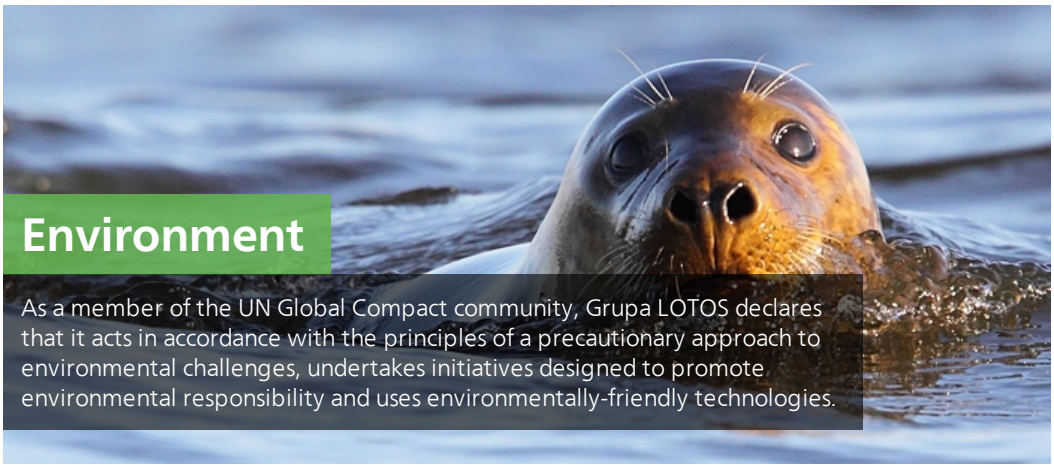
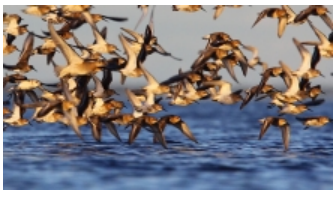


Environment

As a member of the UN Global Compact community, Grupa LOTOS declares that it acts in accordance with the principles of a precautionary approach to environmental challenges, undertakes initiatives designed to promote environmental responsibility and uses environmentally-friendly technologies.

Environmental policy



The Company's objective is to deliver high quality products, leaving the smallest environmental footprint possible where they are used.

Mitigation of environmental impact

By 2020, methods designed to ensure efficient use of energy will help reduce GHG emissions over the fuels life cycle by 6%.

Environmental policy

The Company's objective is to deliver high quality products, leaving the smallest environmental footprint possible where they are used.

The LOTOS Group's core activity comprises exploration for and production of hydrocarbons, deep conversion of petroleum for the purpose of fuel production, and trading in high-value added petroleum products. As it has declared in its mission statement, the LOTOS Group is seeking to operate and develop all areas of its business in a sustainable manner, with due regard to all legally defined environmental requirements and in accordance with the principles of corporate social responsibility.

Aware of the scale and nature of its impact, the Company has made a commitment to observe all internationally recognised standards expected to be met by companies if they want to excel in actively managing their environmental impact. That commitment is expressed in the form of publicly proclaimed support to, and an undertaking to observe the rules defined by, the world's largest organization promoting the ideas of corporate social and environmental responsibility - United Nations Global Compact. As a member of the UNGS community, Grupa LOTOS declares that in its environmental policy it will seek to:

1. support a precautionary approach to environmental challenges,
2. undertake initiatives designed to promote environmental responsibility,
3. encourage development and diffusion of environmentally-friendly technologies.

The areas where the LOTOS Group's production facilities are located are not protected on account of their natural values or impact on biological balance. Still, the LOTOS Group's business is managed in a sustainable manner, in line with best practice, with a view to:

- meeting the environmental quality standards,
- meeting the emission standards,
- ensuring effective management of raw materials and other production inputs,
- ensuring efficient energy management,
- ensuring safe management of hazardous substances,
- protecting the environment against the effects of a major industrial failure.

That is connected with the Company's environmental policy, which is focused on clean production, understood as a constant process aimed at reducing consumption of materials and utilities, efficient waste management, and safe operation of industrial processes in such a way as to prevent failures.

The sustainability and corporate social responsibility principles also entail the delivery of high quality products, which leave the smallest environmental footprint possible in the location where they are used.

As part of its integrated management system, Grupa LOTOS takes and develops initiatives imposed by the requirements of the environmental management system. The environmental management system assumes the existence of procedures to identify environmental aspects at all stages of the Company's operations, determine environmental goals and objectives, manage waste and monitor the processes and operations which have an impact on the environment. A detailed environmental monitoring plan is developed, encompassing all areas of the Company's operations. Corrective action is initiated whenever it is found that any of the assumed parameters is not fully met. If a potential threat to the environment is detected, appropriate preventive action is taken.

Issues relating to environmental protection are managed within Grupa LOTOS by a dedicated organizational unit. Apart from monitoring how and to what extent the Company's production facilities impact the environment and reviewing the quantitative and qualitative compliance of emitted pollutants, produced waste, discharged wastewater and water and emitted noise, the unit is also tasked with the coordination of efforts aimed to ensure compliance with the environmental requirements imposed by law and establishment of LOTOS Group-wide environmental standards. In the context of the Company's operations, it is also necessary to monitor CO_2 emissions and conduct activities related to the EU Emissions Trading Scheme (ETS). The monitoring and reporting of CO_2 emissions from the Company's industrial facilities covered by the ETS is unobjectionable, as evidenced by positive annual assessments by an accredited verifier – a world leading provider of certification services.

The Company also places considerable emphasis on raising its staff's environmental awareness via internal communication channels, which involves education of staff on issues related to environmental protection, understood as an individual,

corporate, regional and global effort. Acting in cooperation with numerous partners, Grupa LOTOS takes a number of environmental initiatives focused on developing desired social attitudes to environmental protection.

Related content:

Declarations **Key risks, opportunities and challenges in the context of sustainable development**

Mitigation of environmental impact

By 2020, methods designed to ensure efficient use of energy will help reduce GHG emissions over the fuels life cycle by 6%.

With a view to limiting the environmental arduousness of its operations, the strategy for 2011-2015 envisages that the LOTOS Group will exclusively implement environmentally friendly technologies, based on the best available solutions characterised by low emissions and highly efficient production processes. In order to ensure that all the requirements resulting from recently introduced or anticipated changes in environmental standards are met, a high pressure natural gas pipeline will be built leading to Grupa LOTOS' refinery. The gas which is to flow through the pipeline will be one of the basic fuels used to satisfy the refinery's energy requirements.

The LOTOS Group's strategy along with the identified development directions until 2020 also accounts for the changing Polish and European legislation. These changes set the general direction for the industry's transformation, by forcing the industry to significantly reduce its environmental impact in the form of emissions of CO_2, SO_2, nitric oxides and dust, both in the process of production and use of products.

In cooperation with local authorities and social organizations responsible for environmental protection, a number of measures are being taken with the aim of reducing the environmental impact of the LOTOS Group members.

In the case of the LOTOS Group's key production facility, namely the Gdańsk refinery, the means leading to minimisation of its adverse impact include:

- on-going monitoring of ambient air and water pollutant concentration and of hydrocarbon concentration in the area immediately surrounding the refinery, enabling quick response if the metrics reflecting the refinery's environmental impact show any undesirable upward trends,
- discharge of wastewater whose quality is fully compliant with legal requirements thanks to a three-stage wastewater treatment plant,
- use of treated wastewater to produce process water,
- use of condensate to produce boiler feedwater,
- strict supervision over waste management,
- use of equipment and measures designed to help protect the environment, such as:
  - double sealing of tanks with floating roofs,
  - ensuring air tightness of all process facilities and connecting them to the emergency discharge system, where hydrocarbons are burned in flares,
  - ensuring that the process of pumping fuel to road tankers and railway tank-cars is performed using the airtight vapour recovery system.

Related content:

Commitment to sustainable development

Environment protection spending

The scale of initiatives undertaken is confirmed by the environmental spending and investment projects recently implemented by Grupa LOTOS, as well as other members of the LOTOS Group.

In the years for which the LOTOS Group has prepared CSR reports, i.e. 2006-2011, the amount spent by the LOTOS Group on environmental projects ran to PLN 652,637 thousand. Charges for economic use of the environment incurred during the same time by the LOTOS Group totalled PLN 28,373 thousand.

