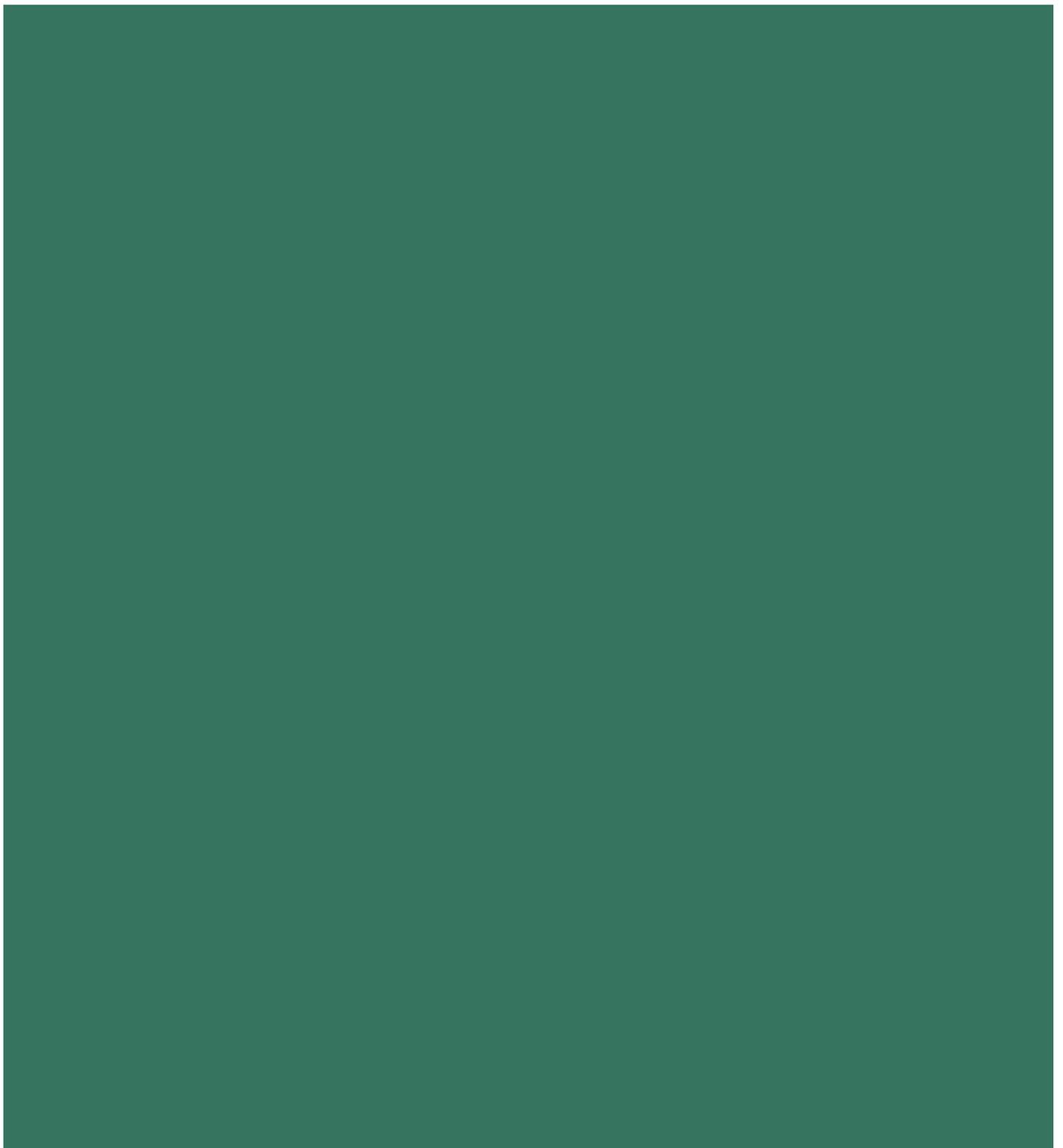


2015/2016 Environmental Report





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Letter from the Chairman



To ensure to the future generations the skills for satisfying their needs: this is the ideal title of the 14th edition of the Environmental report. A management tool that is extremely important for any Company and vital for us crop protection industrials. As we wrote in our ethic code, the implemented resources must remain available, just as they were in the past and are now; besides, the major attention we can possibly put in their safety protection is a real investment for the industrial development.

To believe and to act in the sustainability furrow - when addressed to the outside environment and to the one inside our production plants - pushed, for many years, to take part with enthusiasm to Federchimica Responsible Care program, that provides some shared parameters of environmental safety and protection, all of which in respect of the laws, some being even superior. And I do like to remind here that the chemical companies taking part to the Responsible Care boast better performances indicators than the average. Actually, the sustainability is an approach that can have consequences on the cost structure of the same Company. It is sufficient to think of the energy efficiency activities or the operations giving economic value to the “secondary raw materials”.

The 2015 environmental report allows me also to share with you two considerations, strictly linked one to another. The first one is about the relationship that exists between sustainability and innovation: today’s innovation needs sustainability, its values and its methodologies, in order to gain the most significant effects on the social and economic development.

Therefore, the sustainable innovation is a tool allowing the Company to grow because each of its products is the result of a careful glance to its use, its functions and its monetary and environmental costs generated along its entire life cycle.

Talking of sustainable innovation, Isagro, that works for the plants health, is a model with its advanced research, in relation to both the processes (more efficient and, as a consequence, with less waste) and the as performing as sustainable products.

And right the products are the focus of my second observation. I think of biosolutions. To them, which are the best possible implementation of sustainable innovation, Isagro is more and more dedicating a particular attention in order to make it one of its industrial project pillars: the interaction that we intend to pursue between a research dedicated to biosolutions and a research dedicated to the chemical synthesis products will surely contribute to ensure a better world to the coming generations.



Giorgio Basile

Isagro Group today



Chemistry, environment and agriculture. Since 1992, Isagro has been cultivating itself with the same intention with which it is looking for new sustainable solutions for the agriculture in the whole world countries.

Isagro roots - plunged into the agrochemical humus signed by Montecatini first and Montedison then - contributed to the company capacity to create the conditions for the crops care, protection and returns and for their evolution.

Today, and in the future, the primary engagement Isagro feels to be called at is to make its global player role even stronger - regarding both the new molecule research and the marketing of the products thought of for crops specific needs - inside a sustainable development model, always more able to help reducing the social and environmental outside diseconomies, existing today.

To Isagro, especially in 2016 - characterized by a return to the profits share, thus to reward the investors who trusted its project -, is recognized a first level position internationally among the originators.

It could not be different, because Isagro has always believed in the molecular discovery as strategic as convenient. Convenient also due to the new business model, started in 2013 and further redesigned by the Company, that is focused on guaranteeing an adequate exploitation of Isagro inventions, also by giving to third parties the rights on those products /markets/ segments from which Isagro "alone" could not extract enough value. The goal, in a four-year period, is to gain a turnover of about 200 billion euros income.



Our mission. In the next 35 years (around 2050), the world population will exceed 9 billion of people. This will cause a growth in the food demand whilst the quantity of arable land will decrease to 1600 sqm/ per capita (versus 2500 in 2005: UN, FAO, World Bank sources). Isagro is aware of the current change challenge, having the goal to offer to the farmers of all continents the crop protection products allocated for environmentally friendly, sustainable and efficient crops.

For this aim, Isagro invests, on one side, in the chemical products, the Company business cornerstone (though it requires “patient” time and investments) and, on the other side, with more energy than in the past, in the Biosolutions, being convenient because both they respond to the growing sensibility of farmers and final consumers toward always healthier food and they are introducible on the market any time quite soon, versus the long period of traditional solutions requiring a pluriannual process. Chemical and Biosolutions, for Isagro, must ensure the efficient use of resources during their whole life cycle, which gives birth to the known environmental, economic and social advantages.

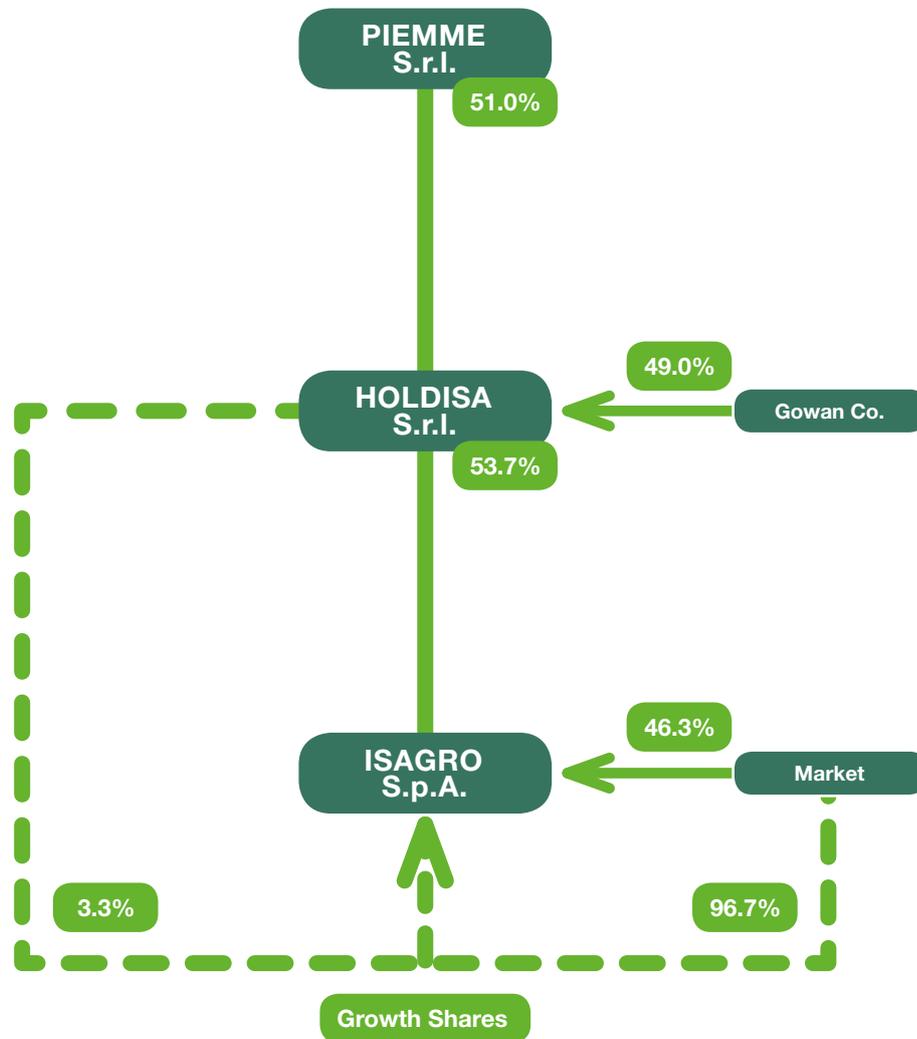
Isagro in Italy, Isagro in the world. In the Ethic Code of Isagro there's written: “the Group respects the fundamental rights of the people with whom it founds itself at any title to interact by protecting their moral and physical integrity. (..)”. Moreover: “the Group is aware of the environmental impact generated by its own business. As a consequence, it plans its activities by looking for a balance between economic initiatives and unavoidable environmental needs, not only in the current laws respect but also taking into consideration the future generations rights”. Well, for Isagro the alliance between men and environment is a crucial part of its own business. The group's employees, more than 600, around 100 of whom are committed in the Development and Research activities, are the main protagonists of such alliance. They are men and women who use, in the manufacturing plants - four in Italy: Adria (Rovigo), Aprilia (Latina), Bussi sul Tirino (Pescara), Novara; one in India: Panoli - a management model that is constantly monitored and updated following the years experience and the international strictest laws on the environmental matter, with a particular interest for the habitat and protected species.

To protect the harvest and crops, the farmers and consumers, the land with its fruits and the living species that inhabit and live of it and, in this way, to contribute to the fight against the food shortage and the nutrition problems, mainly in the most populated countries or in those with fewer economic resources: this is the final goal of a Global Player called Isagro who is now 23 years old.



