

# A M E R O P A

A comprehensive overview of all AMEROPA  
activities in Romania for the year 2016

*“Sustainable development is development  
that meets the needs of the present  
without compromising the ability of future  
generations to meet their own needs.”*

*Brundtland Commission*

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ABOUT THIS REPORT

A year ago we issued our first sustainability report. It was an expression of our efforts to address key environmental, economic and social issues and defined our goals in these areas. They are – in essence – threefold: we want our employees to be satisfied with and motivated in their job; we want our companies to comply with all relevant local, national and international laws and regulations, and to be safe and healthy to work in; and we want our business to contribute over the long term to feeding the world.

This second report details our performance and measures it against the goals we set last year.

It provides a voluntary overview of the non-financial information of Ameropa Romania to company management, board members and financial institutions, as required by Directive 2014/95/EU of the European Parliament and of the Council of 22 October 2014 amending Directive2013/34/EU as it pertains to the disclosure of nonfinancial and diversity information by certain large undertakings and groups.





CEO STATEMENT

Ameropa AG is a family owned business founded in 1948 and is now in its fourth generation. Being family owned it is characterized by long-term thinking. As such, sustainability has always been a core concern to us.

When we acquired Azomures in Romania, we knew that we had to invest in the existing plant to ensure it could operate according to the European Union (EU) environmental standards and in an economically sustainable way. Since 2012 our capital expenditures in Azomures totaled about EUR 360 million. In parallel with this endeavor, we have continued to improve the economic and social components of our business operations as this report will show.

We do not view sustainability as a box-ticking exercise. We have carefully chosen issues of particular concern to us, like changing the way of thinking of both our employees and contractors in all our premises regarding safety, reducing the impact of our emissions on the environment by investing in best technology available on the market and promoting a better use of fertilizers. These goals are realistic, have medium to long-term consequences in the communities where we conduct our activity and are backed by our full dedication.

As part of the global agricultural supply chain we contribute to feeding the world. It is a task we take pride in and which our three companies in Romania are accomplishing admirably.

The time has come to improve the methods of modern agriculture with respect to the environment and related factors without compromising the future of food security. We believe that by becoming a net contributor to the shaping of the Romanian agriculture we shall achieve this. We are committed to advancing this effort in whatever ways we can.

Jan Kadanik  
CEO Ameropa Group



OUR VALUES

We adhere, like all companies of the Ameropa Group, to the principles of the United Nations Global Compact (UNCG). In Romania, we are also required to follow the legal provisions of European Union Directive 2014/95/EU.

The following set of values reflects who we are and how we behave. They guide us in our daily actions toward our colleagues, customers, suppliers and other stakeholders.



ENTREPRENEURSHIP

We challenge ourselves to be entrepreneurs. We cultivate an open and rewarding environment where people are empowered to take decisions and build their own future. We provide highly professional services that differentiate us and contribute to the success of our partners and customers.

INTEGRITY

We honor our contracts and commitments at all times. We pride ourselves on being a reliable partner with a long-term outlook. We respect and carefully balance the economic, ecological, social and ethical needs of our stakeholders inside and outside of the company.

FAMILY

We are a family-owned business that values personal relationships and generational continuity. We respect traditions while being open to new ideas. We encourage our employees to think creatively, have fun on the job and use their talents to make a difference.





ABOUT US

The Ameropa Group is part of the agricultural supply chain whose task is to feed the world.

Founded in Switzerland in 1948 and privately owned, the agricultural commodities Ameropa focuses on are grains and fertilizer. We buy grains and oilseeds where they are grown and transport them to where they are needed. We help to grow these grains and oilseeds by producing, trading and distributing fertilizers.

Our investments in Romania since 2008 reflect these functions and consist of three independent companies: the fertilizer plant Azomures, which is the leading producer and supplier of nitrogen and complex fertilizers to farmers and distributors in Romania;

Ameropa Grains, which distributes some of these fertilizers to Romanian farmers and purchases, stores and transports their grain crops in turn; and Chimpex, which operates a port terminal for grains and fertilizers in Constanta.

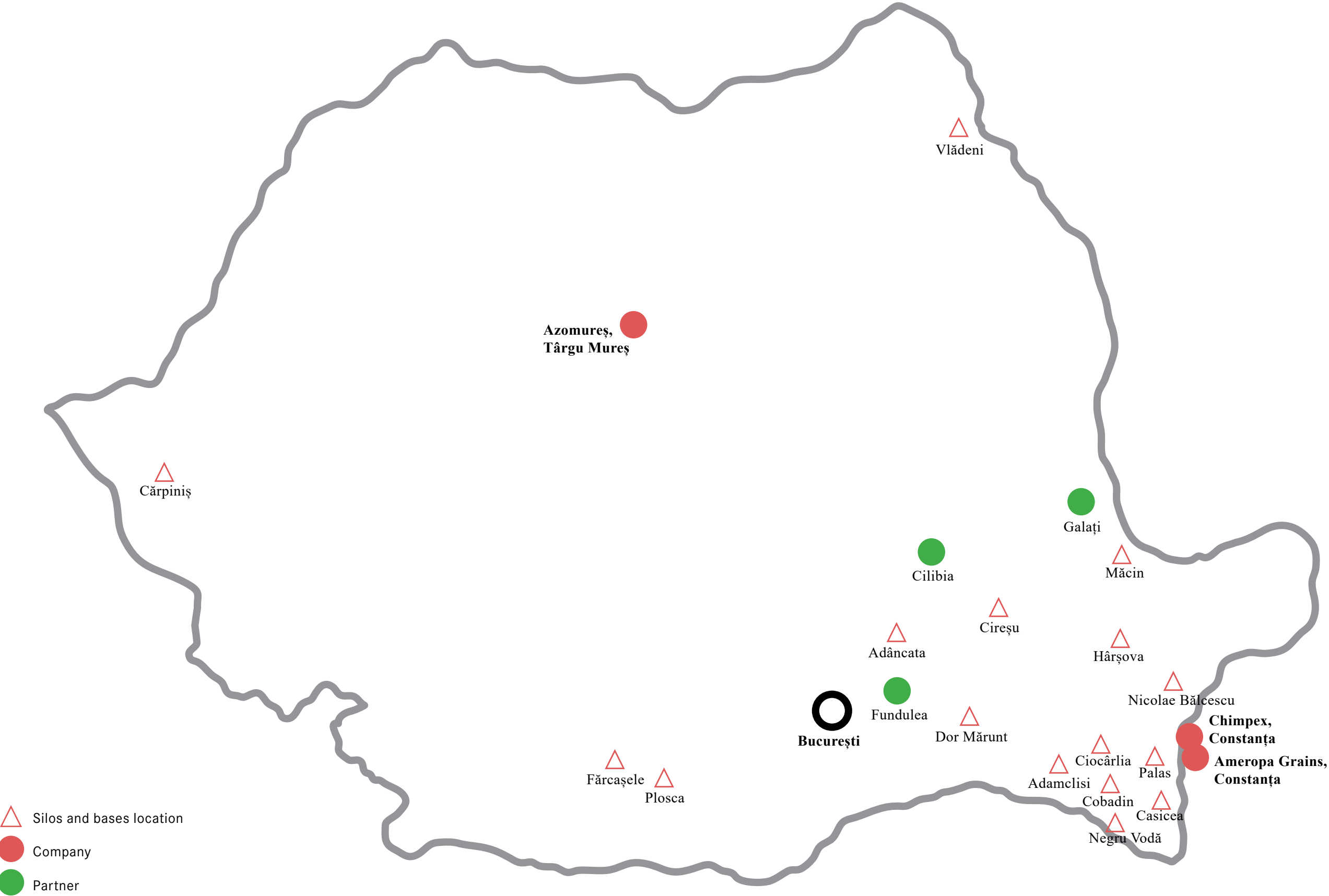
Ameropa Romania<sup>1</sup> employs about 1'900 people (weighted average 2016) in our areas of operation, promoting the local labor force while striving to achieve the highest degree of professionalism and performance.



