011 SUSTAINABILITY REPORT

AQUAFIL
synthetic fibres and polymers

2011 SUSTAINABILITY REPORT

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A LETTER FROM **THE PRESIDENT**

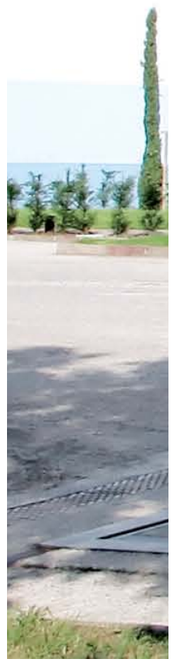
Visions, milestones, obstacles and achievements have all been features of our journey towards sustainability started five years ago. Today, when I look back and assess our achievements so far, I can say that I am truly proud. The United Nations declared 2011 "*The International Year of Chemistry*" laying down a host of challenges. Sustainable chemistry, impact reduction and product and process innovation. These are just some of the major challenges facing our sector and I think it is fair to say that the Aquafil Group is today among the leaders in implementing these objectives in the world of synthetic fibres and plastic polymers. It is thanks to our sustainability policies and the commitment of all our Group personnel that we continue to achieve outstanding results year after year. We have made substantial reductions in our consumption of fossil fuels and water. We have cut our emissions of CO_2 and climate altering gases. We have dealt with the issue of waste by increasing the percentage of separated waste and making reductions in the use of packaging. We are, and we will always be, a real example of how to construct truly sustainable changes. The many projects, large and small, that we have launched in these years have all had the potential to bring about real, substantial innovation in the Nylon 6 and polymer material sectors.

One of the events in 2011 of which I am particularly proud has been the inauguration of the ECONYL® Regeneration System based at the Ljubljana production facility. We have thus fulfilled our dream regenerating also polyamide waste when it reaches the end of its life cycle. Research, innovation and technological progress have made it possible to achieve a small miracle and open the gateway to a circular, sustainable economy. We can regenerate consumer items and materials at the end of their life cycles, extracting the Nylon 6 from material otherwise destined for incineration or landfill. Producing a regenerated raw material which has the same chemical and technical characteristics as new material is a real step in the direction of sustainable chemistry, and is a real contribution to the welfare of society as a whole.

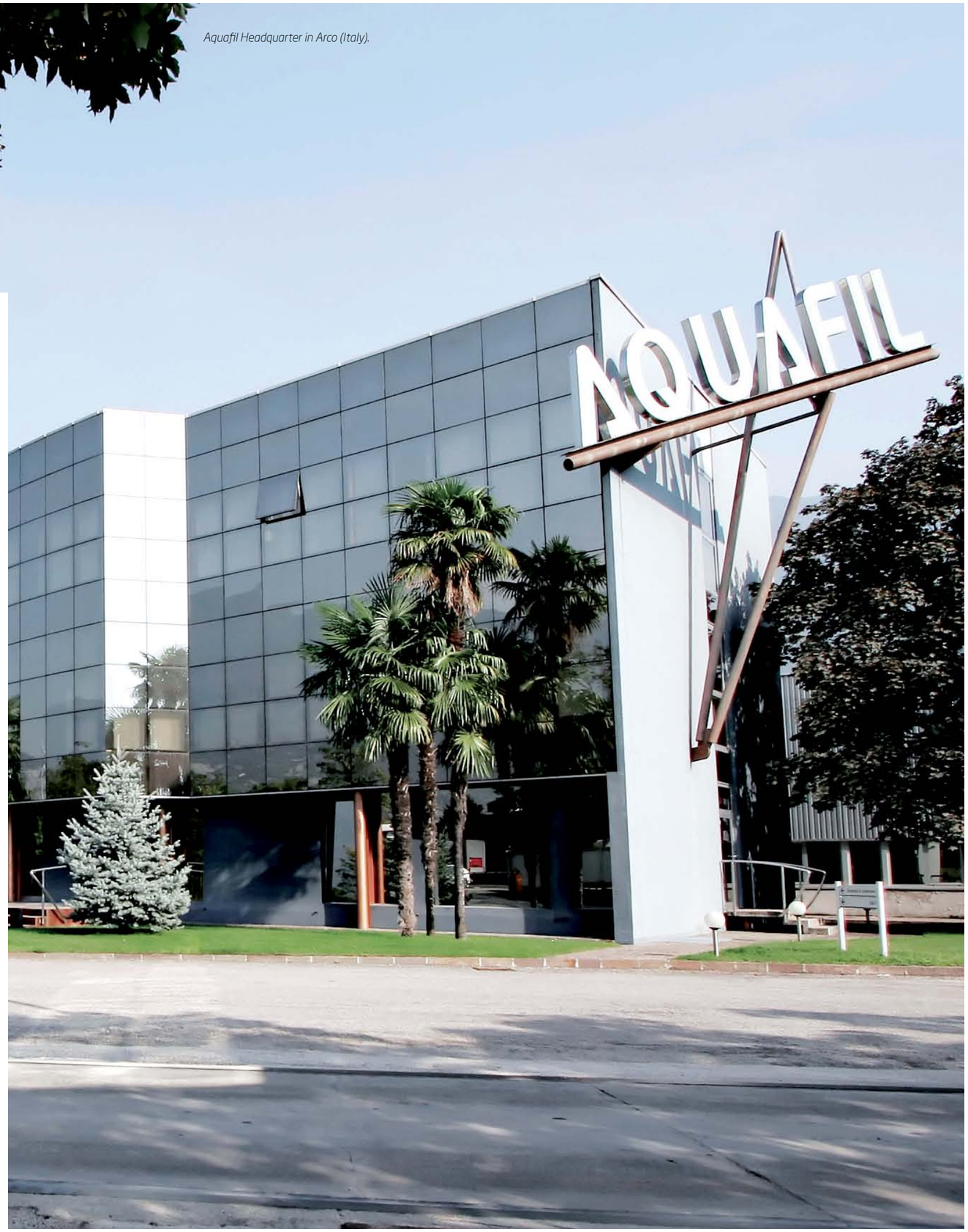
At the same time I should say that I certainly do not believe that our journey towards sustainability ends here. This is just the beginning, the end of the first step. New challenges await and stimulate us. New, ambitious projects to stimulate and motivate us. To achieve these new objectives we need to focus once again on ideas and motivations and define new objectives for the short, medium and long terms. In this framework, we have to increase the energy efficiency of our plants and production facilities, thanks to the continue adoption of process innovations and technical improvements.

During 2011 we made very substantial investments in terms of both financial and human resources to strengthen our activities on the Chinese market by consolidating operations at the Jiaxing production facility. This process has enabled a further rationalisation of our activities on the Asian market in an area which is destined to become of major interest for manufacturing and sales in the future.

I am sure that with the assistance, the skill and the commitment of all the members of the Aquafil Group we have the wherewithal to achieve our objectives and maintain our role as a leader in the synthetic fibre sector.



Aquafil Headquarter in Arco (Italy).



Project Monster.de, carpet realized by Dura with Aquafil yarn. Photograph Christoph Alt

OUR **GUIDING PRINCIPLES**

To fully implement our sustainability policy as embodied in "*The Eco Pledge®*";

THE ECO PLEDGE®
Aquafil's Path toward Full Sustainability

To promote, in collaboration with customers and suppliers, an on-going commitment to sustainability and innovation right through the manufacturing chain in the synthetic textiles industry;

To build and maintain strong links with the local communities in those areas where the Group is present and wishes to grow;

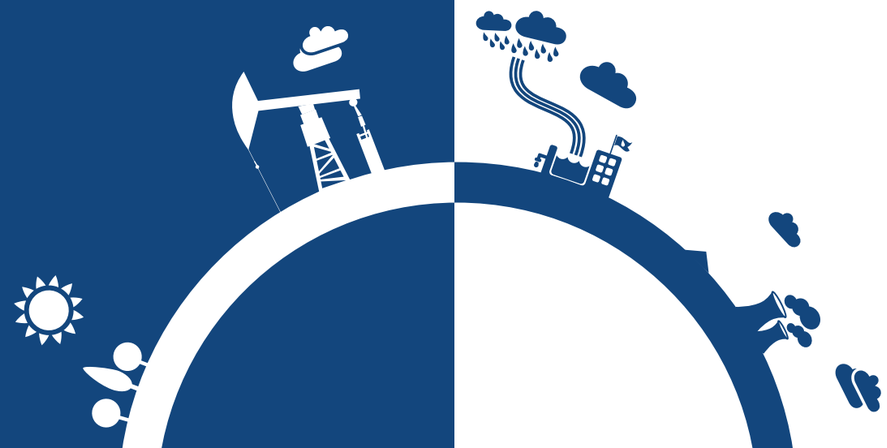
To strengthen the Group's local roots through a constant focus on the health and welfare of internal resources.

OUR **CORE VALUES**

We believe that people are important. This means all people whoever and wherever they may be;

We believe that the search for innovation with all the appropriate means available is fundamental to our success;

We aim to lead in our sector and accept all the obligations and risks that this commitment entails.



OUR **STRATEGY**

To evolve and develop our activities in the direction of closed-loop products which save natural resources and contribute to the regeneration of the environment;

To constantly reduce the ecological footprint of our activities by constantly improving our performance in four areas: energy, emissions, water and wastes;

To involve customers, suppliers, employees and local communities in our project.

MEDIUM TERM **OBJECTIVE**

To reduce the atmospheric emissions of the greenhouse gas CO_2 per product unit by 50% by the year 2020.

ORGANIZATION PROFILE

Machinery to manufacture BCF yarn.

THE NATURE OF THE AQUAFIL GROUP

The Aquafil Group was founded in 1969 at Arco, in Italy's Trentino region. Since its foundation, the company has specialised in the polymerization process of the polyamide 6, operating in three different sectors.
The BCF business unit specialises in the production of yarn for carpet flooring.
The NTF business unit produces yarns for the clothing industry.
The EP business unit specialises in technical polymers for the production of plastic objects. A fourth business unit, Energy and Recycling (E&R), promotes the culture of sustainability, the use of renewable energy sources and the production of regenerated products.

Over the years, the implementation of a strategy aimed at growth, diversification and internationalization has taken the Group into a position of leadership. In the carpeting yarns sector (BCF business unit), the Group is undisputed European leader and ranks as number two world-wide.

Aquafil Group activities are primarily business-to-business (B2B), i.e. with direct relationships to companies producing for final markets. The raw material traditionally used for the production of polyamide 6 polymers is Caprolactam.

SINCE MAY 2011, APPROXIMATELY 10% OF THE POLYMERS PRODUCED IS REGENERATED, I.E. PRODUCED FROM RE REGENERATED RAW MATERIAL.

BUSINESS UNIT
BCF

Synthetic yarns for carpeting for the automotive, residential and contract sectors.

BUSINESS UNIT
EP

Technical polymers for injection moulded plastic products.

BUSINESS UNIT
NTF

Synthetic yarns for the clothing and sportswear industries.

BUSINESS UNIT
ENERGY & RECYCLING

Development of skills, technologies and project to support the sustainability policies of the Group.

MAJOR EVENTS IN THE FIRST MONTHS of 2012

EDI KRAUS

HAS REPLACED ANTONIO BONAZZI ON THE BOARD OF DIRECTORS OF AQUAFIL SPA.