Environmental spending and investment projects

LOTOS Group			
Expenditure [PLN thousand]			
	2009	**2010**	**2011**
Total investments	2,495,553	759,510	296,699
Environmental investments	153,893	33,648	34,709
Spending on environmental protection*			37,534

* Exclusive of the cost of investment projects and charges for economic use of the environment.

Grupa LOTOS			
Expenditure [PLN thousand]			
	2009	**2010**	**2011**
Total investments	2,271,034	587,610	78,000
Environmental investments	138,818	16,812	12,116
Spending on environmental protection*			22,981

* Exclusive of the cost of investment projects and charges for economic use of the environment.

Charges for economic use of the environment

LOTOS Group			
Emissions [PLN thousand]			
	2009	**2010**	**2011**
Air emissions	3,576	4,306	4,805
Water withdrawal	288	245	210
Wastewater discharge	401	528	487
Waste landfilling	5	2	0
Total	4,270	5,081	5,502

Grupa LOTOS			
Emissions [PLN thousand]			
	2009	**2010**	**2011**
Air emissions	3,089	3,817	4,268

Water withdrawal	211	160	144
Wastewater discharge	260	306	313
Total	3,560	4,283	4,725

As one of the Polish market leaders, the LOTOS Group seeks to be perceived as the best petroleum company operating in the Baltic Sea region, when assessed on the basis of its product and customer service quality, and professional management.

Wojciech Blew
Technology Development & HSE Director of Grupa LOTOS

As one of the Polish market leaders, the LOTOS Group seeks to be perceived as the best petroleum company operating in the Baltic Sea region, when assessed on the basis of its product and customer service quality, and professional management. Our ability to maintain the market lead will inextricably depend on our respect for the principles of sustainable development, in particular the rational use of natural resources, as well as minimising the impact of all the LOTOS Group members on the natural environment. The respect for the principles of sustainable development is manifest in our constant commitment – already at the stage of designing and then construction and operation of production units – to using state-of-the-art technologies, involving solutions intended to minimise emissions thanks to material and energy saving processes and thanks to low consumption of electricity, water and non-renewable resources.

Our installations are equipped with multiple failure prevention systems, such as alarm systems or cutting-edge distributed computer control systems, featuring process optimisation and an option to immediately block any developments that could pose a hazard to the installations, equipment or the environment. We have classified the risk of an industrial failure as one of our key risks, which is why in our daily activities we place such strong emphasis on preventive measures. We perform checks to diagnose the condition of our equipment, while organizing regular training and drills to practise failure response, etc. Any failure that does occur is subject to thorough analysis and is discussed during current training in order to prevent its reoccurrence.

The monitoring system we employ provides for ongoing control of the production processes and their impact on the environment. Measurements of air emissions and ambient air pollutant concentrations enable quick reaction whenever there is an unfavourable growing trend in any metrics reflecting the refinery's environmental impact. We constantly monitor the intake of water and the quality of treated wastewater discharge, in order to properly assess its impact on receiving waters.

The data on emissions contained in this year's report (measurements taken in 2011) clearly shows how we have implemented one of the most basic principles of sustainable development, namely the principle of decoupling, which consists in a disproportionately lower increase in environmental pressures relative to gains in throughput capacities. Our water or waste recovery rates (more than 45% and more than 90%, respectively) confirm that environmental concerns are at the very top of our agenda.

Even though relevant regulations have not yet been written into law, Grupa LOTOS monitors greenhouse gas emissions throughout the fuel life cycle, from production, to processing, to logistics and use by the end customer. Greenhouse gas emission volumes over the product life cycle are measured for the engine fuels: LPG, gasoline and diesel oil. The GHG (greenhouse gas) emissions computed for the individual fuels are presented per units, i.e. in CO_2 eq per 1 MJ of energy contained in the fuel. The overriding objective of all activities in this respect is to achieve a GHG emissions reduction of 6% by 2020, by using methods designed to ensure efficient use of energy.

Other installations built as part of the 10+ Programme and launched in 2011 have enhanced the refinery's flexibility with respect to processing various types of crude. This has allowed the Company to diversify its crude purchases, which in turn provides for the most efficient processing from the economic point of view, e.g. heavy crudes are processed when demand for bitumen components grows, but at the same time light crudes, suitable for the production of fuels and oil bases, can be processed on the second distillation line. The newly launched mild hydrocracking unit (MHC) has been supplying a new stream, namely paraffin fraction, with respect to which there have been plans to ultimately sell it as a commercial product. Owing to various optimisation steps, the fraction is now used in whole inside the refinery, contributing to a broadening of the range of engine fuels and increasing the output of base oils. That translates directly into higher efficiency of the oils unit. In late 2011 we carried out performance tests of vacuum distillation of refined paraffin fraction, the initial results of which give a real chance for the production of high-quality group II bases. Group II bases are characterised by a low sulphur content (below 0.03%), making them suitable to be used as bases for the production of modern lubricants.

We also attach great importance to the quality of our products, acknowledging their secondary environmental impact in the place of application or consumption. Our fuels have very low sulphur content. They contain additive packages, i.e. specially selected blends of complex chemical compounds which improve their properties, delivering significant environmental benefits. The additives improve combustion, protect engines from contaminants, etc., as confirmed by tests carried out by

leading European laboratories.

Our gasolines and diesel oils are manufactured with the use of biocomponents, obtained from renewable resources. All our products have Safety Data Sheets (SDS), drafted based on the applicable legal requirements (REACH Regulation). The information included in SDS warns users – where necessary – of potential threats connected with using a particular product.

Wojciech Blew
– Technology Development & HSE Director of Grupa LOTOS

Emissions

Grupa LOTOS does not use or emit substances which deplete the ozone layer.
Higher carbon dioxide emissions recorded in 2010–2011 were caused by the gradual commissioning of new units, built for the Gdańsk refinery as part of the strategic 10+ Programme. Its purpose was to expand the annual oil throughput capacity from 6m tonnes to 10.5m tonnes, while increasing the depth of conversion. Comparative data on feedstock use by the Gdańsk refinery is presented in the table below. For calculating emissions, the CO_2 reference emission factor for energy production (provided by the National Centre for Emissions Management (Krajowy Ośrodek Bilansowania i Zarządzania Emisjami - KOBiZE) has been applied.

Total direct and indirect greenhouse gas emissions of Grupa LOTOS by weight

Direct emissions [thousand tonnes per year]			
	2009	**2010**	**2011**
CO_2	1,121	1,607	2,045
Indirect emissions* [thousand tonnes per year]			
	2009	**2010**	**2011**
CO_2	225	285	365

* Indirect emissions are attributable to energy purchased by Grupa LOTOS.

NO_x, SO_x and other significant air emissions of Grupa LOTOS by type and weight

Emissions [tonnes per year]			
	2009	**2010**	**2011**
SO_2 emissions	4,170	4,758	5,708
permitted level of SO_2	6,470	6,470	7,137
NO_2 emissions	1,132	1,315	1,620
permitted level of NO_2	2,405	2,475	2,650
Dust emissions	220	260	344
permitted level of dust	521	538	556

Feedstock and other materials used by Grupa LOTOS

Crude oil processing [tonnes]			
Item	**2009**	**2010**	**2011**
Total crude oil	5,461,540	8,095,655	9,163,836
Feedstock and components	1,699,034	844,327	1,062,156
Additives	2,229	2,010	2,254

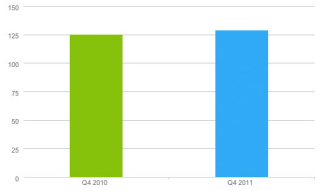
In 2012-2013, the following projects will be executed to mitigate the environmental impact of individual industrial processes and the refinery as a whole:

- recovery and reuse of flare gas,
- use of natural gas for hydrogen production,
- introduction of natural gas to the energy mix of Grupa LOTOS,
- replacement of process furnaces in the light distillate hydrorefining units and furfurol extraction units.

The Company will present their first measurable effects in 2012.

Energy

Change in the number of company cars at Grupa LOTOS



In line with “Poland’s Energy Policy until 2030”, whose main objectives are to improve energy efficiency and mitigate the environmental impact of industrial processes, in 2011 Grupa LOTOS began implementing an energy management system compliant with the EN 16001:2009 and ISO 50001:2011 standards. Steps have been taken to introduce systemic solutions in the area of energy management. They are designed to improve energy efficiency, for example by identifying key energy aspects of the Company’s operations, which include upgrade and development work related to energy efficiency.