<sup>1</sup>The term “Ameropa Romania” is used in this report as an amalgamation of three separate companies with common legal ownership only. It is an abstract term created to define the scope of our business in Romania and does not have a legal basis.







## OUR SUSTAINABILITY GOALS

Our biggest challenge has been to upgrade an aging chemical plant to operate in an efficient, sustainable manner. Beyond this, we are focusing on a few key goals that we regard as realistic and achievable.

**The first** is to comply with the high EU standards in terms of health, safety and the environment and to have zero accidents in all of our companies.

**The second** is to serve as an exemplary employer and to have a motivated, informed and responsible staff.

**The third** is to make the intensive agricultural production we are active in – and which we deem necessary to feed the world – as responsible as we can by promoting the safe and sustainable use of fertilizers based on the “4R principles: right product, right quality, right time, right place.”





BUSINESS DEVELOPMENT

In the 2015 sustainability report we detailed the big shift of focus to the domestic market and the huge revamping investments that led to the Integrated Environmental Permit.

Last year Azomures concentrated on optimizing the operations of the new ammonia and granular urea units and on completing the waste water treatment station. We also continued our policy of expanding our Romanian market presence by strengthening our ties with our distributors, improving our direct contact with farmers and promoting products especially suited to Romanian agriculture and their proper use.

Ameropa Grains, as part of its strategy to be present in Romania’s main grain-growing regions, has acquired and upgraded four new locations to collect grains and distribute fertilizers. It has also professionally developed its staff in them and consolidated the financing programs available to farmers to purchase fertilizers, seeds and plant-protection chemicals.

By putting its new grain terminal into service for the 2017 crop, Chimpex improved the suboptimal logistics for railcar, truck and barge maneuvering and for waiting space, which was creating a bottleneck in the port of Constanta. Chimpex enhanced safety in the workplace for all its employees, contractors and clients by appointing a head of Safety, Health and Environment (SHE).

PRODUCT DEVELOPMENT & MARKETING AT AZOMURES

A new NPK fertilizer, improved with sulfur and magnesium extracted from Kieserit and especially recommended for rape seed and wheat, was launched and promoted to Romanian farmers, as announced in the previous year’s objectives. The benefits of this new fertilizer type were explained to farmers in the dedicated meetings organized periodically throughout 2016.

Together with the University of Agricultural Sciences and Veterinary Medicine Cluj-Napoca and other specialized partners in the agricultural field, we provided farmers with counseling services, soil analyses, experimental lots, precise regulation schemes for agricultural machinery and fertilization recommendations. We are making these efforts not only to sell our fertilizers but to ensure their proper use in growing safe, high-quality agricultural products. For 2017 our plan is to double the number of agronomists in the field.

We have also introduced manuals that provide agronomical guidance to farmers in understandable language about how to best grow maize, wheat, sunflower seeds and rape seeds. They follow the “4R” Nutrient Stewardship initiative of the European fertilizer industry and aim to reduce nutrient losses while increasing nutrient absorption by plants. They are based on the latest agronomic know-how and incorporate the sustainability criteria.

By using the right fertilizer product, at the right rate in the right place at the right time, farmers can boost their productivity and economic efficiency while protecting the environment and increasing the sustainable agricultural use of their lands.

We continue to research and develop several new or improved specialty products suited to the soil and climate conditions of Romanian agricultural regions.





CODE OF CONDUCT

As explained in our 2015 sustainability report, the Ameropa Group shares a Code of Conduct that applies to all Romanian employees as well. The Group’s Chief Compliance Officer assists all subsidiaries in adhering to it. The Code of Conduct can be found at [www.ameropa.com/en/ameropa/code-of-conduct](http://www.ameropa.com/en/ameropa/code-of-conduct).

REPRESENTATION OF INTERESTS AND AFFILIATIONS

Interest representation is done in strict compliance with Romanian and European legislation. Listed below is the updated list of our memberships:

- + Business Port Association Constanta
- + Chamber of Commerce and Industry of Mures County
- + Chamber of Commerce, Industry, Navigation and Agriculture (CCINA Constanta)
- + Depositories Association of Grain Traders (ADCER)
- + European Fertilizer Manufacturers Association (Fertilizers Europe)
- + Federation of Chemistry Manufacturers in Romania (METACHIM)
- + Foreign Investors Council (FIC)
- + HR Management Association Club
- + Romanian Association of Traders of Agricultural Products (ARCPA)
- + Romanian-Swiss Commercial Chamber of Commerce Switzerland-Romania (CCE-R)



QUALITY, HEALTH, SAFETY AND ENVIRONMENT

Chimpex maintained a certified integrated management system based on the following four standards:

- + ISO 9001 (quality) certification with SGS UK Ltd.
- + ISO 14001 (environment) certification with SGS UK Ltd.
- + ISO 18001 (health and safety) certification with SGS UK Ltd.
- + ISO 22000 (food safety) certification with SGS UK Ltd.