START OF THE PRODUCTION OF ELECTRICAL POWER

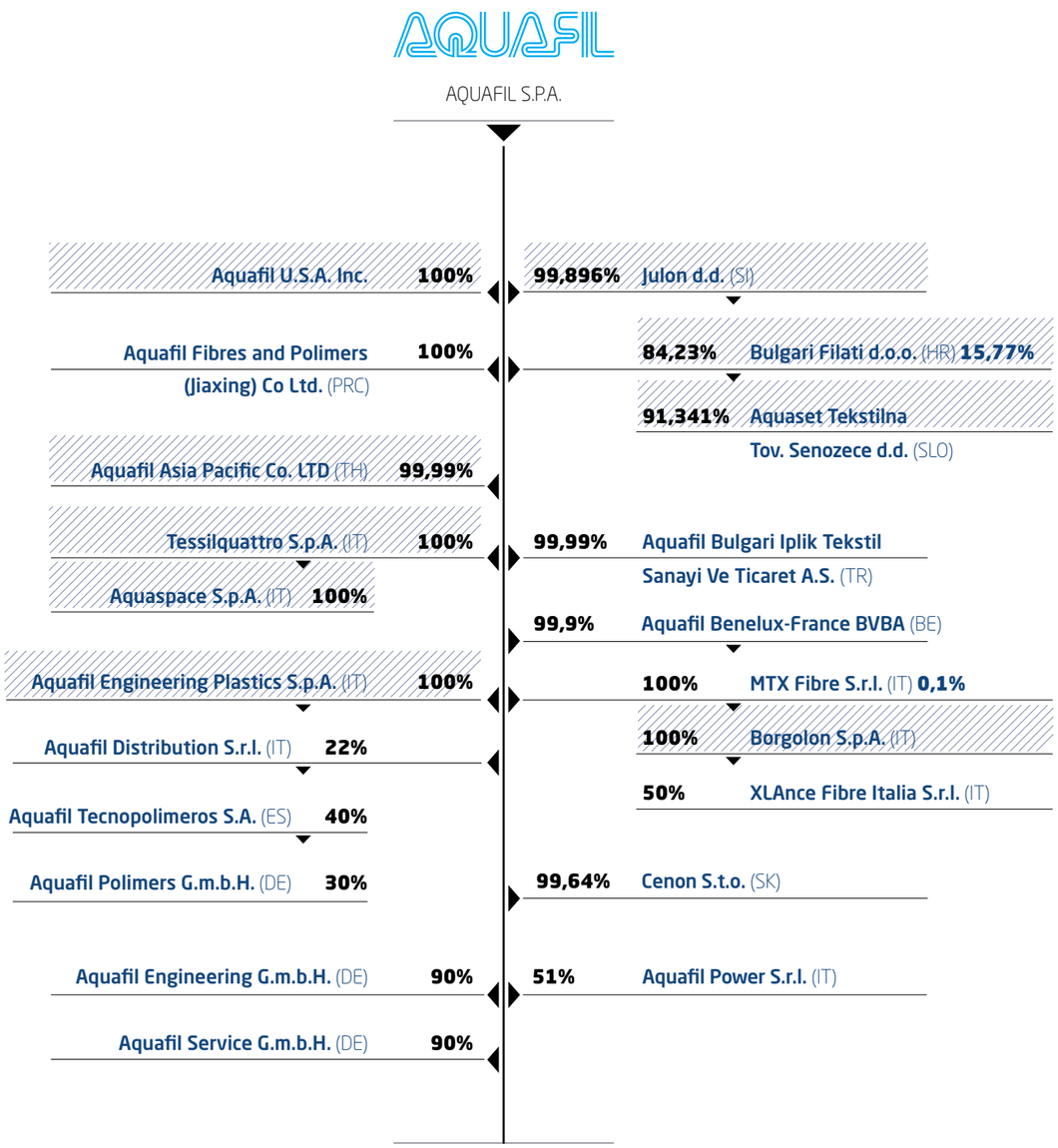
FROM A SOLAR ENERGY SYSTEM AT CARTERSVILLE (USA), WHERE THE LARGEST ROOF-MOUNTED SOLAR SYSTEM IN THE STATE OF GEORGIA WAS INSTALLED.

THE AQUAFIL **GROUP**

THE COMPANY IN ITALY AND WORLD-WIDE

Aquafil Spa is an unlisted joint-stock company in which the majority shareholding is held by the Bonazzi family. The management company H & C Romeo has been part of the corporate structure since 2009 and has been financed by funds managed by Hutton & Collins which has invested € 45 million in Aquafil.

THERE ARE VARIOUS OTHER MINORITY SHAREHOLDERS WHO ALSO SIT ON THE BOARD OF DIRECTORS.

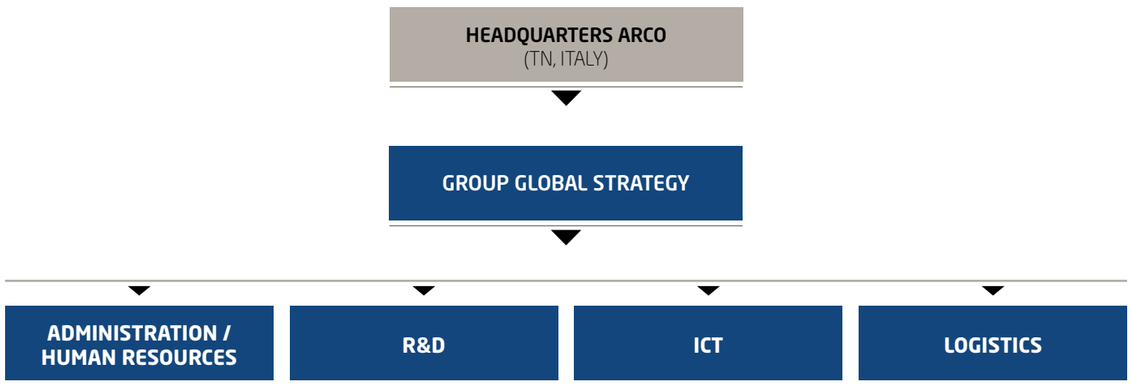


THE GROUP'S CORPORATE STRUCTURE

THE SCOPE OF THIS SUSTAINABILITY REPORT OF ALL THE GROUP'S PRODUCTION SITES

One of the things that continuous growth and internationalisation has not changed is the company's commitment to the town of Arco in Italy's Trentino region. The Aquafil Group has always wanted to preserve its strong links with the Alto Garda area and the town where the company was founded, maintaining the Group headquarters in Arco. The Board of Directors and the Executive Management Committee meet here to define the global strategy to be followed on various markets. In Arco, the Administration and Finance department, the Human Resources department, the Research and Development laboratories and offices, and the ICT and Logistics departments are also based. Despite their centralization, these departments can provide a rapid response for their particular areas of responsibility in various part of the world, where the Aquafil plants are and where its customers operate.

AT THE CENTRALIZATION OF THE LOGISTICS, ADMINISTRATIVE AND IT DEPARTMENTS, IT CORRESPONDS THE STRONG INDEPENDENCE OF THE PRODUCTION FACILITIES THROUGHOUT THE WORLD, PARTICULARLY FOR WHICH PLANTS THAT ARE OUT OF THE EUROPEAN CONTINENT.



PRODUCTION FACILITIES

USA

Cartersville (Georgia)
Aquafil USA

GERMANY

Berlin
Aquafil Engineering

ITALY

Arco (TN)
Aquafil (Headquartier)

Arco (TN)
Aquafil Engineering Plastics

Cares (TN)
Tessilquattro

Rovereto (TN)
Aquaspace

Varallo Pombia (NO)
Borgolon

SLOVENIA

Ljubljana
Julon

Senozece
Aquaset TTS

Store
Julon

Ajdovscina
Julon

CROATIA

Oroslavje
Bulgari Filati

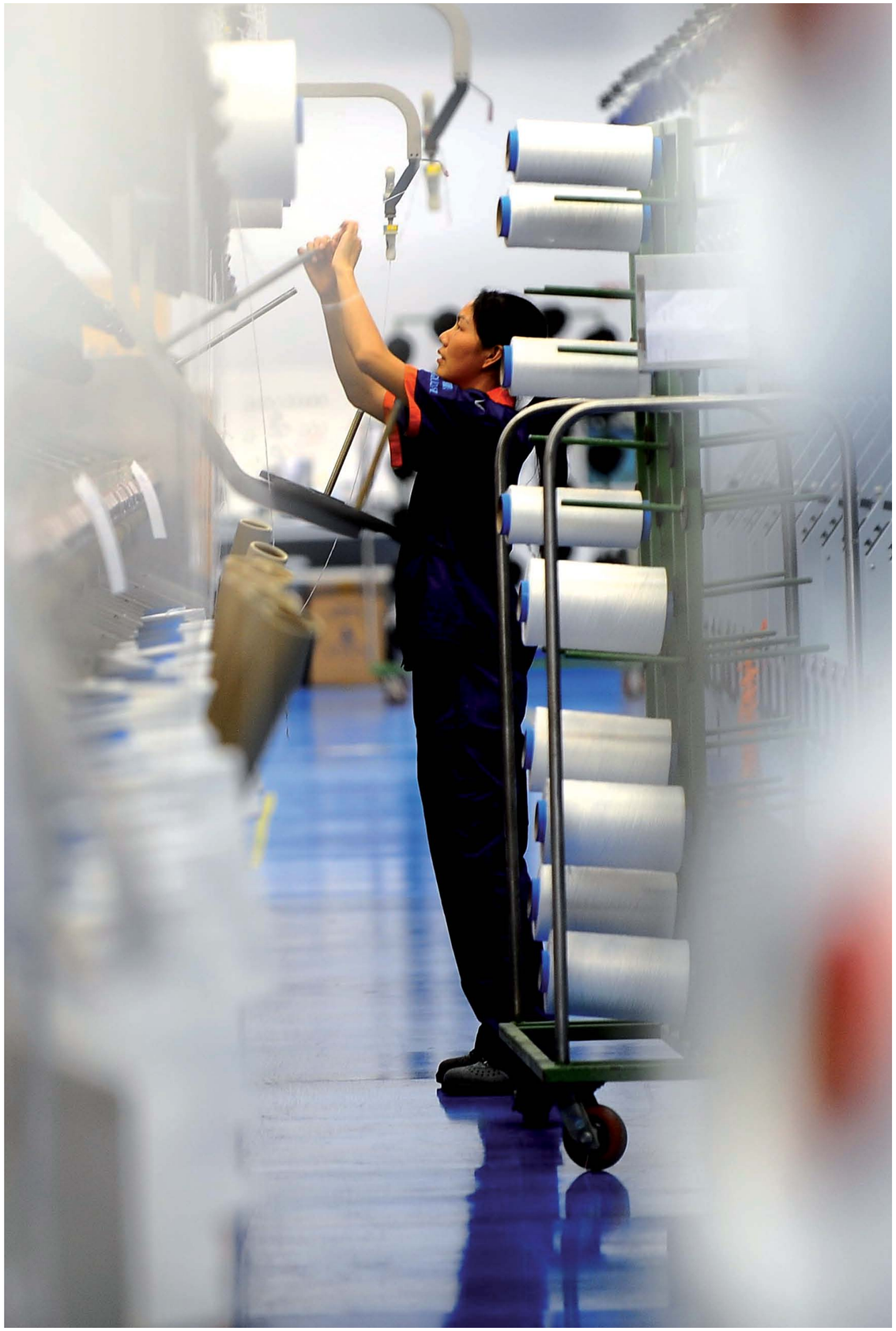
CHINA

Jiaxing
Aquafil Jiaxing

THAILAND

Rayong-Bankok
Aquafil Asia Pacific

Employee of Aquafil at work in the Chinese plant.



People world-wide **more** **2000**

The Aquafil Group employs more than 2,000 people world-wide[1]. Well trained and qualified. Skilled and efficient. These are the essential characteristics that we look for in all our employees in all production facilities and wherever they may be.

We are present on 3 continents (Europe, Asia and North America) in 7 countries (Italy, Germany, Slovenia, Croatia, USA (Georgia), Thailand and China). We have 13 production facilities world-wide and one engineering company based in Berlin.

It should be emphasised that the year 2011 saw great changes in production activities. We consolidated and strengthened the operations of our Chinese facility at Jiaxing, inaugurated in 2010, and also the marketing channels and customer relations in the Asia-Pacific area. The performance of the Group in this region, one of the most dynamic world-wide, continues to improve steadily. In the period from 2007 to 2011, the turnover of the Asia-Pacific region as a percentage of total Group turnover increased from 0% to 2% and there is the potential for greater growth. In May 2011, the Aquafil Group inaugurated the Ljubljana production facility in Slovenia. The plant is a fundamental production asset and is completely dedicated to the production of regenerated raw material.

THE FACILITY USES AN INNOVATIVE CHEMICAL-MECHANICAL SYSTEM OWNED BY THE AQUAFIL GROUP TO REGENERATE THE POLYAMIDE 6 CONTAINED IN VARIOUS TYPES OF WASTE (E.G. INDUSTRIAL WASTE, FISHING NETS, CARPETING, FABRICS), THEREBY REPRODUCING THE RAW MATERIAL ORIGINALLY USED IN THE MAKING OF WHAT HAS BECOME WASTE MATERIAL.

[1]The terms of reference of this report refer to the persons employed directly by The Aquafil Group and do not take into account temporary personnel.

GROUP **ACTIVITIES**

Example of product realized with technopolymers by Engineering Plastics Business Unit.

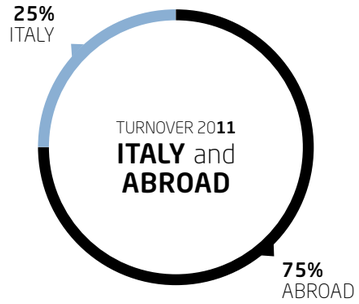
TOTAL turnover
20**11** vs 2010

+14,6%

Halfway through the nineties, the Group started a major process of internationalisation and consolidation. The policy continued to be implemented and fine tuned throughout the following twenty years. The result is that the Group now has production facilities world-wide which enable it to cover all the regions of strategic interest from Europe to the United States, from Asia to Oceania, from the Middle East to the Far East.

The international character of the Aquafil Group is amply demonstrated by the fact that 75% of Group turnover is created outside Italy. This further emphasises the Group's commitment to internationalisation and to competing on world markets.

IN 2011, DESPITE THE DIFFICULTIES OF THE INTERNATIONAL, EUROPEAN AND ITALIAN ECONOMIES, THE AQUAFIL GROUP SAW ITS TURNOVER GROW FROM € 432.3 MILLION IN 2010 TO €495.3 MILLION IN 2011, A GROWTH OF 14.6% IN ONE YEAR.