Isagro S.p.A. control structure

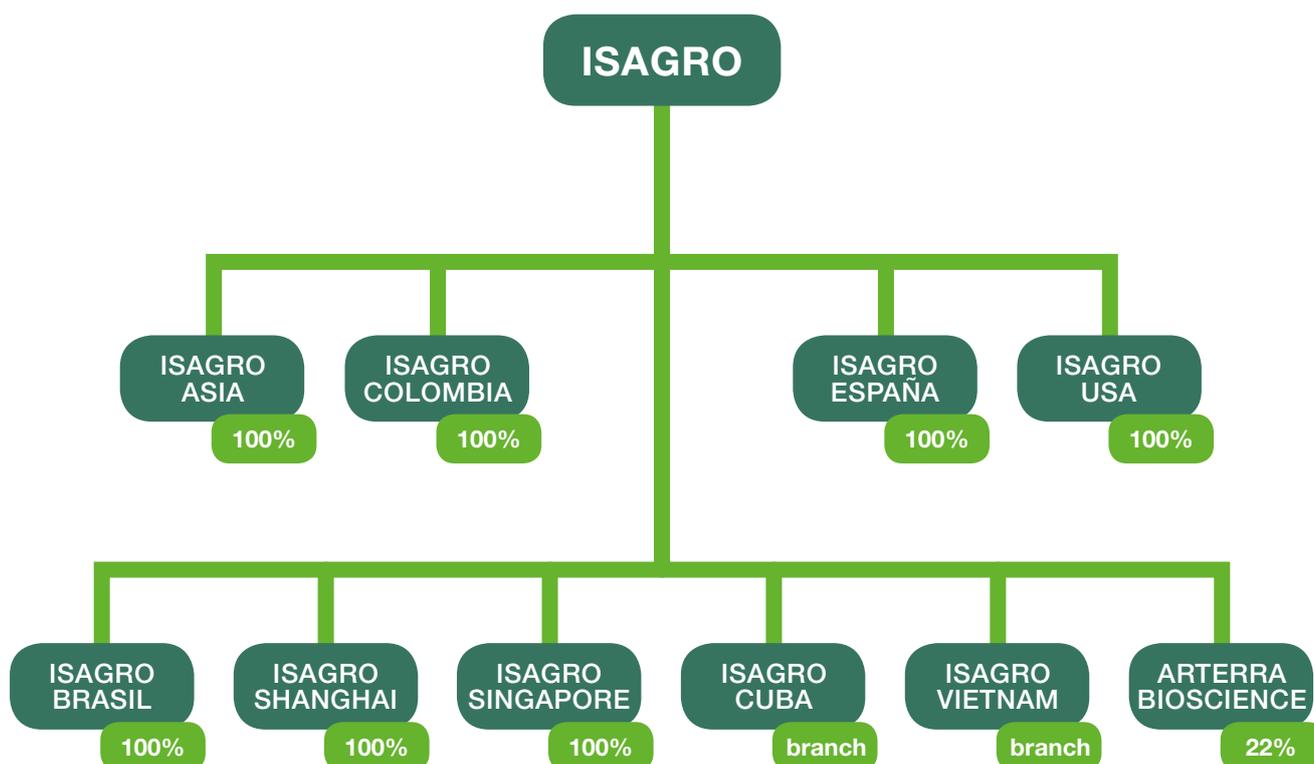
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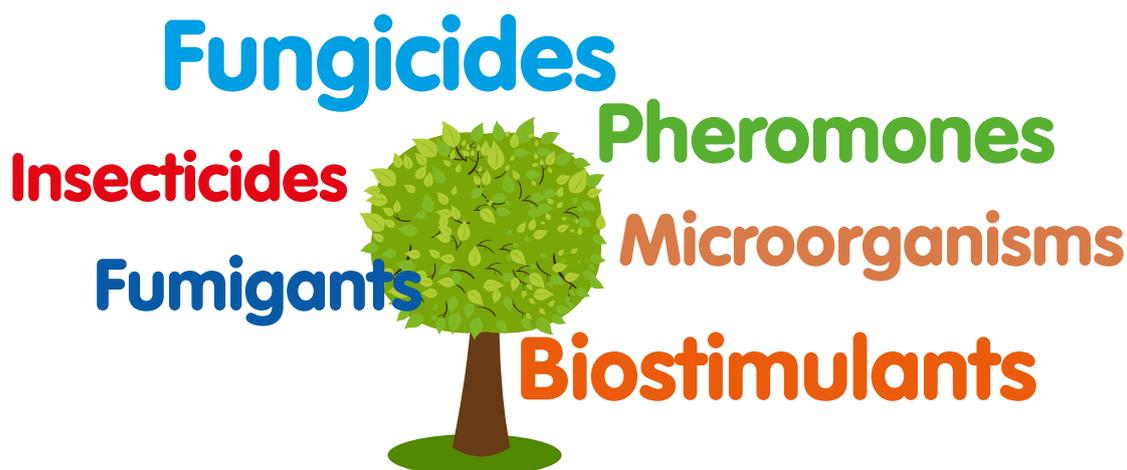
Group Structure

(updated 07/01/2016)



Isagro is also present in Argentina, Australia, Chile and South Africa with companies for the ownership of the Group registrations.





Fungicides

Fungicides are chemical products used to combat the fungi that cause specific diseases in cultivated plants. According to the method of interaction between the fungicide and the fungus, a distinction can be made between products with a preventive action, which stop the pathogen from getting into the plant and spreading, and products with a curative action, capable of controlling infestation after the pathogen has attacked the host plant.

Fungicides represent a strategic segment for the Group, which has invested and continues to invest a large part of its resources in order to ensure their development and therefore to broaden its range of products and increase its market shares.

The principal markets on which they are sold are Brazil, Italy, the United States of America, France, Spain, Eastern Europe, Russia and Middle East.

The table below contains a description of the fungicides based on the Group's principal proprietary active substances.

Active substance	Organic activity	Main proprietary brands	Main markets	Main target crops
Copper-based	Downy mildew and other fungal parasites, bacterial diseases	Airone®, Badge®, Neoram®, Cuprocaffaro®, Cuproflow®, Pasta Caffaro®	Italy, the United States of America, France, Thailand and Spain	Grapevine, olives, fruit-bearing plants/trees, vegetables
Tetraconazole*	Control of oidium, Cercospora leaf spot, rust, ramularia and leaf spot	Brek®, Domark®, Eminent®, Emerald®, Concorde®, Lospel®, Galileo®, Lidal®, Maino®, Mettle®	Brazil, Italy, Poland, the United States of America and India	Maize, soya bean, cotton, beet, cereals, fruit, vegetables and ornamental plants
Kiralaxyl*	Control of downy mildew	Kiralaxyl®, Fantic®, Sidecar®, Capri®, Stadio®	France, Italy, Spain, Poland and Cuba	Grapevine, potato, tomato and vegetables

*Tetraconazole and Kiralaxyl are distributed in the world in different formulations and mixtures.

Insecticides

Insecticides are used to control the insects that damage the plants and are usually classified by their mode of action, which may be through inhalation, contact, absorption by the cuticle or ingestion: the insect eats them on the treated parts of the plant.

The principal markets on which they are sold are Europe, India, South Africa and Cuba. The table below contains a description of the main insecticides based on the Group's proprietary active substances.

Active substance	Organic activity	Main proprietary brands	Main markets	Main target crops
Pyrethroids	Control of phytophagous insects	Scatto®, Antal®, Mitigate®, Forward®	EU, India, South Africa, Colombia, Cuba, Brasil and Argentina	Grapevine, cotton, cereals, fruit and vegetables
IGR	Lepidopterans	Dipron®	Egypt and South Africa	Vegetables

Pheromones

Pheromones are synthetic chemicals that reproduce those released by the female insects during the mating season - as a means of communication between individuals of the same species - and are used in two different ways: in traps to monitor the insect presence and in the dispensers used to prevent mating.

The table below contains a description of the pheromone products based on the Group's proprietary active substances.

Active substance	Organic activity	Main proprietary brands	Main markets	Main target crops
Various	Monitoring	Traptest®, Mastrap®	Italy	Various
Various	Disorientation	Ecodian®	Italy, Austria	Apple trees, peach trees and vegetables

Microorganisms

This category includes crop protection products based on microorganisms (fungi) used to control fungal diseases present in the soil and to contain the grapevine Esca DiseaseComplex. The microorganisms are used principally on vegetables, ornamental plants, grass carpets and vine.

The Group's principal markets for this product are Italy and Spain.

The product that the Group sells contains the strains *Trichoderma gamsii* + *Trichoderma asperellum* and is entirely produced in the Novara plant. The table below contains a description of the crop protection products based on the Group's proprietary strains of microorganisms.

Active substance	Organic activity	Main proprietary brands	Main markets	Main target crops
<i>Trichoderma gamsii</i> + <i>Trichoderma asperellum</i>	Control of fungi in the soil and bait disease control	Tenet®, Bioten®, Remedier®	Italy, Spain and the United States of America	Vegetables, ornamental, grass carpets and grapevine

Fumigants

Fumigants are a category of crop protection products that perform their function by removing many pathogens, such as weeds, fungi and nematodes, from the soil in order to ensure the best development of the agricultural crops that may be then either sown or transplanted. The table below contains a description of the fumigants based on the Group's proprietary active substance *Allyl isothiocyanate*.

Active substance	Organic activity	Main proprietary brands	Main markets	Main target crops
<i>Allyl isothiocyanate</i>	Control of nematodes, weeds, fungi and insects in the soil	Dominus®	The United States of America and Mediterranean countries	Strawberry, vegetables, ornamental plants, nursery plants



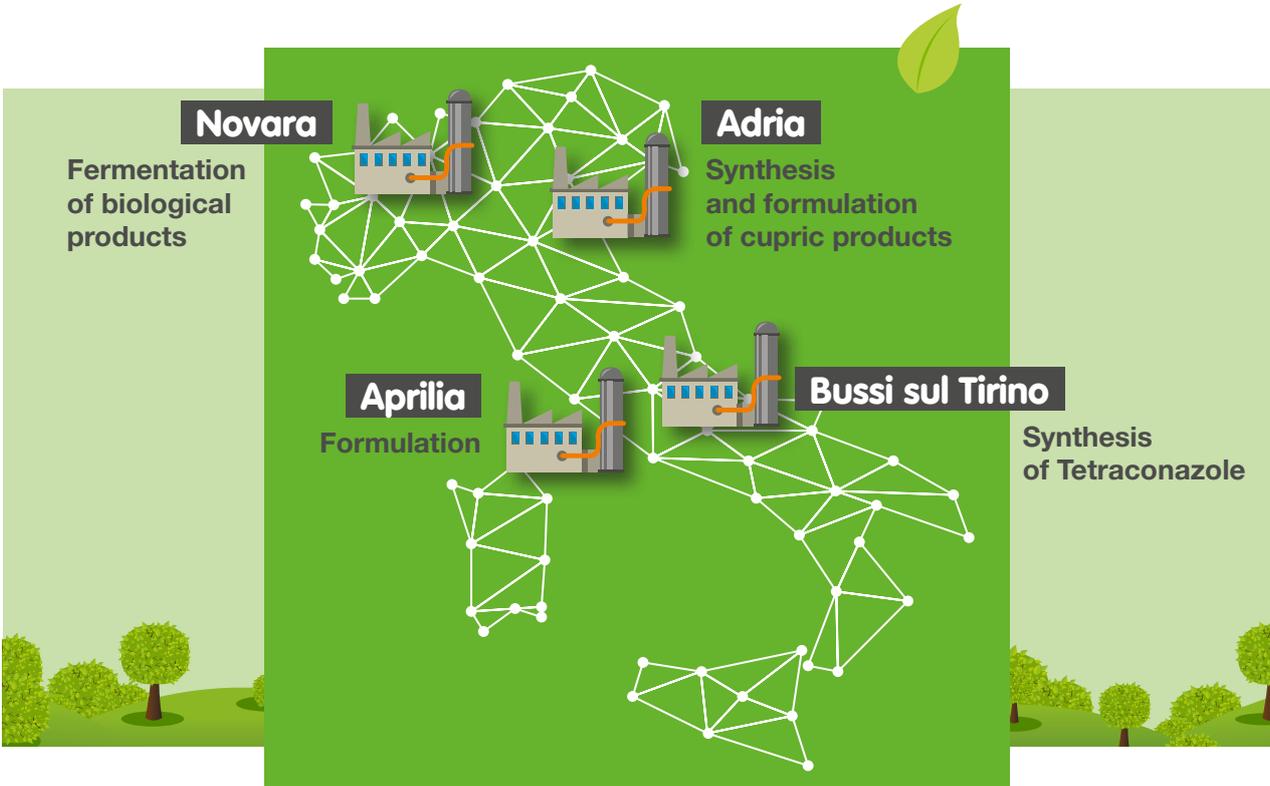
Biostimulants

Biostimulants are able to act on the plants' metabolic and enzymatic processes to improve production levels and crop quality: these products are used on all crops. The table below contains a description of the main biostimulants based on the Group's proprietary active substances. The innovative research and the development, production and sale of proprietary products, which constitute the Group's core business, are based on a continuous renewal of the Group's proprietary range of crop protection products and nutritional products.

