (ELME) project, but it will introduce new approach, improving and extending understanding of mutual links between ecological systems and social system which results in development of tools for introduction of ecosystem approach in practical application by the stakeholders.
The project is participated by 31 research institutions from the EU, Norway and Turkey. Total cost of project is: EUR 6.5 million.

Moreover, MRiRW prepared, after wide consultations with fishermen environment and NGOs and scientific organizations, the Polish stand to Green Book on reform of the Common Fisheries Policy which was submitted to the European Commission in December 2009.

Finalization of the common stand of the Helsinki Convention contracting Parties took place during the FISH HELCOM/ENV Forum 3/2009.

B-17: Additional fisheries measures: National programmes for eels stocks

Deadline: 2008

Previous measures:

Poland developed national programme for the European eel population management which was submitted to the EU at the end of 2008 and approved by the European Commission on 6 January 2010 (K(2009)10601). Polish eel management plan aims at reaching assumed size of eel spawning population escapement pursuant to the Council Regulation (EC) No. 1100/2007 of 18 September establishing measures for the recovery of the stock of European eel. The most important measures provided for in the plan include measures for reduction of mortality rate and fishing efforts and increase of recruitment and possibility to migrate.

Planned measures:

Scientific monitoring and evolution of the plan in question in the 3-year cycle.

B-17: Additional fisheries measures: classification and inventory of rivers; development of restorations plans to reinstate migratory fish species; conservation of at least 10 wild salmon rivers

Deadline: 2012

Previous measures:

Poland participates in HELCOM FISH project.

Planned measures:

There is strong need to renature Polish rivers to enable migration and reproduction of fish, in particular migrating species. Within the European Fisheries Fund (EFF) with consideration of places indicated in the regional (voivodship) programmes for restoration of rivers for fish migrations, the measures for construction of fish ladders and removal of migration obstacle are co-financed. In cooperation with FAO preparation works are carried out to restore dykes for fish in Włocławek which is the greatest migration barrier in Vistula. Also measures are carried out for determination of rivers of particular importance for bi-environmental fish for which further hydro-technical development should be withheld and in which the restoration measures should be intensified.

Poland takes part in new classification and inventory of salmon and trout fish under framework works of the FISH HELCOM/ENV Forum. In Poland there are no rivers which are natural habitats for wild salmon.

B-18: Restoration of lost biodiversity by supporting German/Polish action to reintroduce Baltic sturgeon
Deadline: -

Previous measures:

Poland with Germany still continues programme for sturgeon restitution in Odra and Vistula according to plan developed by the Inland Fishery Institute. Breeding material obtained from Canadian populations. Environmental surveys have been carried out in selected rivers in Odra river basin where sturgeons were released. Pilot restocking of Odra river basin in 2007; in Vistula river basin (breeding carried out only by Poland) in 2006.

Some sturgeons are marked with telemetric marks, floy marks or Carlin's marks. During three years of programme implementation over 14000 fish were released during pilot restocking.

Planned measures:

It is necessary to apply additional measures to increase protection of sturgeons migration but also to obtain more data on bycatches of released sturgeons by fishermen.

B-21a-c: Development of long-term management plans and a suite of indicators for coastal fish species
Deadline: 2012

Previous/planned measures:

Consultations were initiated aiming at strengthening of project with participation of neighbouring countries. Inclusion of Lithuania and Russia (Kalingrad Oblast) to participation in works – task for HELCOM

SEGMENT IV: MARITIME ACTIVITIES

4.4.1. INTRODUCTION.

The superior strategic objective of this Baltic Sea Action Plan (BSAP) segment is that sea transport and business were carried out on the Baltic Sea in a environment friendly manner.

The Baltic Sea is one of world seas with the greatest burden of sea vessels both in respect of their number and tonnage. Currently, traffic on the Baltic Sea constitutes some 15% of the world sea traffic and it will probably grow by above 100%.

Number of ships and ferries increased but also the oil tankers which often cause accidents and damages on open sea. The Baltic Sea is an area difficult for navigation also due to long-lasting ice cover which increases accidents potential. The marine transport in the Baltic Sea region also constitutes a significant commercial axis - it is estimated that there are 2000 ships cruising on its water at the same time.

The adverse effects of direct or indirect human activity on the sea refers to emission of gas to atmosphere including gas contributing to intensification of greenhouse effect, oil spill and hazardous substances discharges including radioactive waste. Last years, a negative phenomena became more intensive – intended or coincidental introduction of alien species, including invasive, which often forced out native species.

Due to international nature, the provisions referring to shipping are regulated by the global commitments settled under special organizations, mostly under the International Maritime Organization - IMO. Most of measures from this segment is implemented by HLCOM Groups: MARITIME and RESPONSE since the issues it covers mostly refer to shipping safety and marine environment protection against pollution from ships.

This refers to maritime transport and monitoring systems (e.g. AIS). Only a small scope of this segment can be introduced individually by the HELCOM Contracting Parties – mostly in the scope of waste landfilling and undertaking measures to reduce or eliminate application of toxic anti-lichen agents containing tin.

Measures of this segment are supported by the EU, in particular by implementation of the EU Strategy for the Baltic Sea Region. Under the strategy there are measures carried out related to covering the Baltic Sea with the Particularly Sensitive Sea Area - PSSA status. Since 2005, the Baltic Sea has also been SOx Emission Control Area (SECA) for which acceptable limits of sulphur emission (level of 1.50% m/m) are regulated by the MSRPOL Convention (Annex VI). However, it is planned to increase the limits by introduction of new acceptable ceiling values from 1 July 2010 (1.00% m/m/) and after 1 January 2015 (0.1% m/m).

Currently there are preparatory works carried out to recognize the Baltic Sea as the NOx Emission Control Area pursuant to provisions of Annex VI of the MARPOL Convention amended

in 2008. They order *inter alia* that ships built in 2016 and later should reduce NOx emission by ca. 80%.

Under implementation of BSAP provisions the following strategic objectives must be taken into account:

− Enforcement of international regulations - No illegal pollution,

− Safe maritime traffic without accidental pollution,

− Efficient emergency and response capability,

− Minimum sewage pollution from ships,

− No introductions of alien species from ships,

− Minimum air pollution from ships,

− Zero discharges from offshore platforms,

− Minimum threats from offshore installations.

The above mentioned objectives met as a result of i.a.

- ratification of AFS Convention and more effective control of ships which do not met the Convention provisions using AIS System, on the basis of list prepared and updated in cooperation with the Paris MoU on regional system of port control of foreign ships in Polish ports,
- initiation of measures for reduction of maritime environment pollution with organotin compounds and reduction of nitric and sulphate oxides emission to atmosphere.
- obtained access to satellite photos under CleanSeaNet programme run by the European Maritime Safety Agency will help to strengthen air supervision covering the entire are of the Baltic Sea to improve oil spills,
- development of local projects related to removal of pollutions from coastal areas and maritime environment such as beach cleaning actions.
- greater stress on improvement port devices to collect wastewater and wastes from ships and implementation of "no special fee" system.
- in the future there will be adequate steps undertaken for implementation of the Action Plan for fighting pollutions on swamps.
- developing by Poland of "red" and "black" chemical substances lists which were accepted during HELCOM 31/2010 meeting.
- to improve safety of navigation in the area of the Baltic Sea in winter conditions, cooperation will be established and/or strengthened between all the Baltic states under Baltic Icebreaking Management (BIM).
- Poland cooperates with the e-Navigation IALA committee in studies of potential possibilities of DGNSS transmissions using Differential Global Navigation Satellite System DGNSS by 2 Polish DGPS base station on the Baltic Sea (Rozewie, Dziwnów), to obtain recommendations and

coordination in this respect from the International Association of Marine Aids to Navigation and Lighthouse Authorities – IALA. Cooperation is also focused on international recommendations in the scope of development of functionalities and organization of the national AIS-PL system network covering 12 coastal stations which provide the data to Baltic Sea HELCOM network from the centre in Copenhagen.

- also the works on decision support system are carried out for application of surface active agents on the Baltic Sea which will set the rules for application of these agents on the basis of IMO Guides, Net Environmental Benefits Analyses – NEBA and current knowledge on oil transport in the Baltic Sea area.

4.4.2. DESCRIPTION CONCERNING PREVIOUS AND PLANNED ACTIONS UNDER IMPLEMENTATION OF INDIVIDUAL OBJECTIVES OF THE SEGMENT IV: MARITIME ACTIVITIES (according to BSAP index)

M-2, M-3, M-4: Ratification of AFS Convention
Deadline: 2009

Previous measures:

Measure completed. The international convention of control of hazardous anti-lichen systems applied on ships (AFS Convention) was accepted on 5 October 2001 during the Diplomatic Conference (AFS Conference) which took place under supervision of the International Maritime Organization (IMO) in cooperation with the Community MS. The Convention was ratified by Poland in 2004 (Act on ratification Dz. U. of 2008, No. 134, item 851).

M-6, M-14: Extension monitoring of AFS non-compliant ships entering the HELCOM area using Automatic Identification System (AIS)
Deadline: -

Previous measures:

Measure in progress. Works under HELCOM AIS EEC group (last meeting on 17 – 18.03.2010) The reports is published on HELCOM MARITIME 8/2009 web site). The group consisting in representatives of all Baltic states and Norway - HELCOM Contracting Parties is participated by representatives of the Marine Office in Gdynia which is a coordinator and administrator of the AIS-PL network. This system, which ahs existed and operated in Poland from 2002 aims at tracking and exchange of information on ship traffic between the countries within the

Baltic Sea region. It is equipped with devices and coastal installations of 12 stations to receive and use AIS information at the Polish coast. A database and servers to transfer and exchange information with other countries AIS (HELCOM, IALA, Volpe) were installed in CBM in Gdynia.

Under HELCOM the following programme is implemented: "Monitoring of non compliant ships" and the EU "EfficienSea" project is supported which is participated by several institutions from Poland including Marine Office in Gdynia.

Competent authorities – Ministry of Infrastructure and Marine Offices.

Planned measures:

Under AIS-PL network development, the Marine Office in Gdynia carries out measures aiming at full coverage with the Polish Exclusive Economic Zone (EEZ) and areas under responsibility of the Maritime Search and Rescue Service (SAR). Therefore, a base station was established at the PetroBaltic oil rig. Extension of infrastructure of database serves are carried out in CBM Gdynia and re0distribution of AIS data and software for statistical and maritime traffic supervision purpose. It is also planned to carry out system tests for full operational launching of proper procedures. Also the technology of so called Polish Single Window is developed for navigation systems operational, maintenance and management purposes.

M-5: Promotion of development of the effective, environmental friendly TBT-free anti-lichen system for TBT-free ships.
Deadline: -

Previous measures:

Research activities. Research is carried out by many research institutions including *inter alia* Institute for Engineering of Polymer Materials & Dyes, Research & Development Centre for Paints, Glues and Polymer – SPKTROCHEM, Ship Design and Research Centre, Marine Institute in Gdańsk.