In 2011, an Energy Efficiency Team was set up within the operating segment of Grupa LOTOS. Its role is to initiate projects aimed at monitoring and improving energy efficiency. In addition, it will work to maintain and enhance efficiency at all stages of the Gdańsk refinery’s operations.

A computer system Visual Mesa by Soteica is currently used by Grupa LOTOS to visualise and optimise energy consumption. The system supervises energy infrastructure of the refineries on a continuous basis, including gas and heating oil systems, and the process steam system, and uses optimisation algorithms to suggest changes to the energy system which reduce energy system costs.

The ingredients and their proportions in fuel products of Grupa LOTOS comply with requirements following from the National Indicative Target concerning the proportion of renewable materials in road fuels. Both gasolines and diesel oils contain biocomponents obtained from renewable materials.

Direct energy consumption of Grupa LOTOS by primary energy source

Item	Unit	Direct energy sources purchased	Direct energy sources produced	Direct energy sources sold	Direct, total energy consumption
Natural gas	GJ	1,383,334			1,383,334
Fuel gas	GJ		10,053,891	194,860	9,859,031
HSFO fuel oil	GJ		3,434,143		3,434,143
LSFO fuel oil	GJ	4,382,235	1,177,603		5,559,838
HON light fuel oil			134,188		134,188
Electricity	GJ			79,499	-79,499
Heat	GJ			86,541	-86,541
Total	**GJ**	**5,765,569**	**14,799,825**	**360,900**	**20,204,494**

Indirect energy consumption of Grupa LOTOS by primary energy source

Item	Unit of measurement	Intermediate energy purchased
Electricity	GJ	4,163,239

Grupa LOTOS undertakes various initiatives aimed to limit its indirect energy consumption. This may be illustrated by our car fleet policy. The makes and models of company cars are selected every three years. During the decision-making process, the Company takes into account the financial aspect, but also CO_2 emissions, fuel consumption levels and engine capacities. Currently, the Company has no cars with engine capacities in excess of 2 litres. This policy will be continued in the coming years, with an option to use cars with even smaller engine capacities.

In 2011, experts from Grupa LOTOS, working with rally drivers and a test group of car users, created the “Optimum Driving” programme, which involves teaching 12 key principles of optimum driving. The principles are a tool allowing drivers to use their cars efficiently, thus achieving cost savings (lower fuel consumption and spare parts use), reducing harmful gas emissions and improving driving safety. The programme is targeted at employees, customers of LOTOS fuel stations and the

Company’s social environment at large. Changing bad driving habits may limit fuel consumption by as much as 30%.

Fuel consumption of company cars at Grupa LOTOS [litres]

Period:		Fuel	
		Unleaded gasoline	Diesel oil
2010	H 1	56,634.20	20,605.61
	H 2	53,811.05	36,217.01
2011	H 1	51,305.63	32,690.38
	H 2	58,103.62	31,633.70

Water

The operations of Grupa LOTOS do not significantly affect surface or underground water sources.

Total water withdrawal of Grupa LOTOS by source [m^3]

	2009	2010	2011
Underground water	209,147	195,024	202,429
Surface water	3,557,093	3,766,470	3,607,427
Total	**3,766,240**	**3,961,494**	**3,809,856**

The implemented technological solutions allow the Company to reuse water. The percentage of recycled water is calculated by dividing the sum of process water obtained from treated wastewater and condensate by its total process water requirement.

Percentage and total volume of water recycled and reused by Grupa LOTOS [m^3]

	2009	2010	2011
Process water obtained from treated wastewater	870,230	1,555,969	1,179,317
Treated condensate	1,118,213	1,546,726	2,030,131
Percentage of recycled water	**34.6%**	**43.9%**	**45.7%**

After being treated, process, sanitary and oily wastewater is released directly to the Martwa Wisła River. Stormwater and water which has passed through the drainage system is released to the Martwa Wisła through the Rozwójka River.

The volumes of treated wastewater discharged to receiving waters by Grupa LOTOS over the years were as follows:

Total wastewater discharge by quality and destination [m^3]

	2009	2010	2011
Rozwójka	4,083,604	3,880,741	3,874,089
Martwa Wisła	1,094,220	1,306,041	1,354,015
Total	**5,177,824**	**5,186,782**	**5,228,104**

Material parameters of treated wastewater discharged to receiving waters by Grupa LOTOS over the years were as follows:

Rozwójka

Contaminants	2009	2010	2011
total suspended solids [mg /dm^3]	10	10	12
permitted value	35	35	35
hydrocarbons of petroleum origin [mg /dm^3]	2	1	2
permitted value	5	5	5

Martwa Wisła

Contaminants	2009	2010	2011
BZT [mg O2/ dm^3]	6	5	3
permitted value	25	25	25
COD [mg O_2/ dm^3]	52	51	34
permitted value	125	125	125
total suspended solids [mg / dm^3]	13	6	8
permitted value	35	35	35
volatile phenols [mg/ dm^3]	0.005	0.006	0.001
permitted value	0.1	0.1	0.1
hydrocarbons of petroleum origin [mg / dm^3]	0.7	0.4	0.8
permitted value	5	5	5
total nitrogen [mg N/ dm^3]	4	4	3
permitted value	30	30	30
total phosphorus [mg P/ dm^3]	0.9	1	1
permitted value	3	3	3

The land occupied by Grupa LOTOS is of no special natural value and is not subject to any form of nature protection. The Rozwójka and Martwa Wisła rivers, the two receiving bodies for water and wastewater generated by Grupa LOTOS, do not have the protected status, either. The discharge of water and wastewater does not materially affect biodiversity of the water bodies or related habitats. No adverse impact of Grupa LOTOS' production operations on the level of biodiversity in land, freshwater and marine environments was found to exist.

The Company's operations pose no risk to any of the species included in the IUCN Red List or national lists of endangered species. In areas surrounding the Gdańsk refinery, there are no known habitats of conservation list species and no risk of their extinction.

However, because Grupa LOTOS withdraws surface water from the Motława River, it has committed to support the biodiversity of the region by co-financing work aimed at restoring fish population within Motława fishing district No. 3. Moreover, a protective belt of trees was planted on the side of national road No. 7, which is exposed to heavy traffic, and on the perimeter of the refinery's wastewater treatment plant.

Out of 10 emergency cases reported at the refinery of Grupa LOTOS in 2011, no spills were identified with a material environmental impact.

In 2009–2010, only one out of 23 incidents had a material impact on the natural environment. It was a diesel oil spillage occurring for reasons not attributable to the Company, but caused by illegal drilling in the pipelines transporting the oil to the port.

Waste

The LOTOS Group manages its waste in a manner that is environmentally safe. Waste that cannot be avoided is segregated and stored at designated and labelled sites, in accordance with the terms of relevant decisions.

In accordance with the waste management policies, hazardous and non-hazardous waste is transported by entities licensed to do so, first to undergo recovery processes and then to be treated or disposed of.
The recipients of waste at the LOTOS Group hold appropriate permits to conduct waste management activities.

Total weight of waste generated at Grupa LOTOS by type and disposal method [tonnes per year]

Year	2009	2010	2011
Waste generated during the year	10,305	11,472	12,384
including:			
Hazardous waste	4,242	4,218	7,338
Non-hazardous waste	6,063	7,254	5,046
Waste stored as at the end of the previous year	3,367	2,215	2,244
Total: waste to be managed in the year	13,672	13,687	14,628
Permitted value (data from the integrated permit)	**89,627**	**89,627**	**89,627**
Waste recovered (waste recovery)	10,215	10,836	12,428
Waste treated or disposed of	1,243	607	4
including:			
Incineration	966	519	4
Landfilling	277	81	0
Waste stored on site as at the end of the year	2,214	2,244	2,196
including:			
Hazardous	953	1,044	1,977
Non-hazardous	1,261	1.,200	219

Weight of waste transported, imported, exported or treated by Grupa LOTOS in 2011, deemed hazardous under the Basel Convention [tonnes]

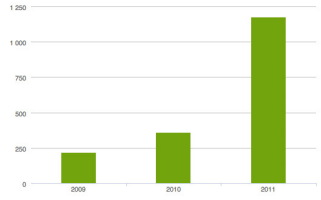
Total weight of hazardous waste transported	6,426
Weight of hazardous waste transported to the refinery from external sources - suppliers from outside the LOTOS Group	21
Weight of hazardous waste transported from the refinery to external sources in Poland	6,286
Weight of hazardous waste transported from the refinery to external sources outside of Poland	119
	%
Percentage of waste transported across international borders	1.86

The fact that in 2011 no fine or other sanction was imposed on any of the LOTOS Group companies for non-compliance with environmental laws and regulations attests to the LOTOS Group's high environmental protection standards and shows that the LOTOS Group assigns high priority to environmental protection issues.