Main proprietary brands	Organic activity	Main markets	Main target crops
Siapton®, Humozon®, Aminoplant®	<ul style="list-style-type: none"> Increased production. Inducing resistance to abiotic factors such as salinity, drought, low temperatures, transplant shock. Increased micronutrient intake by the plants and improved pollen germination. 	Spain, India, Italy, China, Central America and the United States of America	All crops
Ergostim®, Benefit®	<ul style="list-style-type: none"> Stimulation of the metabolic reactions of the plants, leading to an increase in the quality and quantity of the products. Induction of resistance to various forms of abiotic stress. 	Spain, Italy, Central-South America and Portugal	All crops
Goleador®, Siapton® nature, Aminogreen® nature	<ul style="list-style-type: none"> Improvement of flowering, fruit set and fruit growth. 	Spain, Italy and Egypt	All crops

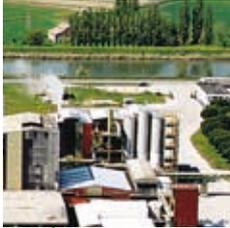
Our plants

The locations that house ISAGRO plants are protected and affected by the same principles that characterise the company's sustainable identity: respect for the environmental context and harmony with the surrounding area.





Adria plant



The plant covers a total surface area of 73,000 sqm, of which roughly 13,000 sqm are covered, about 26,000 sqm developed and 31,000 sqm left green; it can produce up to 22,000 tons/year of copper-based fungicides, that are sold as either technical active principles or formulated powder products,

hydro-dispersible granules and flow products (paste).

The plant is equipped with a tested ISO 14001 certified environmental management system and is further validated by the EMAS registration: in 2009, the site obtained the EMAS registration Regulation nr. IT001113 with the first Environmental Statement accreditation. From the same year, the organization annually discloses the plant environmental performances data by publishing the EMAS Environmental Declaration, validated by Certiquality and available to the public in the website www.isagro.com.

On a three-year basis, the plant's management sets out the specific improvement objectives for the significant environmental issues into a program included in the EMAS Environmental Statement, with a 2014-2016 extension and a regard to the personnel training on the environmental management, the reduction of the atmospheric emissions of the greenhouse gases, the carrying out of an energetic diagnosis study aimed at optimizing the thermic and electric resources.

It should be underlined that the environmental parameters defined in the authorizations granted by the Authorities are constantly kept under strict control and show much lower values, in 2015 too, than the authorized limits.

Aprilia plant

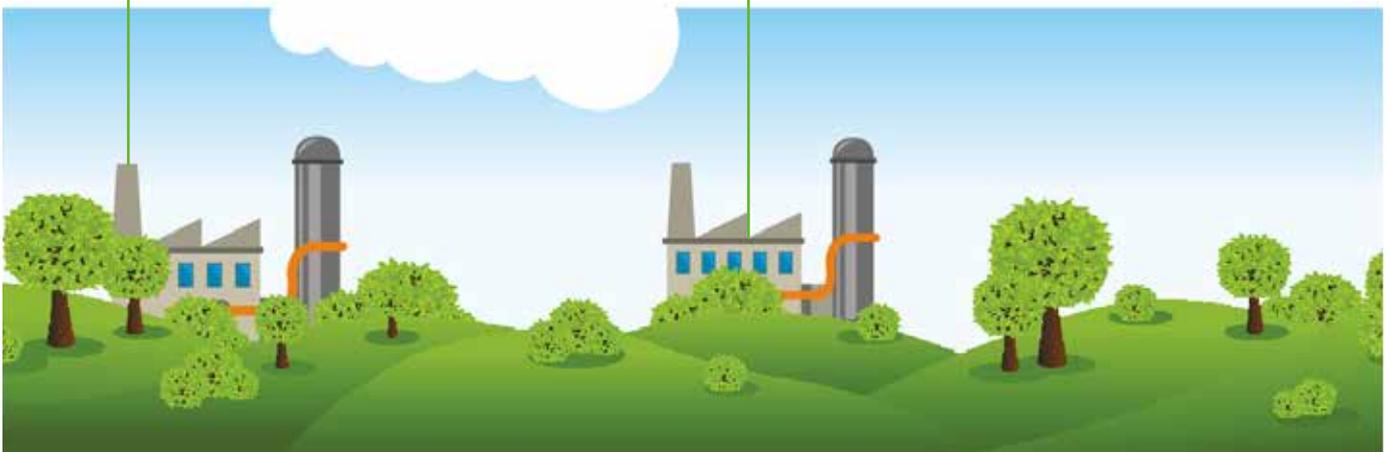


The plant handles the formulation and packaging of powders, liquids, pastes and hydro-dispersible granules, by exploiting the technologies that enable the realization of high quality products with a low environmental impact.

The plant covers a surface area of 140,000 sqm, of which roughly 33,500 sqm are covered, and it can produce up to 300 different types of formulated products.

In this plant too, an energetic diagnosis study aimed at optimizing the thermic and electric resources was made.

The emissions coming from the plant production activity are accurately kept under control by monitoring the parameters defined in the authorizations given by the Authorities. The parameters have values well under the authorized limits. In 2015 too, the plant components installations were carried out to decrease the odours and a systematic specific training program was implemented for the employees, regarding the the reduction of risks affecting the surrounding environment. During 2015, the project to fully remove the asbestos, that was present in the covering forms only, was fulfilled.



Bussi sul Tirino plant



The plant is dedicated to the Tetraconazole production since 2006, which made it possible to reduce its manufacturing cost significantly. The production capacity amounts to 600 tons/year. In this production site too, the environmental parameters set out in the authorizations granted by the

Authorities are accurately kept under strict control, with values well under the authorized limits.

In the three-year period 2013-2015, the manufacturing values were quite discontinuous, because of the different markets demands.

During this period, the attention to the environment was high: particularly, in 2015 a significant investment was made in order to abate the impact on the atmosphere by creating a cryogenic condensation plant able to lower in a significant way the emissions of organic volatile compounds with no destruction effect, through their retrieval in the production phase and a re-use of the raw material. The Bussi Plant insists on an area of national interest, therefore there's a particular focus on controlling the contamination of the soil and of the surface waters and ground waters.

Novara Biological Products Unit



The Novara biological products facility was created in 2006 for the development and production of formulated products based on natural microorganisms. The plant, made of liquid fermenters (4000 litres capacity) and a thermostatic room for the solid substrate fermentation, can produce liquid and solid formulated products that can be used both in the farming (fungicides, herbicides, insecticides) and in the environmental treatments (starters and additives for the biological waste treatment plants). The plant puts no significant gaseous emissions into the atmosphere.

The washing effluent is either neutralized or disposed of as waste. From June 2006, the site (including the greenhouses for the biological evaluations) employs almost only (98%) groundwater drawn from a private well for industrial requirements.

Beside the 750 square meters production site, in April 2015 a New Research center, 9,400 square meters in total, was added to the plant in Novara, including 2,250 square meters laboratories and 1,370 square meters greenhouses. These are Isagro NRC numbers: the NRC will catalyze on Novara territory most of the 50 million Euros investments in R&D that are expected in the next four years.



Panoli (India) plant

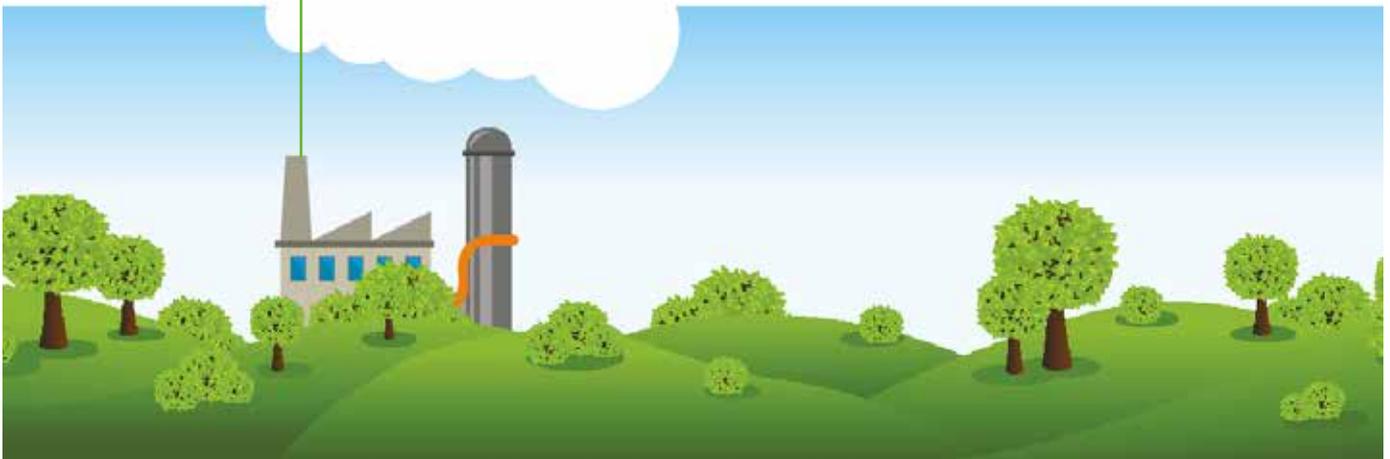


Isagro Asia has a state-of-the-art plant in Panoli, in the Gujarat State (India), operating in the synthesis of the main active proprietary ingredients of the Group and their intermediate products and formulation and packaging of different products bound for the local market.

The site covers a total surface area of 154,786 sqm, about 34.425 sqm of which are covered.

Currently, the company counts 122 employees.

Since 2003, it produced, with increasing volumes and a gradual improvement in efficiency, the M-Alcohol intermediate product, used by the Group to produce Tetraconazole. The improvement of the environmental management of the plant liquid, solid and gaseous effluents was achieved thanks to the implementation of many projects. In particular, the "Zero waste Project" for the full overhaul of the liquid effluent treatment systems was completed. In 2001, Isagro Asia obtained the ISO 9001 certification: 2008 in accordance with the quality management system requirements. It is run by highly qualified staff with a consolidated experience. Isagro Asia obtained in 2015 the 14001 ISO: 2004, the environmental management system guiding the companies in the compliance with the legislative requirements and the environmental laws. In 2011, Isagro Asia gained the OHSAS 18001: 2007 certification, by deploying an international management system for the employees safety and health. Finally, Isagro Asia was given the accreditation for the chemical analyses in facilities in accordance with the ISO/IEC 17025: 2005 by the National Accreditation Board for Testing and Calibration Laboratories (NABL).



Environmental Commitment

THE WISE MAN LEAVES
THE WORLD BETTER
THAN HE FOUND IT





The history of human beings was born together with the history of human society, the history about the human race able to change the world into a better place to live, thus into a reality more and more comfortable and safer. From Prometheus discovery of fire to naming animals and plants through Adam and Eve up to defeating the oceans thanks to Magellan and making sense of the stars with Copernicus.

This is even more true today, in a world where it is become important to combine development and available resources, growth and future generations needs. The necessity of changing the world in order to make it more alike our needs requires, today, to come to terms with the power taken by men. The industrial and technological growth requires an even bigger responsibility toward the people, territory and environment. Chemistry, in particular, is look at as the most dangerous and terrifying human intervention.

The witch hunt didn't end up in the Dark Ages, viceversa it continues under always new disguises. The most frightening thing today is Chemistry!

There was never a less regarded science by the public opinion: «Chemistry pollutes», «it is harmful for people», «it ruins life» and so on, surfing among platitudes, clichés and any kind of slogan. To be clear, we are here referring to «bad» chemistry.