Marine Office in Gdynia cooperates with the Institute of Oceanology of the Polish Academy of Science in the scope of studies of sediments and sea specimen to determine condition of marine environment and TBT content in Gulf of Gdańsk.

M-7: Ratification of Annex VI of MARPOL 73/78 Convention.
Deadline: 2010

Previous measures:

Poland ratified Annex VI of MARPOL in 2006.

Planned measures:

Currently Ministry of Infrastructure works on publication of amendments from 2008 to the Annex VI.

Since 2006 the fuel quality is checked in Polish ports. Fuel samples are collected from ships and from fuel suppliers to determine sulphur content.

M-38, 40: Analysis of possibilities and undertaking measures to reduce emission from ships - Recommendation
HELCOM 28E/13; Annex VI of MARPOL 73/78.
Deadline:

Previous measures:

Poland implemented Directive 2005/35/EC and meets requirements referring to content of sulphur in fuel i.a. through Ordinance of the Minister of Economy and Social Policy if 17 December 2002 concerning specific quality requirements for some liquid fuels (Dz.U. of 2002, No. 229, item 1918).

Since 2001, Environment Protection Law is in force which regulates the issues related to fees for using the environment including fees for emission of gases or dusts to the air, also by ships. In 2006, amendments to the Act on counteracting sea pollution by ships entered into force which implemented Annex VI to MARPOL Convention (in the scope of air pollution by ships).

By 2007, the Environment Protection Inspectorates implemented 3 control cycles concerning i.a. sulphur content in heavy heating oil applied in fuel combustion installations and in ship engines oil – however, only in respect of inland shipping. In total, by 2008 voivodship environment protection inspectorates carried out control of 108 ships owned by 57 ship-owners, during which 69 fuel samples were collected. All the collected samples of oil met the quality requirements specified in the Ordinance of the Minister of Economy of 4 January 2007 concerning quality requirements for sulphur in oils and type of installation and condition in which heavy heating oil is applied.

Constant controls of sulphur content in fuels provided to ships are also carried out by marine offices.

Planned measures:

An efficient control also towards emission of volatile organic compound (VOC) under the International Maritime Organization and introduced to MARPOL Convention, especially for vapours and their recovery, to be applied both in the loading offices, on ships and in port offices.

The increase of effectiveness of execution of provisions of the Directive 94/63/EEC on emission of volatile organic compounds (VOC) created as a results of storing and distribution of fuel.

Strengthening of control and preventive actions towards installations applying heavy heating oil in order to meet quality requirements specified in adequate legal regulations, including Ordinance of the Minister of Economy of 4 May 2007 on quality requirements concerning contents of sulphur for oils and types of installations and conditions in which heavy heating oil will be applied (Dz. U. of 2007, No. 4, item 3) and the Ordinance of the Minister of Infrastructure on requirements for sulphur content in marine fuel (Dz. U. of 2009, No. 58, item 477).

The Ministry of Infrastructure intension is to implement measures of economic nature encouraging to reduce emissions from ships and to introduce related legal provisions to legislation referring to marine environment protection against ship pollutions (only the emissions from Environment Protection Law)

Anticipated deadline: 2011-2012.

M-39: Joint submissions to IMO in order to tighten regulations concerning NOx emissions from ships within the revision of Annex VI to MARPOL 73/78
Deadline: 31.12.2007

Previous measures:

Measure in progress. Poland takes part in correspondence group aiming at development of common opinion on NECA to IMO.

Planned measures:

Poland supports initiative of recognizing Baltic Sea as the NECA. The dates for possible covering the Baltic Sea with NECA are being discussed. During HELCOM MARITIME 8/2009 meeting (24-26.11.2009 r.) it was settled that it is necessary to check social and economic effects and determine economic effectiveness of NECA on the Baltic Sea.

Competent authorities: Ministry of Infrastructure and Marine Offices.

M-34: Improvements in the availability of port reception facilities for sewage
Deadline: -

Planned measures:

Main Polish passengers ports will be covered with plan for improvement of availability of port reception facilities for sewage. Poland intends to implement EMSA recommendations presented after audit.

Competent authorities: Ministry of Infrastructure and Marine Offices, port management offices of Szczecin – Świnoujście and Gdańsk and Gdynia.

M-10, 11: Application of the "no-special-fee" system to ship-generated wastes and waste caught in fishing nets – Recommendation 28E/10.
Deadline: -

Previous measures:

"No-special-fee" system is regulated in the Act on port reception facilities for waste and residues from ships.

Data concerning port facilities in Polish ports were updated in GISIS base. Poland participates in working group for amendments to Annex IV to MARPOL Convention. Gdynia and Świnoujście ports are placed on priority list in the project of improvement of availability of reception facilities in main passengers ports of the Baltic Sea. In 2009 plans for reception facilities in ports were updated in: Kołobrzeg, Darłowo, Ustka, Łeba and 6 fishing ports.

Planned measures:

Regulation activities and amendment of the above mentioned act/ordinance.

M-9, P-5: Promotion of projects to remove litter from the coastal and marine environment.
Deadline: -

Previous measures:

Marine Office in Słupsk – handing out litter bags for fishermen to bring litter to ports. Annual actions "Baltic Cleaning" on Polish coast. Waste caught in fishing nets are not covered in the system of "no-special-fee".

M-37: Ratification of Convention for the Control and Management of Ships' Ballast Water
Deadline: 2013

Planned measures:

Poland plans to start ratification measures in 2011. The competent authority is the Ministry of Infrastructure in cooperation with the following offices: Ministry of Agriculture and Rural Development, Ministry of Environment, Ministry of Science and Higher Education, Ministry of Economy (Coastal Towns and Gminas), Ministry of Regional Development, Ministry of Health (Sanitary and Epidemiological Inspection) and NGOs.

At the current stage the costs are difficult to be settled.

M-37: Implementation of the road map towards ratification of the Ballast Water Management Convention – compilation of a list of non-indigenous, cryptogenic and harmful native species and list of HELCOM Target Species which can hinder or harm environment, human health, properties and Baltic Sea fisheries.

Deadline: 2008

Previous measures:

Protection of the Baltic Sea against alien species. Since 199, the Nature Conservation Institute of PAN in Krakow has kept the base of "Species introduced in Poland". Works are still continued, currently the basis contains data referring to 800 species. The base has been part of Nordic – Baltic Network on Invasive Species NOBANIS system since 2005 – a system used for information exchange on alien species in the Central and Northern Europe. It is also part of global database on alien species GISIN.

Convention on Biological Diversity and the European Strategy on Invasive Alien Species accepted on Bern Convention in 2003.

Among other organizations IMO is operating under this issue.

Planned measures:

Undertaking activities by Ministries of Environment and of Agriculture.

M-37: Implementation of the road map towards ratification of the Ballast Water Management Convention – conduction of baseline surveys of prevailing environmental conditions in major ports.

Deadline: 2008

Previous measures:

Poland participates in corresponding group on ballast water.

In 2007. the Centrum Techniki Okrętowej S.A. implemented survey which included biological, microbiological analysis and analysis of physical and chemical marking of ballastwater samples parameters collected from ships entering to Gulf of Gdańsk, risk assessment of transferring alien species to Gulf of Gdańsk (port in Gdańsk) and assessment of ballast water cleanness.

Similar surveys were carried out for Szczecin port by Marine Academy in Szczecin in 2008.

Planned measures:

Continuation of previous surveys in this respect.

M-37: Implementation of the road map towards ratification of the Ballast Water Management Convention – with OSPAR with guidelines for sea vessels on the basis of voluntariness.

Deadline: -

Previous measures:

Guidelines: "General Guidance on the Voluntary Interim Application of the D1 Ballast Water Exchange Standard by vessels leaving the Baltic Sea and transiting through the North-East Atlantic to other destinations" and *„General Guidance on the Voluntary Interim application of the D1 Ballast Water Exchange Standard In the North-East Atlantic"* were translated into Polish and submitted to amateurs, marine administration and PSC inspectors for application.

M-21, M-22: HELCOM Recommendation 28E/12 Strengthening of sub-regional co-operation in response field.

Deadline: 2013/2016

Previous measures:

BRISK project. Implemented in cooperation with the Marine Office in Gdynia and Marine Institute

in Gdańsk. BRISK meeting which took place in January 2010 in Sopot focused on financial issues and regional agreements. In May, it is planned to sign agreement between Poland and Russia on cooperation with combating sea pollutions.

M-32: Inclusion of oiled wildlife response and integration into contingency planning

Deadline: -

Planned measures:

Rescuing animals is an element of the National Plan for Fighting Marine Environment Threats and Pollution, but there are no procedures. The task requires settlements and assigning competences in the scope of oiled wildlife response .

M-31, M-22: Development of best practices for shoreline response and integration into national contingency plans

Deadline: -

Previous measures:

Measure in progress. Poland appointed a correspondence group which aims at development of proposals for changes in the HELCOM Guide on fighting pollutions.

During the HELCOM RESPONNSE 12/2010 meeting, the group presented proposed amendments to Annex VII of the Helsinki Convention, proposals of recommendations for increase of national capacities in the field of response to oil spills and other hazardous substances in the shoreline, proposal of changes in HELCOM Guide on fighting pollutions to ensure operational procedures for common shoreline response and trainings as well as requests and provision of help in respect of Baltic Sea shoreline response.

Competent authorities: Marine Search and Rescue Services, Ministry of Infrastructure (running correspondence group); Ministry of Interior and Administration (gmina waste management plans).

Planned measures:

It is necessary to establish responsibilities for fighting shoreline pollutions and to develop procedures of cooperation with services.

M-25 and M-26: Development and implementation of a mutual plan for places of refuge and further investigation issues of liability and compensation related to a mutual plan on places of refuge.

Deadline: 2009/2010

Previous measures:

During the HELCOM RESPONSE 12/2010 meeting it was settled that it is necessary to introduce changes in HELCOM Guide on fighting pollutions in the scope of exchange of information related to places of refuge. Moreover, it was stated that the present manner of pollution reporting (POLREP) should be used in case of request for help. HELCOM Recommendation text on mutual plan on places of refuge in case of threat was settled and will be presented during the Ministerial Meeting.

Authorities involved in works: Marine Offices and Ministry of Infrastructure.

Planned measures:

Trainings for sea vessels pursuant to best standards to prevent accidents.

Development of the European marine supervision and monitoring network on the basis of national and international marine traffic and navigation control systems including satellite monitoring and long range identification and tracking systems (LRIT).

Development of mutual and integrated procedures for monitoring and traffic management for ships in the Baltic Sea, especially for quick reporting and response in case of accidents and pollutions emission.

− SOLAS Convention (*International Convention for the Safety of Life at Sea*)
− ISPS Code (*The International Ship and Port Facility Security*)
− "Marine Code" Act of 18 September 2001 (Dz.U. of 2001, No. 138, item 1545).