During 2016, Chimpex recorded three near-miss incidents, one fine given by SEVESO and Inspectorate for Emergency Situations and a minor work incident which led to the temporary disability of one of the workers. Fortunately, the victim did not require hospitalization.

As of December 31, 2016, Chimpex had recorded 348 incident-free days.

Chimpex objectives for 2017 are to continue to implement the Safety Audit Program developed in 2015. This program is focused on implementing the objective “safety first”, and includes measures such as:

- + improving workplace conditions by installing new cabins on grain bunkers to protect the workers from low temperatures, grain dust and eye injuries, as well as installing new stairs on our tanks
- + periodical safety training of all Chimpex employees and contractors alike
- + monthly safety meetings conducted with each shift of employees
- + safety meetings conducted prior to starting high-risk activities
- + implementing the Stop Work Policy – everyone has the right to stop an activity if he/she considers unsafe the work conditions
- + ad hoc daily alcohol tests being conducted increase in the number of site inspections, including on the night shift.

These improvements are just some of the 2017 priorities we have focused on to make Chimpex a better, safer place to work for our employees and contractors. Creating an effective safety culture is an ongoing, multi-year process, one that management and all employees are committed to.

The key performance indicators (KPIs) for safety are as follows:

Chimpex KPI Safety 2016

Objective	Key Performance Indicator (KPI)	Target	Achieved				
			Q1	Q2	Q3	Q4	2016
1. Closing the timely nonconformities	KPI 1 = (no. nonconformities solved YTD/total no. nonconformities YTD) * 100	> 80 %	92%	80%	82%	84%	85%
2. Continuous improvement system:	KPI 2 = (no. audits performed/ /no. planned audits) * 100	98%	100%	93%	98%	100%	98%
- realization planned audits	KPI 3 = [no. AA/no. (AA+AC)] *100	> 30 %	10%	25%	33,3%	32%	22%
- audits focus on observation of unsafe actions							
3. Authority Inspections	Penalties	0/year	2	0	0	0	2
4. Training/Awareness	Accidents with temporary disability	0	1	0	0	0	1
	1 training/month, except legal requirements	100%	100%	100%	100%	100%	100%
	Participation in safety trainings planned	> 90%	100%	100%	95%	95%	98%
5. Maintaining certification and continuous improvement of the integrated management system	0 nonconformities resulting from internal audits and surveillance audits system	>100%	100%	100%	100%	100%	100%

AA = unsafe action  
AC = unsafe condition  
YTD = year to day

**Ameropa Grains** focused on maintaining the existing certifications to assure clients that products manipulated, deposited and delivered fulfilled the norms and good practice for food safety at European and international levels.

- + Certification GMP+B3: Trade, Collection, Storage and Transshipment with SGS Netherlands B.V.
- + Certification GMP+ B4: Transport of the GMP+ FC Scheme (based on GMP+C6) of GMP+International with SGS Netherlands B.V.
- + Certificate ISCC EU: International Sustainability and Carbon Certification approved by the European Commission under the European Energy Directive (RED) with PCU Deutschland GmbH.

We comply with all national and European requirements regarding transportation. All our merchandise is accompanied by a CMR letter as regulated at EU level by the convention on the contract for the International Carriage of Goods by Road (ADR).

We transport inflammable goods, e.g. ammonium nitrate, using only professional drivers who hold an ADR permit and an ADR kit for each vehicle, as required by law. We continue to prioritize, with all our partners along the supply chain, strengthening our high-quality products and services.



FAMILY

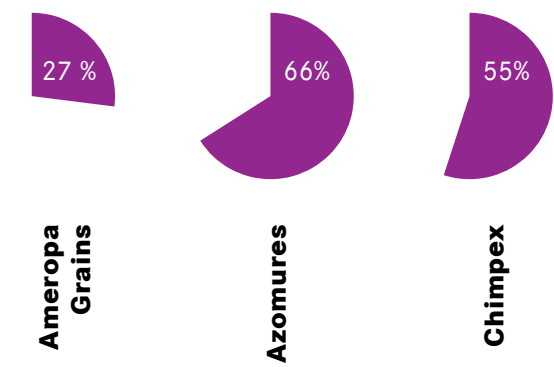
LOCAL EMPLOYMENT

Our employment practices are based solely on a person’s ability, motivation and experience, specifically those related to performing necessary tasks within our organization. We do not refuse to hire due to race, nationality, religion, gender, age, sexual orientation, disability, political or any other opinion or conviction provided it is peaceful and respectful to the others.

We employ people from the communities where we operate. We believe nobody understands Romania’s customs and markets better than local people. This translates into an important economic contribution to the communities in which we do business.

FREEDOM OF ASSOCIATION

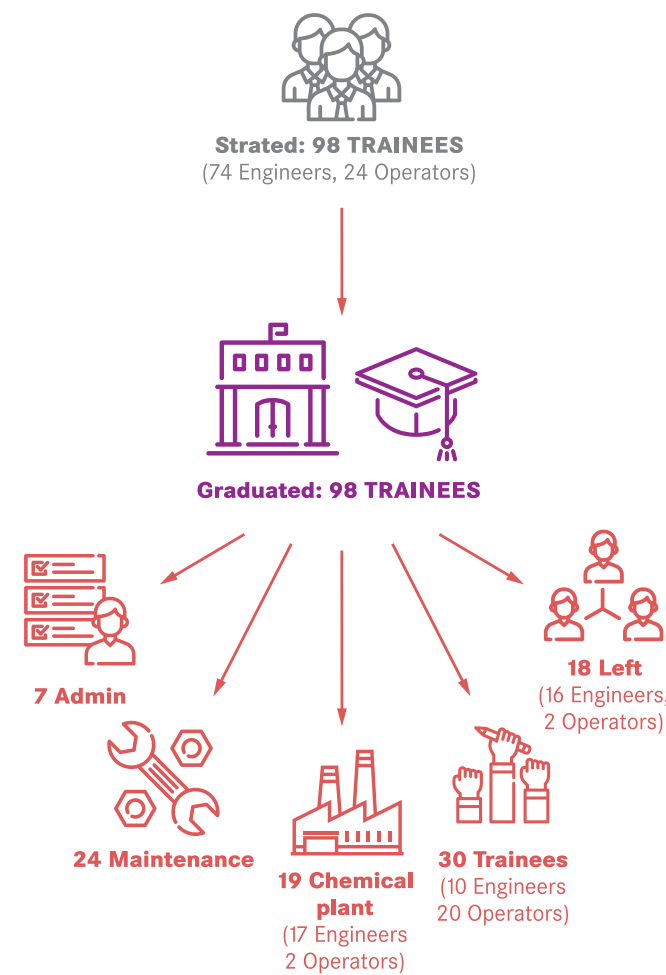
Ameropa Romania recognizes and respects our employees’ civil rights of free association and collective bargaining within national laws and regulations. The percentage of union members among our employees in 2016 was:



TRAINING, TALENT MANAGEMENT AND SUCCESSION PLANNING

In recent years Romania has placed almost no importance on training agribusiness and chemistry specialists at the technical, high school or university levels. The country has gone from being a net exporter of agricultural products prior to 1989 to being a net importer of them. We decided to be proactive, both in Azomures and in Ameropa Grains, by addressing this deficiency and preparing future generations to reverse this trend.