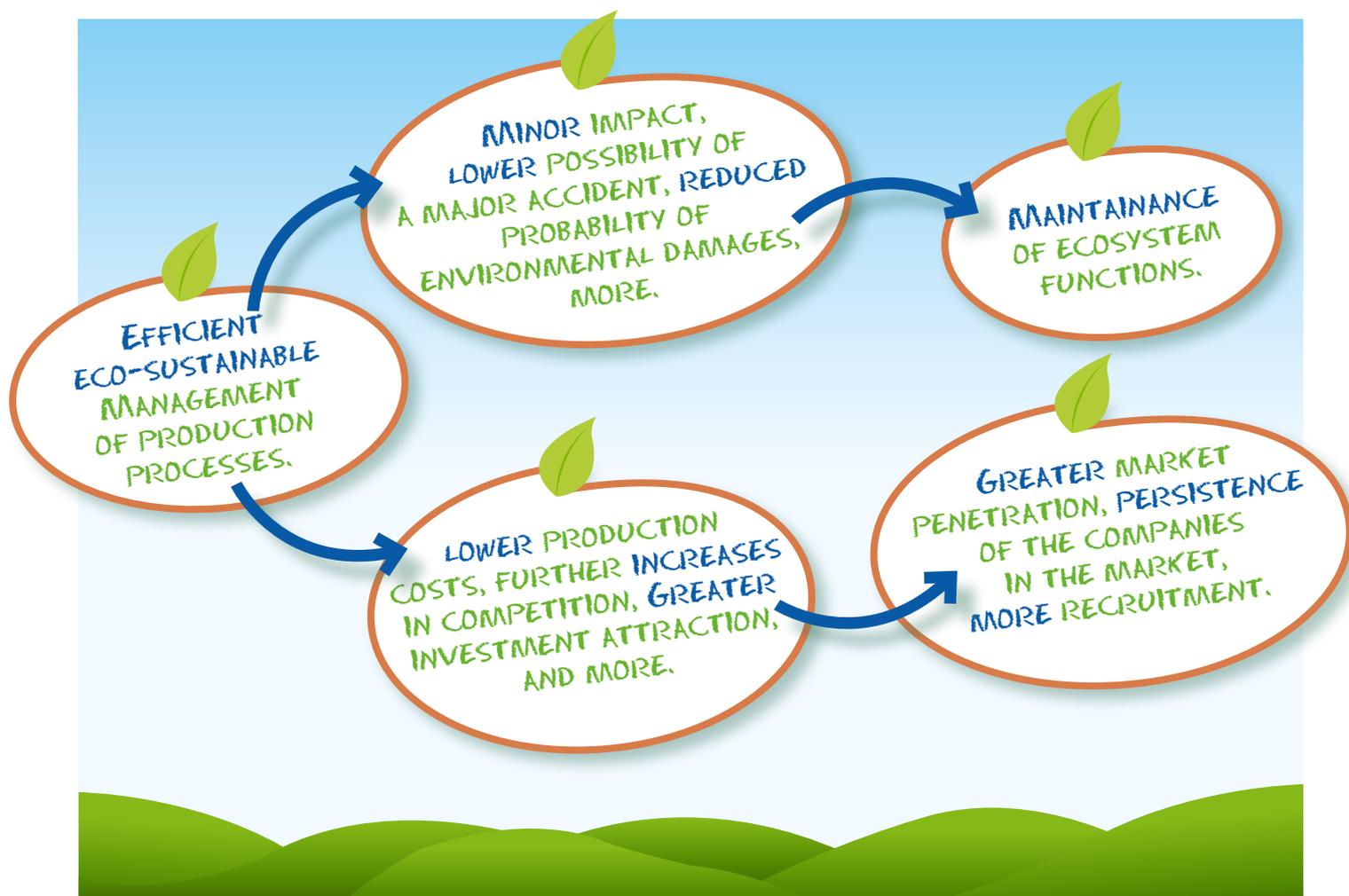
Whether in the past Chemistry caused very serious damages to the environment, due to a lack of knowledge and the inadequacy of the environmental laws and to the operators lack of awareness, today everything has changed significantly.

Chemistry, for instance, is now a friend of Nature, a friend of crops and therefore of the whole planet's nutrition.

«The crop protection products are the decisive response to the world growing demand for food. Thanks to the correct use of these substances, it was possible to increase the agricultural production and efficiency, by lowering the prices and obtaining greater harvests and safe food of a higher quality. Without the crop protection products, there would be for the agriculture production the risk of significantly dropping because of the various illnesses possibly attacking the plants, with a big series of consequences on the human and animal health and on the performance of the economy.

The crop protection products, instead, fulfil the need of providing food in abundance during the whole year, thus making our nutrition more varied and improving the quality of life» (Federchimica).

Environmental management



An industrial activity has the goal of creating richness and wellness for everyone, not only for those who get economic benefits.

The sustainability is a value, for Isagro, and a commitment that become concrete in behaviours and operations set up in an efficient and economic way, in order to always guarantee a top level of safety, health protection and quality to the production processes, in full respect of the environment.

As any other production activity, Isagro plants take from Nature the water resources (groundwater, river water, etc) and the energy resources (fuel, electric energy), which are necessary for changing the raw materials into finished goods.

An industrial activity can be considered environmentally sustainable when it doesn't compromise the future generations skills to satisfy their own needs. The taken resources, therefore, must remain available in the future, just as they were in the past and they are currently. Consequently, it is necessary to put a major focus on their protection, meant of as a real investment for the industrial development.

For this reason, Isagro S.p.A. manages, when running its production activities, the strongest control on the environmental aspects, also ensuring the right respect for Nature.

These environmental aspects concern any type of impact, from the consumption of natural resources to the consequences on their surroundings.

In order to achieve the expected results, a strict management protocol is applied and, beside being partly Corporate and partly local, it is articulated in the following activities:

Corporate

- innovative studies of packaging solutions aimed at reducing the environmental impact, in terms of specific consumption and materials biocompatibility;
- monitoring of current packaging consumption in order to identify areas of possible improvement;
- active participation to exhibitions, conventions and thematic meetings aimed at knowing the best technologies available on the market for reducing emissions and saving energy;
- voluntary adherence to the 231-01 organizational model;
- implementation of a plan to increase the energy management, following the entry into force of the Legislative Decree 102/2014 (Italian transposition of the EU Directive 2012/27 on the energy efficiency);
- voluntary adherence to Federchimica Responsible Care program.

Production plants

- periodic monitoring of natural resources consumption (water, energy), continuously seeking for their optimization and, possibly, for their reduction;
- specific checks of the outgoing polluting parameters (on atmospheric emissions, water bodies, etc), so as to prevent any exceedance of the established emissions thresholds;
- ordinary and extraordinary maintenance of the impact lowering/ containment systems;
- research and innovation on the abatement systems;
- management and control of the effluents types entering the lowering/ containment systems;
- periodic analysis of production flows with the aim of gradually reducing the environmental impact (emissions, water and energy consumption);
- local management systems including a series of proceedings and operating instructions aimed at monitoring:
 - the activities, controls and analyses to be performed on the discharges;
 - the consumption control and optimization;
 - the waste cycle control and optimization, favouring their same reduction and the recycling activities;
 - the assessment of the performance in obtaining the established objectives;
 - the same objectives evolution in the light of the changing technologies and of the current needs.

The compliance with the requirements and limitations set forth in the various environmental authorizations is thereby ensured, because the inside targets are more strict and steadily improving.

Social Responsibility and welfare



Isagro has adopted involving and communicating strategies on the environmental themes toward its interlocutors, thus anticipating what was arranged and marked in the latest drawing up of the National Collective Agreement (Ed. 2016-2018).

Here are the activities arranged among the social parts in agreement, carried out by Isagro as per its environmental policy:

- adherence to the Responsible Care program;
- marked training activity on the Health, Safety and Environment themes;
- involvement of the employees Representatives in all the company activities;
- involvement of the contracting Agencies in the good practice identified by Isagro for the environment protection.

All this is to be translated into the effort to increase the awareness and preparation level both of its personnel and of the surrounding area, in order to promote safer behaviours toward the environment and to minimize its employment impacts on it.

Energy audit in Aprilia – Adria (Tep)



As a result of the energy Audit carried out in those plants identified as the most energy-intensive (Adria and Aprilia), some indicators suggesting a management strategy could be found out. The identification of such indices, despite a very in-depth and detailed study of the production realities, is not sufficient to achieve the best management.

Isagro has always had a particular attention for the university world, with which it cooperates by offering the chance to do training-work experience internships and graduate theses. Thanks to such exchange of professionalism, it became possible, in the light of the evidence revealed by the energy audit, to start the implementation of an energy management system in accordance with standard ISO 50001:11.

Inclusion of an environmental impact indicator for finished goods packaging materials



Such indicator shows the organization contribute to the resources global protection and efforts to reduce the intensive use of materials. These are the goals designed by the OECD Council and by the sustainability strategies of many Nations.

The material consumption is directly related to the total operating costs.

To check from the inside such consumption per product and product category makes the monitoring and the materials efficient use easier.

The monitoring was started in 2015 with the aim of dividing the used packagings over the material and the biodegradability (biodegradable/non biodegradable).

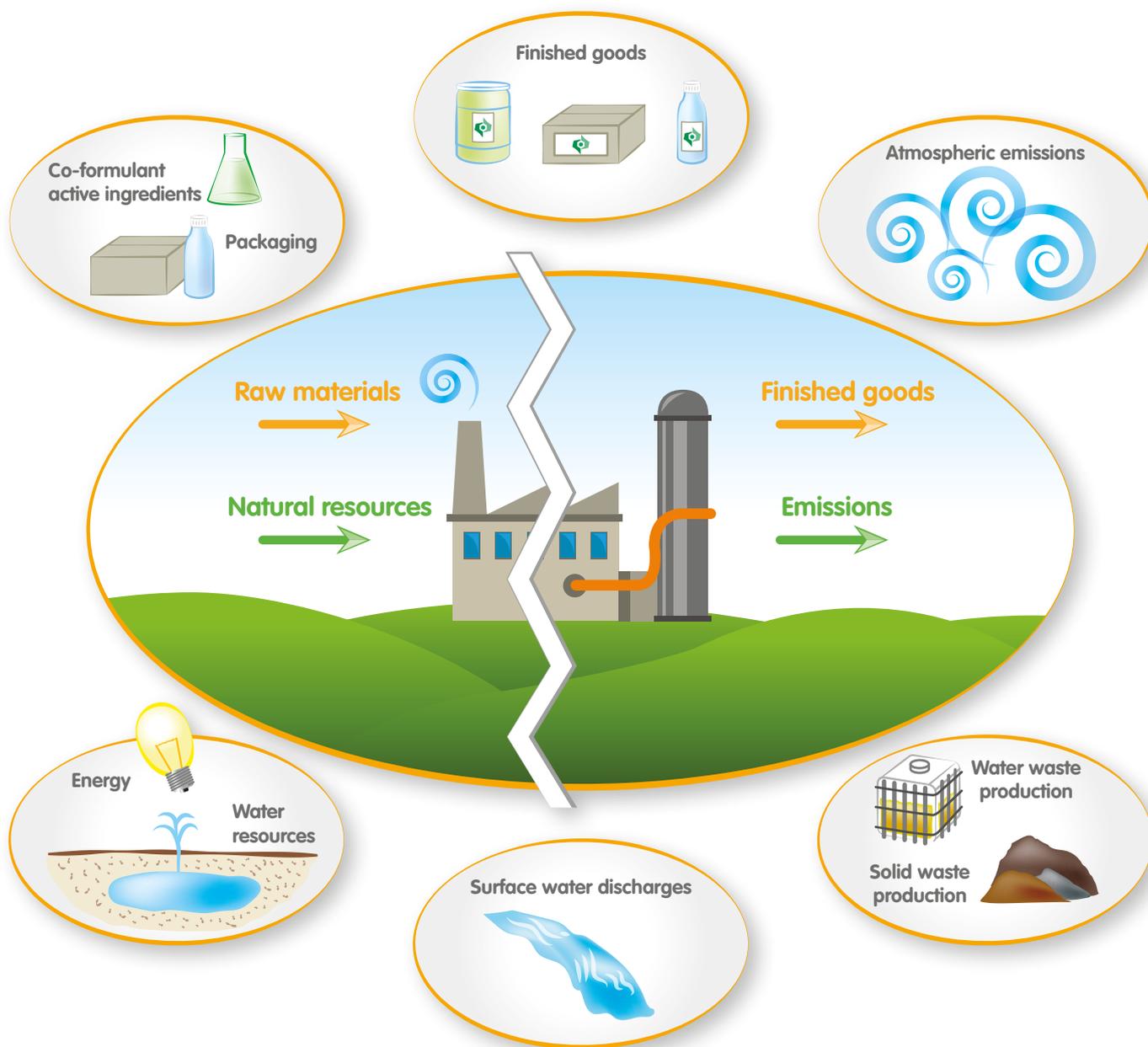
Material Type	Used Quantity (pcs)
Paper and carton	1,085,899
Plastics	3,837,499
Iron	2,623
Water-soluble	6,588
Others	2,624,307

Environmental impact factors

The production flow of Isagro manufacturing facilities provides the transformation of raw materials into finished goods.

In order to achieve such transformation, it is required the use of natural resources like fuel (either used directly or turned into electricity and/or steam), water resources (pumping of groundwater, rivers water, waterworks) and, not least, Isagro workforce of about 400 employees.

The environmental effects of processing, meaning the atmospheric emissions, water discharge and waste production, are the unavoidable and logic consequence of the production activities.



Significant environmental impact factors specific for each site



The significant environmental impacts of each resource used in production activities have been identified, plant-by-plant. In the herein tables the links between the resources consumption and the environmental effects are made clear.

The quantification, monitoring and optimisation of such factors represent Isagro care for the environment.