M-15, M-16: HELCOM Recommendation 28E/11 Further measures to improve the safety of navigation in ice conditions in the Baltic Sea trainings; voluntary pilotage.
Deadline: -

Previous/planned measures:

Recommendation is supported by BRISK programme implementation.

M-20: Support in IMO speeding up introduction of a general requirement for carriage by ships of an Electronic Chart Display and Electronic Chart Display and Information System (ECDIS)
Deadline: -

Previous measures:

Measure in progress. Competent authorities: Ministry of Infrastructure and Marine Offices.

M-8: Harmonization of aerial and satellite surveillance in the whole Baltic Sea

Deadline: -

Previous measures:

Continuous measure. Poland has constant satellite and aerial surveillance of the Polish sea areas. Competent authorities: Marine Office in Gdynia.

M-13: Encouraging development and use of innovative and cost-effective, integrated pollution surveillance systems

Deadline: -

Previous measures:

Continuous measure. Competent authorities: Marine Search and Rescue Service, Marine Offices.

Prevention of incidental fuel spills as a result of sea accidents. In 2000-2001 on the Baltic Sea, there were 119 ship accidents, including 9 oil spills, in total there was 2756,41 m^3 of oil at that time in the sea; the largest spill was caused by accident of the „Baltic Carrier" ship on 29.03.2001.

Sea Fisheries Institute in Gdynia implemented project financed by EU. European Lifestyles and Marine Ecosystems (ELME) (EU-17). Implementation period: 01.01.2004 until 31.12.2006.

ELME Project aimed at provision of best scientific knowledge to forecast possible effects of major economic, social and institutional changes in Europe to marine environment.

Mutual relations between these factors were analysed and summarized using Drivers-Pressure-State-Impact-Response (DPSIR) model. Surveys concerned changes in four European sea basins: the Baltic Sea, North-East Atlantic, the Mediterranean Sea and the Black Sea. Surveys results with be used at the EU level to improve marine environment policy and social policy.

M-41: Implementation of the Offshore Action Plan. Development of the list on "red" and "black" chemicals

Deadline: 2010/2018

Previous/planned measures:

Poland presented lists of "red" and "black" chemicals used at the offshore platforms during HELCOM 30/2009, HELCOM LAND 14 /2009 and HELCOM HOD 28/2009 meetings. The project was settled during HELCOM MARITIME 8/2009, and then approved during HELCOM 31. The list will be used with OSPAR system, suggested by

Denmark during HELCOM MARITIME 8/2009. Implementation of the list will refer to Polish and Russian platforms.

4.5. DEVELOPMENT OF ASSESSMENT TOOLS AND METHODOLOGY

D-1: HELCOM Recommendation 28E/14 – authentication of quantification and assessment of diffuse losses.
Deadline: -

Previous measures:

HELCOM DIFFUSE Project was established.

Planned measures:

Application for project directed to quantification and assessment of nutrients inflows from diffused sources is being prepared in cooperation of ministries, especially MRiRW and MŚ, including KZGW.

Use of Baltic Nest Institute models.

D-2: Development of mutual tool for HELCOM eutrophication assessment i.a. through promotion of project for development of topic assessments for eutrophication (EUTRO-PRO)".
Deadline: 2008

Previous measures:

EUTRO-PRO Project developed integrated topic assessment of eutrophication.

Planned measures:

Trainings and education on sustainable agri-environmental practices at the local government levels in cooperation with MRiRW.

D-3, D-4: Effective use of analytical tools i.e. models for support of decisions for management, cooperation and optimizing in development and use of ecosystems models to optimize limited resources for scientific communities/conglomerations.
Deadline: -

Previous measures:

„HELCOM MODEL" Project.

Development and editing of "Homogeneous and merged waters catalogue" by adequate services related to monitoring and water protection (IMGW) in 2009, which contained results of the stress analysis and impact analysis of identified endangered water and potentially endangered, data concerning water quality monitoring in 5 water categories, location of protected areas and habitat areas with regard to homogeneous parts of river water, spatial identification of measurements and control point s of the National Environment Monitoring in the scope of water quality and water gauge stations.

Marine Fisheries Institute in Gdynia implements research programme financed by the Ministry of Science and Higher Education. "Biodiversity and ecosystem functions on the basis of Baltic coastal area – experimental study". The project objective is studying role of key representatives of macrobenthos in functioning of sand sediments of the Gulf of Gdańsk shoreline and assessment whether species and functional diversity influence on speed of processes carried out in the sediments.

From D-5 to D-10: Development of models for the Baltic Sea marine ecosystem.

Previous measures:

Cooperation with the Baltic Nest Institute for updating of reduction requirements for nutrients loads under BSAP but the suggested „HELCOM MODEL" project idea was introduced during HELCOM MONAS 11/2008 group meeting.

Sea Fisheries Institute in Gdynia implements the project financed by EU. Synergy between science and society - common approach to European seas (EU-35 4Seas). Implementation period: 01.03.2008 until 28.02.2010.

Project is focused on local environments and topics related to the sea. The project objective is popularization of knowledge on sea and integration of scientific environments with society through numerous actions, events and workshops.

Integrated topic assessments of biodiversity and nature conservation were approved for printing by HELCOM 30/2009 and were published by HOD 28/2009.

Sea Fisheries Institute in Gdynia implemented research project financed by EU. Development of Indicators of Environmental Performance of the Common Fisheries Policy (INDECO) (EU-21). Implementation period: 01.12.2004 until 30.11.2006.

Planned measures:

Development of list of measures and best practices in the field of research and development cooperation and commercialization of research works results in the region countries.

Topic assessments of hazardous substances developed in the field of HELCOM HOLAS group, implementation of the Project by February 2010.

Measures aiming at indication of common coordinator for monitoring in the Baltic Sea region countries. Development of equipment and material base for systematic surveys of sea water, which would include regional laboratory, sea vessel and competent research staff.

Support of works for development of Science and Innovation Community in RMB.

Under the INDECO project, the experts from various countries develop indicators for sustainable fisheries policy for implementation of the European Union Common Fisheries Policy. There will be identification of gaps in previous studies, in collecting of data and fisheries statistics and analysis of fisheries policy and the institutional changes needs.
The following issues will be developed under INDECO:

- Indicator of fisheries impact on marine ecosystems (their function and dynamics). Social and economic indicators of sustainable fisheries.
- Operational models describing fisheries pressure on the environment.

Development of holistic HELCOM assessment of the Baltic Sea condition, development of HELCOM CORE SET of INDICATORS and topic assessment for each latitude of the Baltic Sea on ships/sea navigation ready by 2010.

4.6. AWARENESS RAISING AND CAPACITY BUILDING

P-2 to P-7: Awareness raising, capacity building and public engagement in activities related to the Baltic Sea environment protection.

Planned measures:

To strengthen implementation of the Baltic Sea Action Plan objectives it is necessary that ministries and local government intensified actions for public engagement in environment protection and raising awareness of the adverse environmental effects through i.a. education, advertising campaign, access to information and promotion of environmental friendly approaches and measures.

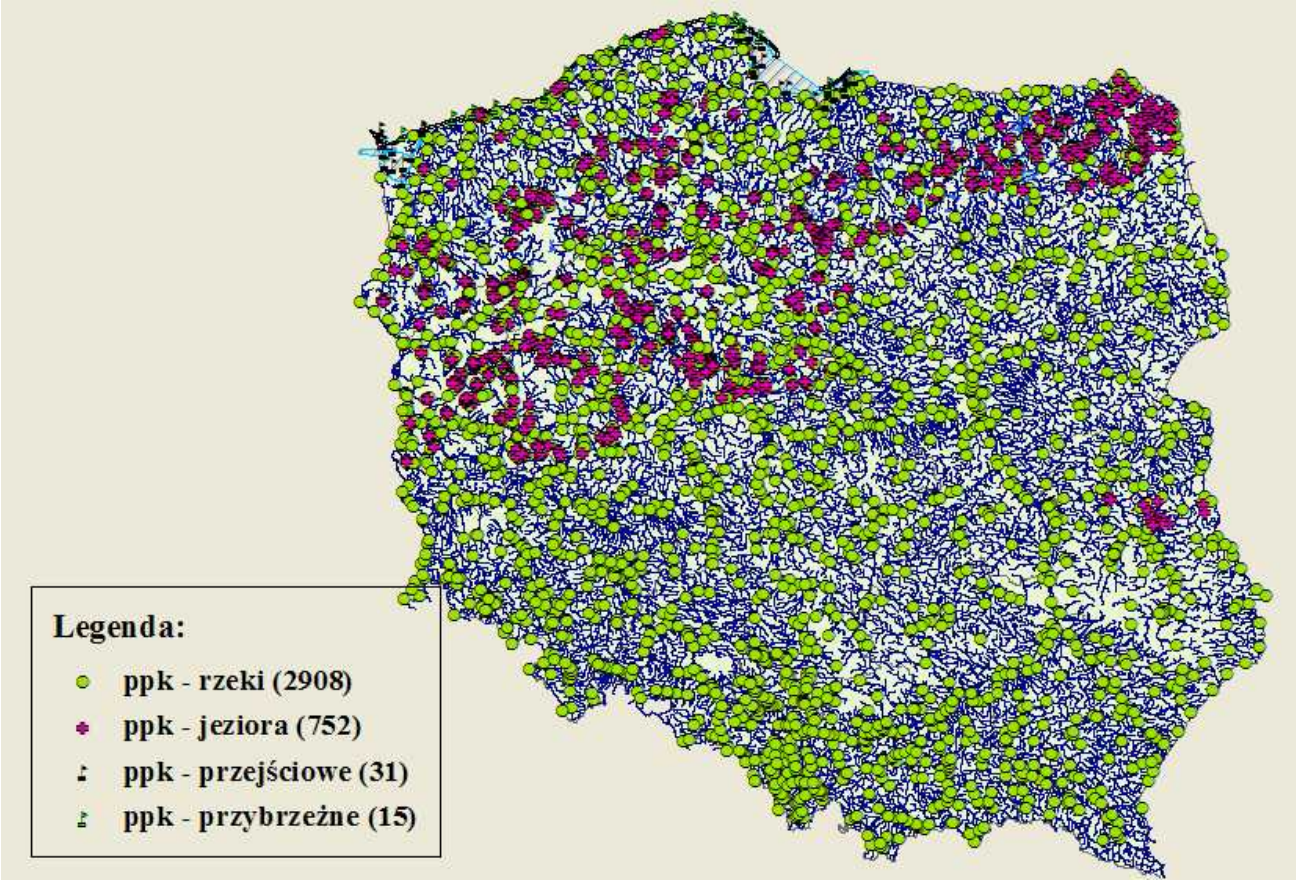
5. MONITORING AND EFFECTS ASSESSMENT MEASURES

An important instrument in monitoring measure effects is the national environment monitoring (NEM) Moreover, the source of information is the public statistics system and ministerial and local government information systems as well as research and development projects.

