

ENVIRONMENTAL ASPECT – ENVIRONMENTAL STEWARDSHIP

Rusagro Group's production activities have an impact on various components of the environment. Following Russian legal requirements, industry best practices, and a continuous search for ways to enhance production methods, the Company takes steps to lessen its adverse environmental impact.



Main objectives



To save all types of resources



To reduce waste generation, discharges and emissions



To reuse raw materials and supplies



To shift to a closed-loop economy

Key principles



Principle of compliance with legal and regulatory requirements and standards



Principle of consistency in addressing environmental security



Principle of preventing adverse effects on people and the environment



Principle of full disclosure on environmental protection and environmental safety activities

Management structure and environmental protection regulations

Environmental management runs through all levels of the Company. Operations management lies within the purview of environmental specialists who are supervised by middle managers and site directors.

At certain production facilities, senior management's key performance indicators (KPIs) take into account how well environmental protection efforts are working in relation to the statutory compliance by minimising the amount of possible financial penalties.

KPIs are also set for Rusagro Group's individual employees: for example, for environmental specialists in relation to the amount of resources used and waste generated, the number of violations and relevant corrective actions.

The environmental objectives are realised through the business development strategy. The Oil and Fats Business has the Environmental Policy in place as a collection of best practice examples. Detailed requirements for environmental management are contained in the Company's by-laws such as regulations, instructions and plans.

Environmental compliance controls

Regular industrial environmental control is an essential element of the environmental management system. The results of internal checks are used to draw up corrective action plans, with the appointment of responsible persons.

Contractors are also subject to the environmental compliance control. For this purpose, the Company's business segments developed the regulations on tender procedures and the regulations on safe works performance by contractors at the customer's site.

At certain Rusagro Group's enterprises, the environmental management system also includes internal environmental audits as an additional tool for verifying the environmental compliance and for assessing the current state of the management system.

Environmental training and development of employees

Rusagro seeks to continuously improve the skills of its environmental protection team by giving them the field-specific training related to certain environmental aspects. Employees of the Company's environmental services also regularly participate in professional community meetings, round tables and conferences to exchange experience and to shape agenda on current environmental issues.

In order to develop the environmental safety competencies of other employees, the Company organises relevant training events, in particular, training in hazardous waste management programmes. To promote the culture of careful attitude to resources and to prevent the environment pollution, Rusagro Group conducts special campaigns, including waste paper collection, waste collection and cleaning of the grounds.

Consideration of environmental risks at the design stage of facilities

The standard for capital construction investment projects in the Meat Business covers environmental requirements not only for construction companies, but also for the originators of design documentation, and stipulates that all stages of any project are to be witnessed by an environmental protection specialist. This practice ensures that the design documentation is reviewed in a timely manner in order to incorporate necessary environmental requirements and appropriate amendments, thus avoiding the risk of environmental violations in the future.

Environmental risk management

Environmental risk management builds on a regular review of production processes and related environmental aspects carried out by Rusagro Group's environmental staff on a monthly basis. The relevant action plan is prepared for risk management and delivered through industrial environmental control programmes.



Sustainable agriculture

Rusagro Group recognises the responsibility and importance of its contribution to food security, quality and availability.

The Company's agricultural activities are governed by adaptive landscape farming projects based on science-based principles, stipulating agrolandscape stability and soil fertility recovery achieved through planning optimal quantity and quality of agricultural products, taking into account the existing environmental and economic factors of the region, market demand, as well as available natural and production resources.

Digital tools for monitoring plant health



The Company's initiative for computer-aided monitoring of plant health and growth involves the use of Cropio, a digital service for remote monitoring of farming lands, which allows for operational satellite monitoring of crop area condition, observation of plants growing and accumulation of analytical data on changes in the condition of fields for further forecasting and planning of agricultural operations

The key methods used by the sustainable agriculture

- 1 Multi-cropping in the crop rotation system
- 2 Use of cover (green manure) crops
- 3 Mulching of the soil surface
- 4 Application of mineral and organomineral fertilisers, Satellite monitoring of the crops condition

Soil conservation

Land resources are one of Rusagro Group's most important assets. Farming is a factor that affects soil and land resources the most, especially in terms of physical stress to soils and landscapes, soil fertility and chemical and biological impact. The impact on soils from the operations of Rusagro's other business segments mainly relates to the operation

of equipment and machinery, construction works on production sites, and area contamination with waste generated before the Company acquired the said areas.