	Impacts					
	Liquid effluents	Gaseous effluents	Carbon dioxide equivalent	TOE	Solid wastes	Liquid wastes
Well water						
River water	■					
Water from aqueduct						
Gaseous fuels		■	■			
Liquid fuels		■	■			
Electricity			■	■		
Steam						
Raw materials					■	
Packaging						
Transport						

Adria

Sources

Aprilia

Sources

Impacts

	Liquid effluents	Gaseous effluents	Carbon dioxide equivalent	TOE	Solid wastes	Liquid wastes
Well water						
River water						
Water from aqueduct						
Gaseous fuels						
Liquid fuels						
Electricity						
Steam						
Raw materials						
Transport						

Bussi

Sources

Impacts

	Liquid effluents	Gaseous effluents	Carbon dioxide equivalent	TOE	Solid wastes	Liquid wastes
Well water						
River water						
Water from aqueduct						
Gaseous fuels						
Liquid fuels						
Electricity						
Steam						
Raw materials						

Novara

Sources

Impacts

	Liquid effluents	Gaseous effluents	Carbon dioxide equivalent	TOE	Solid wastes	Liquid wastes
Well water						
River water						
Water from aqueduct						
Gaseous fuels						
Liquid fuels						
Electricity						
Steam						
Raw materials						
Transport						

Panoli

Sources

Impacts

	Liquid effluents	Gaseous effluents	Carbon dioxide equivalent	TOE	Solid wastes	Liquid wastes
Well water						
River water						
Water from aqueduct						
Gaseous fuels						
Liquid fuels						
Electricity						
Steam						
Raw materials						
Transport						



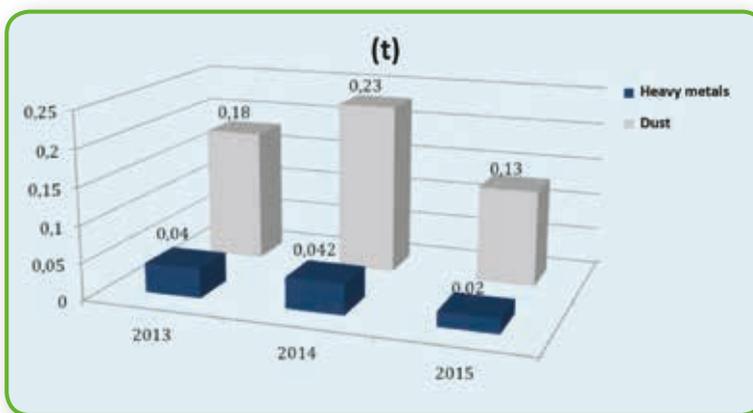
BEFORE SHOWING THE ENVIRONMENTAL PERFORMANCES OF THE SITES, IT HAS TO BE POINTED OUT THAT THE HEREIN REPORTED VALUES ARE THE RESULT OF SAMPLINGS AND ANALYSES DONE BY OUTSIDE CERTIFIED LABORATORIES AND THAT THE MEASURED QUANTITIES ARE DETECTED BY CERTIFIED DEVICES. THEREFORE, ALL DATA ARE REAL AND SIGNIFICANT: A PREREQUISITE FOR A CORRECT MANAGEMENT OF THE WHOLE SYSTEM.

IN ORDER TO MONITOR  THE TREND OF THE VERIFIED PARAMETERS, THE REFERENCE YEARS WILL BE 2013, 2014, 2015.

Adria plant

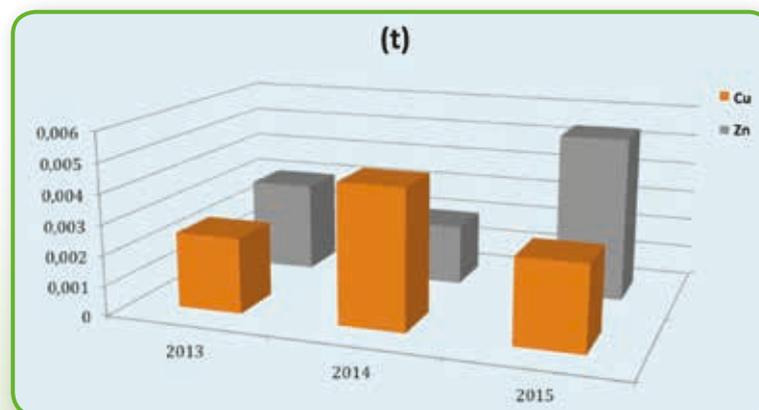


GASEOUS EFFLUENTS



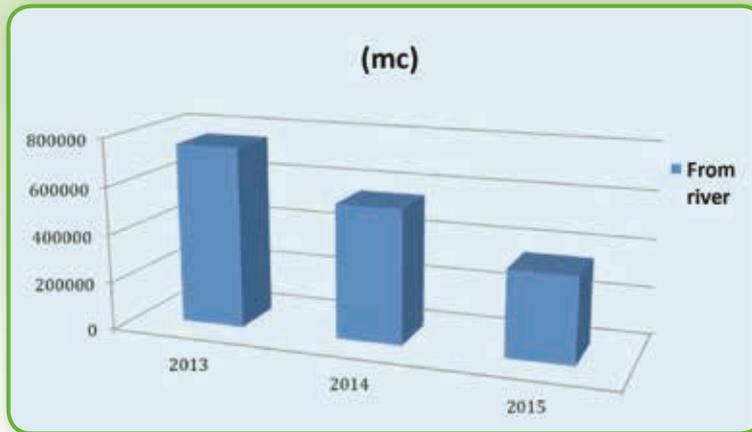
The graphs above show the care for the abatement systems efficiency.

HEAVY METALS IN LIQUID EFFLUENTS



The values reported in the graph are much lower than the limits by quantity low in terms of the concentration of copper in the emission spots is a fifth of the legal limit, the concentration of zinc is two orders of magnitude lower than the legal limits.

WATER FROM RIVER



- The graph above shows the care for the process management in order to lower the natural resources exploitation.

ENERGY CONSUMPTION

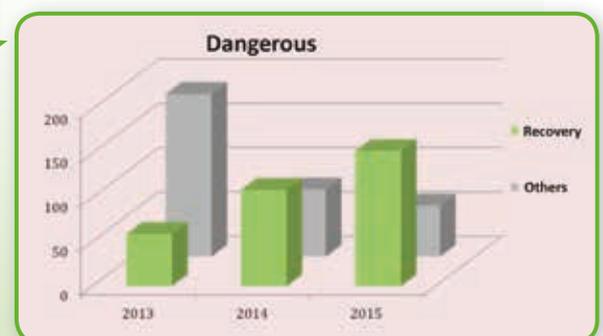


- The energy consumption didn't undergo any substantial change (being strongly linked to the tons of manufactured products).

WASTE



DANGEROUS - PRODUCTS

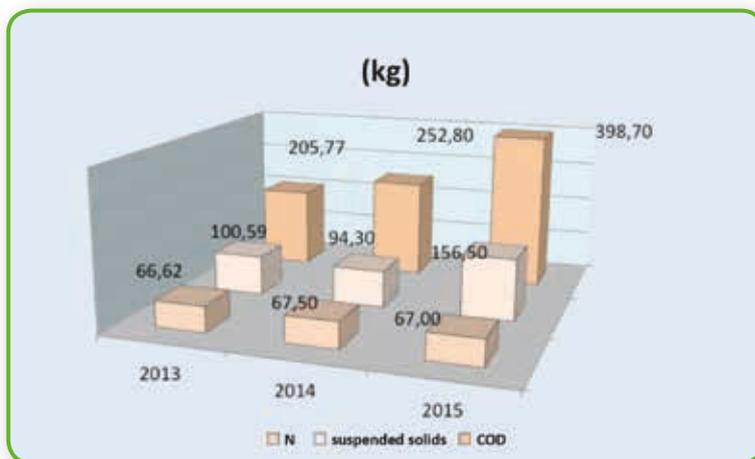


- The net direction to recovery is clear despite the destruction of waste.

Aprilia plant

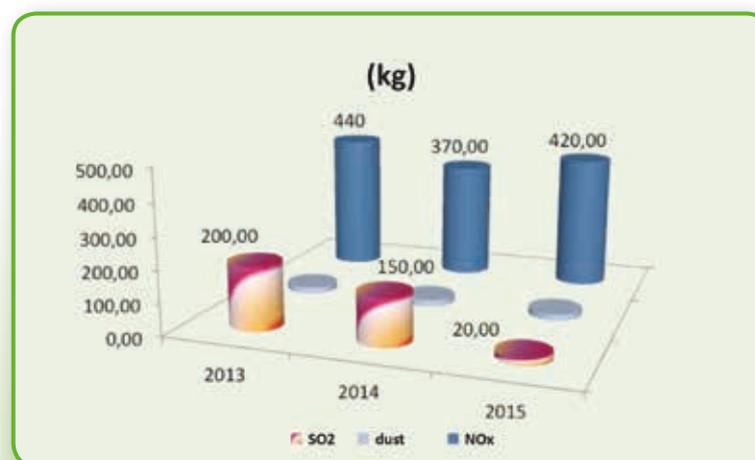


LIQUID EFFLUENTS



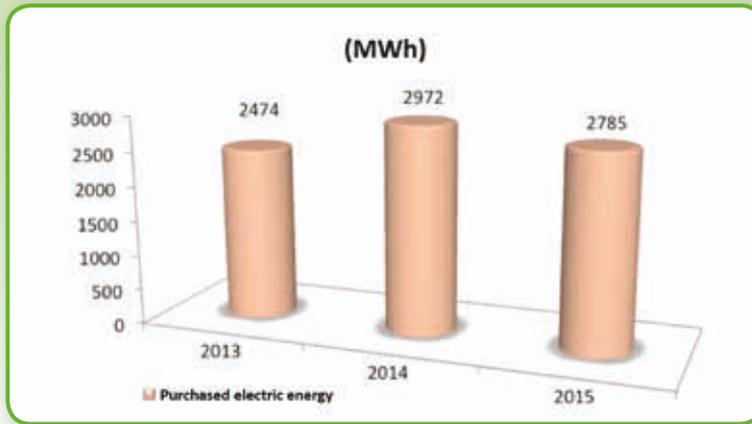
The released quantity of pollutants is closely linked to the quantity of purified water. The concentrations of outgoing pollutants are stable and well under the legal limits.

GASEOUS EFFLUENTS



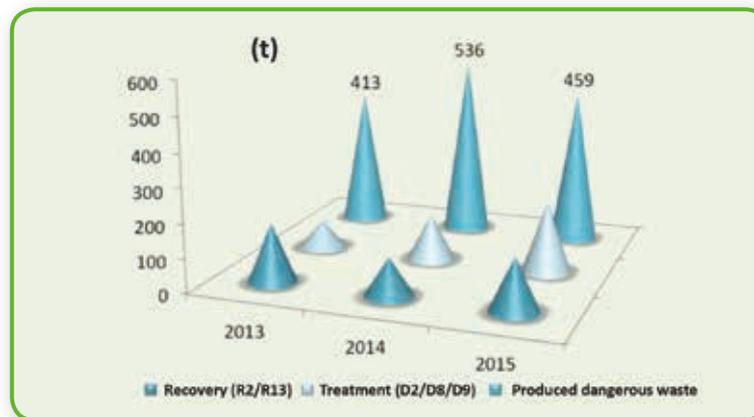
The trend over the years is regular for all the substances, except for the SO_x, due to combustion of oil. Liquid fuels have been completely replaced with LPG.

PURCHASED ELECTRIC ENERGY



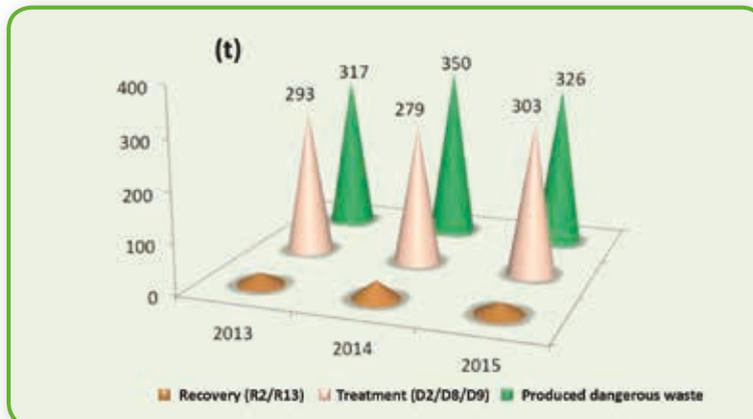
An evident reduction of such trend is expected within next years, following the adoption of energy management systems.

DANGEROUS WASTE



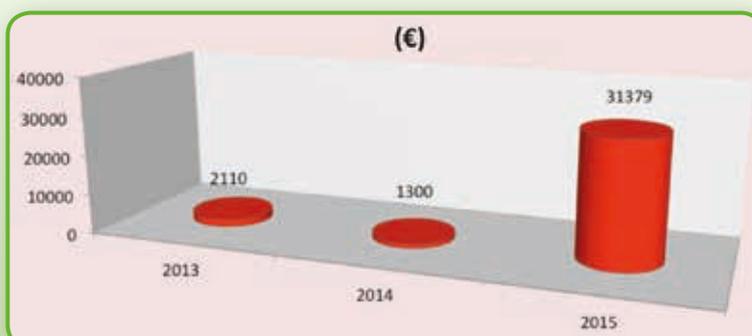
The dangerous waste recovery is preferred to their disposal depending on their conditions.