5.1. MEASURES UNDER NATIONAL ENVIRONMENT MONITORING

5.1.1 Rivers monitoring

Rivers monitoring is implemented in Poland under NEM by voivodship environment protection inspectorates. On the basis of the *Programme of National Environment Monitoring* under network of measurement and control point s settled for 2007-2009 there were carried out checks for 2908 points located on rivers, 752 points located on lakes, 31 points in transitional waters and 15 points located on coastal waters.



Legend:

ppk	Measurement and control point
rzeki	Rivers
jeziora	Lakes

przejściowe	Transitional
przybrzeżne	Coastal

Fig. 5.1. Surface water monitoring network – water categories

Water monitoring programmes were settled before 22 December 2006; they aim at establishing cohesive and comparable review of water condition in respect on river basis area, allowing for assigning all parts of surface water to one of five classes of quality. According to assumptions of the Water Framework Directive, the monitoring was divided into diagnostic, operational and research monitoring.

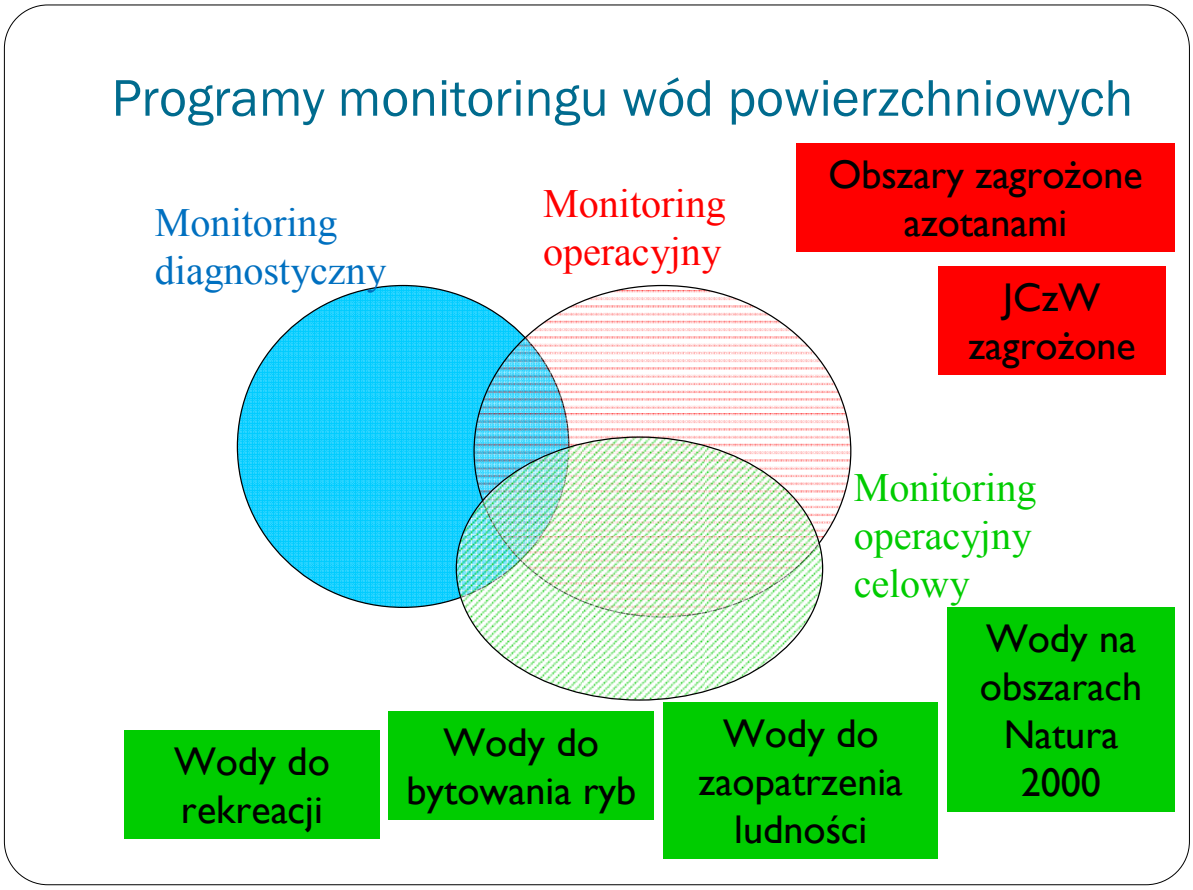


Figure translation:

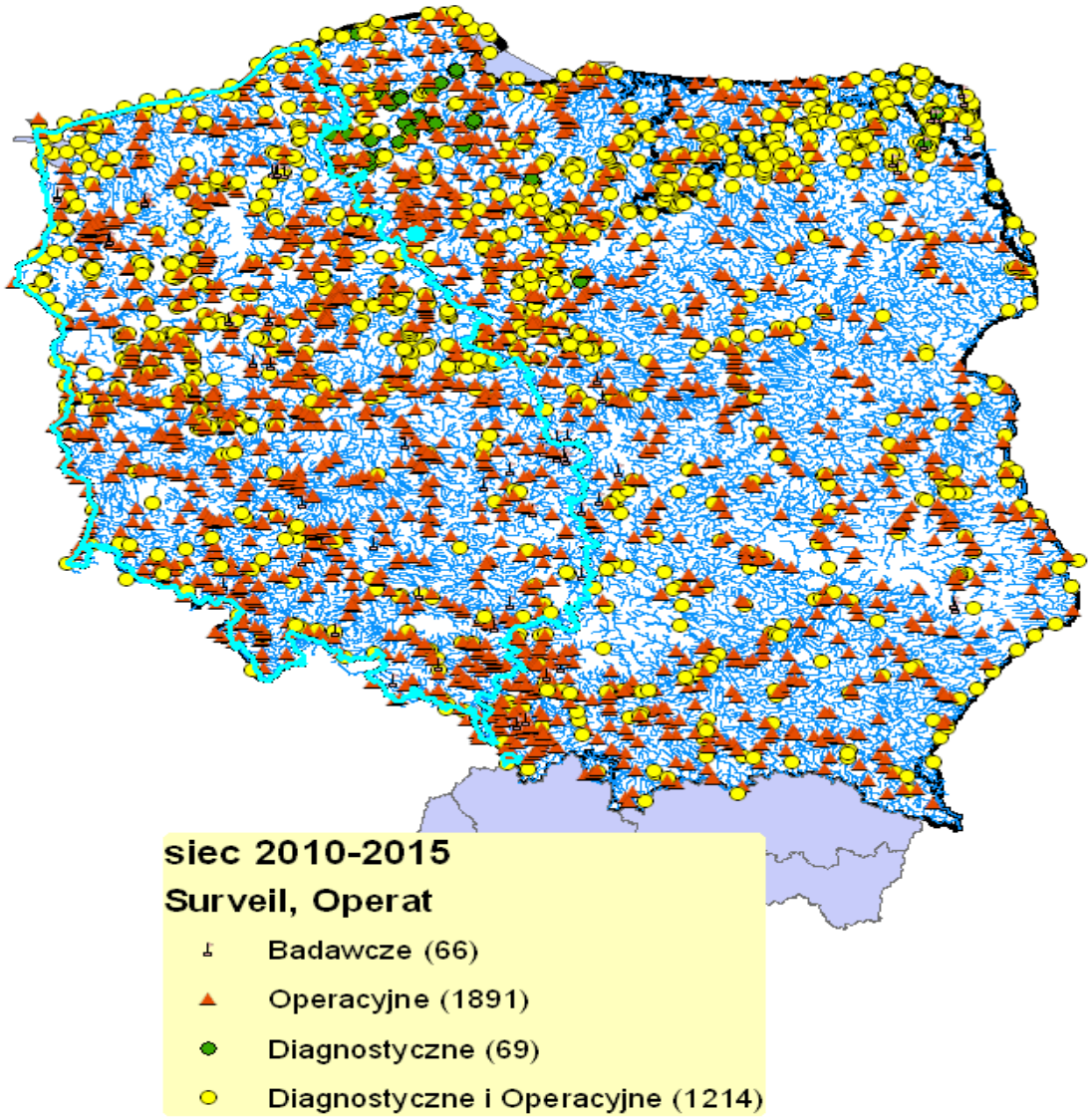
Programy monitoringu wód powierzchniowych	Surface water monitoring programmes
Monitoring diagnostyczny	Diagnostic monitoring
Monitoring operacyjny	Operational monitoring
Obszary zagrożone	Areas vulnerable to nitrogen
Monitoring operacyjny celowy	Target operational monitoring
Wody do rekreacji	Recreational water bodies
Wody do bytowania ryb	Fish water bodies
Wody do zaopatrzenia ludności	Water supply for people
Wody na obszarach Natura 2000	Water in the Natura 2000 areas

Fig. 5.2. Types of surface water monitoring programmes.

Monitoring covers all the categories of water bodies: spouts, streams, creeks and channels, lakes and water reservoirs (with inlets), marine internal water, transitional and coastal water, with consideration of specificity of artificial and strong changed homogeneous parts of water. Forms and manner of monitoring is determined by the Ordinance of the Minister of Environment *on forms and manner of running monitoring of water bodies* (Article 155b(1) of Water Law Act).

Ordinance of the Minister of Environment of 20 August 2008 transfers to national law new more complicated assessment system for condition of water bodies compliant with the requirements of the Water Framework Directive. It results from the scope and quantity of currently performed measures and in particular studies of biological elements (phytoplankton, phytobenthos, macrophytes, benthos macroinvertebrates and ichthyfauna) and indicators from the group of chemical indicators characterized by occurrence of substances particularly hazardous for water environment including specific synthetic and non-synthetic pollutions and so called priority substances.

On the basis of provisions of the *National Environment Monitoring Programme for 2010-2012,* a network of measurement and control point was developed with perspective for 2015 to adapt it to the first cycle of water management plans (Fig. 5.4.).



Legend:

Badawcze	Research
Operacyjne	Operational
Diagnostyczne	Diagnostic
Diagnostyczne i Operacyjne	Diagnostic and Operational

Fig. 5.3. Planned monitoring network for 2010-2015.

Monitoring of surface water in Poland is based on the principle that one measurement and control point may be part of one or more types of monitoring. In the diagnostic monitoring programme, all biological elements are checked in contrast to operational monitoring where only one is checked, which provides the best response for the given type of environmental pressure.

The operational programme also distinguishes target monitoring programme under which measurements and assessments of water quality condition are carried out with consideration of their intention and use. Monitoring of the above mentioned waters is carried out by voivodship environment protection inspectorates on the basis of water indexes developed by directors of regional water management. The basis for assessment of the above mentioned water is adequate Ordinance of the Minister of Environment.

5.1.2. Transitional water monitoring.

Under monitoring of marine water, studies area carried out on 9 identified homogeneous parts of transitional water in 31 measurement and control point s (as of 2009). The following map presents spatial location of transitional water with their measurement and control point s and monitoring programmes implemented in 2007-2009. On the basis of the National Environment Monitoring Programme for 2010-2012, in 2011-2012 a full diagnostic monitoring programme will be implemented in all measurement and control point s of transitional waters.

