

# Eco-friendly growth

We have taken a strategic approach to minimizing our environmental impacts, which is why the Grupa LOTOS refinery, our major plant, is now one of the most environmentally friendly refineries in Europe. We believe that reducing negative environmental impacts brings benefits to Grupa LOTOS, and thus to its shareholders. In this way, we create additional value for our other stakeholders, who support us as partners in pro-environmental activities.

One of the key objectives of our CSR strategy for 2012–2015 was to reduce the environmental risk and seek to continually minimize the environmental impact of the LOTOS Group's operations.

Four operational goals have been assigned to this objective:

- Promote environmental standards and best practices across the LOTOS Group;
- Monitor the environmental footprint of the LOTOS Group's infrastructure beyond mandatory obligations;
- Reduce the contamination level in the streams of treated wastewater and discharged water;
- Improve the ERM Portal supporting environmental risk management.

Environmental matters are also addressed in the LOTOS Group's Code of Ethics. The recommended approach is put into practice by:

- Adhering to internal procedures intended to ensure conformity of our processes with the requirements imposed by applicable environmental laws;
- Implementing solutions designed to mitigate the LOTOS Group's environmental impacts;
- Engaging in educational initiatives to raise environmental awareness within the organization and in a wider social environment;
- Care for the environment in and outside of the workplace.

The business activity of the LOTOS Group may involve significant environmental impacts resulting from emissions of pollutants into the air, generation of waste, use of water and discharge of wastewater. The scale and nature of our environmental impacts are regulated under the environmental protection laws. In connection with their activities, companies of the LOTOS Group hold a number of permits, including integrated permits, which govern the operational and environmental aspects of the LOTOS Group's installations.

The most critical source of environmental impact caused by our plants, both for the installations' immediate environment and areas located further away, are gas emissions. Therefore, we are most concerned to ensure that the processes involving gas emissions are based on Best Available Techniques and best practices reducing the plants' impact in that respect.

Accordingly, when selecting and implementing innovative solutions, we always seek synergies between the needs of the company and benefits to the environment, and especially to the natural world.

## Total environmental protection expenditures and investments

Waste disposal, emissions treatment, and remediation costs (PLN thousand)	33,523
Prevention and environmental management costs (PLN thousand)	84,839
Eco-friendly projects (PLN thousand)	72,211

The EFRA Project is not only a breakthrough initiative for Grupa LOTOS in terms of efficiency and competitiveness, but it also limits our environmental footprint.

When implementing the project, we decided to apply solutions that go beyond environmental protection regulations and BAT requirements:

- In the Delayed Coking Unit, before opening the DCU reactor, the water pressure will be reduced more than it is normally done, in order to achieve a maximum withdrawal of gaseous hydrocarbons still before the coke cutting and removal processes;
- All the processes related to coke unloading, transfer, storage, loading and transport out of the refinery will be carried out using a system that ensures above-standard environmental safety.

### [EFRA Project](#)

### Best practice:



**THE GLOBAL GOALS**  
For Sustainable Development



### Key projects and initiatives to minimize the environmental impact

- In 2015, the LOTOS Group became the Major Partner of the Baltic Programme, carried out by UN Global Compact in Poland. The Baltic Programme is aimed at developing optimised sustainable development directions in the Baltic Sea region by supporting the expansion of sea transport corridors and transport in the region, paying special attention to improved transport security and infrastructure, increased competitive advantage of the Baltic Sea region, and also to protecting its ecosystem. The environmental protection of the Baltic Sea, including prevention of the eutrophication process, were considered one of the key priorities of the Baltic Programme.
- In pursuance of the objective of reducing the environmental risk and seeking to continually minimize the environmental impact of the LOTOS Group's operations, in 2012–2015 we carried out a large-area wildlife survey in the vicinity of the refinery in Gdańsk, and revised the environmental documentation of our service stations across Poland. We organized environmental experts' meetings to discuss best practices in environmental protection and important protective activities.
- LOTOS Kolej received modern rolling stock, which eliminated leakage of lubricating oils. In 2015, we eliminated the process of gas removal from LPG tanks on the LOTOS Kolej's site in Gdańsk. The process was relocated to a Grupa LOTOS unit, where gas is recovered by sending to the fuel gas system.

- LOTOS Asphalt reduced production costs through the introduction of efficient energy management and feedstock optimization. Its products are manufactured with due care for the environment and transported using eco-friendly means. The company promotes tractors that comply with the highest emission standard (minimum Euro 5), reducing nitrogen oxides (NOx), hydrocarbons (HC), carbon oxides (CO) and particulate matter (PM) emissions. Transport is preferably arranged on safe, fast-traffic express roads and motorways, with non-collision crossroads, which leads to mitigation of social consequences of road accidents.
- Polskie Centrum Badań i Certyfikacji, a Polish certification body, awarded LOTOS Serwis the Integrated Management System Certificate, which covers maintenance activities, overhauls and upgrades, industrial plant construction and commissioning. The certificate also extends to works carried out on the oil and gas production installations.
- In order to minimize the risk of environmental disasters, LOTOS Petrobaltic has put in place procedures based on international regulations, and regularly conducts emergency spill response training in the sea. It is organized in cooperation with the Maritime Search and Rescue Service (SAR) and the Maritime Office in Gdynia.
- Our employees' engagement in numerous ecological initiatives testifies to the importance they attach to environmental protection. For instance, LOTOS Asphalt, partner of the 'Tree for a Tyre' campaign organized a collection of worn-out tyres in a facility of Grupa LOTOS in the Gdańsk Province. Within just a few hours, employees from our Gdańsk-based companies brought as many as 300 tyres, receiving 300 guelder-rose, bird cherries, dogwood, fir and spindle seedlings in exchange.
- During the conference 'TIME OF INNOVATION. OIL AND CHEMICAL INDUSTRIES 2015, Grupa LOTOS received an award for the development and implementation of a technology that prevents water in the storage reservoir serving as a source of water for the refinery from turning green with algae. With the new technology, the total amount of water abstracted from the environment was reduced by approximately 6%, despite increased volumes of oil processed. This innovative solution is a source of technological benefits (no problems with water treatment), economic benefits (stable production cost) and environmental benefits (improved water quality).