NON DANGEROUS WASTE



The recovery of non dangerous waste is most of times possible (and always preferred to other solutions).

TREATMENT COSTS FOR LIQUID/GASEOUS EMISSIONS

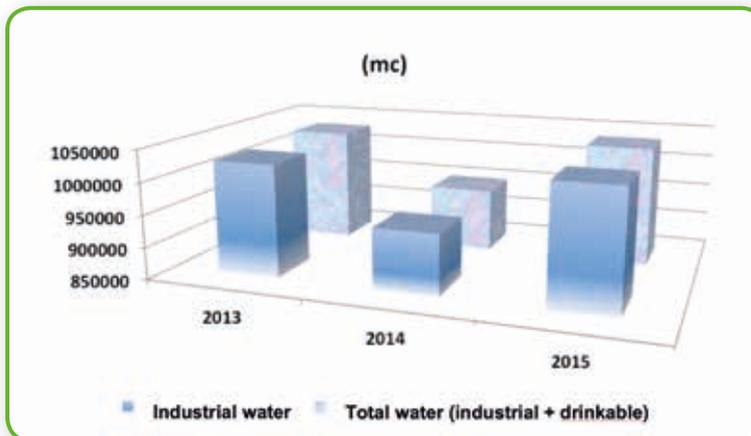


2015 costs were mainly incurred for changing the fuel and monitoring the sewerage.

Bussi sul Tirino plant

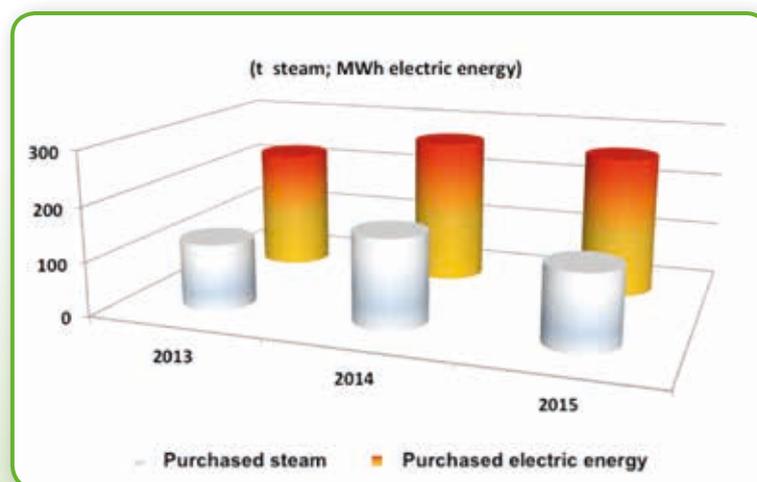


WATER CONSUMPTION



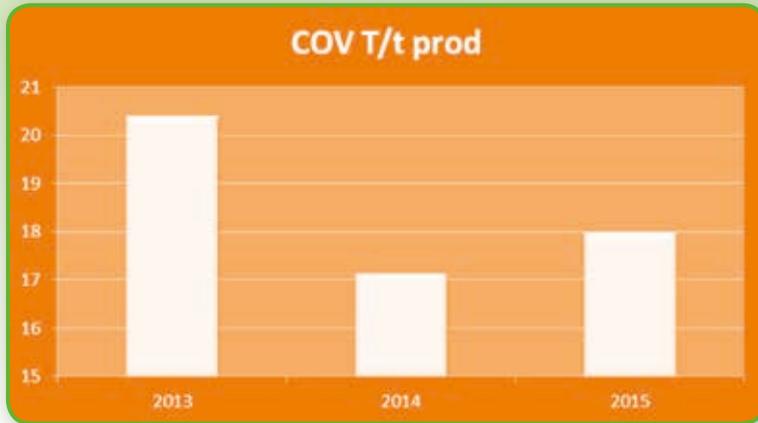
The values have been indexed as specific consumption referring to the annual production. In 2013 the consumption increased compared to the historical average, kept stable in the following two years, because of a production inflection.

ENERGY CONSUMPTION



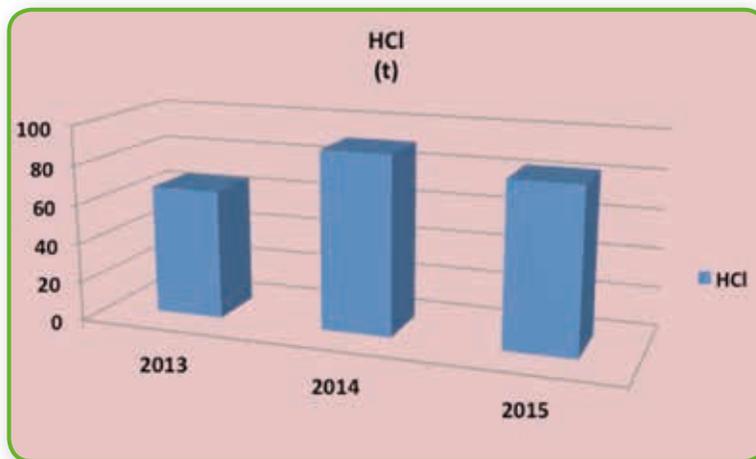
The specific consumption of electric energy increased in 2013 due to the reduction of the volume produced. The 2014-2015 trend falls under the normal range of expected consumption. The notes and comments regarding the previous years are now confirmed and consolidated, taking into account the production volumes.

GASEOUS EFFLUENTS



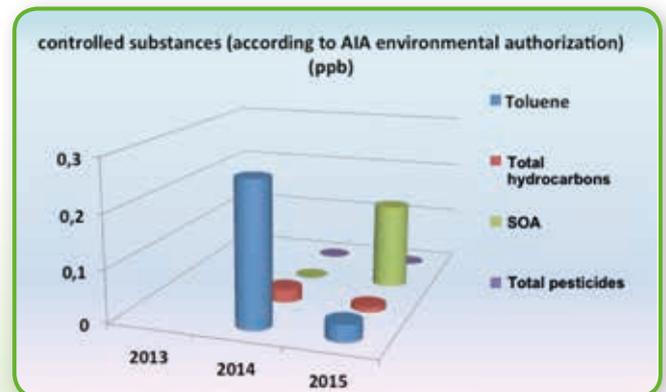
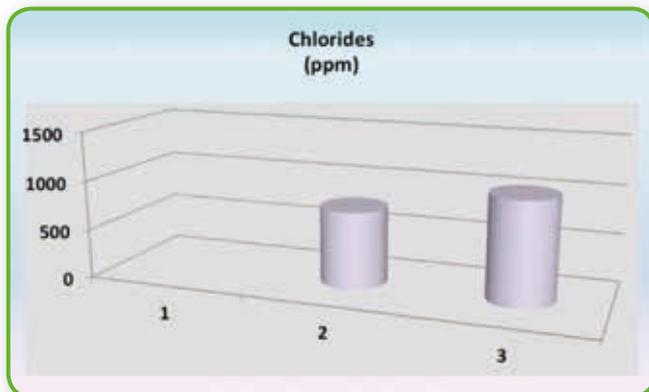
The specific emission data confirm the trend already observed in the past years: the emissions are closely linked to the tons of processed products, taking into consideration a physiological dispersion, also if there's no production, due to the presence of storage tanks and intermediate accumulation. In 2016, a drastic emissions reduction is expected, as an effect of a facility start-up for the emissions abatement by cryogenic condensation.

LIQUID EFFLUENTS



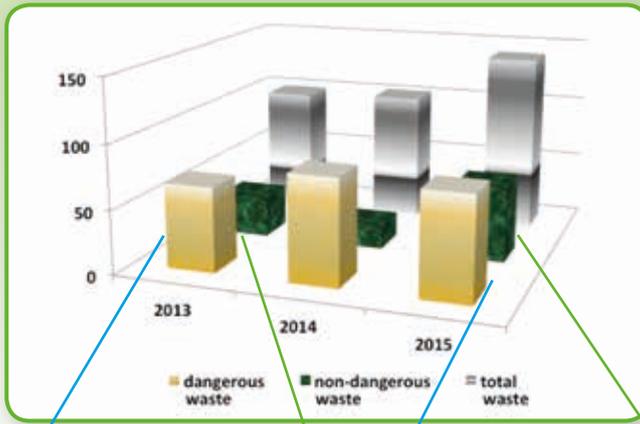
The data confirm the trend already observed in the past years: the specific water discharges are independent from the production volume.

LIQUID EFFLUENTS



The previous graphs show the data highlighted during the self-monitorings as per the Environmental Integrated Authorization, a regional authorization released to the Bussi plant end of 2013. For this reason, the monitorings began in 2014. The reported data are in ppb and at least two orders of magnitude lower than the legal limits.

WASTE PRODUCTION



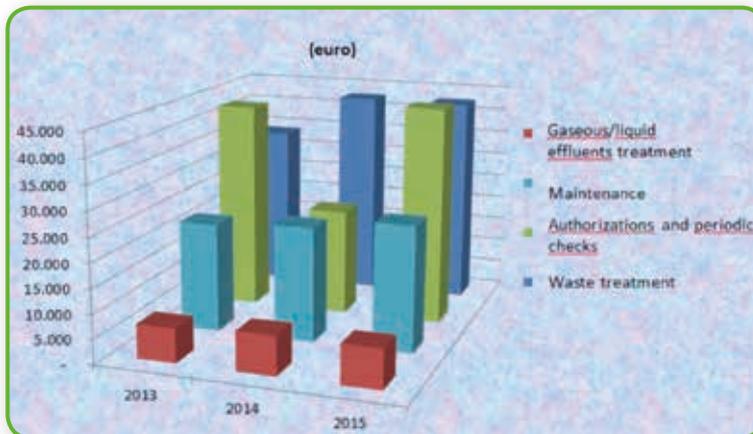
The reported data are to read as specific consumption. In 2014-2015 the waste specific production decreased especially because of the production shortage of not dangerous waste.

Dangerous waste management modality

Non dangerous waste management modality

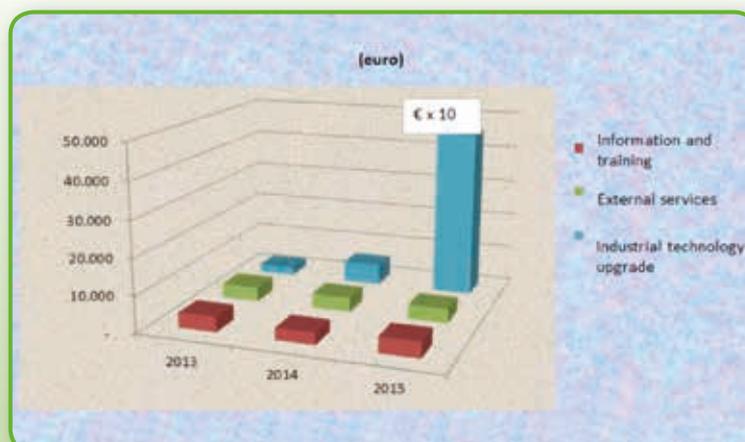


ENVIRONMENTAL MANAGING COSTS



The graph show a significant increase in the environment prevention costs relating to year 2015, due to the construction and installation of a technologically advanced system of abatement for the gaseous effluents.