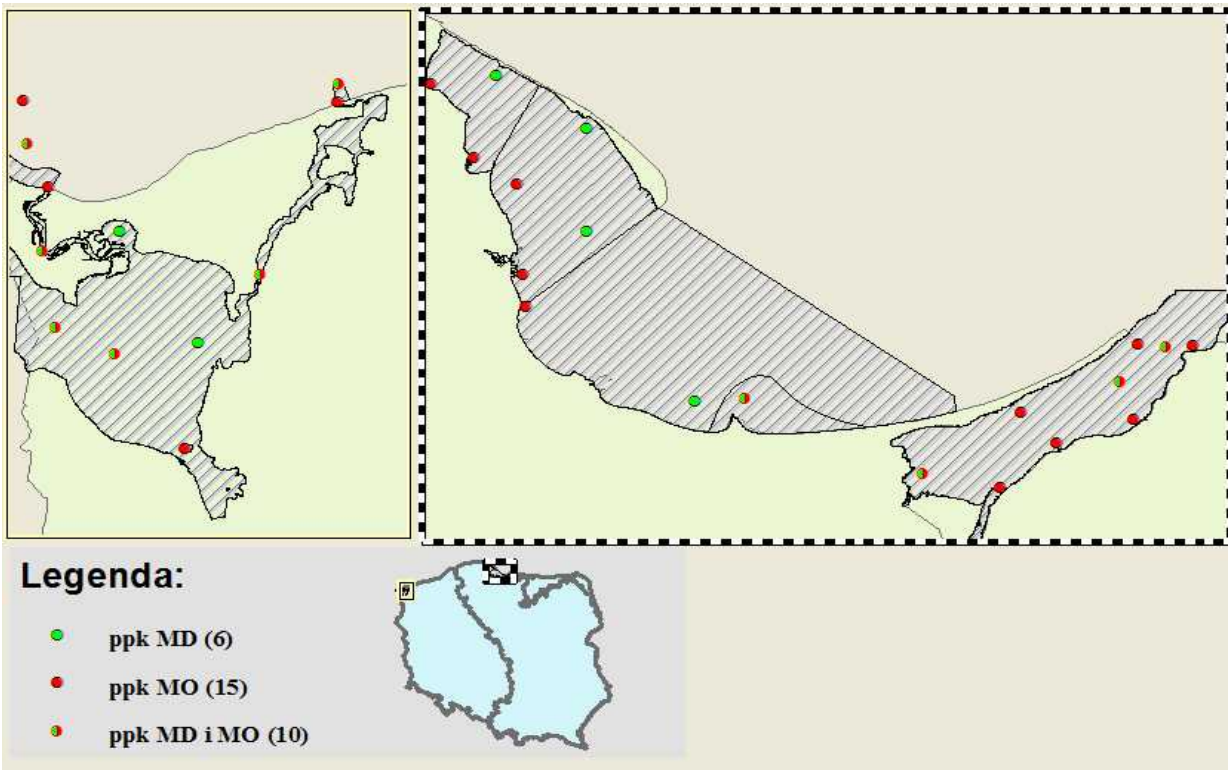


Fig. 5.4. Location of measurement and control point s on transitional water.

5.1.3. Coastal water monitoring.

Under monitoring of marine water, studies area carried out on 11 identified homogeneous parts of coastal water in 15 measurement and control point s. The following map presents spatial location of coastal water with their measurement and control point s and monitoring programmes implemented in 2007-2009. On the basis of the National Environment Monitoring Programme for

2010-2012, in 2011-2012 a full diagnostic monitoring programme will be implemented in all measurement and control point s of coastal waters.

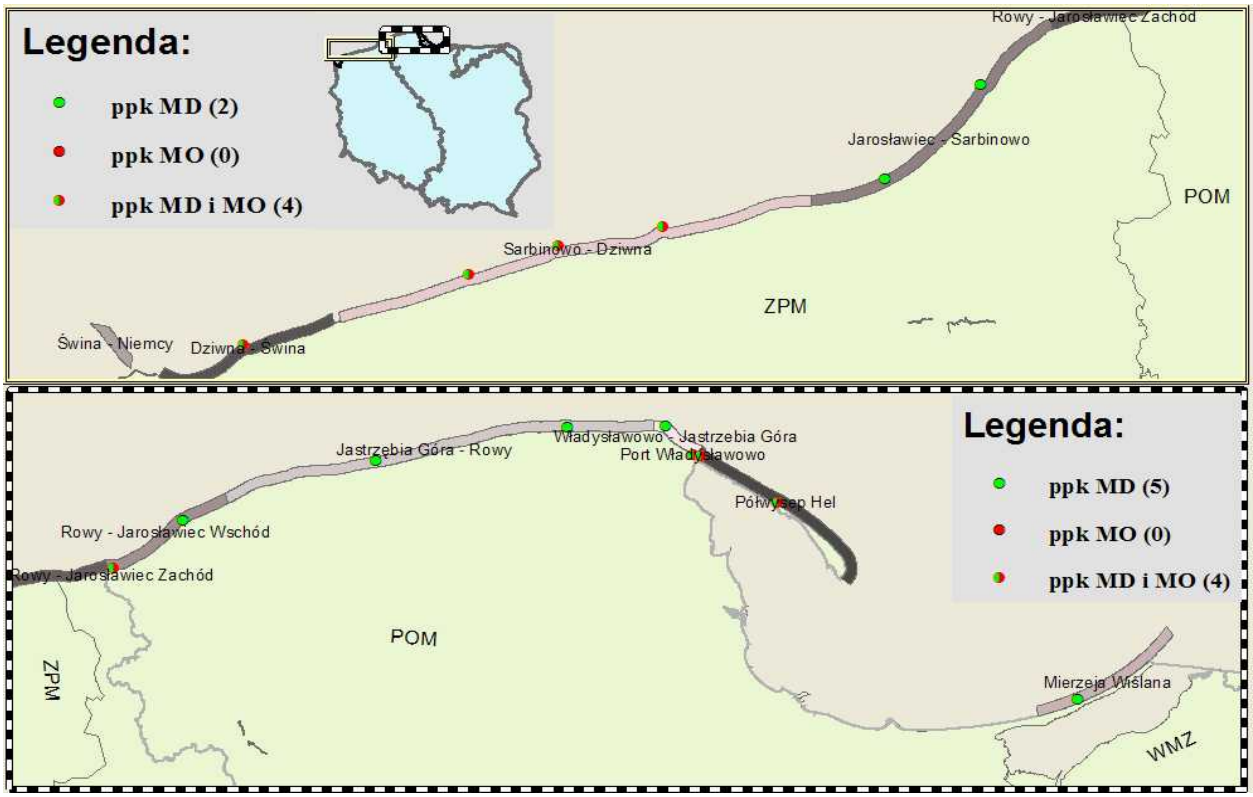
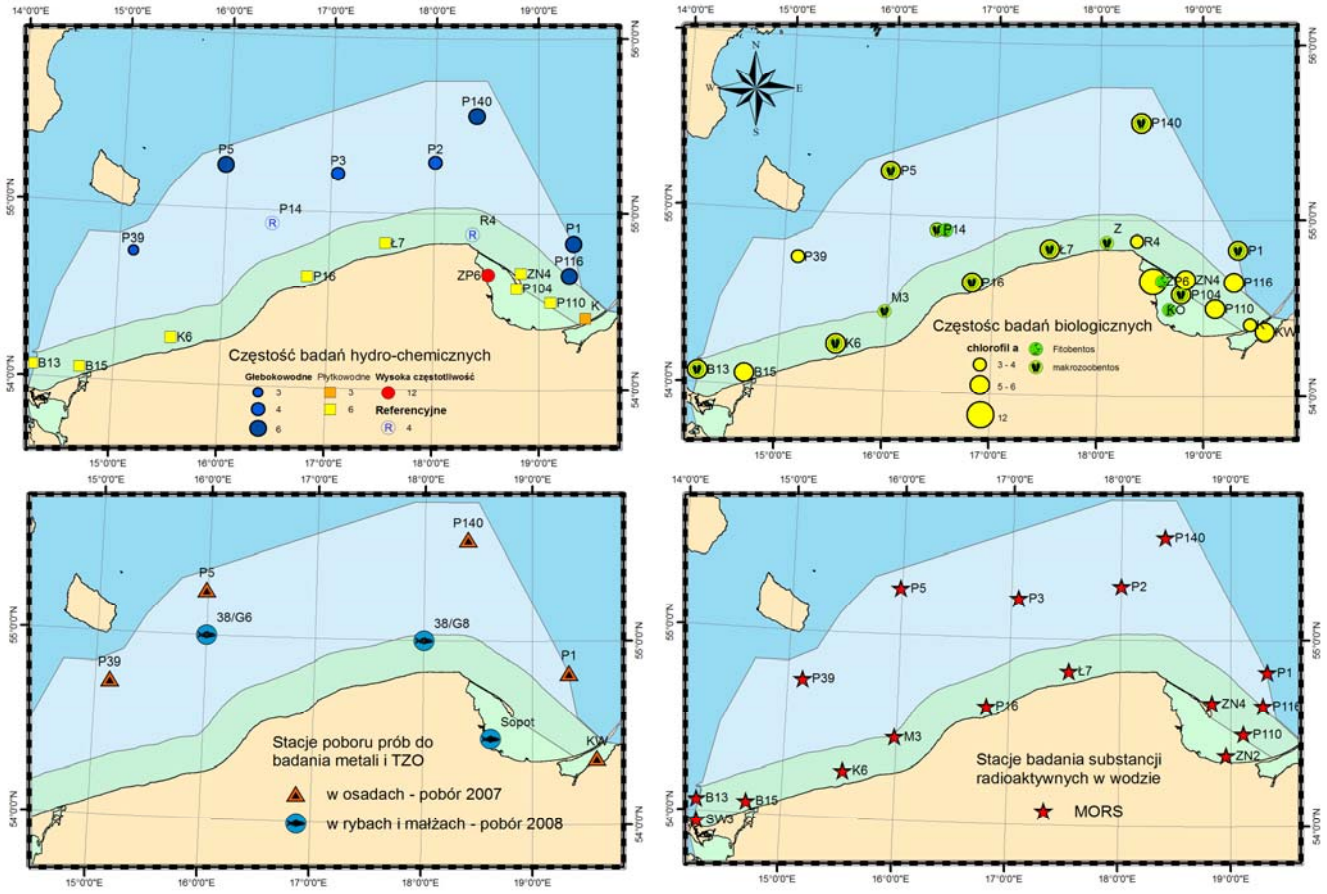


Fig. 5.5. Location of measurement and control point s on coastal water.