Rusagro Group's focus areas pertaining to soil conservation

Control over compliance with soil conservation regulations and regular monitoring of soil conditions at facility boundaries to assess the potential spread of pollution

Development of plans and instructions for conducting activities in compliance with soil protection regulations, including certain technical regulations for fertiliser use

Development of reclamation programmes for disturbed lands, stipulating timeframes and necessary resources, in case of land contamination

Application of sustainable agriculture methods

Prevention of soil pollution and disturbance

Fertility project

The aim of Rusagro's Fertility Project is to maintain and improve soil fertility. The project provides for variable-rate application of mineral and organic fertilisers and also involves seeding perennial legume grasses in selected fields for two to three years to let the soil rest

Soil protection in using manure-based fertilisers

In order to improve soil quality, Rusagro uses organic manure-based fertiliser, but in case of violation of process operations, there may be a negative impact on the environment. To drive out soil pollution risks, there are process-related regulations, which set out the necessary environmental safety measures. Wash-out of manure is prevented by relevant preparatory and preventive measures, and ammonia emissions into the atmosphere are minimised through a closed manure application method

Depollution of soils

Long-standing soil pollutions with fuel oil and sulphur at the sugar plants predates the acquisition of the assets by the Company. Depollution of soils includes a thorough survey of the grounds and subsequent reclamation of the contaminated sections

Contribution to climate change

Boiler houses, which run the heat and power generation facilities and heat the production buildings, are one of Rusagro Group's primary sources of air pollution emissions, such as greenhouse gases (GHG), nitrogen and sulphur oxides. As for the Agriculture, Sugar and Oil & Fats segments, a significant volume of emissions comes from dust emissions generated during grain harvesting and sugar beet and sunflower seeds processing, whereas in the Meat Business, emissions are mainly represented by volatile organic compounds such as methane, carbon dioxide and ammonia.

Approach to managing climate impacts and air emissions

The management of emissions and climate impacts encompasses a number of important process-related and organisational aspects of the production, such as energy resources and energy efficiency management system, emissions and effluents treatment methods, which are all connected with the impacts on air quality and the climatic conditions. Work is also underway to align the calculation methodology of GHG emissions with global best practices.

Below are the key initiatives towards the reduction of atmospheric emissions

Streamlining processes and upgrading production equipment

Conducting regular industrial environmental control

Improving the efficiency of gas-cleaning and dust-removal equipment

Obtaining an integrated environmental permit (IEP) for Tambovsky Bacon LLC



Throughout 2024, the slaughterhouse in the Tambov Region and the meat processing plant in Belgorod Region owned by Tambovsky Bacon LLC, part of Rusagro, completely revised and edited all environmental documentation regulating the environmental impact of the facilities, while also monitoring the environmental compliance. These efforts made the production facilities more environmentally friendly and allowed avoiding multiple increases in pollution fees due to the introduction of multiplying factors at the beginning of 2025 for non-IEP plants

Comprehensive emission abatement measures



The problem of reducing air emissions at meat processing plants is approached in a holistic way, for example, manure removal processes employ compounds that can reduce the content of ammonia, hydrogen sulphide and methylmercaptan in emissions. Pig farms keep on improving their microclimate and climate control systems, and new facilities are built using energy-saving technology

Emission treatment system of the molasses desugarisation facility at Chernyansky sugar plant



The molasses desugarisation process involves the emission of pollutants, such as ammonia. Since 2021, Chernyansky sugar plant has been using a specialised treatment system to reduce these emissions. In 2021, the design efficiency of ammonia removal was at least 90%, as confirmed by measurements by an independent laboratory

Energy management and energy efficiency

As Rusagro Group's assets are mainly represented by industrial facilities, they consume significant amounts of energy resources, with the Sugar Business being the largest consumer, and the Agriculture Business – the smallest one.

Energy management system

Rusagro Group's business segments have standards in place to ensure that the activities are carried out in line with the energy management system requirements. They also draw up and regularly review energy strategies that set targets for energy management.

Measures to reduce energy usage and improve energy efficiency fall under the following focus areas:

- Accounting, metering of energy consumption and control over technological processes, including through means of automation
- Replacement of energy-intensive equipment with energy-saving one and transition to in-house power generation
- Repair and regular maintenance of equipment to improve energy efficiency

Impacts on water resources

Surface and ground water bodies are mainly exposed during water withdrawal and effluents discharge.

Approach to managing impacts on water resources

Rusagro Group works towards smaller exposure of water bodies and makes each and every efforts to reduce withdrawals from water bodies and improve the quality of effluents discharged.

Measures to improve the efficiency of resource consumption cover the following focus areas:

- Introduction of water recycling and reuse systems, including reuse of treated effluents
- Automation of water consumption processes to control the withdrawals, consume water exactly as needed and identify and repair leaks in a timely manner
- Controls and monitoring of water consumption, identification of water misuse

Enterprises in the Oil and Fats Business, as well as the Sugar Business discharge effluents into surface water bodies. The Sugar Business stopped using two discharge points as a result of the reduced water consumption. In the Meat and Agriculture segments, effluents are only discharged to public utility service systems.