BUSINESS UNITS AND OTHER ACTIVITIES

THE GROUP OPERATES IN CLOSE COLLABORATION WITH DIFFERENT TYPES OF CUSTOMERS, OPERATING IN A WIDE RANGE OF FIELDS:

> THE BCF BUSINESS UNIT

cooperates closely with leading world players for the production of synthetic floor coverings for the contract market, the residential sector and for the automotive industry.

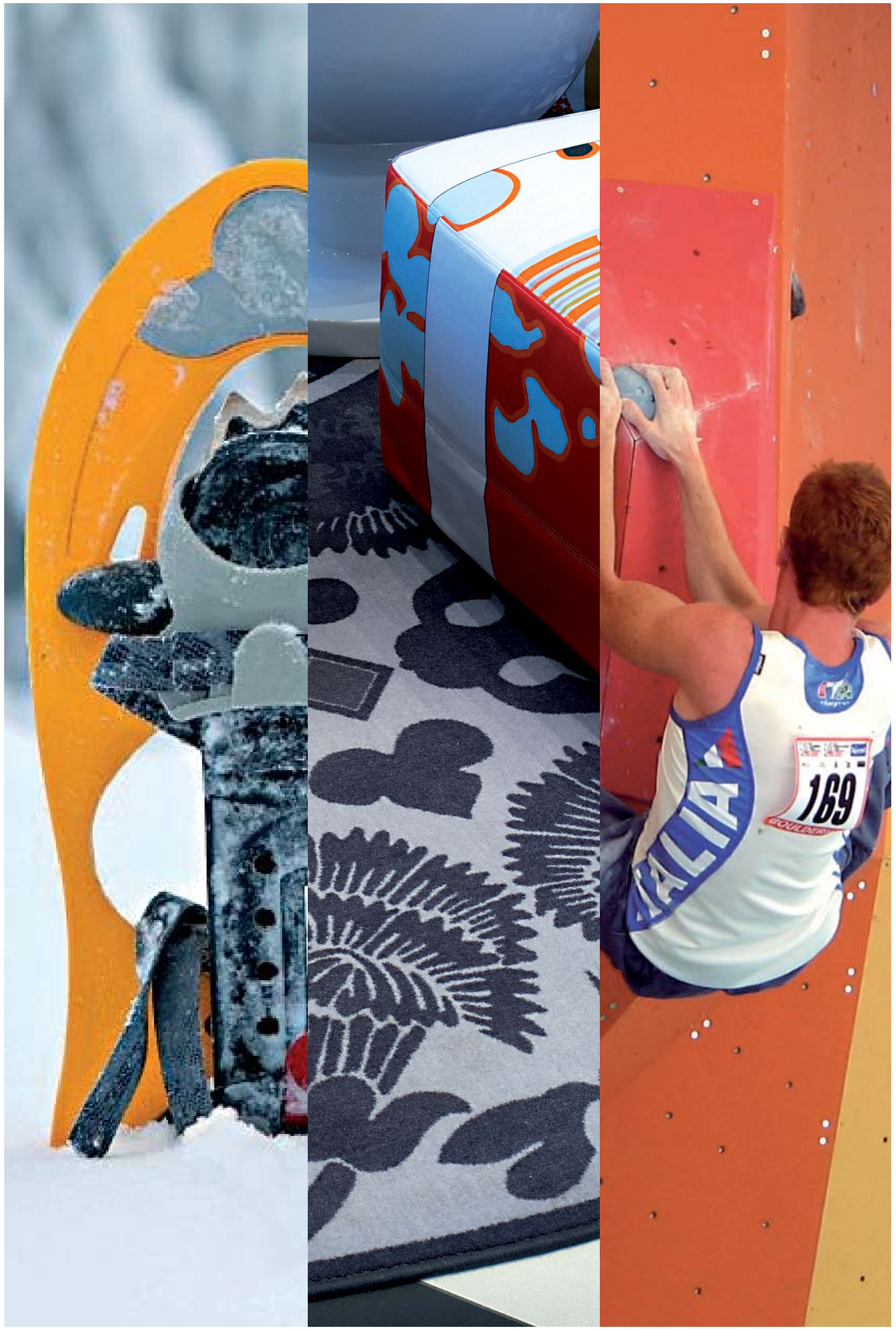
> THE NTF BUSINESS UNIT

has forged close links with fabric manufacturers specialising in underwear, hosiery, sports clothing, swimwear and fashion goods. A particularly important activity for this business unit has been the development and marketing of the Dryarn microfibre. This advanced yarn has characteristics which make it suitable for the manufacture of technical fabrics for use in professional sports wear and equipment for extreme sports.

> THE EP BUSINESS UNIT

works with customers who use our technical polymers to manufacture plastic items using the extrusion and injection moulding processes.

Final products realized with Aquafil yarn and polymers.



THE PRINCIPLE SECTORS WHERE AQUAFIL PRODUCTS ARE USED ARE AS FOLLOWS:

INTERIOR DESIGN, BUILDING & CONSTRUCTION

The Aquafil Group provides this sector with synthetic flooring textiles (BCF) for the home furnishings and contract applications (e.g. hotels and large public areas) and technical polymers (EP) for the building industry.

THE CONTINUOUS DEVELOPMENT OF NEW ITEMS MEANS THAT WE CAN SATISFY AN INCREASINGLY MORE COMPLEX AND BROAD RANGE OF DEMANDS FROM THE MARKET, GUARANTEEING CUSTOMERS AND FINAL USERS QUALITY AND SUSTAINABILITY.

AUTOMOTIVE

One of the most important sectors for the Aquafil Group is, without a doubt, the automotive industry. The BCF business unit provides the yarns for floor mats and interior coverings. The EP business unit provides the polymers used in the engineering plastics for the plastic components often used to substitute metal components.

THE SUSTAINABILITY, LIGHTNESS AND EFFICIENCY OF AQUAFIL PRODUCTS MEANS THAT THEY CAN MAKE A MAJOR CONTRIBUTION TO IMPROVING ENVIRONMENTAL PERFORMANCE. REDUCING WEIGHT ENABLES REDUCTIONS IN CO_2 EMISSIONS.

SPORT, FASHION AND FREETIME

The third sector where Aquafil Group products are used is the sport and fashion industry. The NTF business unit provides the yarns for making high performance sportswear, while the EP business unit supplies the technical polymers used in the manufacture of sports plants and equipment. Aquafil supplies the fashion industry too, collaborating with numerous Italian and European brands specialising in underwear, swimwear and sportswear.

OUR OBJECTIVE HERE IS TO ACHIEVE HIGH LEVELS OF TECHNICAL PERFORMANCE AND QUALITY WHILE REDUCING THE ENVIRONMENTAL IMPACT OF YARN AND POLYMERS MANUFACTURING.

ELECTRIC AND ELECTRONIC

The EP business unit also produces technical polymers used in the manufacture of plastic components, such as connectors, for industry.

THESE PRODUCTS HAVE TO MEET A VARIETY OF VERY STRINGENT OFFICIAL STANDARDS REGARDING HEALTH AND SAFETY IN THE WORKPLACE, FIRE PREVENTION AND ACCIDENT PREVENTION.

OPERATING ALONGSIDE THE BCF, NTF AND EP PRODUCT BUSINESS UNITS THERE IS A FOURTH BUSINESS UNIT:

> The **ENERGY & RECYCLING** has the following responsibilities:

ENERGY
To promote technological projects and innovations for the production of electrical and thermal energy from renewable sources or from sources with a low environmental impact.
The primary objective of the Group in this area is to increase the energy efficiency of plant and machinery and thereby reduce emissions of CO_2 and climate-altering greenhouse gases.

RECYCLING
To promote the use of regenerated raw materials in the making of our products.
To collaborate with our customers to design, right from the start, products which are intrinsically recyclable, i.e. which are designed to enable easy separation of component parts.

CULTURE
To promote a culture of sustainability in relations with all stakeholders through the continuous training of employees and through partnerships with customers and suppliers.

AWARDS RECEIVED IN 2011

EUROPEAN BUSINESS AWARD

The Aquafil Group was selected as one of the 25 industrial groups to represent Italy at the European level;

BMW SUPPLIER INNOVATION AWARDS

During the annual "*International Forum of BMW Suppliers*", the Aquafil Group took second place in the awards for suppliers in the "*Environmental Sustainability*" category;

FOREIGN DIRECT INVESTMENT AWARD

The Slovenian government awarded the Aquafil Group for its major investments in Slovenia;

ERNST & YOUNG AWARD FOR THE INDUSTRIAL PRODUCTS CATEGORY

The president and CEO of the Aquafil Group, Giulio Bonazzi, received the Ernst & Young 2011 Award for the "*Industrial Products*" category for making Aquafil the leader in Italy, Europe and the world for the production of synthetic fibres.

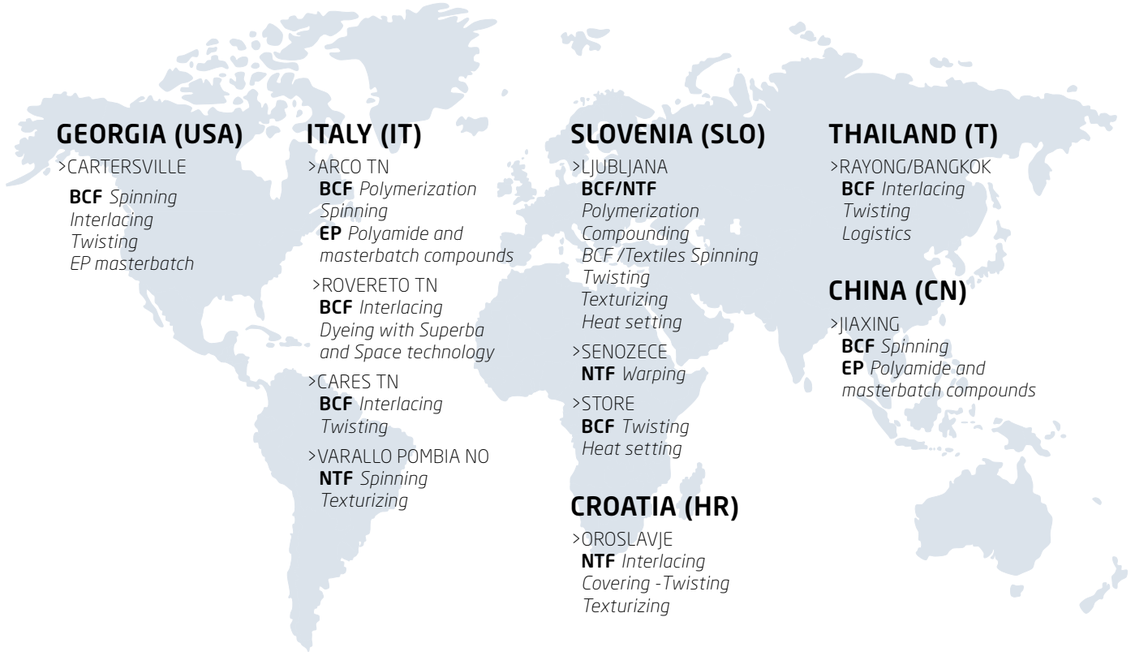
PREMIO AMBIENTE - ENVIRONMENT PRIZE 2011

Aquafil Spa and Dana Italia Spa, won the *Premio Ambiente - Environment Prize 2011*, awarded by the Environmental Protection Agency of the Trento local government.
The prize was awarded for the energy sharing agreement between the two companies. The thermal energy produced by the cogeneration plant at the Aquafil site is distributed over a district heating system to the plant of the American multinational on a neighbouring site.

ABOUT **THE REPORT**

SINCE 2007 THE AQUAFIL GROUP HAS PUBLISHED A SUSTAINABILITY REPORT ONCE A YEAR. THE REPORT DETAILS SUSTAINABILITY ACTIONS UNDERTAKEN IN THE PREVIOUS YEAR AND IS PRESENTED TO STAKEHOLDERS AND ALL THE RELEVANT PUBLIC AUTHORITIES.

THE REPORT FOR 2010 WAS PUBLISHED IN JULY 2011.