**Azomures** launched the formation program for chemical operators in a local private-public cooperative partnership. We continued our “graduate trainee program,” an internship that begun for 98 trainees, 80 of whom completed it and have started work as illustrated in the diagram below.



In 2016 we launched a dual school program with Ion VlasIU High School in Targu-Mures. It established a three-year technical course to train chemical plant operators who, after graduation, will become candidates for a position at Azomures. The 2016-2019 program has 15 students enrolled and is based on the “learning by doing” principle: theoretical training in school is supplemented by practical training at Azomures.

We also continued our partnerships with Transylvanian technical universities, offering them the opportunity to conduct summer internship programs in Azomures production and maintenance facilities. This program augments the theoretical knowledge gained by students in school with practical activities performed in the company’s major production plants/departments. It had 26 participants in 2015 and 22 in 2016.

Along with the workers training, the second human resources priority of Azomures is improving internal communication.

**Ameropa Grains** has continued the paid internship program begun in 2013. The rate of insertion at the end of the internship in 2016 was 100% due to the rigorous recruitment procedure conducted. From 2013 to 2015 the insertion rate was 96%.

Our goal is to consolidate the internship program in 2017, and we pride ourselves with the recruits that skipped one stage in the company career path after being for just six months within the company. Special attention is being paid to developing the skills and cohesion of the operations team through specialized training sessions and team-building activities. Finding and developing agribusiness specialists remains the biggest challenge faced in Ameropa Grains.

In **Chimpex** we have focused on improving the retention rate of employees and on improving their professional education. Sixty-two percent of them have followed a tailor-made training program, as per workplace requirements and 10% have taken English courses in addition.





## OUR INVOLVEMENT IN THE LOCAL COMMUNITIES

All our companies support social programs in the communities where they are located or do business. The companies' websites display a regularly updated list with the corporate social responsibility (CSR) projects they are involved.



## AMEROPA FOUNDATION IN ROMANIA

The Ameropa Foundation supports humanitarian, educational, and agricultural projects. All projects are structured and managed by the Foundation directly, but implemented by local employees or local partners. We do not believe that a real change can happen quickly, on the contrary, our commitment to projects and individuals is based on a long-term strategy and nature as we believe that real change takes time.

In 2015 we co-financed the construction of a work shop in Rosia, Sibiu County, in which the practical part of the planned vocational school will take place. The applications for the official recognition of the school were made in 2016.



The goal is to start as of spring 2018 the instruction of two to three apprentices in the field of metal processing and the same number in the fields of agriculture and plastic processing.

A metalworker/blacksmith and a local assistant with Roma background have already been hired and have been running the metal work shop since May 2016 thanks to a number of smaller and larger customer orders.



More info can be found by accessing [www.ameropa-foundation.com/en/Ameropa](http://www.ameropa-foundation.com/en/Ameropa).



Given Azomures' size and the impact of its production activity in the community and the economy of the county, we are dedicating the following special chapter to discussing several indicators linked to it that are not detailed in the previous sections along with Ameropa Grains and Chimpex.

### CERTIFICATIONS

In 2016 we recertified the Integrated Management System, complying with international standards for quality and the environment. This third-party audit ensured not just compliance with the program but adherence to the basic principle of continuous improvement. The result was zero nonconformities and 12 opportunities for improvement.

The following certifications are in place:

- + Standard ISO 9001:2008 (quality) certification with TÜV Nord
- + Standard ISO 14001:2005 (environment) certification with TÜV Nord
- + Standard Product Stewardship Certificate by Det Norske Veritas
- + Certified producer with the European Chemicals Agency under the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH) regulation.

In addition to achieving these certifications, we have voluntarily implemented further procedures developed internally. We have, for instance, produced practical guides for employees and contractors that stipulate internal safety rules as well as procedures for dealing with fire and we have increased community engagement through customer satisfaction surveys, local customer services and social media platforms, and local farmer meetings.





PRODUCT STEWARDSHIP PROGRAM

As a member of the European Association of Fertilizer Producers (Fertilizers Europe) we take part in its Product Stewardship Program. Ensuring that farmers safely receive the right product of the right quality is fundamental to gaining their trust. Through product stewardship principles we work to determine the best and safest way to produce, transport, store and apply fertilizers and industrial products.

The program’s most recent audit certification was conducted in 2014 by Det Norske Veritas (third-party audit company). Azomures scored 93%. The next audit is scheduled for May 2017. Our objective in 2016 was to consolidate our procedures and boost overall performance.

The term “product stewardship,” for Fertilizers Europe, is to a large extent synonymous with “responsible care” and covers many aspects of “sustainable development.” It takes account of the whole life-cycle of a product from development to application, as shown in the figure below.



- The audit manual addresses the following objectives:
- + Fertilizers and their raw materials, additives and intermediate products are processed and manufactured, handled, stored, distributed and used in a safe way.
  - + Work follows the highest standards and respects applicable legislation with regard to health, occupational and public safety, the environment and security.
  - + Plant nutrients satisfy society’s need for safe food production and animal feed.
  - + Co-operation along the whole supply chain is required to achieve these targets.