Measures to improve the quality of effluents cover the following focus areas

- Introduction of a system for recording and analysing incoming information on effluents quality
- Quality inspection of artesian groundwater
- Construction of new and update of existing local treatment facilities at production sites

Construction of a complex of wastewater treatment facilities at the production site of Molochnye Produkty Rusagro LLC

The existing wastewater treatment facilities were commissioned in 1972 and could not be used any longer. In order to ensure wastewater treatment, a new modern wastewater treatment plant with a physical and chemical purification unit is to be built in Koshki village.

In 2024, the design of construction of treatment facilities, expert examination of design documentation and installation of two underground grease traps are completed

Impact on water resources

Managing the risk of non-compliance with effluents quality standards

The Oil and Fats Business runs the pre-project inspections of industrial and domestic wastewater collection and treatment systems with the purpose to evaluate the actual condition and operating characteristics of the effluents treatment facilities and assess their real performance. The results gained are used to tailor optimal technical solutions for the elimination of the existing shortcomings

Construction of local treatment facilities at the production site of Rusagro-Saratov LLC

Commenced in 2024, the construction of local treatment facilities will ensure that wastewater is treated to the prescribed levels in order to reduce the fees for exceeding established limits paid to the wastewater disposal organisation.

The design of construction of treatment facilities and expert examination of design documentation were completed in the reporting period

Upgrade of local treatment facilities at the production site of Zhirovoy Kombinat JSC

Commenced in 2024, the upgrade of local treatment facilities at the production site in Ekaterinburg will ensure wastewater treatment in order to reduce fees paid to the wastewater disposal organisation by meeting the wastewater composition requirements.

The design stage of the upgrade was completed in the reporting period

Waste management

For Rusagro Group, waste management is an important environmental factor. The key issue here is not the type of waste (the bulk of which falls within non-hazardous IV and V classes) but the amount of such waste (which proved to be rather significant due to specific nature of production processes). For example, the Agricultural Business's facilities generate a large volume of husk from sunflower seeds, while the sugar plants produce lime defecate, which is a by-product of beet juice treatment. Hazardous waste mainly includes mercury lamps, lead batteries and waste oil products, which are handed over to specialised contractors for further disposal.

Approach to waste management

The aims of the Company's waste management efforts are to minimise waste generation, align the production activities with waste management regulations, and to be in constant search for alternative uses of waste and reuse of materials and raw materials generated during such activities.

The waste management efforts cover the following focus areas:

- Reuse of waste and application of the principles of the closed-loop economy in waste management
- Waste generation and movement recording and waste management enforcement

To promote the rational use of recyclable materials and waste management, the Oil and Fats Business has been introducing a unified waste management system at its production sites: one contractor covers collection, transportation and treatment of hazardous waste, while the other one deals with the entire cycle of collection, preparation and disposal of recyclable waste. The Meat Business screened the recyclables market and identified the most demanded types of waste, as well as purchased new containers for waste separate collection. The Agriculture Business started collecting plastic packaging and waste paper at all its sites and appointed employees responsible for this process.

Improving the waste management system


Returning sugar beet washing sludge to economic turnover


As a result of the development of a new technology for the production of nutrient-rich soil based on the sludge formed after washing sugar beet roots, the Sugar Business registered the Sila Chernozemya brand of nutrient-rich soil, which is used for growing ornamental and agricultural crops, forming a fertile layer and improving soil structure. The technology reduces sugar plant waste, has environmental benefits and can be easily adopted in agricultural production across the country.

Externally acknowledged as promising, this technology will allow millions of tonnes of nutrient-rich soil to be returned every year to economic turnover across the federal sugar industry

Salvaging of industrial by-products


Rusagro has a widespread practice of by-products recycling, which gains additional benefits and minimises the negative environmental impact.


For example, the Company sells lecithin from the oil refining process to the food and pharmaceutical industries. 

Lime defecate from the beet juice refining process is used as an organomineral fertiliser for soil acidification. Defecate was certified as a fertiliser and excluded from the total amount of waste generated, resulting in a reduction of waste generation in the Sugar Business 

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Leveraging the best available technologies

New pig farms in Tambov Region rolled out a technology of manure separation into solid and liquid fractions, which accelerated the organic fertiliser maturation process and allowed to register it as certified fertilisers under Fitovit-1, Fitovit-2 and Fitovit-3 brands. Thus, pig manure was excluded from the total amount of waste in 2021, resulting in a 2.5 times drop in the volume of waste directed to landfilling