GEORGIA (USA)
>CARTERSVILLE
BCF *Spinning*
Interlacing
Twisting
EP masterbatch

ITALY (IT)
>ARCO TN
BCF *Polymerization*
Spinning
EP *Polyamide and masterbatch compounds*

>ROVERETO TN
BCF *Interlacing*
Dyeing with Superba and Space technology

>CARES TN
BCF *Interlacing*
Twisting

>VARALLO POMBIA NO
NTF *Spinning*
Texturizing

SLOVENIA (SLO)
>LJUBLJANA
BCF/NTF
Polymerization
Compounding
BCF /Textiles Spinning
Twisting
Texturizing
Heat setting

>SENOZECE
NTF *Warping*

>STORE
BCF *Twisting*
Heat setting

CROATIA (HR)
>OROSLAVJE
NTF *Interlacing*
Covering -Twisting
Texturizing

THAILAND (T)
>RAYONG/BANGKOK
BCF *Interlacing*
Twisting
Logistics

CHINA (CN)
>JIAXING
BCF *Spinning*
EP *Polyamide and masterbatch compounds*

BCF >Synthetic yarns for carpeting
EP >Engineering plastics
NTF >Synthetic yarns for the clothing industry
ERS > ECONYL Regeneration System

SCOPE AND TERMS OF REFERENCE OF THE REPORT

TERMS OF REFERENCE

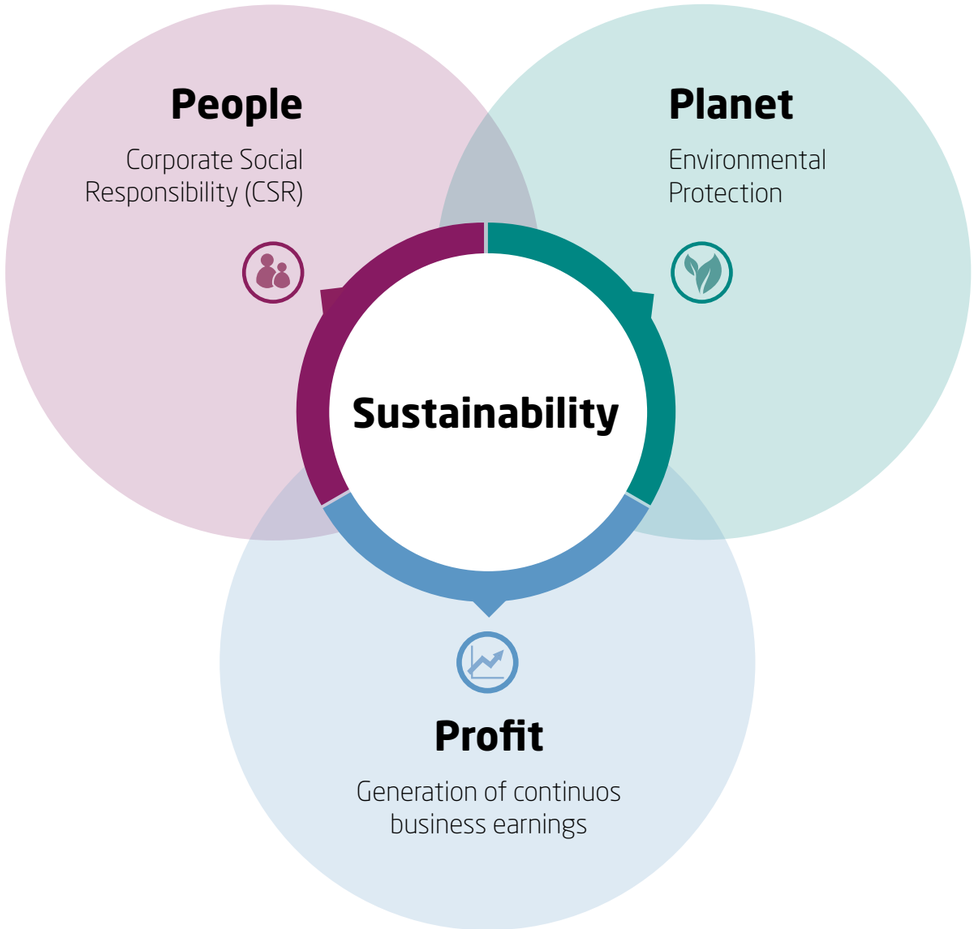
The Sustainability Report 2011 refers to the 13 production facilities owned by the Aquafil Group and sited in Italy, Slovenia, Croatia, USA, Thailand and China. For each of these facilities the report analyses four macro areas: energy, emissions, water and wastes. The report also looks at all the aspects relating to the financial situation of the Group and the development of the Group's social policies relating to employees and the local communities where it operates.

IT SHOULD BE NOTED THAT THESE PRODUCTION FACILITIES ACCOUNT FOR THE ENTIRE PRODUCTION ACTIVITIES OF THE AQUAFIL GROUP AND THAT THE GROUP THEREFORE HAS TOTAL CONTROL OVER ALL THE OPERATIONS PERFORMED IN ITS FACILITIES. IN 2011 THE AQUAFIL GROUP DID NOT HAVE ANY JOINT VENTURES WHICH MIGHT COME WITHIN THE TERMS OF THIS REPORT.

SCOPE

The annual Sustainability Report is an essential part of our policy of informing all our stakeholders, in as transparent a manner as possible, of all the actions we have implemented during the year to improve our performance in reducing the impact of our production activities. Sustainability is judged in terms of the three P: *Profit, Planet and People;* in other words, sustainability in terms of business earnings, environmental protection and social responsibility. We firmly believe that a true sustainability policy must take into account these three aspects. The three P may appear to be separate and distinct but in practice they are closely interlinked and in the long term will bring benefits to the company, to stakeholders and to markets. A good example of how the three P are closely linked is as follows. A company which increases its energy efficiency or increases its use of energy from renewable sources will reduce its consumption of fossil fuels and its dependency on electrical energy from outside sources. This will have the effect of reducing its greenhouse gas and CO_2 emissions and reduce its environmental impact.

AT THE SAME TIME IT WILL CONSIDERABLY REDUCE THE COMPANY'S ENERGY COSTS AND THEREBY INCREASE ITS FINANCIAL SUSTAINABILITY. SAVINGS AND TECHNOLOGICAL INNOVATION REDUCE COSTS AND INCREASE THE ATTRACTIVENESS OF PRODUCTS. THIS BOLSTERS THE POSITIONING OF THE GROUP ON INTERNATIONAL MARKETS AND THUS HELPS TO MAINTAIN AND INCREASE EMPLOYMENT LEVELS AT THE VARIOUS COMPANY SITES. THIS PRODUCES BENEFITS FOR SOCIAL SUSTAINABILITY.



MEANING OF THE DATA

The annual Sustainability Report of the Aquafil Group presents data and graphics detailing the financial, environmental and social actions undertaken by the company. All this information taken together can be used by stakeholders to monitor the Group's year on year commitment to sustainability and the efficacy of its actions in this area. The data provided are as follows:

FINANCIAL

The financial section of the report details turnover data and the EBIDTA (in € millions) of the Aquafil Group. Earnings data are broken down and shown as the percentage contribution made by the three product business units, the Italy-Abroad division and the major geographical areas where we operate. The materiality of the financial indexes we have developed is linked to the opportunity for the stakeholders and markets to have a clear framework on the economic progress of the Aquafil Group, particularly referred to the budget, structural solidity and funding capacity on the credit market. These information are basic to have a good idea of the financial evolution of the Group, particularly during a strong economic crisis.

ENVIRONMENTAL

The report details the development of our environmental performance in four areas: energy, emissions, wastes and water. This part of the report publishes the progress of results from 2007 to the present day. The data show: the consumption of electrical energy, natural gas and purchased steam; greenhouse gas and CO2 emissions; water use and amount of water discharged; level of internal recycling; quantity of packaging purchased and processed. We choose to give transparency to these four issues (divided into different specific indicators) because they are characteristic and representative of our sustainability policies, as well as of our capability to cope with the most relevant problems of our production activities. These information are hence very important for all our stakeholders, because they could be transparently informed about our environmental efforts and commitments.

SOCIAL

The Aquafil Group presents a set of data regarding its personnel which is of interest to stakeholders. The information provided includes: the total number of personnel (2007-2011) for each of the four business units; the number of men and women employed at the Group level and at the level of each country; the turnover rate; the reasons for the various turnover rates; the number of top managers, middle managers, white collar and blue collar workers employed. At the end of this section we give three indicators relating to accidents: the frequency index; the seriousness index and the risk index. These indicators give to the stakeholders several important information both on the employing structure and on the evolution dynamics of the workforce which characterize the Aquafil Group.
At the same time, they show the attention of the Group on the health and safety policies developed in our plants worldwide. For us, a coherent sustainability policies couldn't aside from these issues, in particular when it is presented to the international stakeholders.

STAKEHOLDER

THE STAKEHOLDERS EFFECTED BY THE ACTIONS OF THE AQUAFIL GROUP ARE NUMEROUS:

EMPLOYEES AND CONTRACTORS

The Group, thanks to its commitment to innovation and to its efforts on international markets, managed to increase its workforce in 2011 and made minimum use of the social assistance programmes available in the countries where it operates. The widespread efforts to increase the sustainability of its production activities and to develop to the full its innovative projects has made it possible for the Group to create a series of high profile teams. This has opened up major opportunities for creating high-quality jobs based on the research, the innovation and the technical and scientific skills needed to achieve our objectives.

LOCAL COMMUNITIES

The relationship with the local communities in the areas where the Group operates plays an important role in the actions of the Group. An awareness of the importance of maintaining good relations with the persons who live close to our production facilities is the basis for our social responsibility programme of real, effective action. We have acted to eliminate or reduce our negative impact on the natural environment. We have focused our attention on the training and preparation of an efficient local workforce thus increasing value of human capital at the local level. In places where the legal protection for the local labour force is below European standards we have implemented the same protections and safeguards that operate in our Italian and European production facilities.

SUPPLIERS

Creating new, close and lasting relationships with suppliers is a fundamental part of our journey towards sustainability and the creation of a truly, circular economy. It is no longer sufficient to ask our suppliers to focus their attention on social topics, to ask for a commitment to reduce environmental impact, to respect other cultures and to promote human rights. We want to go beyond this and take one step further forwards. We have already started. With the entry into service of our regeneration plant we are trying to create new relationships with other players in order to create a supply chain for a new raw material - polyamide 6 waste.
For this reason, we dedicated the year 2011 to identifying new supply chains with several players: local communities of fishers, consortia that collect old carpet flooring and universities and research centres.

CUSTOMERS

The relationship with the customer is no longer that of buyer and seller. Today, we share objectives and actions in production and in coordinated communications. Against the background of this changed scenario, the relationship with the customer has taken on a new importance. Our customers now want to market final goods and products which are more sustainable, more recyclable and have a lower environmental impact. This stimulates our actions. To provide a complete response to this continuous demand for sustainable and recycled products, the Aquafil Group has dedicated considerable capital and human resources to the development of the ECONYL Regeneration System. Thus our customers play a fundamental role in the implementation of virtuous, sustainable supply chains. Thanks to the action of customers it is now easier to create and define a system for collecting end of life cycle products. This is a notable contribution to transforming the economy into a circular one and to changing business models.

GOVERNANCE, COMMITMENTS AND ENGAGEMENT

GOVERNANCE

Corporate governance of the Aquafil Group is primarily the responsibility of two bodies - the Board of Directors and the Executive Management Committee. Both the Board and the Committee are headed up by Giulio Bonazzi, President and CEO of the Aquafil Group and representative of the Bonazzi family, owners of the industrial group since its foundation in 1969.

The Board of Directors directs the day to day operations of the Aquafil Spa company. It directs the corporate governance system of the Group, defining the development strategies of Aquafil companies and issues directives. It decides investment plans and monitors and evaluates results.

THE BOARD OF DIRECTORS INCLUDES DIRECTORS FROM INSIDE AQUAFIL AND TWO REPRESENTATIVES FROM THE UK COMPANY HC ROMEO, A PARTNER IN THE GROUP SINCE 2009.

>GIULIO BONAZZI
President and Managing Director

>CARLO BONAZZI
Honorary President

>BRUNO TORRESANI
Managing Director

>ADRIANO VIVALDI
Managing Director

>EDI KRAUS
Member of the Board

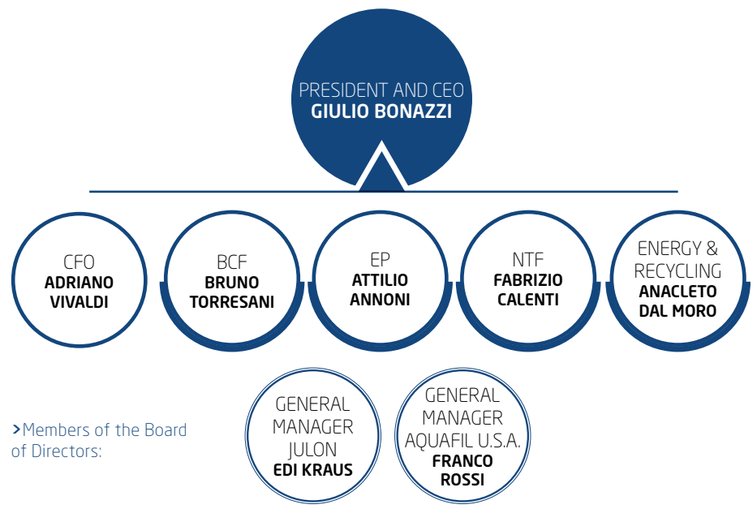
>MAURO MORETTI
Member of the Board

>RAFAEL BOULET TORRES
Member of the Board

The role of the Executive Management Committee is to assist the Board of Directors in implementing its decisions. It is responsible for the operational management of industrial activities, logistics and marketing. It is responsible for monitoring the general progress of the Group, the progress of projects and the implementation of training, health and safety in the workplace policy.