The Product Stewardship Program requires comprehensive management commitment at a company level. Azomures, has implemented and/or put in place the following:

- + A company policy statement and a program structure that reflects a high commitment to product stewardship
- + Product stewardship improvement targets and action plans for achieving the targets
- + Sufficient resource allocation for product stewardship activities
- + Clear lines of responsibility for the various product stewardship elements, with one person nominated as the overall facilitator
- + Training provisions
- + Performance monitoring and evaluation
- + Corrections made when and where necessary, including holding people accountable in their roles and responsibilities
- + Communication with and the involvement of employees and the supply chain to raise awareness of product stewardship and its importance to the fertilizer industry
- + A controlled documentation system of operational requirements for product stewardship
- + A system for handling non-conformities and complaints
- + A system to trace and retrieve products in the supply chain
- + A decision-making process on product risks across the entire supply chain, with assessment of alternative raw materials and chemicals, alternative means of transport and transport routes, type of storage, etc.
- + An internal audit system for checking compliance and the initiation of improvements
- + Regular company management review of the progress of the product stewardship activities, with corrective action taken if required.

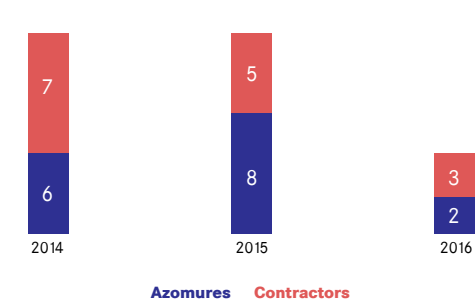
The top management in Azomures is committed, through their authority and personal example, to ensure that the necessary resources to document, implement, maintain and improve the Integrated Quality-Environment Management System and the Product Stewardship System are available. The above is just a small extract of our responsibility to the community that hosts us. Full information about the program can be found here: <http://www.productstewardship.eu/>.

HEALTH AND SAFETY

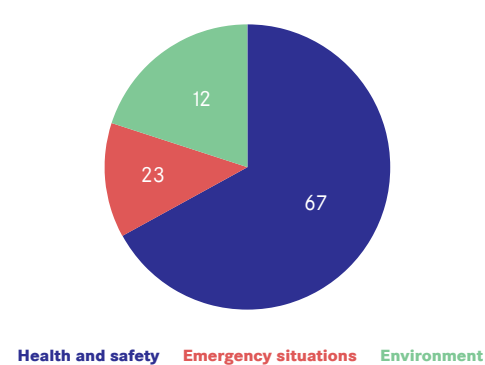
Since 2012 Azomures has made major strides in the area of on-the-job health and safety (H&S). Our overall goals in H&S terms are to reach our “zero accident” target and rank in the top quartile of European plants. Operational responsibility for doing so belongs to the head of the H&S department. Meanwhile, the management board continues to monitor H&S indicators and educate, train and motivate employees to understand and comply with H&S policy. The Board of Directors also itself watches H&S indicators closely.

While we have made good progress in this area with our own employees, we need to redouble our efforts to ensure our contractors comply with our safety procedures. The number of accidents registered on our production platform decreased in 2016 if the total number of working hours are taken into account.

Azomures accidents number 2014 - 2016



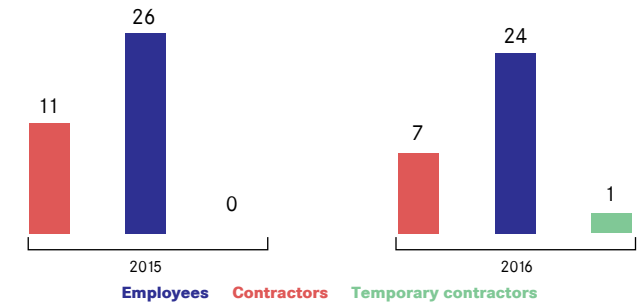
Red labels number per categories 2016



Accidents are measured in the LTIR by the EU industry. The Lost Time Injury Rate (LTIR) was 0.92, representing two injuries. No workplace fatality has befallen any of our employees since we acquired the plant in 2012, but to our deep regret one of our contractors suffered a fatal accident in 2016.

Since 2015 we have counted the number of “near misses” among our employees and contractors, as shown in the figures below. An internal intranet application was created to enable employees to report them quickly and easily, without paperwork.

Azomures near misses 2015 - 2016



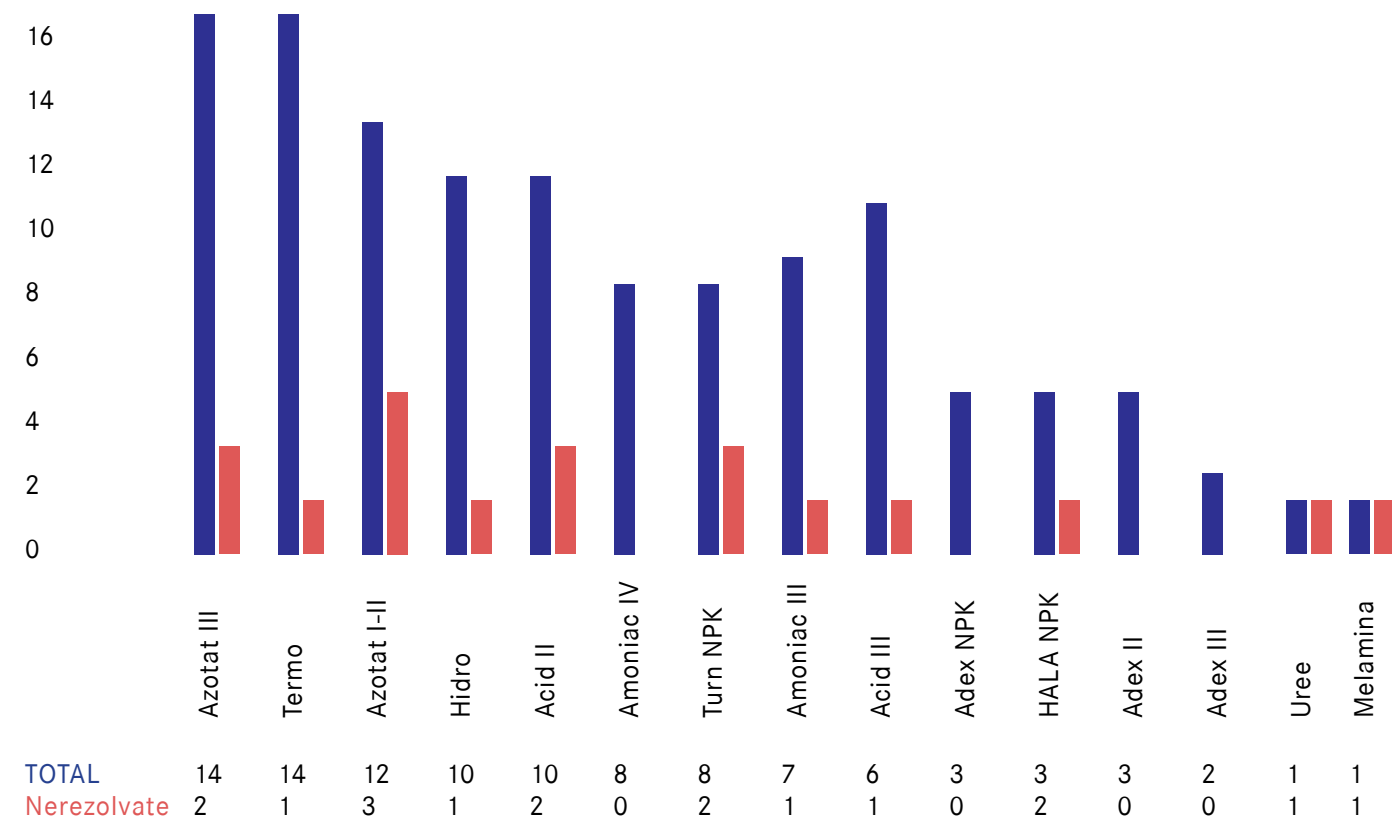
The KPI system “red label” was introduced in 2014 to identify health, safety and environmental non-conformities that need to be resolved. Many of them were resolved in 2015 and the number of red labels greatly declined in 2016. Imbalances in various areas of the plant are proportional to the size and type of processes; the charts below illustrate their annual evolution.