Grupa LOTOS duly performs all its obligations resulting from the environmental protection laws, as well as product quality and labelling requirements. If used correctly, Grupa LOTOS' products do not generate any significant environmental impacts.

Products and services

Quantity of waste generated by LOTOS Kolej [tonnes]



Every year, Grupa LOTOS and the LOTOS Group's trading companies take a number of measures to reduce the impact of their products and services on the environment.

Grupa LOTOS meets the highest European standards relating to compliance with the laws and regulations concerning addition of biocomponents to motor fuels. In 2011, Poland had one of the highest biocomponent targets in the European Union, set at 6.20% (calculated on the basis of fuel calorific value). In 2011, the Company met the target by achieving a 6.25% biocomponent content in its fuels.

Given the specific nature of **LOTOS Petrobaltic's** business, which consists in the exploration for and production of crude oil and natural gas, the company's priority is to ensure effective protection against the risk of sea pollution by spills of extracted crude oil and other substances used in the extraction process, and to limit to the minimum the environmental impact of such spills, should they occur. LOTOS Petrobaltic has in place an Oil Spill Response Plan for spills resulting from the exploration and production work carried out by Petrobaltic within its licence areas. The plan has been approved by the Maritime Office in Gdynia. In 2011, LOTOS Petrobaltic took part in an oil spill response exercise together with the Maritime Search and Rescue Service. Moreover, the condition of the environment is constantly monitored prior to, in the course of, and after the completion of operations. Appropriate management of waste from platforms and seagoing vessels is also very important given that the ban on discharge of any waste or pollutants from platforms has become one of the key policy objectives. Therefore, in 2011, the relevant procedure was updated and an industrial shed for hazardous waste was built within the onshore base.

Similarly, **AB LOTOS Geonafta** uses only drilling techniques which do not cause any damage to the environment. The company is also actively involved in the reduction of gas emissions: gas obtained during the mining of crude oil is used to generate electricity and heat for the production installations.

LOTOS Petrobaltic, through its subsidiary **Energobaltic**, owns a combined heat and power plant in Władysławowo which is fired by fuel gas obtained in the process of separation of gas transmitted from the offshore platform. This has led to the elimination of tens of thousands of tonnes of air emissions per year as a result of liquidation of boiler plants (mainly coal fired) in Władysławowo and ending the practice of flaring waste gas at the platform.

In 2011, **LOTOS Paliwa** continued its investment projects designed to mitigate the negative environmental impact of the operations of the LOTOS service stations. The projects implemented by LOTOS Paliwa included: installation of separators, upgrade of stormwater, sanitary and industrial sewerage systems, installation of leak-proof surfaces, installation of gasoline fume absorption systems, installation of equipment to measure and monitor petroleum product stocks, installation of leakage alert systems for detecting leakage of petroleum products into soil, surface water and underground water, installation of soil contamination monitoring equipment, replacement of single-jacket tanks with double-jacket tanks and replacement of air-conditioning units.

In 2011, LOTOS Paliwa launched a new environmental protection project to use renewable energy by installing heat pumps at new service stations located in the Motorway Service Areas along the A1 motorway and S3 expressway. The heat pumps use renewable energy from ambient air and transform it into energy used to provide heating and hot water in buildings.

In 2011, **LOTOS Kolej** launched a major investment project involving the upgrade and overhaul of the rail tanker cleaning facility. The project-related work will continue until August 2012. Once completed, the project will substantially reduce the environmental impact of the cleaning facility and significantly improve the Health and Safety at Work conditions. Air sealing of the technological processes, changing the technology for cleaning rail tankers and utilising modern equipment in the cleaning process will lead to lower consumption of utilities and reduced generation of oily wastewater.

In 2011, LOTOS Kolej recorded a 16% increase in the consumption of energy for non-traction purposes (to 2,053 MWh) relative to 2010 (1,760 MWh). The increase followed from the expansion of its operations which led, among other things, to the need to use more equipment. In order to reduce electricity consumption, lighting systems were provided with automatic controls. New electronic ignition and ballast units for high-pressure discharge lamps fitted with a microchip controller are also being tested.

In 2011, at the **LOTOS Oil's** production branch in Czechowice-Dziedzice, nine tanks with capacities from 50 to 200 cubic meters, used for raw material and finished product storage, were fitted with double bottoms and a leakage alert system. Repair of three tank trays to prevent penetration of petroleum-based products into the soil was also completed. Similar preventive work was also performed under the tracks and the road located near the road tanker loading facility in

Czechowice.

In 2011, **LOTOS Parafiny** purchased new product pumps and an emulsion homogenizer for its facilities in Jasło. The replacement of those units allowed the company to eliminate pollutant penetration into the environment. The upgrade of the railway loading facility in Czechowice-Dziedzice, commenced in 2011, will be completed in Q1 2012. The upgrade involves the replacement of loading arms with rigid units employing a system of counterweights. This will completely eliminate pollutant penetration into the environment.

In line with **LOTOS Asfalt's** strategy adopted in previous years, measures were initiated in 2011 to eliminate hydrocarbon emissions from the production, storage and dispatch of bitumens, which generate olfactory nuisance, chiefly within the production sites. The projects already completed in pursuance of the strategy include: installation of a process gas thermal oxidiser, air sealing of tanks and connection of air-sealed tanks and bitumen filling terminals to the thermal oxidiser – in Jasło, as well as inclusion of two double-station car tanker filling terminals and two double-station rail tanker filling terminals in the fume extraction system, connection enabling disposal of extracted fume in thermal oxidisers and construction of a stand-by filling process-extracted fume disposal unit in activated charcoal adsorbers – completed in Gdańsk.
EU funding was secured for the project designed to reduce emissions of odorous hydrocarbons in Gdańsk. Once the project has been fully completed (in 2013), the air quality at the production site in Gdańsk will improve significantly. The upgrades of production facilities in Gdańsk and Jasło have improved their efficiency, while markedly reducing the energy intensity per unit of production.

In the case of many products manufactured by the LOTOS Group companies, their effect on the environment during production and after the end of their useful lives is not negative. The same is true of the packaging in which products are marketed. In accordance with the applicable laws and regulations, the individual LOTOS Group companies have contracted recovery organizations to perform their obligations related to the recovery and recycling of packaging materials introduced on the domestic market.

LOTOS Paliwa does not sell products in packaging which is subject to the recycling/recovery requirement. However, the company's service stations sell packaged products containing hazardous substances. After being used, the packaging containing traces of such substances becomes hazardous waste, which customers may leave at the station. At service stations which sell automotive and general-use batteries, there are special designated areas for storage of hazardous waste in the form of general-use batteries (in special containers provided by suppliers) and automotive batteries (in areas designated by the station's management, which is not accessible to unauthorised persons). The handling of hazardous waste at service stations is governed by the internal waste management procedure.

In 2011, a repeated analysis of the quantity of waste generated by **LOTOS Kolej** was performed. Based on the results of the analysis, the company applied to the competent authorities for amendment of its waste generation permit to allow for increased waste generation.

The 227% increase in the quantity of waste generated by LOTOS Kolej is due mainly to the ongoing work on the upgrade and overhaul of the rail tanker cleaning facility and the construction of a new building near the facility. An increase of over 11% in cargo transport and reclamation work commenced on areas leased by the company were also factors affecting the 2011 figure.
In 2012, LOTOS Kolej plans to perform an upgrade of its industrial sewage pipeline to reduce the risk of sewage penetration into the environment, and to construct a water treatment plant to eliminate drinking water from the industrial process.