5.2. HELCOM COMBINE MONITORING

Poland as the contracting party to Helsinki Convention is obliged to provide data concerning pollution of the Baltic Sea within waters located in the Polish part of territorial water and in Polish economic zone. Polish programme of the Baltic Sea monitoring covers with a regular control (6 times a year) condition of marine environment of the Polish zone of southern Baltic Sea on stations located in the deep-sea zone – in the area of Gdańska Depth(station P1=BMP L1), Bornholm Depth (station P5=BMPK2), in S-E part of Gotland Depth (station P140=BMP K1) on stations located in the shoreline (Fig. 5.6.). Surveys of marine environment cover the quantitative study of biological elements and the hydrological, chemical indicators, long-life radio-nuclides and analysis of toxic content in commercially exploited fish and bottom species.



Legend:

Częstość badań hydro-chemicznych	Frequency of hydro-chemical tests
Głębokowodne	Deep-water
Płytkowodne	Shallow-water
Wysoka częstotliwość	High frequency
Referencyjne	Referential
Cząestość badań biologicznych	Frequency of biological tests
Stacje poboru prób fo badań metali i TZO	Sampling stations for metals and POPs tests
W osadach – pobór 2007	In sediments – sampling 2007
W rybach i małżach – pobór 2008	In fish and mussels – sampling 2008
Stacje badania substancji radioaktywnych w wodzie	Stations for testing radioactive substances in water

Fig. 5.6. Location of the HELCOM COMBINE monitoring station on territorial waters and in economic zone.

5.3. POLLUTION LOAD COMPILATION PLC-6

In 2012, the HELCOM PLC-6 project will be launched - Sixth index of quantity of pollution discharges deposited to river basins which will be implemented mostly by the Baltic states pursuant

to HELCOM Recommendation 26/2 accepted by the Helsinki Commission in 2005. The tasks of the above mentioned international project is:

- quantitative determination of pollution loads from point and area sources discharged to surface water in the Baltic Sea catchment area on the basis of monitoring data and modelling of catchment areas not covered with the monitoring,
- quantitative determination of pollution loads discharged directly to the Baltic Sea (from rivers, from coastal areas and from point sources);
- estimation of load changes since 1994,
- referring the obtained results to area of measures undertaken to reduce landborne pollutions.

6. FINANCING

Due to convergence of measures contained in the BSAP with implementation of Community obligations it must be emphasised that Poland, while making up for economic delays from the period before transformation, currently invests funds in subordination of water-sewage management in estuaries, transformations, rationalization and modernization of agriculture and in reduction of pollutions emission to air and in other protective measures and R&D and monitoring works. The main financing source in the administrative, control and educational measures are the State budget, in case of investment measures these are mostly EU funds and funds from National and Voivodship Environmental Protection and Water Management Funds and the local governments budgets. These funds are used to improve condition of inland water and were assigned to measures aiming at implementation of the Community obligations, therefore, according to rule to avoid double calculation of costs, they cannot constitute the total costs of BSAP implementation.

However, it is necessary to intensify measures, especially in the scope of reduction of phosphorus and nitrogen loads of agricultural origin, elimination/limitation of hazardous substances and the need to strengthen educational and control activities which will require additional funds, however, a significantly smaller cost of investment activities in municipal, industrial and agricultural sectors.

7. SETTLEMENTS AND CONCLUSIONS AND DIRECTIONS OF SUBSEQUENT WORKS

The major ecological and social and economic objective of the Baltic Sea Action Plan is ensuring good condition of the Baltic Sea waters. Meeting this superior and priority objective is carried out in particular by implementation, performance and planning measures related to reduction of eutrophication and reduction of pollutions of water with other substances, including those recognized as hazardous substances. Implementation of tasks specified in the BSAP should ensure general protection, conservation and renewal of the Baltic Sea biodiversity, especially for endangered and precious species and habitats, carrying out sustainable and environmental friendly marine fisheries. This also refers to adverse effects of human business activities and other forms of activities on sea, contributing to direct devastation of water environment of the Baltic Sea. Also other segments have significant meaning in BSAP, which contain directions of measures and works in so important fields as science and education, mostly the issues related to development of

cohesive and efficient tools and methodology for assessment, raising social awareness and other solutions of organizational and economic nature in this respect.

Eutrophication is currently the biggest problem of the Baltic Sea, which in the 20th century changed from oligotrophic with clear water to very eutrophicated environment. The excessive nitrogen and phosphorus loads from land, located in the catchment area of Helsinki Convention Contracting Parties are the main reason for reservoir eutrophication. Ca. 75% of nitrogen load and at least 95% phosphorus load is discharged to the Baltic Sea through rivers and so called direct discharge with waters. Ca. 25% of the nitrogen load comes from atmospheric deposition.

After verification and determination of acceptable nutrients loads by HELCOM it will be necessary to perform quantitative balance of effects of the previous measures with respect to objectives settled for 2021 and undertaking additional measures. This quantitative values should be specified by each business sector, which directly or indirectly contribute to the Baltic Sea eutrophication. This is an obligatory condition for proper and effective implementation of the BSAP.

Moreover, it will be necessary to estimate costs (per year and/or the cost of total project) both for performed as well as for planned measures. Lack of reliable and unequivocal information on costs and deadlines borne/expected towards measures carried out/planned under the Eutrophication segment makes provision of actual/possible values impossible at the present stage of WKPW BSAP study.

Similar supplementations will be necessary with regard to other segments while creating final version of National Implementation Programme of BSAP. Further works on this document will also be necessary in the view of requirements of the Marine Strategy Framework Directive 2008/56/EC considering pursuit of the Convention Contracting Parties which also are EU Member States to determine the measures under Convention as pilotage within the meaning of the MSFD.

8. INDEX OF SELECTED ABBREVIATION

AFS (Convention on the Control of Harmful Anti-fouling Systems on Chips) Konwencja o kontroli szkodliwych systemów przeciwporostowych na statkach

AKPOŚK aktualizacja Krajowego programu oczyszczania ścieków komunalnych (Update of National Programme for Municipal Waste Water Treatment)

ARiMR Agencja Restrukturyzacji i Modernizacji Rolnictwa (Agency for Restructuring and Modernization of Agriculture)

ASCOBANS (Agreement on the Conservation of Small Cetaceans of the Baltic and North Seas) Porozumienie o ochronie małych waleni Bałtyku I Morza Północnego

BAT (Best Available Technique) najlepsze dostępne techniki

BEAST (BEAST Biological Effects of Anthropogenic Chemical Stress: Tools for the Assessment of Ecosystem Heath) projekt: Biologiczne efekty chemicznej antropopresji

BONUS Baltic Organisations Network for Funding Science

BSAP Bałtycki Plan Działań HELCOM (HELCOM Baltic Sea Action Plan)

B+R badania + rozwój (research and development)

BREF (BAT Reference Documents) Dokumenty Referencyjne dotyczące BAT

B+R+I badania + rozwój + inwestycje (research and development and investments)

BRISK (Sub-regional risk of spill of oil and hazardous substances in the Baltic Sea) program dot. Sub-regionalnego ryzyka wycieku oleju i substancji niebezpiecznych w Morzu Bałtyckim

BSAP (Baltic Sea Action Plan) Bałtycki Plan Działań

BSPA (Baltic Sea Protected Areas) – bałtyckie obszary chronione

BZT biochemiczne zapotrzebowanie na tlen (biochemical oxigen requirements)

BZT_5 biochemiczne zapotrzebowanie na tlen w pięciodniowym okresie analizy (biochemical oxigen requirement in 5-day analysis period)

CBD (The Convention on Biological Diversity) Konwencja o różnorodności biologicznej z 5.06.1992 r.

CFP (Common Fisheries Policy) Wspólna Polityka Rybołówstwa UE

ChZT chemiczne zapotrzebowanie na tlen (chemical oxigen requirements)

ChZTCr chemiczne zapotrzebowanie na tlen oznaczane metodą dwuchromianową analizy (chemical oxigen requirement in 5-day analysis period)

CLP (Classification, Labelling and Packaging) rozporządzenie WE nr 1272/2008 z 16.12.2008 r. w sprawie klasyfikacji, oznakowania i pakowania substancji i mieszanin chemicznych

CLRTAP (Convention on Long-range Transboundary Air Pollution) Konwencja w sprawie transgranicznego zanieczyszczenia powietrza na dalekie odległości z 13.11.1979 r.

COHIBA (Control of Hazardous Substances in the Baltic Sea Region) projekt: Kontrola substancji niebezpiecznych w regionie Morza Bałtyckiego

DPJ duża jednostka przeliczeniowa

ECDIS (Electronic Chart Display and Information System) System obrazowania elektronicznych map i informacji nawigacyjnych

EFF (European Fisheries Fund) Europejski Fundusz Rybacki

EFRROW (uropean Agricultural Fund for Rural Development) Europejski Fundusz Rolny na Rzecz Rozwoju Obszarów Wiejskich

EMEP (European Monitoring Environmental Program) Europejski Program Monitoringu Środowiska

ESPON (European Spatial Planning Observation Network) program: Europejska Sieć Rozwoju Terytorialnego i Spójności Terytorialnej

EUR euro

EUROSTAT (the Statistical Office of the European Communities) Urząd Statystyczny Wspólnoty Europejskiej

EWG Europejska Wspólnota Gospodarcza (European Economic Community)

EQS (Environmental Quality Standards) środowiskowe normy jakości

GEF (Global Environment Facility) Fundusz na rzecz Globalnego Środowiska

GDOŚ Generalna Dyrekcja Ochrony Środowiska (General Directorate for Environmental Protection

GIOŚ Główny Inspektorat Ochrony Środowiska (Chief Inspectorate for Environmental Protection)

GIS (Geographic Information System) System Informacji Geograficznej

GHS (Globally Harmonised System) Globalnie Zharmonizowany System

GUS Główny Urząd Statystyczny (Central Statistical Office)

HAIR (Harmonised Environmental Indicators for Pesticide Risk) zharmonizowane wskaźniki ryzyka związanego z pestycydami