Red labels situation 2015 and 2016



Number of red labels placed in 2016



MANAGEMENT OF EMERGENCY SITUATIONS

Emergency situations are strictly managed according to national legislation. Means for their prevention, intervention, limitation and elimination are regularly updated and/or revised. Those that apply to the public can be found on the company website and those for the staff on the Azomures intranet or on the site pinboards.

In 2016 we organized yearly practical exercises, e.g. fire simulations in which our internal emergency teams and the responsible authorities (SMURD and ISU) carried out the safety procedures in place. The exercises are announced publicly to the local community both by the authorities and by us using all available media.

As a chemical manufacturing site, Azomures is classified as industrial activity with potentially major accident hazards. Our activities are covered by local environmental permits, and are required to operate in accordance with strict procedures and management controls to prevent safety-related accidents. The Azomures plant is not considered to represent a risk to the local environment provided the legal requirements are met.

MANAGEMENT OF HAZARDOUS CHEMICAL SUBSTANCES AND MIXTURES (REACH)

Our products comply with the European chemicals REACH and CLP regulations that deal with chemical classification and labeling. Azomures is a founding member of the Fertilizers and Related Materials (FARM) consortium established in 2008.

FARM originally comprised 16 chemical fertilizer producers in the EU. Today there are more than 50 member companies, including non-EU companies and those that want to sell products in the EU.

PRODUCT SAFETY AND QUALITY ASSURANCE

Investments in laboratory equipment were significant in 2016 and reduced client complaints by 33%. Our production process fulfills the 2003 EU regulation that requires manufacturers and distributors of fertilizer products to comply with technical rules concerning composition, type of fertilizer identification module (marking and labeling), packaging, etc.

We improve our procedures and the quality of our products continuously, in line with ISO 9001 Standard Procedure. Product stewardship provides a systematic approach to monitoring and reviewing the quality of all our activities and products. It commits us to making sure customers and end-users receive the right products for the right purpose, accompanied by proper information about how to use them – thereby addressing concerns about the impact of modern farming.

As per European legislation, Azomures has issued Safety Data Sheets (SDS) for all of its products, which are updated on a regular basis. The chemicals supplied to Azomures all come with SDS from the producers.



ENVIRONMENTAL COMPLIANCE & INVESTMENTS

Between 2012 and 2016 we invested EUR 360 million to lower plant emissions into the environment and improve the quality of our final products.

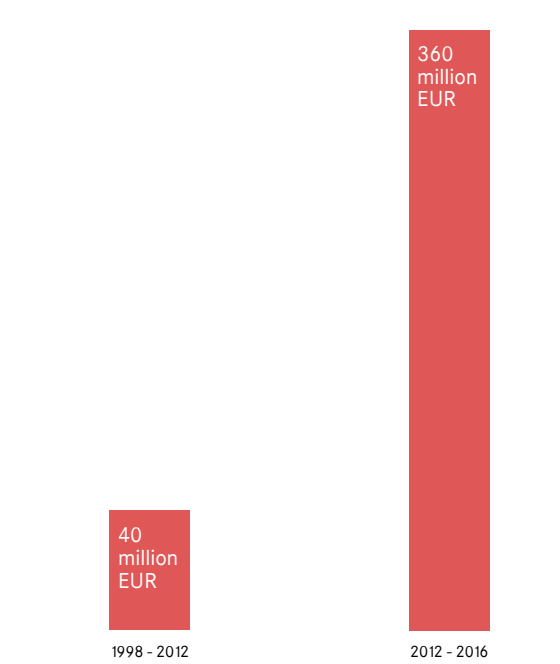
Azomures, occupying a total surface of 100 hectares, is the main industrial concern in Mures County and one of the top three employers based on the total number of employees. The company was founded in 1962 and prior to being purchased by the Ameropa Group in 2012, the company did not prioritize environmental concerns in its operations, which led to frequent local community complaints.

When we acquired the plant our first step was to adopt an investment plan of EUR 270 million to bring it into compliance with the highest EU environmental standards. By the end of 2016 actual investments had reached EUR 360 million.

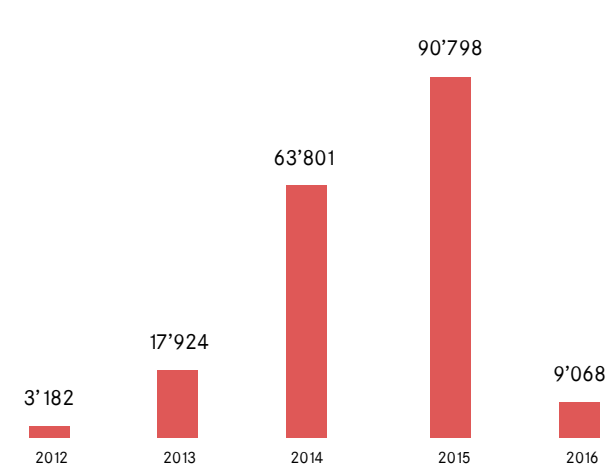
The Integrated Environmental Permit (IEP) issued by the Environmental Protection Agency Mures as a result of the vast improvements made remains valid until 2026. The chart below highlights the euro amounts spent to increase environmental performance while at the same time enhancing the productivity, efficiency and quality of the production processes and of the products themselves.