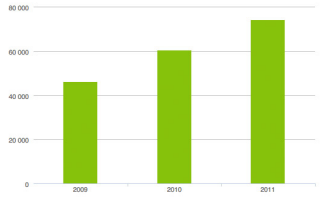
LOTOS Asfalt's products (bitumen and heavy fuel oil) are mostly transported in tankers. Packaged products include tar paper produced at the waterproofing materials production site (Zakład Materiałów Hydroizolacyjnych) in Jasło, as well as bitumens and pitches in primary packaging, also used for waterproofing purposes. Sales of primary packaging bitumens and pitches accounted for less than 0.1% of the overall bitumen sales by LOTOS Asfalt in 2011. 55% of all packaging was recovered.

The recovery and recycling rates achieved by the recovery organization contracted by **LOTOS Oil** in 2011 were as follows: waste oil – recovery at 50%, including recycling at 35%; plastic packaging waste – recycling at 19%; paper and cardboard packaging waste – recycling at 54%; steel packaging waste – recycling at 37%; wood packaging waste – recycling at 15%; total packaging – recovery at 55%, and recycling at 40%.

The recovery and recycling rates achieved by the recovery organization contracted by **LOTOS Parafiny** in 2011 were as follows: plastic packaging waste – recycling at 19%; paper and cardboard packaging waste – recycling at 54%; steel packaging waste – recycling at 37%; wood packaging waste – recycling at 15%; total packaging – recovery at 55%, and recycling at 40%.

Transport

Use of traction electricity by electric locomotives of LOTOS Kolej [MWh]



The LOTOS Group companies analyse the environmental impact from transporting products, goods and other materials used in their business.

No negative environmental impact has been identified from the transport for the needs of **LOTOS Petrobaltic**. The company uses six seagoing vessels to carry supplies to, and to take away waste and contaminants for disposal or treatment from, the offshore platforms. The same vessels are used to carry crews to and from the platforms. The vessels are powered by low-sulphur diesel oil, which complies with the requirements of Annex VI to the Marpol Convention 73/78. All contaminants and waste from vessels generated during their operations are taken to the shore for disposal or treatment. A potential risk to the marine environment arises in the case of a potential collision of the tanker with another vessel and double-hull leakage. The tanker transports crude oil to the petroleum port in Gdańsk. In 2011, the tanker covered the distance of about 60 km from the B3 field to the port five times, carrying the crude produced from the field. All the ships of Miliana Shipping Company providing sea transport services to LOTOS Petrobaltic have all the required certificates valid and meet the highest standards applicable to such vessels. They do not generate any significant environmental impact.

LOTOS Asfalt has embarked on a number of investment projects the purpose of which is to mitigate the environmental impacts of the company's transport activities. Products are handled at LOTOS Asfalt depots in modern handling terminals, where emissions of harmful fumes into the air are minimised. Air sealing of road tanker filling stations reduces air emissions of harmful gases, such as hydrogen sulphide, and improves the occupational safety of staff involved in road tanker filling.
In 2011, work was completed at the Gdańsk loading terminal on the installation of mass flow meters. The mass flow meters provide for precise control of the volume of cargo loaded and help eliminate events which might arise from exceeding the gross vehicle weight rating by vehicles providing transport services to LOTOS Asfalt. This mitigates the destruction of roads by overloaded vehicles.
From LOTOS Asfalt branches, bitumen is carried to end customers by specialised providers of road haulage services. Each of them meets the highest quality standards as far as environmental protection and customer service are concerned. They operate modern transport fleets that meet European standards, thus ensuring safe, economical and environmentally friendly delivery of products to their destinations. In 2011, several dozen new road tractors meeting the relevant environmental requirements were added to the company's fleet of transport vehicles. The new road tractors consume less fuel and meet the Euro4 and Euro5 exhaust emission standards, markedly reducing the environmental emissions of harmful exhaust gases. The vehicles providing international road transport services meet the requirements concerning low noise emissions, as confirmed by relevant signage. The road tankers are properly insulated, which limits the need to heat up products, thus markedly reducing environmental pollution.
Sea shipping of bitumens continued in 2011, with the handling volume at over 100 thousand tonnes per year. With a higher share of sea shipping in the total transport volume, the economies of scale make it possible to reduce harmful environmental emissions and fuel consumption per unit of shipped cargo.

LOTOS Oil does not have its own transport fleet. Goods are carried by providers of transport or forwarding services whose customer service and environmental protection standards must meet strict quality requirements, usually confirmed by the ISO 9001 certification. In piece-goods transport, the ISO 14001 certification is required. An internal control system is also in place which helps monitor and supervise the following areas related to transport services: energy consumption, emission of gases into the air, production of wastewater, production of waste, noise emissions and – potentially – leakages. The carriers must have insurance covering risks related to the distribution of all LOTOS Oil products. With respect to the identification of significant environmental aspects and procedures to be followed while transporting, loading and unloading hazardous materials, the company operates on the basis of its own internal rules. Ongoing analyses are carried out with respect to hazards generated by the company's operations involving land transport.
In line with the applicable laws, carriers have the duty to maintain appropriate records of fuel consumption and to report the emission of gases into the atmosphere as a result of providing transport services.

The transport of liquid fuels sold by **LOTOS Paliwa** has been entrusted to specialised companies: LOTOS Kolej in the case of rail transport, and external providers of haulage services in the case of road transport. Transport of fuels is subject to strict regulation under the Polish and international laws concerning transport of hazardous materials, the purpose of which is to minimise the negative environmental impact from transport. Irrespective of the legal requirements, the company has taken a number of measures in order to mitigate the environmental impact of road transport. For instance, it has developed safety requirements for delivery points, prepared safe loading, transport and unloading procedures as well as regular controls of whether these procedures are observed, put in place emergency response procedures, and started to monitor the service providers' vehicles – to check if they meet the relevant technical requirements – as well as the system of selection and training of staff employed to handle the transport operations. Rail transport of fuels is done at the customer's risk and

responsibility, whereas road transport – at the risk and responsibility of LOTOS Paliwa.
For a total number of 43,744 deliveries made in 2011, no occurrences involving leakage of fuel were identified as part of the road transport monitoring process. All costs of removal or elimination of air pollutants as a result of emissions, remedial measures, as well as environmental management and prevention connected with transport services, are borne by the service providers and are not reported by LOTOS Paliwa. Out of a total of 4,835 thousand cubic metres of fuels sold in 2011: 586 thousand cubic metres (or 12% of the total volume sold) were transported using rail tankers, and 1,164 thousand cubic metres (or 24% of the total volume sold) were transported using road tankers. The balance was collected from storage terminals by the customers' own means of transport.

2011 was another year during which the quantities of cargo transported by **LOTOS Kolej** using electric traction increased relative to Diesel traction. The motive power units were also gradually upgraded. As a result, the consumption of engine fuels was further reduced, as were the environmental emissions of exhaust gases and noise emissions by locomotives. Modern TRAXX DE locomotives have Stage IIIA compliant Diesel engines.
In 2011, about 85.5% of all transport work done by LOTOS Kolej (expressed in btkm) relied on electric locomotives. At the end of 2011, the company had 96 locomotives, including 50 electric ones and 46 Diesel ones. Modern locomotives accounted for about 35% of the company's motive power units. Thus, LOTOS Kolej operates one of the most modern locomotive fleets among Polish rail carriers.

Diesel oil consumption by Diesel locomotives of LOTOS Kolej [litres]

	2009	2010	2011
H 1	1,938	3,861	2,739
H 2	3,232	3,299	3,059
Total	5,170	7,159	5,798

Source: In-house compilation based on operational data.

The 19% reduction in the consumption of diesel fuel in 2011 relative to 2010 was due to the use of electric locomotives, as well as the gradual withdrawal from service of older types of locomotives, which were being replaced by modern ones consuming less energy. As a result, the consumption of diesel oil per one tonne of transported product has been falling.

Consumption of gasoline at LOTOS Kolej for non-traction purposes [tonnes]

	2009	2010	2011
Consumption of gasoline	8.5	7.73	3.88

Source: In-house compilation based on operational data.

In 2011, the consumption of unleaded fuel for non-traction purposes fell considerably as compared with 2010. Fuel consumed for non-traction purposes included almost entirely fuel consumed by company cars used by LOTOS Kolej staff. The reduction was a result of the gradual phasing out of unleaded gasoline-powered cars.

The 22.5% increase in the consumption of traction electricity at LOTOS Kolej in 2011 relative to 2010 is attributable to the growing scale of the company's transport operations and the growing share of work performed using electric traction in the total work.