HCB - heksachlorobenzen (Hexachlorobenzene)
HELCOM (HELSINKI COMMISSION - Baltic Marine Environment Protection Commission) Komisja Helsińska
HELCOM COMBINE (Co-operative Monitoring in the Baltic Marine Environment) Międzynarodowy Zintegrowany Program Monitoringu Morza Bałtyckiego
HELCOM HABITAT (Nature Conservation and Biodiversity Group) Grupa ds. Ochrony Przyrody i Różnorodności Biologicznej
HELCOM HOD (HELCOM Heads of Delegations) Narada Przewodniczących Delegacji stron Konwencji Helsińskiej
HELCOM LAND (Land-Based Pollution Group) Grupa HELCOM ds. Zanieczyszczeń Pochodzenia Lądowego
HELCOM MARITIME (Maritime Group) Grupa HELCOM ds. Zanieczyszczeń na Morzu
HELCOM MONAS (The Monitoring and Assessment Group) Grupa HELCOM ds. monitoringu i ocen HELCOM
IBL Instytut Badawczy Leśnictwa (Forestry Research Institute)
ICES (International Council for the Exploration of the Sea**)** Międzynarodowa Rada Badań Morza
ICM (Integrated Crop Management) zintegrowanego zarządzania uprawami
ICT (Information and Communication Technologies) technologie informacyjne i komunikacyjne
IETU Instytut Ekologii Terenów Uprzemysłowionych (Institute for Ecology of Industrial Areas)
IMGW Instytut Meteorologii i Gospodarki Wodnej (Institute of Meteorology and Water Management)
IMO – (International Maritime Organization) Międzynarodowa Organizacja Morska
IOŚ Instytut Ochrony Środowiska (Institute of Environmental Protection)
IOŚ Inspekcja Ochrony Środowiska (Environmental Protection Inspection)
IPM (Integrated Pest Management) zintegrowanego zarządzania szkodnikami
IPPC (Integrated Pollution Prevention and Control) Dyrektywa 2008/1/WE Parlamentu Europejskiego i Rady z 15.01.2008 r. dotycząca zintegrowanego zapobiegania zanieczyszczeniom i ich kontroli.
ISO (International Organization for Standardization) Międzynarodowa Organizacja Normalizacyjna
ISPS (The International Ship and Port Facility Security) Międzynarodowy Kodeks Ochrony Statku i Obiektu Portowego
IUCN (International Union of Conservation of Nature and Natural Resources) Międzynarodowa unia Ochrony Przyrody
KPGO Krajowy program gospodarki odpadami (National Waste Management Programme)
KPOŚK Krajowy program pczyszczania ścieków komunalnych (Urban Waste Water Treatment Programme)
KPW krajowe programy wdrażania (national implementation programmes)
KPWKS Krajowy Program Wdrażania Konwencji Sztokholmskiej (National Implementation Programme for the Stockholm Convention)
KPZL Krajowy Program Zwiększenia Lesistości (National Programme for the. Augmentation of Forest Cover)
KZGW Krajowy Zarząd Gospodarki Wodnej (National Water Management Authority)
LCP Dyrektywa nr 2001/80/WE w sprawie ograniczenia emisji niektórych zanieczyszczeń do powietrza z dużych źródeł spalania paliw z 23.10.2001 r. (Directive 2001/80/EC of the European Parliament and of the Council on the limitation of emissions of certain pollutants into the air from large combustion plants of 23 October 2001)
LRTAP Konwencja LRTAP, patrz CLRTAP (LRTAP Convention, see CLRTAP)
LZO lotne związki organiczne (Volatile Organic Compounds)
MARPOL (International Convention for the Prevention of Pollution From Ships) Konwencja o zapobieganiu zanieczyszczenia morza przez statki z 2.11.1973 r.
MERCW (Modelling of Ecological Risks Related to Sea-Dumped Chemical Weapons) projekt ws. modelowania ryzyka ekologicznego związanego z depozycją broni chemicznej na dnie Bałtyku.
MG Ministerstwo Gospodarki (Ministry of Economy)
MI Ministerstwo Infrastruktury (Ministry of Infrastructure)
MIR Morski Instytut Rybacki (The Sea Fisheries Institute)
MORS (Monitoring of Radioactive Substances in the Baltic Sea) Monitoring Substancji Radioaktywnych w Bałtyku
MPA (marine protected areas) morskie obszary chronione
MRiRW Ministerstwo Rolnictwa i Rozwoju Wsi
MSP – (Marine Spatial Planning) morskie planowanie przestrzenne
MW – megawat (megawatt)
MWWTP (municipal wastewater treatment plant) miejska oczyszczalnia ścieków komunalnych

N_{tot}	azot ogólny (total nitrogen)
NCM	(Nornic Council of Minister) Nordycka Rada Ministrów
NEC	(National Emission Ceilings Directive) Dyrektywa 2001/81/WE Parlamentu Europejskiego i Rady w sprawie krajowych poziomów emisji dla niektórych zanieczyszczeń - Dyrektywa Pułapowa z 23.10.2001 r.
NECA	(nitrogen oxide emission control area) obszar kontroli emisji tlenków azotu
NEFCO	(Nordic Environment Finance Corporation) Nordycka Korporacja Finansowa na Rzecz Środowiska
NFOŚiGW	Narodowy Fundusz Ochrony Środowiska i Gospodarki Wodnej (National Fund for Environmental Protection and Water Management)
NIVA	Norweski Instytut Badań Wody (Norwegian Institute for Water Research)
NNN (IUU)	(Illegal, Unregulated and Unreported Fishing) nielegalne, nieudokumentowane i nieuregulowane połowy
NPK	nawozy mineralne: azot, fosfor, potas (mineral fertilizers: nitrogen, phosphorus, potasium)
ONZ	Organizacja Narodów Zjednoczonych (United Nations)
OSN	obszary szczególnie narażone (particularly sensitive areas)
OSPAR	(The Convention for the Protection of the Marine Environment of the North-East Atlantic) Konwencja o ochronie środowiska morskiego północno-wschodniego Atlantyku z 22.09.1992 r.
P_{tot}	fosfor ogólny (total phosphorus)
PCB	polichlorowane bifenyle (Polychlorinated biphenyl)
PCBC	Polskie Centrum Badań i Certyfikacji (Polish Centre for Testing and Certification)
PC UE	państwa członkowskie Unii Europejskiej (European Union Member States)
PDDO	Punkt Dobrowolnego Dostarczania Odpadów (Voluntary Waste Disposal Point)
PK	Park Krajobrazowy (Landscape Park)
PKB	produkt krajowy brutto (Gross Domestic Product)
PLC	(Pollution Load Compilation) Grupa Projektowa ds. oceny zrzutów zanieczyszczeń do Morza Bałtyckiego
PLC-3	(The Third Baltic Sea Pollution Load Compilation) Grupa Projektowa ds. trzeciej oceny zrzutów zanieczyszczeń do Morza Bałtyckiego
PLC-4	(The Fourth Baltic Sea Pollution Load Compilation) Grupa Projektowa ds. czwartej oceny zrzutów zanieczyszczeń do Morza Bałtyckiego
PMŚ	Państwowy Monitoring Środowiska (National Environmental Monitoring)
POM	polski obszar morski (Polish sea territory)
POP	(president organic pollutant) trwałe zanieczyszczenia organiczne
POŚ	ustawa Prawo Ochrony Środowiska POŚ z 27 kwietnia 2001 r. (Dz. U. 2001 Nr 62 poz. 627)
PPOM	Planowanie Przestrzenne Obszarów Morskich (Marine Areas Spatial Planning)
PROW	Program Rozwoju Obszarów Wiejskich na lata 2007 – 2013 (Rural Development Programme for 2007-2013)
PSC	(Port State Control) Inspektorat Państwa Portu
PSSA	(Particularly Sensitive Sea Area) szczególnie narażony obszar morskiego
RDSM	Ramowa Dyrektywa w sprawie Strategii Morskiej (Marine Strategy Framework Directive)
RDW	Ramowa Dyrektywa Wodna - Dyrektywa 2000/60/WE Parlamentu Europejskiego i Rady z 23.10.2000 r. ustanawiająca ramy wspólnotowego działania w dziedzinie polityki wodnej (Water Framework Directive - Directive 2000/60/EC of the European Parliament and of the Council establishing a framework for the Community action in the field of water policy)
REACH	(Regulation EC No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals REACH) rozporządzenie (WE) Nr 1907/2006 Parlamentu Europejskiego i Rady z 18.12.2006 r. w sprawie rejestracji, oceny, udzielania zezwoleń i stosowanych ograniczeń w zakresie chemikaliów REACH
RLM	równoważna liczba mieszkańców (population equivalents)
RMB	region Morza Bałtyckiego (Baltic Sea region)
ROSH	(Restriction of Hazardous Substances) Dyrektywa 2002/95 ROHS Parlamentu europejskiego i Rady z 27.01.2003 r. w sprawie ograniczenia stosowania niektórych niebezpiecznych substancji w sprzęcie elektrycznymi elektronicznym
RP	Rzeczpospolita Polska (the Republic of Poland)
RZGW	Regionalny Zarząd Gospodarki Wodnej (Regionalne Zarządy Gospodarki Wodnej)
SAICM	(Strategic Approach to International Chemicals Management) Strategiczne Podejście do Międzynarodowego Zarządzania Chemikaliami
SAPARD	(Special Accession Programme for Agriculture and Rural Development) Specjalny Program Akcesyjny na Rzecz Rozwoju Rolnictwa I Obszarów Wiejskich
SEA	(strategic environmental assessment) strategiczna ocean oddziaływania na środowisko

SOLAS	(International Convention for the Safety of Life at Sea) Konwencja o Bezpieczeństwie Życia na Morzu z 1.11.1974 r.
SPO	sektor programu operacyjnego (Sectoral operation programme)
TA	Traktat Akcesyjny (Accesion Treaty)
TZO	trwałe zanieczyszczenia organiczne (persistent organic pollution)
UAC	(unit abatement cost) jednostkowy koszt redukcji
UNECE	(United Nations Economic Commission for Europe) Komisja Gospodarcza ONZ dla Europy
UNEP	(the United Nations Environment Programme) Program Środowiskowy ONZ
UNIDO	(United Nations Industrial Development Organization) Organizacją Narodów Zjednoczonych ds. Rozwoju Przemysłowego
WE	Wspólnota Europejska (the European Community)
WEA	(Whole Effluent Approach) Pełna Ocena Ścieków
WFD	(Water Framework Directive) Ramowa Dyrektywa Wodna - Dyrektywa 2000/60/WE Parlamentu Europejskiego i Rady z 23.10.2000 r. ustanawiająca ramy wspólnotowego działania w dziedzinie polityki wodnej
WIOŚ	Wojewódzki Inspektorat Ochrony Środowiska (Wojewódzkie Inspektoraty Ochrony Środowiska) (Voivodhsip Environmental Protection Inspectorate)
WKPW BSAP	Wstępny Krajowy Program Wdrażania Bałtyckiego Planu Działań HELCOM (Intial National Implementation Programme for the Baltic Sea Action Plan HELCOM)
WPR	Wspólna Polityka Rolna (Common Agricultural Policy)
VASAB	(Vision and Strategies around the Baltic Sea) projekt: wizje i strategie wokół Morza Bałtyckiego

TASK CATEGORIES
L - legal/coordination/management
C – control/monitoring
I – investment/technology
E – education/training
R – research/development

M - main unit

TABLE LIST OF TASKS TO BE IMPLEMENTED AS PART OF THE NATIONAL PRELIMINARY PROGRAMME FOR THE IMPLEMENTATION OF THE BALTIC SEA ACTION PLAN (WKPW BPD)