Azomures Total Investments before and after new ownership (million/EUR)



Environmental investments 2012-2016 (thousands EUR/year)



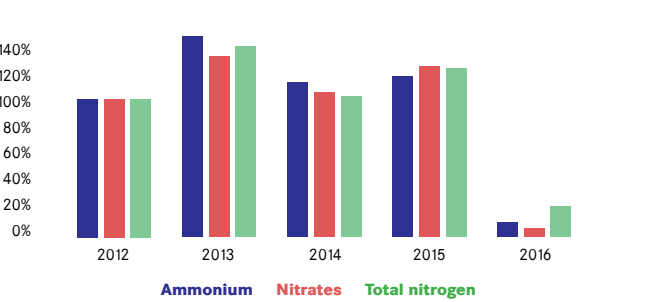
ENVIRONMENTAL PROTECTION

The fertilizer manufacturing process in a plant consists of converting energy, natural minerals and nitrogen from the air in a chemical reaction to obtain essential products that are further processed and transformed into different fertilizer types used to feed crops. The process involves large amounts of natural resources and affects water, air and noise on the production premises and in nearby areas.

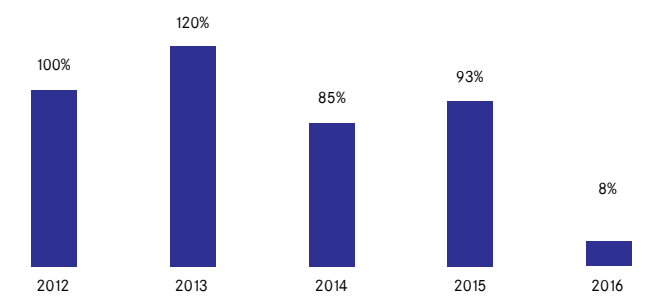
WASTE WATER

Water is important in the fertilizer production process. Most of it is used for cooling processes and is returned unpolluted to the source, i.e. a river, it was drawn from. Discharges to the water from production processes consist mainly of nitrogen and phosphate. The emissions are monitored strictly and reported to the local environmental authorities.

Evolution of the concentration of pollutants emitted in the Mures River (indexed 2012=100%)



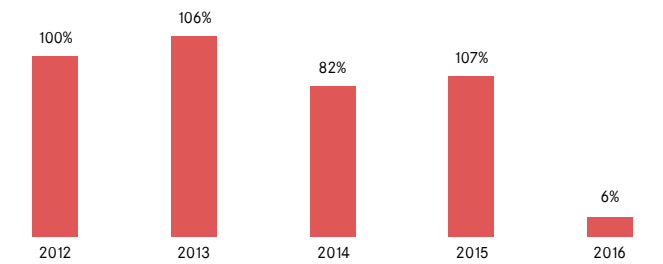
Ammonium ions concentrations discharged in Mures river (mg/l) (indexed 2012=100%)



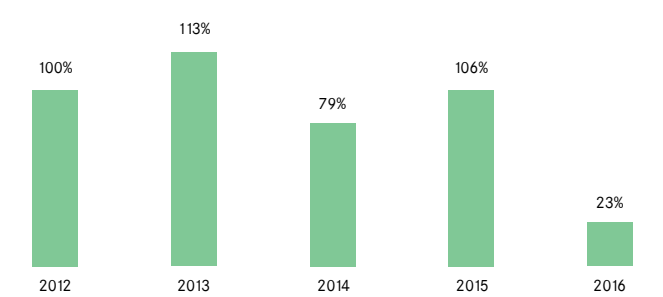
Obtaining the IEP was not the only reason for our environmental investments. As of January 2016, which marked the end of the transition period after the accession of Romania to the EU, we reduced the concentrations of primary pollutants from the plant significantly. Building a new waste water treatment facility was the only way we could meet the stricter water requirements that came into effect in the wake of the 10-year EU transition period.

The water treatment plant was completed at the end of 2015. Over the course of the past year the Water Authority Mures has performed five controls; only once were the limits higher than permitted, and a fine was applied. In the charts below can be found the evolution of the pollutants concentrations in the Mures River and the evolution of concentrations for each category of pollutant after the new limits took effect.

Nitrate ions concentrations discharged in Mures river (mg/l) (indexed 2012=100%)



Total nitrogen concentrations discharged in Mures waters (mg/l) (indexed 2012=100%)





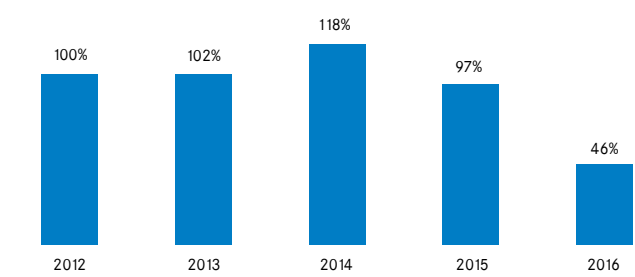
AIR EMISSIONS AND AMBIENT AIR QUALITY

The upgrading of ammonia production installations (two plants) and the reconstructions of the urea production plant and the prilling towers of the ammonium nitrate and NPK halls have reduced air emissions markedly and enhanced air quality. Visual dustiness and discomfort in the local community have been greatly lowered as a result.

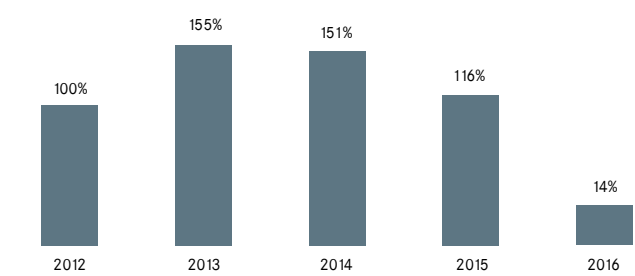
Air emissions are measured, analyzed and registered according to national regulations. Automatic analyzers were placed in two locations: the Mureseni and Cristesti areas constantly monitoring the air emissions; their results are linked to the company website here: <http://www.azomures.com/en/environment/reports/ambient-air-quality/>.