The transport of products sold by **LOTOS Parafiny** is contracted out to specialised third-party providers, which are required to hold the relevant licences and approvals for the means of transportation to carry hazardous materials. Operators of such means of transportation must hold the required qualification certificates and licences. In most cases, insulated road and rail tankers are used to carry paraffin products. Additional technical requirements are related to weather conditions - the haulage vehicles need to be fitted with a heating system (in winter) or a cooling system (in summer).
All costs related to emissions of pollutants into the air, as well as costs of environmental management to the extent related to transport services, are borne by the service providers.

The company operates production sites in Czechowice-Dziedzice and Jasło. Products are sold directly from those sites. Transport of finished products in packaging to the warehouse, from where the products are shipped to customers, relies on forklift trucks, most of which are LPG-powered, as well as electric trucks. By phasing out older Diesel trucks, the quantity of exhaust gas emissions has been reduced. As part of measures undertaken with the aim of minimising the impact of transport on the environment, LOTOS Parafiny has developed emergency response procedures and started monitoring the vehicles to check if they meet the relevant technical requirements.

Biodiversity

The production facilities of **Grupa LOTOS** in Gdańsk occupy land with an area of 234.50 ha, for which there are effective zoning plans in place. In the zoning plans, the land has been designated for production and service facilities, as well as for accommodating depots and storage facilities. The land is of no special natural value and is not subject to any form of nature protection. However, there are areas subject to various forms of protection in the vicinity of the refinery.

Nature reserves:

- "Ptasi Raj", located on the Zatoka Gdańska coastline, at the mouth of the Wisła Śmiała, which an arm of the Vistula River. The reserve encompasses two eutrophic lakes which have gradually been overgrowing with vegetation, and lies along one of the birds' main migration routes. The reserve is located within the boundaries of the "Ujście Wisły" Special Bird Protection Area (PLB220004).
- "Mewia Łacha". The reserve encompasses an alluvial cone in the artificial Vistula River bed (Przekop Wisły), which is characterised by varied floral assemblages and serves as a breeding site for terns and a dwelling place for various species from the charadriidae and anatidae families. Also this reserve is located within the boundaries of the "Ujście Wisły" Special Bird Protection Area (PLB220004).

Landscape parks:

- Trójmiejski Park Krajobrazowy (Tricity Landscape Park) covers a part of the morainic plateau near the Tricity (the Gdańsk-Gdynia-Sopot conurbation). The park is characterised by diversified land relief, and as such it encompasses a variety of habitats and microclimates. Around 90% of its area is covered by woods.
- Park Krajobrazowy Mierzeja Wiślana. The park covers a section of the Mierzeja Wiślana bay-mouth bar from Sztutowo to Piaski, with ranges of dunes overgrown with pine forest mixed with oak and beech. All these are 19th century plantings. In 1994, the park was notified for entry in the list of Baltic Sea Protected Areas HELCOM BSPA.

Protected Landscape Areas:

- The Wyspa Sobieszewska Protected Landscape Area, encompassing also a section of the Mierzeja Wiślana bay-mouth bar. In this area we encounter a zonal system of dunal flora, and in the Vistula River mouth - rush-plants and halophyte sites. The coastline section of the Wyspa Sobieszewska Protected Landscape Area has been included in the "Ujście Wisły" bird habitat protection area (PLB 220004).
- The Żuławy Gdańskie Protected Landscape Area, covering the Vistula River mouth plain, which features a complicated washland and gravitation melioration system.

NATURA 2000 areas:

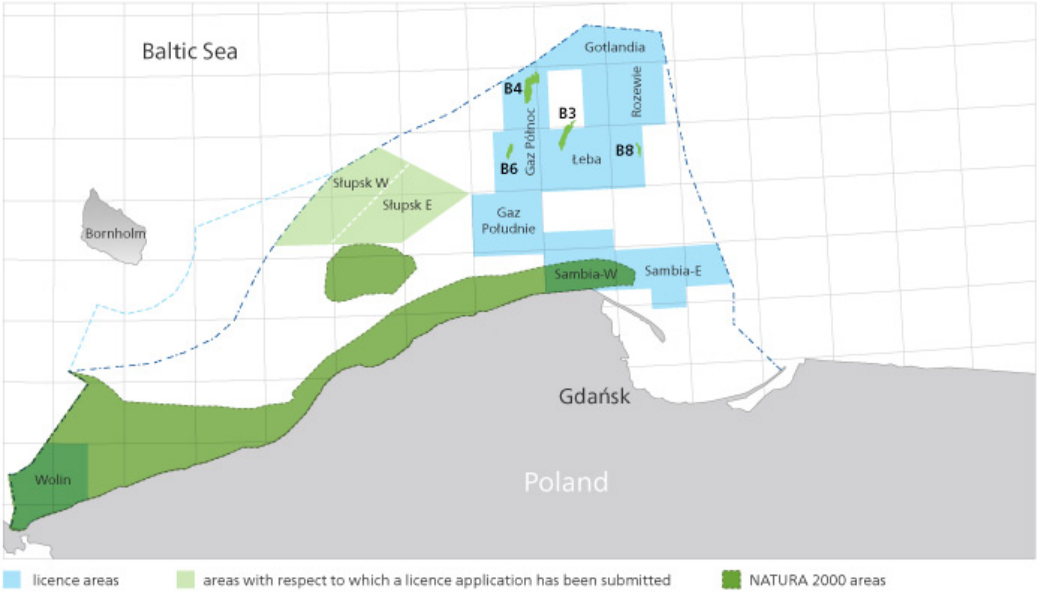
NATURA 2000 areas located closest to Grupa LOTOS' industrial facilities include:

- special bird protection areas: "Ujście Wisły" (PLB220004) and "Zatoka Pucka" (PLB220005),
- special habitats protection areas: "Twierdza Wisłoujście" (PLH220030) and "Ujście Wisły" (PLH220044).

LOTOS Petrobaltic owns two land properties. The first one with an area of 25,630 sq m accommodates the company's onshore base. The second one with an area of 24,025 sq m accommodates the gas-fired power plant in Władysławowo, operated by Energobaltic. Within Poland's offshore territory, the company currently holds seven licences to explore for and extract crude oil and natural gas.

In December 2011, LOTOS Petrobaltic filed two applications to be granted oil and gas exploration and appraisal licences covering the "Słupsk E" block with an area of 1,139.10 sq km and the "Słupsk W" block with an area of 1,021.20 sq km, concurrently requesting to be awarded mining usage rights over those areas.

General map of area of operations of LOTOS Petrobaltic.



These areas are adjacent to NATURA 2000 sites, but the operations for which licences have been requested by LOTOS Petrobaltic will have no impact on the protected areas, as clearly demonstrated in the "Environment Impact Assessment Report for the Project Consisting in Exploration for Crude Oil and Natural Gas in Baltic Sea Licence Areas A1, A2, A3, A4, and A5".
The report, prepared by the Gdańsk Submarine Geology Division of the National Geological Institute – National Research Institute, served as the basis for the environmental decision issued by the Regional Environmental Protection Directorate of Gdańsk. Currently, LOTOS Petrobaltic is awaiting a decision from the Ministry of Environment regarding its licence and mining usage rights applications.

In 2011, LOTOS Petrobaltic commenced activities aimed at developing the B8 field and prepared for performing offshore seismic surveys within the "Gaz Południe" licence area, which ultimately ended in submitting an investment project application. Currently, only one licence area ("Sambia W") is adjacent to or overlaps with coastal zones of the Baltic Sea protected under the Birds Directive.
The areas in which LOTOS Petrobaltic holds licence interest are not characterised by any considerable biodiversity, and the impact of the company's operations on these areas is negligible.

In Lithuania, some of the oil production facilities are immediately adjacent to, or lie in close vicinity of, NATURA 2000 sites. However, the National Authority for Protected Areas has not identified any negative impacts from industrial operations on the protected areas. The heat and power plant in Władysławowo is located in an industrial/port zone, on a parcel of land with an area of 24,025 sq m. This land is owned by the State Treasury and is held by Energobaltic in perpetual usufruct. It covers the topmost part of the Hel peninsula, and is located within the Nadmorski Park Krajobrazowy landscape park protection zone.