During 2011 the only change to the governance structure with respect to 2010 was the replacement of Attilio Annoni as General Manager of the Engineering Plastics business unit.

> **EXECUTIVE MANAGEMENT COMMITEE**



>Members of the Board of Directors:

THE **ECONOMY**

the price of Caprolactam
20**11** vs 2009
+65%

In 2011 the Italian and European economies underwent a further period of profound economic crisis due for the most part to problems with sovereign debt and weakness of the real economies in the countries of Mediterranean Europe. This opened up new fronts adding new difficulties to those which had emerged from 2008 onwards. The overall result was a contraction in the demand for goods and services throughout continental Europe.

Despite this complex macro-economic background, the Aquafil Group reported, for the second year running, strong growth in its turnover. Between 2009 and 2010 turnover grew by 28%. In the period 2010 to 2011 it increased by 14.6% to € 495.3 million up from € 432.2 million in the previous period.

THE EBITDA ON THE OTHER HAND WAS DOWN TO € 53.4 MILLION, A SLIGHT CONTRACTION (-2.4%) IN COMPARISON WITH 2010.

The growth in turnover was driven by two factors. First, the Group managed to maintain growth in its sales volumes due for the most part to the promotion of new, regenerated, sustainable products which went a long way to meeting the expectations of markets and customers. Second, the Aquafil Group was obliged to increase its prices to the customer in order to compensate, in part at least, for the strong and continued increases in the prices of fossil raw materials which are vital to its production activities.

It is worth noting that the price of Caprolactam in 2011 was 25% higher than in 2010. The increase in the price of Caprolactam between 2009 and 2011 was 65%. Dramatic to say that this caused unsustainable pressure in the cost of the Group's activities.

THE **RESULTS**

We now look at the figures in greater detail and analyse the performance of the single product business units. It will be noted that the BCF business unit increased its turnover by 20%. This was mainly thanks to the massive increase in consumption and orders from the Chinese and Australian markets.

This clearly demonstrates the accuracy of the strategic choices made by the Group and in particular those regarding the opening of production activities in Thailand (in 2007) and China (in 2010). This made it possible for us to serve in the best possible way the Chinese and Asia-Pacific markets, the two markets where there was a consistent growth in demand during 2011.

THANKS TO ITS COMMITMENT TO INTERNATIONALISATION, THE AQUAFIL GROUP IS THE ONLY MANUFACTURER OF NYLON 6 SYNTHETIC YARNS FOR CARPETING TO HAVE ORGANISATIONS AND PRODUCTION FACILITIES ACROSS THE THREE CONTINENTS OF EUROPE, NORTH AMERICA AND ASIA.

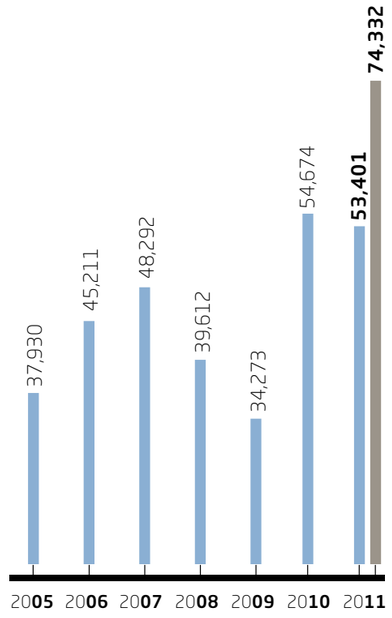
Turnover BCF
20**11** vs 2010
+20%

Turnover NTF
20**11** vs 2010
+3%

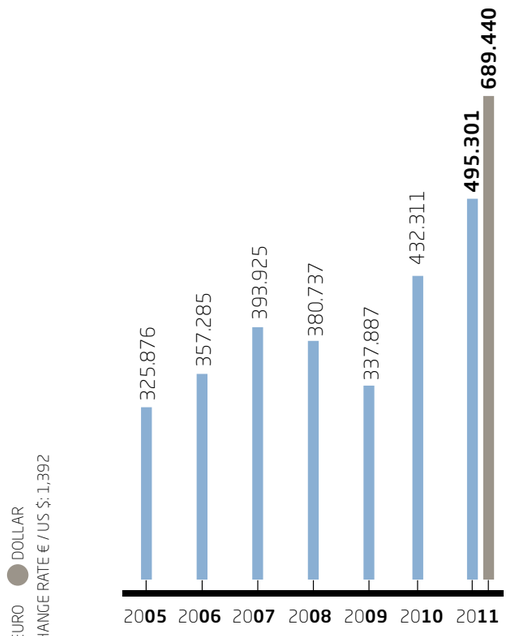
Turnover EP
20**11** vs 2010
+10%

The NTF business unit also saw its turnover increase by approximately 3% thanks in particular to an upward adjustment in prices. However, NTF experienced a slight contraction in its volumes reflecting the widespread difficulties of the textile industry in Italy and Europe.

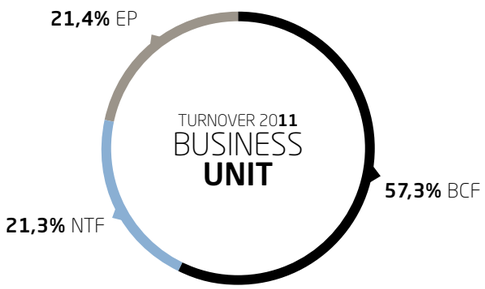
The Engineering Plastics (EP) business unit increased its turnover by 10% in comparison with 2010. This was due primarily to the rationalisation of production activities and a slight increase in the sales price of technical polymers destined for use in the production of engineering plastics.

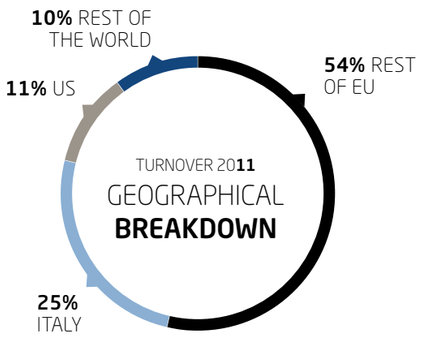


>MILLION € **EBIDTA**



>MILLION € **TURNOVER**





A summary of the profit and loss account is illustrated in the table below (amounts in thousands of Euros):

Ref.	Description	2011	2010
A1	Revenues from sales and services	495,302	432,311
A2	Change in inventories	18,957	16,258
A4	Capitalisation of internal construction costs	1,684	2,898
A5	Other revenues and income	4,478	3,595
A	**Value of production**	**520,421**	**455,062**
B6 B11	Raw material, supplies, consumables and merchandise	(301,926)	(251,619)
B7-8,B13-14	Service and other operating costs	(88,568)	(79,315)
B9	Personnel costs	(76,526)	(69,454)
	EBITDA	**53,401**	**54,674**
B10a-b	Amortisation and Depreciation	(24,918)	(21,346)
B10c-d,B12	Provisions and write-downs	(1,052)	(1,625)
A - B	**EBIT**	**27,431**	**31,703**
C	Net financial income and charges	(15,712)	(13,954)
D,E20-21	Extraordinary income and charges	(1,192)	(715)
	Profit before taxes and minority interest	**10,527**	**17,037**
E22	Income tax	(4,586)	(6,094)
	Net profit before minority interest share	**5,941**	**10,943**
23	Minority interest profit	0	55
24	Group net profit	5,941	10,888
	Group Cash Flow (profit + deprec.)	**30,859**	**32,234**

DURING 2011, THE DONATION OF THE AQUAFIL GROUP HAVE REACHED 69.000 EUROS, WHILE THE COMMUNITY INVESTMENT HAVE REACHED 131.500 EUROS.

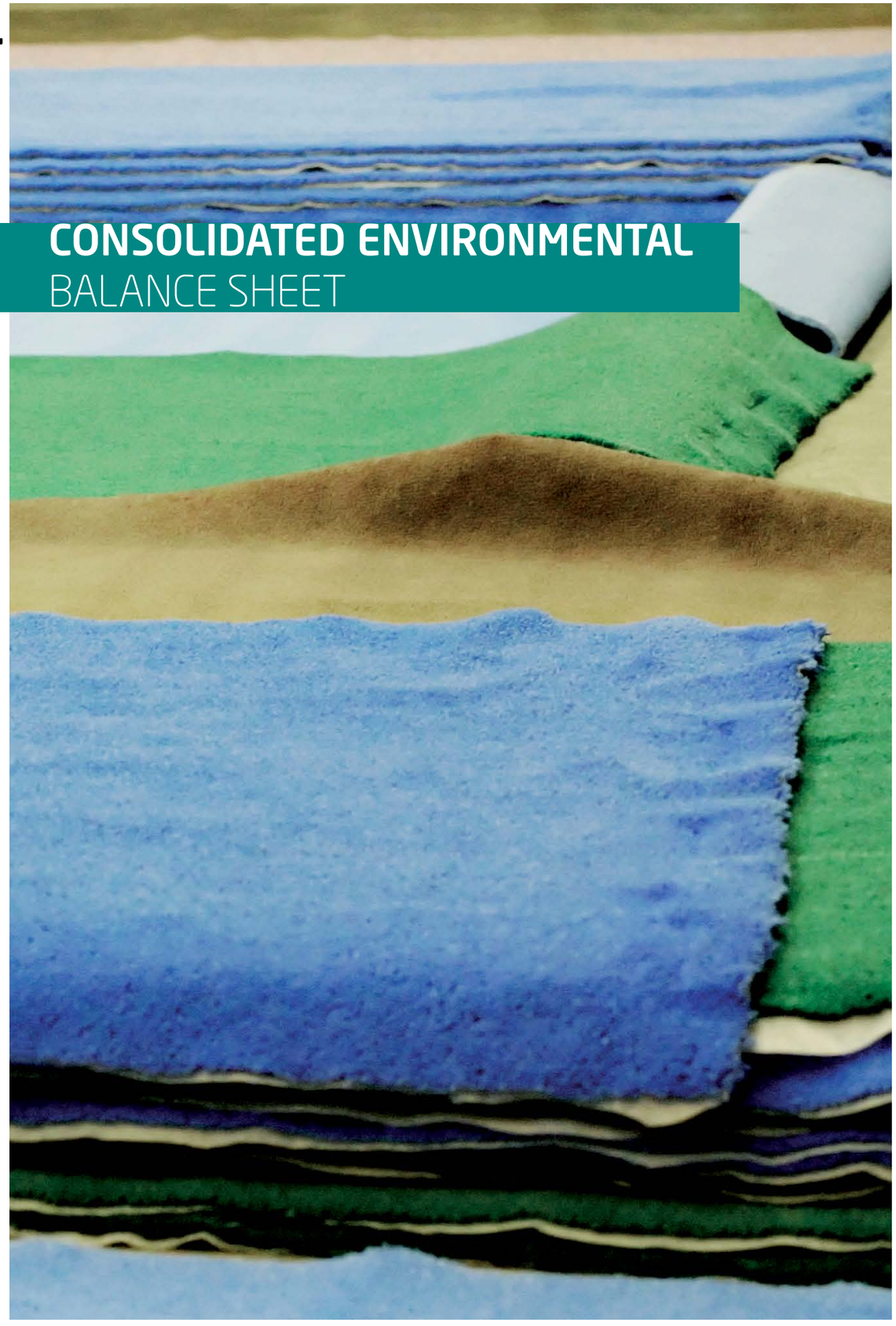
GROUP BALANCE SHEET AND FINANCIAL POSITION

The table below reclassifies the consolidated balance sheet and profit and loss account items (amounts in thousands of Euros):

Reclassified fixed assets		31/12/2011	31/12/2010
	Fixed assets:		
BI	Intangible assets	11.049	12,328
BII	Property, plant & equipment	180,571	178,272
A,BIII1, BIII2a,BIII2d	Financial and other Fixed Assets	1,772	1,369
	1. Total fixed assets	**193,392**	**191,969**
	Net working capital:		
CI	Inventories	135,246	103,380
CII1-4	Trade receivables	62,034	76,063
CII4bis-5, D	Other receivables	15,703	15,197
D6,D7 (v. N.I.),D9-10	Trade payables	(73,843)	(73,901)
D12-14, E	Other payables	(24,960)	(26,616)
	2. Total net working capital	**114,180**	**94,123**
	Provisions for risks and employee leaving indemnity:		
C	Employee leaving indemnity provision	(8,371)	(8,541)
B	Provisions for risks and charges	(7,407)	(6,204)
B, C	**3. Total provisions for risks and employee leaving indemnity**	**(15,778)**	**(14,745)**
	(1+2+3) = 4. Net capital employed	**291,794**	**271,347**

Reclassified liabilities and net equity		31/12/2011	31/12/2010
	Shareholders' equity:		
AI	Share capital	(19,686)	(19,678)
AII-VIII	Reserves	(52,585)	(50,866)
AIX	Net profit for the year	(5,941)	(10,888)
	a) Group Net Equity	**(78,212)**	**(81,432)**
AX	**b) Minority interest equity**	**(613)**	**(1,044)**
	1. Total shareholders' equity	**(78,825)**	**(82,476)**
	Net financial position:		
CIII, CIV, BIII2	Medium/long term securities, liquidity	41,907	51,081
D4 (v. N.I.)	Banks and financial institutions - short term	(89,567)	(78,919)
D4 (v. N.I.)	Banks and financial institutions - medium/long term	(120,307)	(118,723)
D7 (v. N.I.)	Leasing payables	(26,612)	(29,152)
	a) Net financial position - third party	**(194,579)**	**(175,712)**
BIII2, CII4, D11	Receivables from holding companies	37,395	36,944
D3	Shareholder payables - medium/long term	(55,785)	(50,103)
	b) Net financial position - shareholders	**(18,390)**	**(13,159)**
	(a+b) = 2. Net Financial Position	**(212,969)**	**(188,871)**
	(1+2) = 3. Source of funds	**(291,794)**	**(271,347)**

CONSOLIDATED ENVIRONMENTAL BALANCE SHEET



Samples of carpet flooring .