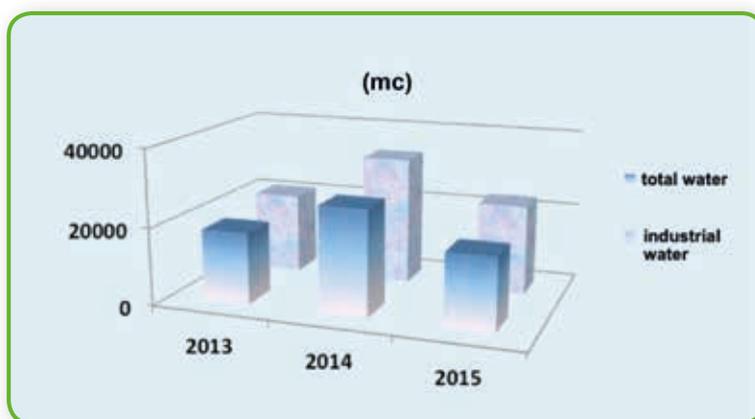
ENVIRONMENTAL PREVENTION COSTS



Novara Biological Products Unit

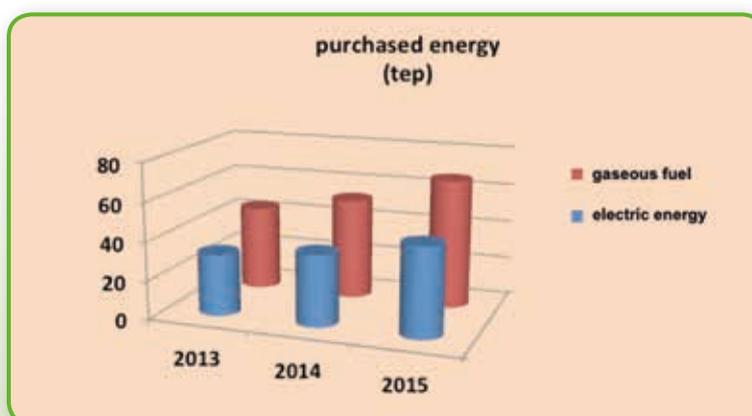


WATER CONSUMPTION



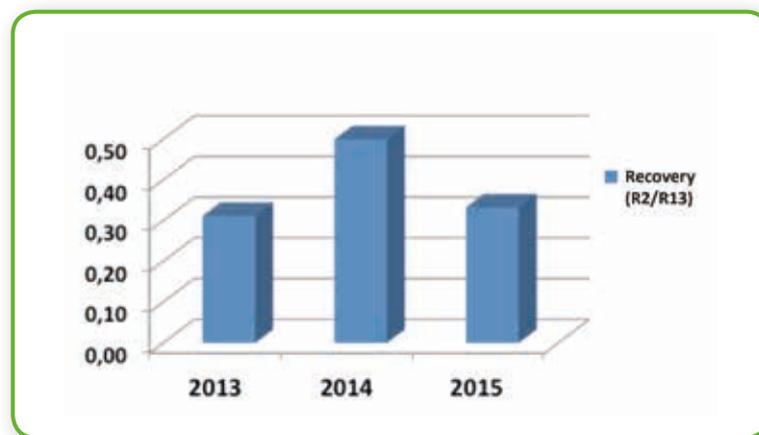
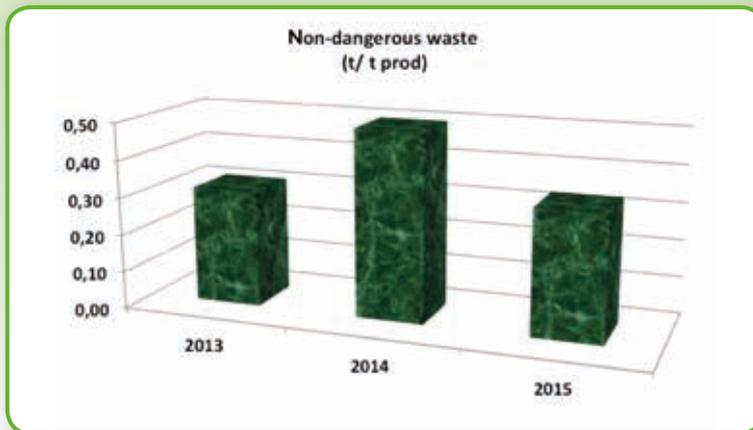
The consumption of well water is about 30% less after both the plants halt and a major efficiency as well as the best management of its use in cooling. In 2013, the consumption was lower due to the production department closure in the second half of the year. Drinking water is not used for production, therefore consumption is strictly related to the personnel presence.

ENERGY CONSUMPTION

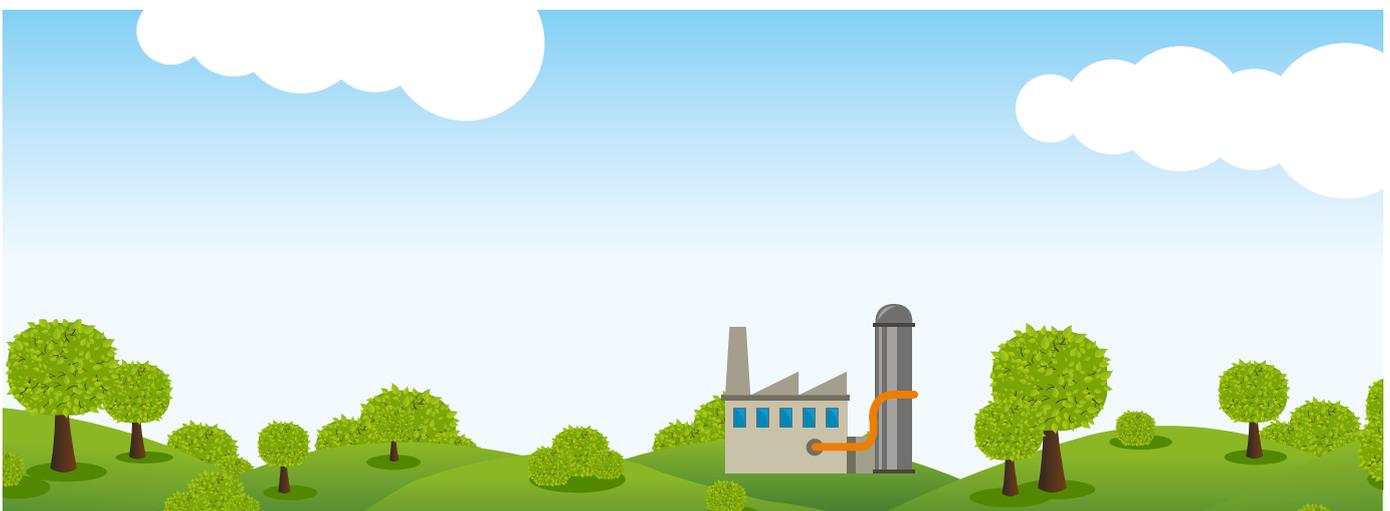


Although higher quantities were produced, the consumption of methane and electricity remains stable. As the production was suspended for 8 months in 2014, the higher energy consumption recorded was also associated with the construction site needs of building the adjacent Research Center.

WASTE PRODUCTION



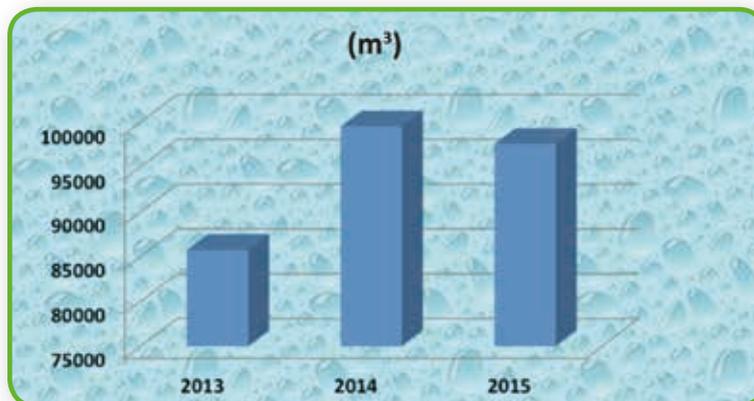
The waste quantity is higher in 2014 than in the other years observed, for the intrinsic features of the same disposed product. It is a very hygroscopic solid product of plant origin that suffers considerably from the storage area climatic conditions; so, with a really humid weather, being the generated waste volumes equal, the disposing matter weighs more.



Panoli plant

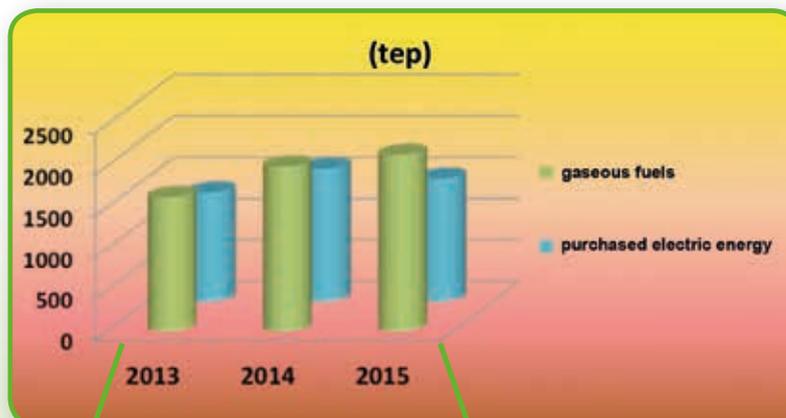


DRINKABLE WATER CONSUMPTION



The drinkable water consumption is substantially the same as the previous year. The small fall is in the standard.

PURCHASED ENERGY



The charts show the absence of major changes in energy consumption (liquid fuels, gaseous fuels, electricity).

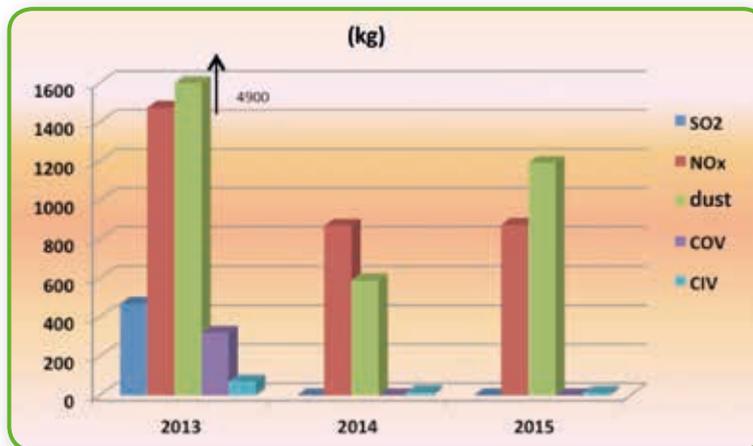


LIQUID EFFLUENTS



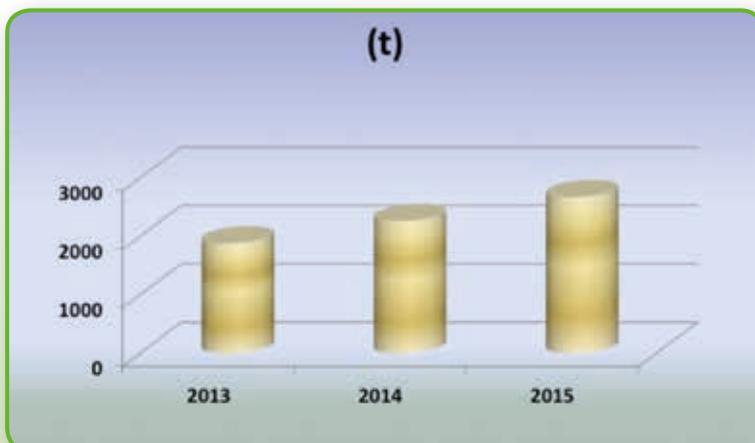
A general quality improvement of the outgoing discharges is clear. The major evidence comes from the reduced value of the Suspended Solid products, which represents a strong attention on the phase of separation/filtration.

GASEOUS EFFLUENTS



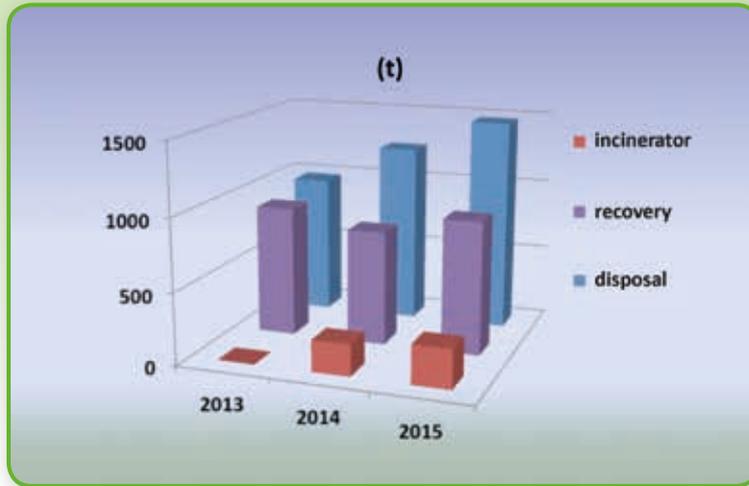
In the charts a major quality improvement of the gaseous effluents is clear: it began in 2012 when (and because) the incineration plant revamping was completed.

DANGEROUS WASTE PRODUCTION

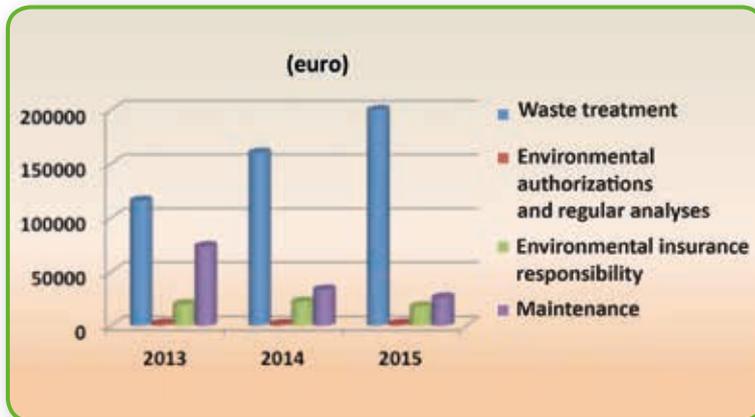


The dangerous waste production closely relates to the production volumes. Even if the quantity of dangerous waste is always treated in dumpsters mainly, the amount of waste destined for recovery is bigger.