The licence areas in which LOTOS Petrobaltic has the right to conduct operations are generally situated outside the Baltic Sea Protected Areas. The only licence area located entirely within the boundaries of a protected area was the Wolin Licence, which expired in October 2011 pursuant to a decision by the Ministry of Environment.

LOTOS Asfalt' production operations are carried out at three sites, which also accommodate storage and distribution facilities. They are located on the refinery premises in Gdańsk, Jasło and Czechowice-Dziedzice.

The company also holds industrial land in perpetual usufruct or under lease agreements, whose area is approximately 234.5 ha in Gdańsk (property of Grupa LOTOS), approximately 13.4 ha in Jasło (property of LOTOS Jasło) and approximately 2 ha in Czechowice (property of LOTOS Czechowice).

There is no form of nature protection applying to land controlled by LOTOS Asfalt or to areas in its immediate vicinity. The installations held by the company in Gdańsk and in Jasło require an integrated permit, and as such should meet all the environmental requirements associated with the use of best available techniques, in particular they must not cause the relevant emission limits to be exceeded. To note, observing the emission limits implied by the use of best available techniques does not release an entity from the obligation to meet the applicable environmental standards.

LOTOS Oil has production sites located in Gdańsk, Czechowice-Dziedzice and Jasło. The company also operates a Distribution Centre in Piotrków Trybunalski. The production site in Gdańsk is located within Grupa LOTOS' premises. The land is not located within protected zones, or within areas of high biodiversity value outside protected areas.
Another production site is situated in Czechowice-Dziedzice, in Silesia Province. The land, along with the structures and installations it accommodates, is situated within the premises of a former oil refinery, built at the turn of the 19th and 20th centuries, and is not located within any protected areas.
The nearest NATURA 2000 site is the "Dolina Górnej Wisły" Upper Vistula Valley Special Bird Protection area, located about two kilometres away from the production site's location. The protected area covers the Goczałkowickie Lake, numerous fish pond clusters and forested areas. Most bird species having their habitats within the area are rare, including species listed in

the European Commission's Directive.
The third production site is located within the premises of a former oil refinery in Jasło, in the Province of Rzeszów. This land is not located within a protected area or an area of high biodiversity, either.

In the case of **LOTOS Paliwa's** business, which is conducted via a chain of service stations, an environmental impact assessment report is drafted already at the construction planning stage, in order to assess the potential impacts on adjacent areas that the planned facility would generate, with a special emphasis on protected areas and areas of high biodiversity value.
For existing stations, impacts on protected sites are analysed only if required for instance in connection with a planned upgrade, or if a major environmental accident occurs.
Currently, one station located in the immediate vicinity of protected areas has been identified from among those added to the company's chain in 2011. The inventory-taking records relating to stations included in the company's chain in 2010 show that two of those stations, not mentioned in the 2010 report, are located in close vicinity of such areas.

Features	**Service station No. 801 Police, Service station No. 802 Łęka** (both added in 2010)	**Service station No. 807 Wysoka** (added in 2011)
Geographical location	NATURA 2000 site – the "Dolina Środkowej Warty" Middle Warta River Valley Special Bird Protection Area, approximately 1 km to the east of the MOP Police Motorway Service Area; site code PLB200002.	Wysoczyzna Łaska (Łask Upland) and Kotlina Szczercowska (Szczerców Basin)
Status relative to protected area	adjacent	adjacent
Type of operations	trading	trading
Size/area of the operating unit in sq km	0.0058	0.0049
Features of protected area	ecosystem – biodiversity	freshwater ecosystem
Protection status	NATURA 2000	NATURA 2000

Based on the opinions obtained from local environmental institutions, the locations of the stations, as well as the technical solutions applied, ensure no adverse impact on protected areas.

Impact of conducted operations on biodiversity

Grupa LOTOS duly performs all its obligations resulting from the environmental protection laws, as well as product quality and labelling requirements. If used correctly, the Company's products do not generate any significant environmental impacts.

The operations conducted by **LOTOS Petrobaltic** in the Baltic Sea consist in the exploration for and extraction of crude oil from the sea floor. Exploration operations may be divided into two stages:

1. performance of seismic surveys, which show where a hydrocarbon accumulation may be located,
2. drilling a trial borehole to make a preliminary estimate of the size of a deposit (the reserves).

Seismic surveys consist in generating acoustic waves, which also affect the sea fauna. The influence is not significant, but before any such survey may be carried out, an Environmental Impact Assessment Report needs to be prepared. The report, along with an application for approval of specific work, is submitted to the Regional Directorate of Environmental Protection, which, having procured an opinion on the report and the application from the Marine Supervision Authority (Urząd Morski), issues an Environmental Decision, in which it specifies the requirements which must be met when conducting the planned work. The second stage of work that must be done before production from a field can be launched, is drilling a trial borehole. Although the oil deposits beneath the Baltic Sea floor are low pressure reservoirs, the possibility of an eruption during appraisal work must be taken into account. Therefore, all the best practice and best technology solutions are employed to prevent an eruption.
The main output of the production process is crude oil, but also some natural gas is produced, with an admixture of small quantities of various types of other hydrocarbons. The gas is sent via a transmission pipeline to Energobaltic, where it is used to generate electricity.

Given the fact that the licence areas in which LOTOS Petrobaltic operates are located in zones characterised by limited biodiversity, the impact from the company's operations in those waters is marginal or close to none. If used correctly, the products of **AB LOTOS Geonafta** do not generate any significant environmental impacts, either.

The premises occupied by **Energobaltic** are controlled by a processes and emissions monitoring system, which helps to minimise the environmental impact from the company's installations. In 2011, analyses were carried out of flue gas emissions and underground water quality with respect to compliance with the applicable standards. The analyses were performed by laboratories and measurement teams accredited by the Polish Centre for Accreditation. The flue gases emitted by the CHP plant meet all the emission standards, both those laid down in the environmental laws, and those specified in the permit to release gases and dust into the air issued by the Puck County Governor's Office (Starostwo Powiatowe w Pucku). An investigation made with regard to the monitoring of near-surface waters within the CHP plant's premises has proven that there are no sources of pollution with petroleum related substances.

LOTOS Exploration & Production Norge holds a 20% interest in Yme Development, of which Talisman Energy of Norway is the operator. The company regularly reports the scale and nature of its environmental impact to the Norwegian authorities.

Production platform on the YME field

YME Development takes measures the purpose of which is to minimise the environmental impact of the company's operations. The drilling work completed in 2012 did not result in any oil spills.

The platform operations on the YME field entail air emissions and generation of waste, which is transported to the shore. In this respect, the company operates in compliance with the relevant permit it has obtained.

The environmental report prepared for the Norwegian authorities confirms that the operations of YME Development are conducted in compliance with the environmental standards and pose no risk to the biodiversity of the North Sea.

The operations conducted by **LOTOS Asfalt** do not have any significant impact on the biodiversity of protected areas or areas of high biodiversity value outside protected areas. The emissions released into all parts of the environment meet the applicable legal requirements, as well as the BAT requirements for the refining industry. No environmental quality standards or emission standards are exceeded due to the operation of the company's installations. Energy, water, raw materials and fuels are used in a rational and efficient manner.

No environmental quality standards are breached in any of the neighbouring areas due to the impact from the installations. The plant operation, even at its maximum capacity, should not result in any deterioration of the parameters recorded to date. The launch of new or modernised installations has improved the local acoustic climate on the plant premises. The air sealing of loading terminals has eliminated fugitive emissions accompanying shipment of bitumens at road and rail tanker loading stations, and has limited emissions of malodorous substances which, until recently, were generated during shipment and storage of the products.

LOTOS Paliwa conducts fuel trading operations through its service stations, which are classified as facilities having no significant impact on the environment. Harmful emissions are limited thanks to air sealing of the processes of fuel reception and dispensing, as well as rainwater and meltwater treatment, which ultimately guarantees that the stations do not interfere with the natural environment.

Any possible negative impacts on wildlife of protected areas is neutralised by retaining a protective belt immediately adjacent to a wildlife protection site (selected individually for a given form of wildlife protection), as a safeguard against any potential threats which might stem from the company's operations.

Reclaimed habitats

In 2011, no events were recorded at **LOTOS Paliwa** which in consequence would require any reclamation work to be carried out. LOTOS service stations are designed, constructed and operated using the best technical, technological and organizational solutions, based on the assumption that environmental standards must be complied with both along the project site borders and beyond.