THE ECO PLEDGE®
Aquafil's Path toward Full Sustainability

The fifth edition of the Sustainability Report brings to a close the first cycle of fundamental change and investments for the Aquafil Group. From 2007 to date we have increased the number of our production facilities from nine to thirteen, making changes in the type of production and thereby changing the terms of reference of the report. Major developments for the Group in 2011:

> **The Group completed the various projects for increasing production capacity at Cartersville (Georgia, USA), Oroslavje (Croatia) and Celjie (Slovenia);**

> **At Jiaxing (China) the Group started a new production line for the production of BCF yarn and EP technical polymers destined for the Asia-Pacific market;**

> **At the Julon facility in Ljubljana (Slovenia), the ECONYL system entered service; the system treats pre- and post-consumer polyamide 6 waste to produce regenerated raw materials.**

THE START OF THESE NUMEROUS PRODUCTION ACTIVITIES HAD A CONSIDERABLE INFLUENCE ON OUR ENVIRONMENTAL PERFORMANCE. HERE, TWO POINTS ARE WORTH NOTING:

1 Waste was removed from the environment , thanks to the implementation of the ECONYL® Regeneration System;

2 The reduced efficiency of the plant which had only just entered production caused a change in the trend of some indicators.

Gaseous emissions reduced 2011 vs 2007

-21%

Waste recycled 2011 vs 2007

+36%

Indirect emissions CO_2 kg/ton 2011 vs 2007

-35%

Overall, the progress in the Group's performance in the five-year period from 2007 to 2011 has been very positive, especially considering the explosion of the international economic crisis which hit particularly hard in the USA and Europe. The sustainability policy adopted by the Aquafil Group has proved to be a winning strategy for dealing rationally with the generalised economic downturn.
This is clear if we look at the balance sheet results for the 2011 period. In particular, a highly focussed strategy for reducing energy and water consumption, for improving the processing of the waste produced and reducing emissions has made it possible for the Aquafil Group to make substantial savings which have helped it to maintain financial sustainability.

AN ANALYSIS OF THE MAIN ENVIRONMENTAL INDICATORS - ENERGY, EMISSIONS, WASTE AND WATER - SHOWS THE FOLLOWING:

> **Overall, there was a 6% decrease in the consumption of energy resources (electricity, purchased steam and natural gas) despite the fact that the number of production facilities increased from nine to thirteen;**

> **Gaseous emissions were kept under close control and were reduced by 21%;**

> **The amount of recycled waste increased by over 30%. Waste disposed of using traditional methods was reduced overall by 5%. It should be noted that in 2010, before the substantial expansion of production structures, non-recycled waste had already been reduced by over 35%;**

> **Waste water was reduced by 15%.**

In addition to these four main points, it should also be emphasised that in order to feed the regeneration facility at Ljubljana, the Aquafil Group recovered approximately 4,000 tons of pre- and post-consumer Nylon 6 waste from the environment. This is waste material recovered by Aquafil which would otherwise have been sent to landfills and incinerators or abandoned in the environment.

Another important topic is the packaging for semi-finished and finished products. To reduce the use and disposal of packaging we need to define an integrated management system which comprises the production step (developed by Aquafil) and the handling step implemented by customers.

Rationalising the process in this way would make it easier to reduce the amount of packaging waste and improve performance in an area where good results are difficult to obtain.

THE PRIMARY, MEDIUM-TERM OBJECTIVE OF OUR SUSTAINABILITY PROGRAMME "THE ECO-PLEDGE®" IS TO REDUCE CO_2 EMISSIONS PER PRODUCT UNIT BY 50% BY 2020. FROM 2007 TO DATE, WE HAVE MADE GOOD PROGRESS IN REDUCING THE DIRECT AND INDIRECT EMISSIONS OF CO_2.

In particular:

> **Direct emissions are down by 15%**

> **Indirect emissions are down by 35%**

> **Total emissions are down by 29%**

Direct emissions CO_2 kg/ton 2011 vs 2007

-15%

TOTAL emissions CO_2 kg/ton 2011 vs 2007

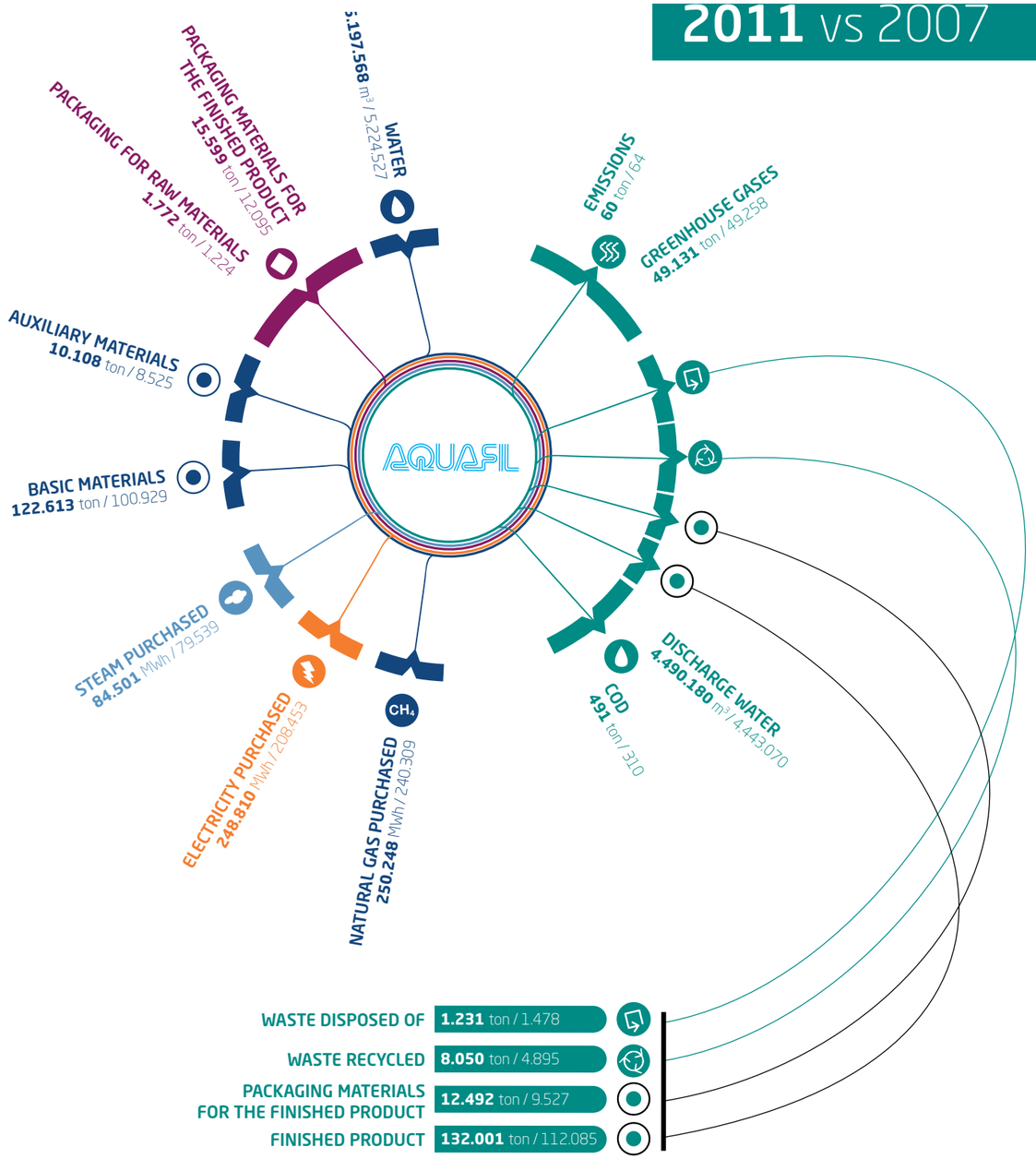
-29%

>CONSOLIDATED ENVIRONMENTAL BALANCE SHEET **2007-2011**

Normalized values per ton of finished product

		UdM	2007	2008	2009	2010	2011	%11/07
in	Basic materials	ton/ton	0.921	0.932	0.928	0.923	0.929	1%
	Auxiliary materials	ton/ton	0.076	0.068	0.067	0.075	0.077	1%
	Electricity purchased	Kwh/ton	1.860	1.809	1.740	1.792	1.885	1%
	Steam purchased	Kwh/ton	709.6	674.2	662.5	590.1	640.2	-10%
	Natural gas purchased	Kwh/ton	2.144	2.154	2.126	1.919	1.896	-12%
	Water including condensate from steam	m^3/ton	46.61	45.91	40.90	37.17	39.38	-16%
	Packaging raw materials	ton/ton	0.011	0.017	0.007	0.015	0.013	22%
	Packaging for purchased finished product	ton/ton	0.11	0.11	0.10	0,11	0.12	7%
		UdM	2007	2008	2009	2010	2011	%11/07
out	Packaging for finished products received	ton/ton	0.085	0.085	0.077	0.085	0.095	11%
	Recycled wastes	kg/ton	47.1	53.7	47.9	52.2	63.9	36%
	Waste disposed of traditionally	kg/ton	12.5	8.6	9.3	7.9	11.9	-5%
	Emissions	gr/ton	574	581.3	486.1	467.7	456,2	-21%
	Greenhouse gases (direct)	kg/ton	439,5	426,4	423,4	382,1	372,2	-15%
	Greenhouse gases (indirect)	kg/ton	1.107	1.120,8	1.076,4	681,3	720	-35%
	COD	kgO_2/ton	2.8	2.6	2.4	2.2	3.7	33%
	Waste water	m^3/ton	39.5	39.4	35.1	31.9	34.0	-14%
Wastes removed from the environment as part of the ECONYL project		Kg/ton					-29,0	
Indicator of the total CO_2 directly emitted by the Aquafil Group + CO_2 emitted indirectly by purchased energy		Kg/ton	1,546	1,547	1,500	1,063	1,092	-29%

2011 vs 2007

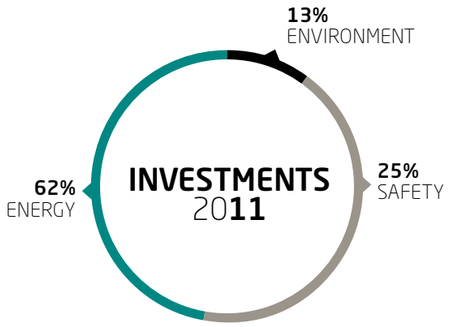


OVERVIEW OF **INVESTMENTS**

A step of the production of Aquafil yarn.

In 2011 the Aquafil Group invested € 2.3 million ($ 3.0 million) in energy, the environment and safety. As the table and graphic below show our main investment effort has been directed at increasing energy efficiency and producing energy from renewable sources. Investment in these areas accounts for 62% of the total and finances projects designed to have a positive effect on savings in the future.

SOME OF THESE PROJECTS HAVE BEEN STARTED BUT NOT YET COMPLETED. FOR THIS REASON THE POSITIVE RESULTS WILL ONLY BECOME APPARENT DURING 2012.



INVESTMENTS 2011

	Euro	%
ENVIRONMENT	316.310	10%
SAFETY	1.366.572	43%
ENERGY	1.466.039	47%
TOTAL	**3.149.221**	**100%**

DURING 2011 THE MAIN INNOVATIONS IN THE ENERGY FIELD WERE AS FOLLOWS:

The installation of a photovoltaic system on the roofs of the main production facility at Arco;

At the Slovenian and Croatian sites, the substitution of traditional light bulbs with energy-saving light bulbs;

At the Slovenian and Croatian sites, the activation of high-efficiency electric motors.