NO.	TASK	BSAP Index	UNITS / TASK CATEGORIES													
			MINISTRY													
			OF AGRICULTURE AND RURAL DEVELOPMENT	OF ECONOMY	OF INFRASTRUCTURE	OF THE ENVIRONMENT	KZGW - RZGW	GIOŚ - WIOŚ	GDOŚ - RDOŚ	OTHER MINISTRIES AND CENTRAL OFFICES	MARINE OFFICES	LOCAL GOVERNMENTAL ADMINISTRATION (voivode and the reporting services, autonomous administration bodies)	TERRITORIAL SELF-GOVERNMENT UNITS	RESEARCH & DEVELOPMENT AGENCIES AND UNITS	BUSINESS ENTITIES, FARMERS
	SEGMENT I: EUTROPHICATION															
1	Designation of areas vulnerable to nitrates of agricultural origin and implementation of action plans within these areas	E-16	L			L	**M**, L, C	C						C, E	I
2	Designation of hot spots related to intensive livestock, poultry and pig farming which fail to meet the requirements of the amended Annex III to the Helsinki Convention and implementation of remedial actions	E-19	**L**			L		**M**, C						C, E	I
3	Prevention and limitation of pollution by land sources of agricultural activity (pursuant to Annex III Part II of the Helsinki Convention), including the implementation of good agricultural practice	E-17	**M**, L, E	L		L	L	L, C					E	C, E	I
4	Reduction of discharges from urban wastewater treatment plants - meeting the specific requirements concerning wastewater from agglomerations or implementing the alternative provision on the percentage reduction of discharge of nutrients in wastewater (HELCOM Recommendation 28E/5)	E-11, E-12			L	L	**M, L**, C	C					I, E		I
5	Reduction of discharges from home wastewater treatment plants – implementation and promotion of practices in respect of home wastewater treatment systems which collect domestic wastewater or similar waste from single family homes, small businesses or settlements not covered by wastewater collection systems in towns, inter alia consisting in the implementation of maximum daily loads per capita for BZT, P and N (HELCOM Recommendation 28E/6)	E-11, E-12					**M,** L, C, E	C					I, E		I
6	Reduction of discharges by applying phosphate-free detergents - Measures to replace polyphosphates (phosphorus) in washing powders and consideration in 2010 of the possibility to replace polyphosphates in dishwashing means (HELCOM Recommendation 28E/7)	E-13		**M,** L		L, E							E	E	I
7	Monitoring, calculating and reporting complete data sets on point and area sources (HELCOM Recommendation 28E/14)	D-1	R				**M,** C, R	C, R						R	
8	Inclusion of adequate measures in national water and environmental programmes, updating of river basin management plans and conditions of use of water regions and water catchment areas, drawn up in accordance with the Water Law Act, transposing the requirements of the WFD.	E-10					L, R	C							
9	Measures to decrease loads of biogenes from atmospheric deposition by reducing the emissions of nitrogen compounds from the respective sectors, including marine transport.	E-26	L, E	L	L	**M**, L		C					I, E	B	I
10	Measures regarding the implementation of the UNECE Convention on Long-Range Transboundary Air Pollution objectives and the Protocol relating thereto and the Gothenburg Protocol in 1999.	E-27				**M,** L		L, C							
	SEGMENT II: HAZARDOUS SUBSTANCES														
11	Reduction and prevention of emissions of dioxins and other hazardous substances from small-scale combustion (HELCOM Recommendation 28E/8)	H-1		M, L		L		C					I		I
12	Implementation of HELCOM Requirements concerning proper handling of waste/landfilling (HELCOM Recommendation 24/5)	H-3				**M, L**									
13	Implementation and application of the Whole Effluent Approach (WEA)	H-9				L	**M,** L, C	C						R	I
14	Establishment and development of appropriate chemical product registers by 2010.	H-10, H-11		**M,** L		L									
15	Implementation of the Globally Harmonised System – GSH on classification and labelling of chemicals.	H-18		L		L				**M, L** - Ministry of Health				R	
16	Promotion of the Strategic Approach on International Chemicals Management and participation in the regional implementation process.	H-22		**M,** L										R	
17	Measures to reduce or to use substitutes of specific substances (MCCP, OP/OPE, PFOA, decaBDE) and consideration of measures regarding HBCDD.	H-12		**M,** L		L		C					E	C	I
18	Introduction by 2010 in the whole Baltic Sea catchment area of the ban on the use, production and marketing of specific substances (endosulfan, pentaDBE, octaDBE.).	H-13	L	**M,** L		L		C					E	C	I
19	Application of restrictions on the use of specific substances (PFOS, NP/NPE, SCCP).	H-14		**M,** L		L		C					E	C	I

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			OF AGRICULTURE AND RURAL DEVELOPMENT	OF ECONOMY	OF INFRASTRUCTURE	OF THE ENVIRONMENT									
20	Assessment of the possibility and introduction of restrictions for cadmium content in mineral fertilisers.	H-15		M, L, R				C					E	R	I
21	Application of strict restrictions on the use of mercury in products and processes.	H-16		**M,** L		L		C		Ministry of Health			E	C	I
22	Ratification of the 2001 Stockholm Convention on Persistent Organic Pollutants and measures to implement the provisions thereof.	H-20, H-21		L		**M,** L									
	SEGMENT III: BIODIVERSITY AND NATURE CONSERVATION														
23	Establishment and implementation by 2010 within the Baltic Sea area of the coherent and well-managed Baltic Sea Protected Areas (BSPAs), Natura 2000 and Emerald sites.	B-4, B-5	L		L	L			**M,** L, C		L			R	
24	Development and implementation of common broad-scale spatial planning principles for protecting the marine environment and reconciling various interests concerning sustainable use of coastal and offshore areas, including the Coastal Strip (HELCOM Recommendation 28E/9)	B-1	L		L	L			**M, L, C**	L	L				
25	Ensuring that “natural” and near-natural marine landscapes are adequately protected and the degraded areas will be restored.	B-7	L		L				**M, L**						
26	Halting the degradation of threatened and/or declining marine biotopes/habitats in the Baltic Sea and ensuring that threatened and/or declining marine biotopes/habitats in the Baltic Sea have largely recovered.	B-7	L		L				**M, L**						
27	Preventing the introduction, eliminating, halting the spread and control of number of alien species, in particular species most threatening to native biodiversity resources.	B-7, M-37	E		L	L			**M,** L, C					R	
28	Spatial distribution, abundance and quality of the characteristic habitat-forming species, specific for each Baltic Sea sub-region to extend close to its natural range.	B-7	L, R			L, R			**M,** L, R, C					R	
29	Improvement in the Baltic Sea area by 2015 of the protection of species included in the HELCOM lists of threatened and/or declining species and habitats, with the overriding aim to achieve and ensure favourable protection for all species.	B-7	L, R, E			L, R			**M,** L, R, C, E					R	
30	Establishment by 2012 within the whole Baltic Sea area of spatial/temporal closures of fisheries or permanent closures of sufficient size/duration.	B-13	**M,** L, C, E		L									R	
31	Development and application of appropriate breeding and restocking activities for salmon and sea trout to ensure genetic diversity thereof.	B-13, B-17	**M,** L, R, C, E											R	
32	Elimination of illegal, unregulated and unreported fisheries.	B-14	**M,** L, C, E		L									R	
33	Implementation of national programmes for conservation of eel stocks, containing in particular the list of measures for successful eel migration from the Baltic Sea catchment area to the spawning grounds.	B-17	**M,** L, R, C, E						L, C					R	
34	Active protection of at least ten threatened/endangered wild salmon populations in rivers and reintroduction of native Baltic Sea salmon in at least four potential rivers.	B-17	**M,** L, R, C, E						L, C					R	
35	Reintroduction of salmon in at least four potential rivers.	B-14,	**M,** L, R, C, E						L, C					R	
36	Establishment of the re-introduction programme for Baltic sturgeon and, as a long term goal, after their successful re-introduction has been attained - to have best natural reproduction, and populations within safe genetic limits in each potential river.	B-17, B-18	**M,** L, R, C, E						L, C					R	
37	Avoidance of by-catch of harbour porpoise, seals, water birds and non-target fish species with the aim to reach by-catch rates close to zero.	B-7, B-9, B-13	**M,** L, C, E											R	
38	By 2015 discards of fish are close to zero (< 1%).	B-13	**M,** L, C, E												
	SEGMENT IV: MARITIME ACTIVITIES SEGMENT														
39	Ratification of specific conventions and protocols (AFS, Marpol 73/78).	M-2, M-7			L	**M,** L									
40	Use of harmless anti-fouling systems.	M-5			**M,** L, C, E	L					L, E			R	
41	Introduction of the “no-special-fee” principle to ship-generated wastes (HELCOM Recommendation 28E/10).	M-10, M-11			**M, L, C, E**	L		C			L, E		I	R	I
42	Designation of the Baltic Sea as a special area, with the aim to eliminate the discharge of sewage from ships, especially from passenger ships and ferries.	M-33			**M, L, C, E**						L, E			R	I
43	Monitoring, inspection related to the Paris Protocol MoU of 1982, cooperation in the field of enforcement and punishment for illegal spills originators.	M-12			**M, L, C, E**			C		L	L, E				
44	Integration of the subject of oiled wildlife response into oil pollution contingency plans either on a national or local level.	M-32			**M, L**				L, E		L, E				
45	Improvement of safety of navigation in ice conditions in the Baltic Sea.	M-15, M-16			**M,** L, R, E						L, E			R	

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			OF AGRICULTURE AND RURAL DEVELOPMENT	OF ECONOMY	OF INFRASTRUCTURE	OF THE ENVIRONMENT									
46	Enhancement of inter-regional cooperation in the field of oil spills response, development of oil spills and chemical pollution risk assessment.	M-21, M-22			**M,** L, C			C			L			R	
47	Conclusion of agreements and development of spills response plans.	M-21, M-22			**M,** L					L	L				
48	Development and implementation of the common plan on the shelters for ships at risk.	M-25			**M, L**						L				
49	Development of a satisfactory responsibility and compensation system.	M-26, M-27			**M, L**						L				
50	Researching the possibility to designate ballast water exchange zones outside the Baltic Sea area with OSPAR.	M-36			**M, L**, R	R								R	
51	Consideration of the introduction within the Baltic Sea area, where appropriate, of feasible and effective economic incentives to reduce emissions from ships.	M-38			**M, L**, E	L					L			R	I
52	Support for IMO works to implement stricter requirements on the emissions from ships.	M-40			**M, L**	L									
53	Application of the "zero-discharge" principle for the offshore platforms in the Baltic Sea starting from 1 January 2010.	M-41			**M, L**, C										I
54	Implementation of the environmental impact assessment principles in respect of the new platforms, monitoring of the existing ones and obliging the operators to present annual reports on the environmental impact of their activity.	M-42			**M, L**, C				L						L
	MONITORING														
55	Monitoring of the Baltic Sea and the inland waters within the State Environmental Monitoring.							**M,** C, L						R	
56	Implementation of the HELCOM PLC-6 project - 6th presentation of the quantity of pollution discharge from the river basin areas.							**M, C**, L						R	