The number of pollutant sources for ammonia (NH3) and nitrogen oxides (NOx) have declined notably, also thanks to investment. And the maximum concentration levels have plunged. The improved air quality, as shown in the chart, has reduced local community complaints drastically. Authorities conducted eight controls in 2016 and only one fine was applied due to excessive ammonia emissions.

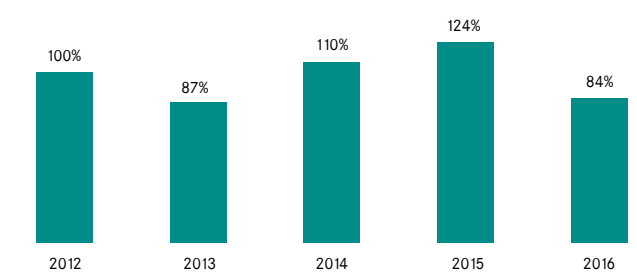
Ammonia emissions in air (tons/year) (indexed 2012=100%)



Dust emissions in air (tons/year) (indexed 2012=100%)



Nitrogen oxides emissions in air (tons/year) (indexed 2012 = 100%)



NOISE

Azomures received two complaints about excessive noise in 2016. The particular incidents occurred on the northwest side of Mureseni Street due to the nearness of the residential area to the factory perimeter. An action plan to lower the level of noise in this area was agreed to with local authorities. Despite implementing all of the measures of the plan, the noise still surpasses the limits under certain conditions, mainly when revision overhauls or start-up maneuvers are conducted. Three fines were applied in 2016 because of the complaints. The situation continues to be looked into; we are fully committed in mitigating the noise levels as quickly as possible.

ENERGY

Ammonia production is energy intensive, so a key to improving it is greater energy efficiency. Azomures has invested heavily in upgrading and optimizing plant reliability and efficiency, areas it has made clear improvements in. Most of our installations have been revamped to reduce electrical consumption during ammonia production, which has led to savings of 14'000 MWh of electricity each year.

HAZARDOUS WASTE AND RECYCLING

In 2016 we recycled 18 tons of paper waste, which translates into 306 saved trees. We recycled 3'400 tons of packaging waste (plastic, paper, metal and wood), which corresponds to lowering greenhouse gas (GHG) emissions by 1'205 tons of CO<sub>2</sub> equivalent, or what would be produced by a car traveling about 4'465'168 km.

CLIMATE CHANGE AND CO<sub>2</sub> EMISSIONS

Azomures seeks to curb GHG emissions by making technical investments and offering solutions for climate-smart agriculture, e.g. producing directly available nitrogen products. Agriculture causes significant GHG, a fact that has to be balanced with the need to meet the rising global demand for food.

More efficient plants decrease the emissions per ton of fertilizer produced, but greater capacity and production increase total emissions. Technical investments and smart products that make nitrogen directly available to plants without loss help to curtail GHG; as described above we are making a big effort to reduce the environmental footprint of our operations.

The Azomures plant is covered by the emission trading system (EU ETS). The greenhouse gases relevant for our production plants are CO<sub>2</sub> from fuels and N<sub>2</sub>O from nitric acid production. These are calculated as CO<sub>2</sub> equivalents: CO<sub>2</sub> to air:1 and N<sub>2</sub>O to air: 298. Each EU Allowance unit corresponds to one ton of CO<sub>2</sub> under the EU ETS and is validated by the official ETS verification body.

When the new urea plant becomes fully operational we will face a shortage situation. For this allocation stage, which will occur in fewer than one year, we expect to receive fewer EUAs than projected initially by the certifying body. The certificates covering roughly the next three years will have to be sourced from the emissions trading market.

The EU ETS, although meant to reward the best performers has not allocated enough allowances to the fertilizer industry and since 2013 we receive fewer certificates than our production needs. The chart hereafter shows the trend of receiving fewer certificates compared to the initial proposed number of certificates to be allocated and the actual consumption.

Emissions CO<sub>2</sub> equivalent (tons/year) = number of greenhouse gas allowances consumed.

Ammonia emissions in air (tons/year) (indexed 2012=100%)

Number	Allocation period/year	No. of allocated allowances	No. of consumed validated allowances	The difference between allocation and consumption
I.	Stage I (experimental) - 2007			
I.1	2007	100%	94%	6%
II.	Stage II - 2008 - 2012			
II.1	2008	87%	92%	-5%
II.2	2009	87%	80%	8%
II.3	2010	87%	98%	-10%
II.4	2011	87%	110%	-22%
II.5	2012	87%	101%	-13%
	2008-2012	437%	480%	-43%
III.	Stage III - 2013-2015			
III.1	2013	97%	152%	-54%
III.2	2014	95%	142%	-47%
III.3	2015	94%	148%	-54%
	2013-2015	286%	442%	-156%
III.5	2017	90%		
III.6	2018	88%		
III.7	2019	87%		
III.8	2020	85%		
	2013-2020	832%	884%	-311%



## LOOKING AHEAD: YEAR 2017

Our first and foremost goal remains “zero accidents” in all three of our Romanian companies. To fulfill this target, we need to continue to allocate the necessary resources to develop and apply first-rate safety measures and policies. We also intend to review our KPIs and health and safety policy before the end of 2017.

In Azomures, to increase our efficiency per ton of fertilizer produced we aim to overcome the startup shortages. We made strides here in 2016 but technical start-up problems have prevented us from operating the plant at full capacity and, thus, in the most energy-efficient way.

We are also looking forward to the positive contribution the new grain terminal in Constanta will make upon its completion in summer 2017 in terms of food safety and emissions.

Beyond these immediate goals, we will continue to nurture a company culture that keeps our employees motivated, informed and responsible, one that reflects positively on our partners and customers. Maintaining a flat hierarchy and an entrepreneurial spirit, promoting talent, involving ourselves in the life of the communities around us and ensuring a degree of fun and plenty of satisfaction on the job are all important to us.

Finally, while we have the noble task of contributing to feeding the world, we must strive to minimize the impact of our own operations and that of the farmers we serve on the environment by promoting the safest and most efficient use of fertilizers, by developing smarter products, by reducing waste and improving the quality of grains when handling them, and by any other means available to us. To this end, we will continue to reach out and cooperate with universities, research institutions, agricultural authorities and the farming community.

We intend to publish our next sustainability report for the year 2017 on our website. It will enable us, our stakeholders and responsible authorities to assess our year-to-year performance.





For further information,  
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subject: Ameropa Romania Sustainability Report 2016

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