WASTE MANAGEMENT



ENVIRONMENTAL MANAGING COSTS



The big quantity of generated dangerous waste implies, consequently, some great expenses for their adequate treatment. Actually, the cost trend for the waste treatment depends on the waste production flow.

ENVIRONMENTAL PREVENTION COSTS



The prevention costs are mainly due to re-vamping interventions on the in-use technologies, as per the criteria of the production activity integrated management (less pollution by optimizing the production processes).

2016/2017 Forecast



The figures in the previous sections illustrate the efficient and careful environmental management of Isagro sites.

Isagro technical personnel considers the trend of all the observed parameters a valid indicator of the entire management system.

The improvements carried out with the previous years operations are confirmed as good choices by the performances trend and development.

In the current and next years, new engineering and management solutions will be studied to even more reduce the impacts and to lower the natural resources consumption.

The environmental management systems were implemented and activated on a voluntary basis and, regarding Adria plant only, they were certified (ISO 14001 and EMAS) by external bodies.

These systems make it possible to keep under control, in a tried and tested way, the management of the production activities environmental aspects.

The environmental policy document sums up the Quality, Safety and Environment service quality in four stages:

- **activities planning;**
- **activities implementation;**
- **performances auditing;**
- **overall review and definition of the new goals to achieve.**

The trend of the up mentioned management is monitored periodically during the year.

Improvement targets



Target 1

Packaging

replacement of iron kegs with plastic kegs for Bussi.

Target 2

Transport tracking

shipment tracking also when not on road (to be compared with national data).

Target 3

Energy consumption

Bussi sul Tirino

To time track the plant energy consumption as to assess the solutions for the energy impact optimisation.

Such actions include both heat and electricity.

Aprilia

During 2016, the implementation preliminary stages of an energy management system will take place; the main operating processes will be drawn up and applied on Aprilia site and the energy consumption data will be gathered when strategic for the costs indexation of the various productions.

Target 4

Packaging waste

It will be carried out a monitoring of quantity and type of waste from RM, in order to define the percentage of total amount of waste. The total amount of waste is defined after production, as hazardous / non-hazardous waste code.

With this project, it is possible to check the raw materials impact on total waste production, to distinguish the effect of RM from the manufacturing process waste.

For each plant the waste codes deriving directly from the raw materials will be identified. During 2016, they will be tracked and their effects on the totality of waste generated by the production activities will be established.

Bussi plant

RM	RM type of waste	CER code	Dangerous/not dangerous
M-Alcohol	M-Alcohol big bags	150110	Dangerous
M-Alcohol, kegs for TGZ	Cartons and plastics	150106	Not dangerous

Target 5

Monitoring of CO₂ emissions from on-road transport

During 2016, a monitoring study of the CO₂ coming from the on-road transport of Isagro plants outgoing products will be started on the Italian territory.

Investments



The investments made every year on health and safety issues are proposed at the beginning of the year, following the Prevention and Protection Services assessments in cooperation with the Employers and the technical services Responsibles.

In case it becomes necessary to make non-budgetary investments during the year, Isagro will guarantee their realization, which confirms that the themes of Health, Safety and Environment are a top priority for the company.

Plant	Environment investments 2013 (€)	Environment investments 2014 (€)	Environment investments 2015 (€)
Adria	123,000	128,000	20,000
Aprilia	25,494	153,615	34,687
Bussi	6,000	56,569	457,088

Management systems

Every activity area of all Isagro plants is subduced to a Management System.

The Quality Management System has the aim of making our working processes always safer and more reliable, by guaranteeing our Customers on the ongoing quality of our products and reliability of our plants.

The Environment Management System has the aim of allowing on all matrices the control of any aspect of the environmental impacts. Moreover, the Adria plant adherence to the EMAS tool guarantees a superior level of transparency toward the citizens. The other plants, though they are not certified, implemented their environment management systems based on UNI EN ISO 14001, by integrating the environment specific inside the Quality Management System.

The Safety Management Systems used by Adria and Aprilia plants are, differently from the other two plants, a legal obligation because they are part of the so called “Seveso Directive” (more precisely the Legislative Decree 105/2015, the Italian transposition of the EEC European directive, known as “Seveso Diirective III”). Such systems are oriented to preventing the happening accidents in the plants; the accidents are said “major” because of the involvement of big quantities of chemicals.

Plant	Quality Management System		Environmental Management System		Safety Management System	
	In-use system	Adoption year	In-use system	Adoption year	In-use system	Adoption year
Adria	UNI EN ISO 9001:2008	1993	UNI EN ISO 14001/EMAS	2000/2007	SGS «Major accident risk»	2006
Aprilia	UNI EN ISO 9001:2008	2004	Inside management system		SGS «Major accident risk»	1999
Bussi	UNI EN ISO 9001:2008	2008	Inside management system		Inside management system	
Milano	UNI EN ISO 9001:2008	1998	Inside management system		Inside management system	
Novara	UNI EN ISO 9001:2008	2010	Inside management system		Inside management system	
Panoli (india)	UNI EN ISO 9001:2008	2002	UNI EN ISO 14001	2005	OHSAS 18001:2007	2011

Group offices and activities



ISAGRO S.p.A. (Parent Company)

Registered and administrative offices: Milan.

ISAGRO ARGENTINA S.r.l.

Head Office: Buenos Aires.

Activities: management of Isagro products development and registration in Argentina.

ISAGRO ASIA AGROCHEMICAL Pvt Ltd.

Head Office: Mumbai, India.

Activities: development, production, marketing and distribution of crop protection products in the Indian market.

ISAGRO AUSTRALIA PTY Ltd.

Head Office: Sydney.

Activities: management of Isagro products registrations in Australia.

ISAGRO BRASIL Ltda.

Head Office: São Paulo.

Activities: promotion of Isagro market presence, development and registration of Isagro new products in Brazil and South America.

ISAGRO CHILE Ltda.

Head Office: Santiago, Chile.

Activities: management of Isagro products registration in Chile.

ISAGRO (SHANGHAI) TECHNICAL SERVICES CO. Ltd.

Head Office: Shanghai.

Activities: promotion of Isagro market presence, development and registration of Isagro new products in China.

ISAGRO COLOMBIA S.A.S.

Head Office: Cota, Cundinamarca.

Activities: development, registration, marketing and distribution of Isagro crop protection products in the Colombian market, in the Andean region and in Central America.

ISAGRO ESPAÑA S.L.

Head Office: Madrid.

Activities: development, registration and distribution of Isagro crop protection products in the Spanish market.

RESEARCH INNOVATION & DEVELOPMENT CENTER ISAGRO

Head Office: Novara.

Activities: innovative research aimed at identifying new crop protection products and development of the new products identified.

ISAGRO SINGAPORE PTE Ltd.

Head Office: Singapore.

Activities: development, registration, marketing and distribution of Isagro crop protection products in the Asian Far East.

ISAGRO SOUTH AFRICA Ltd.

Head Office: Amanzimtoti.

Activities: management of Isagro products development and registration in South Africa.

ISAGRO USA Inc.

Head Office: Morrisville, North Carolina.

Activities: development, registration and marketing of Isagro products in the USA.

BRANCH in CUBA

Head Office: La Habana.

Activities: management of Isagro products development and registration in Cuba.

REP. OFFICE in VIETNAM

Head Office: Ho Chi Min.

Activities: promotion of Isagro market presence, development and registration of Isagro new products in central Asia and Oceania.

ASSOCIATED COMPANIES AND JOINT-VENTURES

ARTERRA BIOSCIENCE S.r.l.

Head Office: Naples.

Activities: research and development of biology and molecular genetics.

Agropharmaceutical-Phytopharmaceutical

Agropharmaceutical is a compound term, “agro” from the Latin “ager-agri” = field, referring to agriculture or fields, and pharmaceutical, a substance for treatment. Phytopharmaceutical comes from the Greek “phitón” = plant and “phármacon” = medication.

In humans and animals the term means functional modifications via a chemical or physical action, in the common sense of a medication or remedy.

The neologism was coined to define, in a way that is immediately comprehensible and unmistakable, the chemical product used to treat plant diseases in agriculture.

Antiparasitic

From the Greek “anti” = against and “parásitos” = commensal. A substance used to combat plant parasites.

Biotechnologies

Technologies based on the manipulation of the genetic code of plants, in order to insert genes capable of improving certain characteristics (like insect resistance).

COD (Chemical Oxygen Demand)

Quantity of oxygen needed for the oxidation of all organic and inorganic substances found in liquid refluents.

Corporate Social Responsibility

The voluntary addition, by companies, of social and ecological issues in their commercial operations and in their relations with concerned parties (adapted from the European definition contained in the European Commission’s Green Book).

EMAS

European Union Regulation 761/2001 concerning voluntary compliance with a European eco-management and audit system on the part of companies in the industrial sector.

EMS

The Environmental Management System is a formalised, structured organisational model integrated with overall company activities, which defines the responsibilities, planning activities, procedures and resources

for drafting, implementing and maintaining active the environmental policy.

Environment

The context in which an organisation operates. It includes water, air, human beings and their interactions, fauna, flora, natural resources and land.

Environmental/Safety/Quality Audit

A systematic, continuing and documented process of verification to assess, using objective evidence, whether an environmental/safety/quality system put in place by an organisation complies with the defined policies.

Formulated products - Preparations

The commercial preparation of a crop protection product: these products may contain one or more active ingredients and are made up of three basic components: 1) active ingredient, 2) adjuvants, 3) excipients (inert substances).

Fumigating agent

Product which, when released into the environment or into the soil, will lead to the formation of fumes that are toxic for parasites, once applied.

GMO

Genetically modified organism. A crop which characteristics are biotechnologically modified.

Nematocide

Substance used to destroy harmful nematodes (unsegmented worms, plant/animal parasites).

NOx

Nitrogen oxide (mainly NO, NO₂) gases are produced by the combustion of fossil fuels. These gases contribute to the formation of ozone in the lower strata of the atmosphere and acid deposits.

OECD

Organization for the Economic Cooperation and Development.

Parasite

Any animal or vegetable organism that lives off other organisms.

Pathogen

Biotic agent that can cause damages to the agricultural crops. The term can refer to insects, fungi, bacteria or viruses.

Pesticide

From the English “pest” (harmful plant or animal) and the Latin “caed-e-re” = cut to pieces. Substance capable of destroying organisms harmful to crops.

Pheromone

A substance secreted by insects that does not act on the secreting insect but on others of the same species, on which it performs the function of a chemical messenger, by influencing coupling, development, growth etc.

Phytoregulator

A synthetic organic non-nutritive compound, which in small doses encourages, inhibits or, in any case, modifies certain physiological processes in plants, by acting in places other than where it is applied.

Phytosanitary control

The complex of structures to which the defence and protection of useful plants and their products are entrusted.

Phytosanitary products

From the Greek “phitón” = plant and from the Latin “sanus” = healthy.

Pursuant to Legislative Decree. 17/3/1995, no. 194, Art. 2 - lett. a), they are active ingredients and preparations containing one or more active ingredients, present in the same form supplied to users and intended for: 1) protecting plants or plant products from all harmful organisms, or preventing the effects of said organisms; 2) favouring or regulating the life processes of plants, (not including fertilisers); 3) saving of plant products (excluding conserving agents subject to special regulations); 4) removing weeds; 5) removing plant components and inhibiting or preventing the undesired development of the same.

Responsible Care

Responsible Care is a global chemical industry initiative, established to monitor and improve the activities of chemical industries in terms of health, safety and environment. Compliance with the Responsible Care program by chemical companies is voluntary. The activities set out in the program are coordinated by Federchimica in Italy, who publishes the results each year in an Annual Report.

SO₂

Sulphur oxides are gases generated by the combustion of fossil fuels containing sulphur. They contribute to acid rain.

Stakeholder

Person or group with a vested interest in the performance or success of an organisation, such as a company. For example: customers, proprietors/shareholders/partners, employees, suppliers, competitors, banks, unions, local communities or public administration bodies.

Sustainability

Guaranteeing socio-economic development in line with today needs without compromising those of the future generations.

TOE

Tonne of oil equivalent, a conventional unit for the measurement of energy equivalent to 10 million kcal, used to refer to any heat source on the basis of its heat generating capacity.

VOC

Volatile organic compounds.

Weed - Infestation

A plant presents simultaneously with the crop with which it competes for primary resources i.e. space, nutrients, water and light.



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