With respect to registered sites adjacent to protected areas, additional security measures are applied in the form of monitoring of underground waters, more frequent analyses of wastewater discharged into the environment, or extra restrictions applied by authorities with respect to volumes of emissions into the environment.

As in the case of other LOTOS Group companies engaged in the trading business, no need to carry out any protection or reclamation projects was identified at LOTOS Paliwa in 2011. Such a project is being implemented though as part of the Corporate Social Responsibility Strategy of the LOTOS Group.

In line with its CSR strategy, the **LOTOS Group** supports environmental efforts, i.e. all activities connected with the structure

and processes of nature. One of the examples of the company's involvement in reclamation efforts concerning the Baltic Sea is its cooperation with the Gdańsk University Development Foundation and the Marine Station of the Gdańsk University Oceanography Institute in Hel. The joint efforts, which have already continued for three years, were undertaken to prevent the extinction of endangered marine species, notably the harbour porpoise. Apart from these efforts, the partnership paved the way for further projects which aim to promote knowledge on the Baltic Sea biodiversity and provide information on how the endangered species can be protected. In previous years, the Company provided funds to finance the purchase of equipment (hydroacoustic detectors and fishing pots) that helps protect harbour porpoises against by-catch.

The cooperation with our partners brought results in the form of various educational and information campaigns carried out in 2011. A series of exhibitions were organized, devoted to the Baltic Sea fauna and flora, entitled "Okiem Mewy" ("The Seagull's View").

Just like in previous years, an information and education campaign entitled "Natura pod kilem" ("Nature under the Keel") was organized on the ships of the Gdańsk tourist fleet to promote the protection of NATURA 2000 sites and encourage Poles to contribute to developing plans aimed to protect those sites. During the campaign, over 240 thousand passengers travelled on ships of the Gdańsk tourist fleet.

A promotion and information campaign was also organized on the trójmiasto.pl website, the purpose of which was to draw attention to the problem of effective protection of animals in the light of the international obligations that Poland must implement as a signatory of various conventions and agreements, and as a member of the European Union.

A number of other actions were undertaken in 2011 in cooperation with the partners named above for the purpose of reaching the circles and persons who can influence the manner of the Baltic Sea exploitation and of changing their current attitudes.

Managing impact on biodiversity

The Biodiversity Convention of 1992 states that the greatest human-generated threats to biodiversity include:

1. destroying flora and fauna habitats,
2. climatic changes the speed of which is such that certain species find it impossible to adjust themselves to the changing living conditions,
3. introducing other species originating from other geographical regions, which results in displacement of local species.

The operations of **LOTOS Petrobaltic** do not pose any threat to biodiversity in the areas where they are conducted, because they involve none of the elements enumerated above. The company's licence areas are situated outside the NATURA 2000 sites, currently called Baltic Sea Protected Areas. As the animal and plant life in the areas where LOTOS Petrobaltic conducts its activities is very poor, the impact from the company's operations on the ecological system and biodiversity of the areas is practically non-existent. LOTOS Petrobaltic does not transfer any unwanted living organisms from other geographical and climatic regions, which could endanger the species native to the Baltic Sea.

It is important to note that as part of any strategic planning concerning new installations and technologies, e.g. ones which are to be used to produce oil from the B8 field, or gas from the B4 and B6 fields, the environmental aspects and legal requirements pertaining to environmental protection are the crucial elements of project viability studies.

One of the most important objectives for the company regarding its operations in the Baltic Sea is to implement the best available solutions with respect to environmental protection, thus supporting the full biodiversity of the Baltic Sea. LOTOS Petrobaltic is working towards completion of its projects aimed to implement the Baltic Sea Action Plan, which stipulates zero discharge from offshore platforms.

The company has entered into negotiations with a Polish company which prepares muds for drilling operations. LOTOS Petrobaltic wants to phase out the harmful red chemicals, which, when confined to a closed system, are not in any contact with the environment. At the same time, the company wants to meet the requirements of the Baltic Sea Action Plan and substitute the red chemicals with green ones, which cause no harm to the marine environment, being friendly to both its flora and fauna.

Concurrently, it is assumed that all waste, including greywater and industrial waste, generated by offshore drilling rig and production platform operations, is to be transported to the shore. In 2011, an installation was constructed on the B3 field the purpose of which is to inject formation water back into the formation. As far as the environmental aspects are concerned, one of the priorities for 2012 relates to the continued implementation of the Baltic Sea Action Plan, both through technological and systemic solutions.

LOTOS Petrobaltic will also seek to meet the latest requirements and standards imposed by HELCOM with respect to treatment of sanitary sewage on its platforms. The company wants to conduct its operations based on the best available technologies and best practice concerning extraction of hydrocarbons from offshore reservoirs, in order to mitigate its impact on the Baltic Sea's biodiversity.

Impact of LOTOS Petrobaltic's operations on biodiversity		**Environmental actions undertaken in line with the Baltic Sea Action Plan (BSAP)**	
Destruction of wildlife and plant	**Negligible impact**	Formation and oily water re-injection	**Positive impact**

habitats			
Climate change	**No impact**	Technological and systemic solutions concerning cuttings generated in the drilling process	**Positive impact**
Climate change	**No impact**	Transfer of all waste from offshore platforms to the shore	**Positive impact**

LOTOS Paliwa is involved in activities the purpose of which is to investigate biodiversity-related hazards posed by its existing filling stations. They include an assessment of the existing facilities' locations relative to identified protected areas and areas of high biodiversity value outside protected areas, made on the basis of the existing environmental impact assessment reports for such facilities with a view to meeting the effective laws and requirements.

The activities of **LOTOS Oil** focusing on biodiversity-related issues relate to three aspects: product characteristics, product manufacturing and product functionalities.

The company's products are designed based on production inputs such as oil bases and additives, and are marketed in labelled packaging. All production inputs are classified as chemical substances or mixtures, and as such are subject to the registration, evaluation, authorisation and restriction of chemicals (Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)). Among other things, the REACH regulation requires that such substances be evaluated from the point of view of their effect on reproduction of living organisms. At present, the REACH registration requirements do not apply to components used for the production of lubricants (lubricant soaps). For these substances, the obligatory registration date is 2013. The company has been taking steps in order to collect materials necessary for their registration.

Products marketed by LOTOS Oil undergo the process of natural ageing, and therefore must be replaced with new ones. Dealing with used oils is regulated by the environmental laws, which require that some proportion of marketed products be collected back and utilised in a manner that is not arduous to the environment. The company has therefore entered into relevant agreements with providers of recovery and recycling services.

Some of the oil products are biodegradable, i.e. if used correctly for the purpose for which they are intended, they enter the environment and become decomposed into components which cause no harm to the environment. The company is planning to launch such products. Plasticizers meeting the REACH requirements and intended for the rubber industry, whose production was launched in previous years, will continue to be developed. The products are characterised by a low (legally defined) content of polycyclic aromatic hydrocarbons.

Some of the products which the company wants to introduce will be produced by new installations, the designing and operation of which is subject to the currently applicable laws, which take into account the environmental aspects.

The products planned to be launched are designed with a particular focus on those functional characteristics which would enable them to be used in solutions designed to reduce negative environmental impacts. These are, for instance, products for wind farms and engines fuelled with landfill gas or natural gas, or motor oils intended for low-emission engines meeting the Euro5 standards. The company has also been considering the launch of production of biodegradable form oils for the construction industry. Demand for these products depends to a large extent on legal regulations which are in effect.

In accordance with its existing environmental management system (ISO 14001), **LOTOS Asfalt** has set certain goals as far as the environmental aspects of its operations are concerned. The goals include:

- reduction of emissions of bitumen fumes generated during dispatch of products from the Gdańsk facility, which has the largest capacity and actually load the highest volumes of bitumen into vehicles,
- reduction of emissions of bitumen fumes generated during storage of products at the Gdańsk facility, which has the largest throughput and the largest storage base for bitumen products.

These goals were set in 2010 and still apply. All the investment work with respect to the first of the goals was scheduled for completion in 2012, while the modernisation work concerning the tank park was scheduled to be finished by the end of 2013.

An environmental management programme was developed at the company, which comprises investment, organizational and training activities the purpose of which is to reduce any significant, identified environmental impacts, taking into account their technical and economic viability.

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