Thirty-two projects for the 2011-2012 period were launched with the specific objective of improving the sustainability of the Aquafil Group. General projects (e.g. reduction of waste disposal in all facilities) and specific projects (e.g. substitution of light bulbs in a specific facility) are all part of a drive to implement the sustainability policy inaugurated in 2007.

THESE PROJECTS ARE ANALYSED IN DETAIL IN THE "OVERVIEW OF IMPROVEMENT PROJECTS" SECTION.

Safety remains an important issue. We have performed further, in-depth risk analyses in order to improve the working conditions of Group employees. The analyses have enabled further improvements in fire-fighting systems and the identification of potential risk areas thus making a substantial contribution to safety in the workplace.

Reduction emissions CO_2
2011 **TOTAL**
63718 tons

Total savings of TEP
2011
19912

CHANGEOVER FROM BOILERS TO COGENERATION/ TRIGENERATION AND NATURAL RESOURCE SAVINGS.

In 2006, the Aquafil Group installed a cogeneration system at its Arco production facility. This produces both electricity and thermal energy. This has made it possible to substitute electricity sourced from the mains power network with cogenerated power. Cogenerated thermal energy replaces that produced by burning natural gas in much less efficient conventional boilers.

Over the years, the cogeneration system has been converted to trigeneration thus further increasing the efficiency of the entire plant. The system now provides air-conditioning for the headquarters production facility and offices during the summer months. During 2011, the Group activated a district heating system which supplies thermal energy to the neighbouring site of Dana Italia Spa. This has increased plant efficiency and built a network of relationships with the local area.

The structural consolidation of the plant between 2006 and 2011 brought the following environmental benefits:

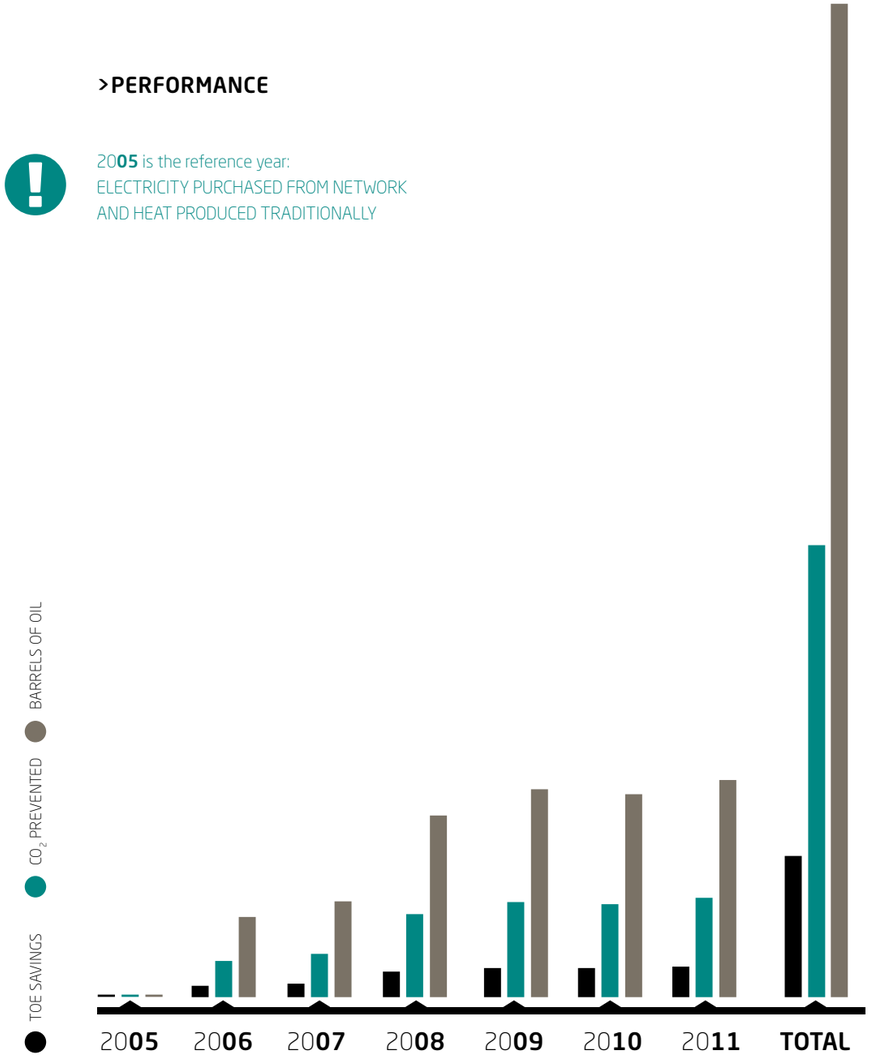
Savings in fossil fuel equivalent to 139,159 barrels of oil;

Savings of 19,912 tons of oil equivalent (TOE);

Reduction in CO_2 emissions of 63,718 tons.

>PERFORMANCE

20**05** is the reference year:
ELECTRICITY PURCHASED FROM NETWORK
AND HEAT PRODUCED TRADITIONALLY



	2005	2006	2007	2008	2009	2010	2011	TOTAL
TOE SAVINGS	0	1,620	1,934	3,666	4,194	4,106	4,392	**19,912**
BARRELS OF OIL	0	11,322	13,516	25,621	29,311	28,696	30,694	**139,159**
CO_2 PREVENTED	0	5,184	6,189	11,731	13,421	13,139	14,054,4	**63,718**

Co-generation plant in Arco .

RENEWABLE ENERGY ON THE TOTAL purchased energy by the **Group** 2011

29%

ENERGY

In 2011 the Group consumed 584,000 Mwh of energy compared to the 557,000 Mwh consumed in 2010. Most of this figure is accounted for by the consumption of methane and other fuels followed closely behind by electricity. A much lower percentage is accounted for by the consumption of thermal energy.

BETWEEN 2010 AND 2011 THERE WAS AN ABSOLUTE INCREASE IN ENERGY CONSUMPTION OF 4.8%. THE INCREASE WAS DUE MAINLY TO THE FOLLOWING:

> **The startup of new production facilities in Jiaxing (China) and in Ajdovscina (Slovenia);**

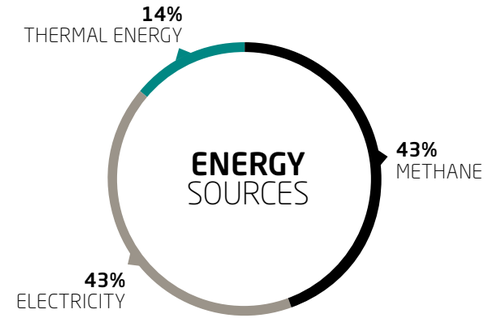
> **The entry into service of the regeneration plant in Ljubljana (Slovenia);**

> **The startup of new machinery and new production lines in USA, Slovenia, Croatia and Italy.**

Time is needed before new activities and new production facilities start to operate at maximum efficiency in terms of output and efficiency indicators and this accounts for the slight increase in energy consumption. It should be noted that 29% of the electricity purchased by the Aquafil Group comes from renewable sources. This enables a drastic reduction in the environmental impact deriving from the supply of electricity.

The Group has also made substantial investments in self-generating part of the electrical energy used in its plants.

Here, it is worth mentioning the installation of solar panels in two photovoltaic systems. One installed on the roofs of the headquarters in Arco; during 2011 this produced 219,000 Mwh. Construction of the second system at the Aquafil USA facility in Cartersville (USA) started in the last months of 2011. A third project to produce electricity from solar energy is in progress at the Cares plant (Tessil 4, Italy). In this case, Aquafil Group has provided the roofing areas necessary for the construction of a very large photovoltaic system to third party.



The Group has taken up a shareholding in ReEnergy Capitol, a fund operating in the renewable energy and environment sector. Two solar fields built by Aquafil Solaris at Brindisi (Italy) in 2009 have been transferred to the fund.

THE INITIAL VALUE OF THE INVESTMENT HAS BEEN TRANSFERRED FROM THE DIRECT MANAGEMENT OF THE SOLAR FIELDS TO THE POSSESSION OF A SHARE PACKAGE OF THE SAME VALUE TO THE REENERGY CAPITOL FUND.

>AQUAFIL GROUP **ENERGY PURCHASED 2007-2011 CYCLE**

MWh	2007	2008	2009	2010	2011	%11
METHANE AND OTHER FUELS	240,309	228,096	234,633	248,376	250,248	**43%**
ELECTRICITY (*)	208,453	191,519	192,081	232,002	248,810	**43%**
THERMAL ENERGY	79,539	71,392	73,128	76,379	84,501	**14%**
TOTAL	**528,301**	**491,007**	**499,842**	**556,758**	**583,558**	
UNIT CONSUMPTION, Mwh/t	**4.713**	**4.637**	**4.528**	**4.301**	**4.421**	
(**) OVERALL UNIT CONSUMPTION, Mwh/t	**4.726**	**4.669**	**4.539**	**4.312**	**4.438**	
Reduction on the first year of the cycle:					**-6,1%**	

* TOTAL ELECTRICITY PURCHASED ENERGY PURCHASED FROM RENEWABLE SOURCES

** OVERALL UNIT CONSUMPTION INCLUDING FUEL AND TECHNICAL GAS FOR GENERATORS

Thanks to the operation of the trigeneration system, the Arco site has made substantial reductions in the electrical energy it sources from the external grid. During 2011 numerous technical improvements were made to the system with the result that its efficiency is now 80%. Today, the system produces electrical energy, thermal energy and refrigerated water for the air conditioning of the production facility and offices.
The high efficiency of the system made it possible in 2011 to sell 1805 Mwh of electricity back to the network.
To produce this amount approximately 352,688 Sm^3 of natural gas was used; this is equivalent to 0.379 tons CO_2 per Mwh.

This coefficient is lower than the average calculated for the production of electrical energy in Italy (currently 0.531 tons CO_2 per Mwh). The Aquafil Group has therefore fed back to the network electricity produced with a lower level of CO_2 emissions; this is a clear environmental advantage.

**IN 2011 THE GROUP SIGNED AN AGREEMENT WITH DANA ITALIA SPA, AN ENGINEERING COMPANY SITED NEXT DOOR TO THE ARCO PRODUCTION FACILITY.
THE AGREEMENT WAS FOR THE SUPPLY OF THERMAL ENERGY OVER A DISTRICT HEATING SYSTEM TO HEAT DANA'S OFFICES AND PRODUCTION FACILITIES.**

ELECTRICITY in Mwh

	Purchased from the external network	Auto-generation		Total internal consumption
		Total	*Fed back to the network*	
20**07**	14,180	68,159	0	82,339
20**08**	10,520	62,048	0	72,568
20**09**	2,975	70,228	4,968	68,235
20**10**	14,757	68,469	439	82,788
2011	**11,948**	**70,434**	**1,805**	**80,577**

THERMAL ENERGY in Mwh/t

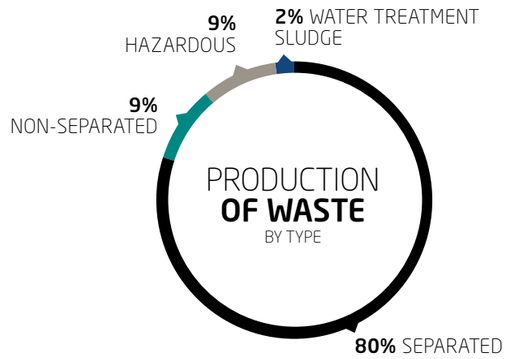
	Auto-generation	Total internal consumption
	Total	
20**07**	91,783	91,783
20**08**	101,651	101,651
20**09**	106,730	106,730
20**10**	108,878	108,878
2011	**105,374**	**105,374**

ELECTRICITY from photovoltaic system

	Auto-generation	Total internal consumption
	Total	
2011	**219**	**219**

Total unsorted wastes
from 20**07** to 20**11**

-42%



WASTE

During 2011, all 13 production sites of the Aquafil Group continued to proactively implement the Group policy of reducing the production of waste and in particular the production of non-separated waste.

In the 2007 to 2011 period the indicator for non-hazardous, non-separated waste continued the positive trend, down 41.8%, dropping from 9.8 kg/ton (2007) to 5.7 kg/ton (2011). In the 2010-2011 period there was a slowdown in the improvement due in part to the internal dynamics of some facilities and to the numerous works to reorganise and expand production. The increase in non-separated waste is due in particular to the disposal of non-separable packaging of some purchased raw materials, to non-recyclable stores waste and to various material produced by period stock clearances.

In the 2007-2011 period the indicator for non-hazardous, separated waste continued the positive trend, increasing by 20.9% from 42.6 kg/ton to 51.5 kg/ton. There was a net increase in the material sent for recycling with a subsequent decrease in material sent to landfill or incineration. The increase in the indicator for non-hazardous, separated waste is a positive factor in that it is matched by a corresponding decrease in non-separated wastes thereby demonstrating once again the efficiency of the sustainability policy started by the Group in 2007. One of the factors strongly influencing this indicator in 2011 was the treatment of process waste at Aquafil USA.

AT THE SITE, THE INCREASE IN PRODUCTION HAD CREATED AN INCREASE IN THE AMOUNT OF PROCESS WASTE PRODUCED; PROCESS WASTE WAS USUALLY SENT TO AN EXTERNAL RECYCLING COMPANIES. DURING 2011 AN INTERNAL ENGINEERING PLASTIC LINE ENTERED SERVICE AT THE CARTERSVILLE FACILITY. THIS MEANS THAT IN 2012 AQUAFIL USA WILL BE ABLE TO DIRECTLY RECYCLE ITS PROCESS WASTES WITHOUT HAVING TO SELL THEM TO EXTERNAL COMPANIES FOR TREATMENT.

The third item to be considered is hazardous, separated waste. The indicator for this type of waste increased between 2007 and 2011 by 31.1%. The increase can be attributed to an improvement in the efficiency of treating waste water and process waste. For example, in 2011 the introduction of a new, experimental system for extruding and regenerating engineering plastics produced by the Aquafil Group entailed a change in the methods for managing waste water. This made it possible to comply, as always, with the limits defined in environmental protection legislation and at the same time to minimise the impact control values reducing these to half of the specified limits.

IN THIS WAY THE AQUAFIL GROUP HAS ENSURED THE FULL COMPLIANCE OF ITS PRODUCTION, TEST AND EXPERIMENTAL PROCESSES WITH THE ENVIRONMENTAL SAFETY AND PROTECTION REQUIREMENTS FOR THE SURROUNDING AREA.

>ANALYSIS OF **WASTE IN 2011**

TYPE OF **WASTE**	**ton**					**kg/ton** produced					**% RECYCLED**				
	2007	2008	2009	2010	2011	2007	2008	2009	2010	2011	2007	2008	2009	2010	2011
NON-HAZARDOUS SEPARATED	**4,779**	**5,065**	**5,107**	**6,469**	**6,801**	**42.6**	**47.6**	**46.3**	**50.0**	**51.5**	**100**	**100**	**100**	**100**	**100**
> Paper	3,164	2,636	2,463	3,267	3,227	28.3	24.9	22.3	25.2	24.4	100	100	100	100	100
> Plastic and wood	1,349	1,638	1,483	2,126	1,997	12.0	15.5	13.4	16.4	15.1	100	100	100	100	100
> Other	266	791	1,161	1,076	1,577	2.3	7.3	10.5	8.3	11.9	100	100	100	100	100
HAZARDOUS SEPARATED	**499**	**620**	**638**	**741**	**774**	**4.5**	**5.8**	**5.8**	**5.7**	**5.9**	**23**	**26**	**28**	**38**	**36**
> Organic residues comparable to fuels*	116	162	180	281	299	1.0	1.5	1.6	2.2	2.3	100	100	100	100	100
> Oils and old batteries	383	458	458	460	475	3.5	4.3	4.1	3.6	3.6	0	0	0	0	0
NON-HAZARDOUS NON-SEPARATED	**1,095**	**643**	**564**	**562**	**756**	**9.8**	**6.1**	**5.1**	**4.3**	**5.7**	**0**	**0**	**0**	**0**	**0**
TOTAL	6,373	6,328	6,309	7,772	8,331	56.9	59.5	57.2	60.0	63.1					
WATER TREATMENT SLUDGE	**308**	**260**	**195**	**208**	**179**	**2,7**	**2,5**	**1,8**	**1,6**	**1,4**	**0**	**0**	**0**	**0**	**0**
TOTAL	6,681	6,588	6,504	7,980	8,510	59.6	62.0	58.9	61.7	64.5					

***** total of fat oils + spent chemicals + 50% various watery waste containing organic material

WASTE FROM REGENERATION PLANT

During 2011 the Aquafil Group activated a major product and process innovation - the ECONYL® Regeneration System. The system was installed in the Julon facility at Ljubljana and following activation has started to produce new waste (see table below).

This was derives from the progressive industrialisation of production processes which were previously part of R&D and experimental activities. During the first year of activity the processes at Julon recorded a lower rate of efficiency than planned for when the plant will be fully operational. This is quite normal and common when similar industrial processes first come on line.

At the same time it should be noted that the ECONYL® Reclaiming Program for the world-wide collection of waste needed to feed the Ljubljana plant has returned very good results. The Program has removed a massive 4,000 tons of waste from the environment, waste which would otherwise have been sent to landfill or incinerators.

PART OF THE RECOVERED WASTE WAS POST- CONSUMER. WASTES FROM FISHING NETS, CARPET FLUFF, FABRICS AND PLASTIC COMPONENTS.

>LJUBLJANA **ECONYL WASTE**

Hazardous, separated		
		Tons
Organic residues comparable to fuels (waste from ECONYL chemical process)		**950***
Wastes removed from the environment	total	**3845**

***** Note: the 950 tons include:

> The salts derived from the catalyser derived from the phosphoric acid required in the process.
> The by-products derived from the processes for separating the additives and other components present in recycled PA6.

Indirect CO_2
2011 vs 2007
ton
-21484

ATMOSPHERIC EMISSIONS

The atmospheric emissions of all the production facilities of the Aquafil Group are closely monitored according to a specific control plan, including scheduled analyses which take place at more frequent intervals than those stipulated in the relevant regulations.

In 2011 the overall value of emissions was lower than that specified by law thereby demonstrating the efficiency of the Group's emissions policy. The table below shows that the atmospheric emissions between 2007 and 2011 fell by 20.7%.

GREENHOUSE GAS EMISSIONS WERE AS FOLLOWS:

Direct CO_2 emissions: 85% of these emissions were produced by the Arco cogeneration plant which is a high-efficiency producer of electrical and thermal energy;

Indirect CO_2 emissions: these are all produced by the electrical and thermal energy purchased from Group suppliers; they are therefore produced by suppliers;

CO_2 emissions from goods transportation: these are linked to the transportation of goods between the various sites of the Group and the transport of waste to the warehouse at Ajdovscina.

As the table shows, between 2007 and 2011 direct emissions dropped by 15.3%, achieved mainly through an increase in efficiency of the cogeneration plant at Arco. In absolute terms, the indirect emissions of CO_2 in the 2007 - 2011 period fell substantially by 17.1%, dropping from 125,596 to 104,112 ton. The normalised value for the decrease was 34.9%. The strategic policy of purchasing external electricity from renewable sources, where available, also proved successful in reducing emissions. In Italy we purchased 71.722 Mwh from renewable sources enabling a reduction in 2011 of 50,133 ton in indirect CO_2 emissions in comparison with purchases from traditional sources.

The Arco production facility of the Aquafil Group comes within the terms of the Emissions Trading System (ETS) for controlling CO_2 emissions on the basis of quotas assigned by the ETS authority. The consolidated efficiency of the trigeneration plant enabled a saving on assigned quotas of over 20% through a reduction of CO_2 emissions of over 12,000 tons per year.

CONVERSION COEFFICIENTS

> **1Kwh** = **0,531** Kg CO_2 eq
(Enel)

> **1Kwh** = **0** Kg CO_2 eq
(Electricity from renewable sources)

> **1Kwh** = **0,43** Kg CO_2 eq
(ELES e Ministry of Industry of Slovenia)

> **1Kwh** = **0,726** Kg CO_2 eq
(Website Southern Company • Georgia Power Company))

>Table 1 **AIR EMISSIONS**

Ton		2007	2008	2009	2010	2011
TOC (CPL + OIL + VOC)		32.8	33.4	23.7	29.1	**33.6**
NOx		19.7	17,2	18,8	19.0	**14.1**
CO		7.6	7,3	4.8	6.0	**6.2**
SO2/SOx		0	0	0,01	0.02	**0.22**
DUSTS		3.9	3.7	6.3	6.4	**6.2**
PM10		**0**	**0**	**0**	0	**0**
(*) TOTAL	ton	64	61.6	53.61	60.54	**60.2**
	gr/ton	574	581.3	486.13	467.73	**455.30**

In most cases the accuracy of emission figures is subject to a tolerance of 5-10%.

> Table 2 AQUAFIL GROUP **EMISSIONS OF EQUIVALENT GREENHOUSE GASES**

Ton	2007	2008	2009	2010	2011	Delta2011-2007
DIRECT	49,258	45,151	46,740	49,463	49,131	**-127**
INDIRECT	125,596	120,185	118,815	100,715	104,112	**-21.484**
TRANSPORTATION	2,433	2,650	2,299	2,746	3,072	**639**
TOTAL	**177,287**	**167,986**	**167,854**	**152,924**	**156,314**	**-20.973**

>**EMISSION TRADING** FOR THE ARCO FACILITY

	2006	2007	2008	2009	2010	2011
ASSIGNED QUOTA	43,098	51,788	55,203	55,203	55,203	55,203
CONSUMED QUOTA	36,259	42,998	39,548	42,220	42,436	42,460
SAVING	**16%**	**17%**	**28%**	**24%**	**23%**	**23%**

Total water consumption
m³/ton 20**11** vs 2007

-15%

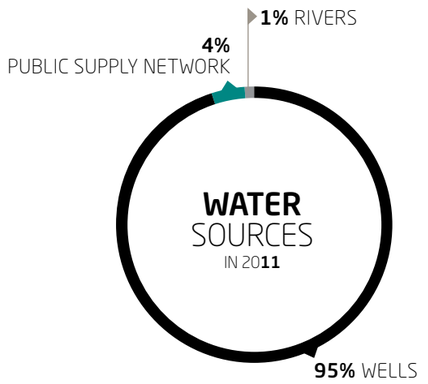
WATER

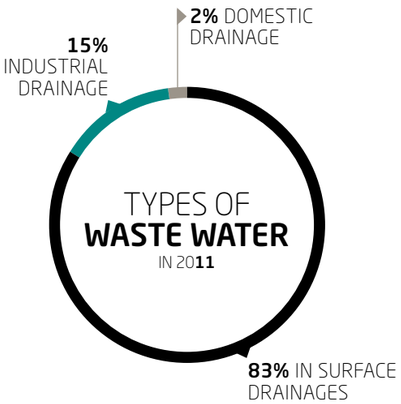
The Group has a policy of limiting water consumption primarily through the recycling of this valuable resource within the various stages of production. The Aquafil Group was very successful in this area and between 2007 and 2011 cut its consumption of water by 15%. This was achieved even though the number of production facilities increased in 2011. In particular it should be noted that the regeneration plant activated in Slovenia is a fully chemical plant comprising major heating and cooling cycles which use water. To reduce the consumption of water, the Aquafil Group has adopted closed circuit recycling systems which reduce the amount of water fed into the system and the amount of water drained off.

ALONGSIDE THESE DEVELOPMENT WE HAVE ALSO IMPLEMENTED TEST AND MONITORING SYSTEMS WHICH ENABLE VERY RAPID CORRECTIVE ACTION EVEN WHEN THERE ARE ONLY SLIGHT VARIATIONS IN VOLUMES.

One of the primary advantages of this integrated, closed-cycle water management and monitoring system is that it can continue to operate at the same reduced levels even when production increases. This is the reason why the Aquafil Group strongly focuses on this topic and continues to implement many projects of this type. As the graphic shows, 86% of waste water goes into the surface drainage system while 15% is drained off and sent for treatment as industrial waste. The waste water drained off into the surface drainage system has concentrations of COD which are within the regulatory limits specified in the various countries where the Group operates. Generally, the level of COD in waste water is substantially lower than regulatory limits.

THE REMAINING PART IS SENT FOR TREATMENT TO LOCAL WATER TREATMENT AUTHORITIES AND CONCENTRATIONS REMAIN WITHIN THE LIMITS STIPULATED BY THE AUTHORITY CONCERNED.





During 2011, the start of production at the Ljubljana regeneration plant led to an increase in the total amount of COD present in the waste water sent to local water treatment authorities. This is because the Ljubljana facility is a chemical plant where the depolymerisation of the polyamide 6 contained in wastes produces more by-products which in turn require more water to be separated out during the purification step of the process. To overcome this problem, the Group is concentrating on optimising the process.

A preliminary study of the by-products present in the waste material before the process will make it possible to identify and physically separate these by-products before the process starts thus limiting as far as possible any subsequent contact with process water.

>WATER SOURCES

	2007	2008	2009	2010	2011			2011/2007
	m³/t	m³/t	m³/t	m³/t	m³/t	m³	%	
Water from public supply network	0.8	1.1	0.9	1.0	1.6	217,490	4%	
Water from rivers	0.4	0.4	0.4	0.3	0.3	42,229	1%	
Water from wells	44.4	43.5	39	35.3	36.7	4,851,091	95%	
TOTAL	**45.6**	**45**	**40.3**	**36.6**	**38.6**	**5,110,810**		**-15.3%**

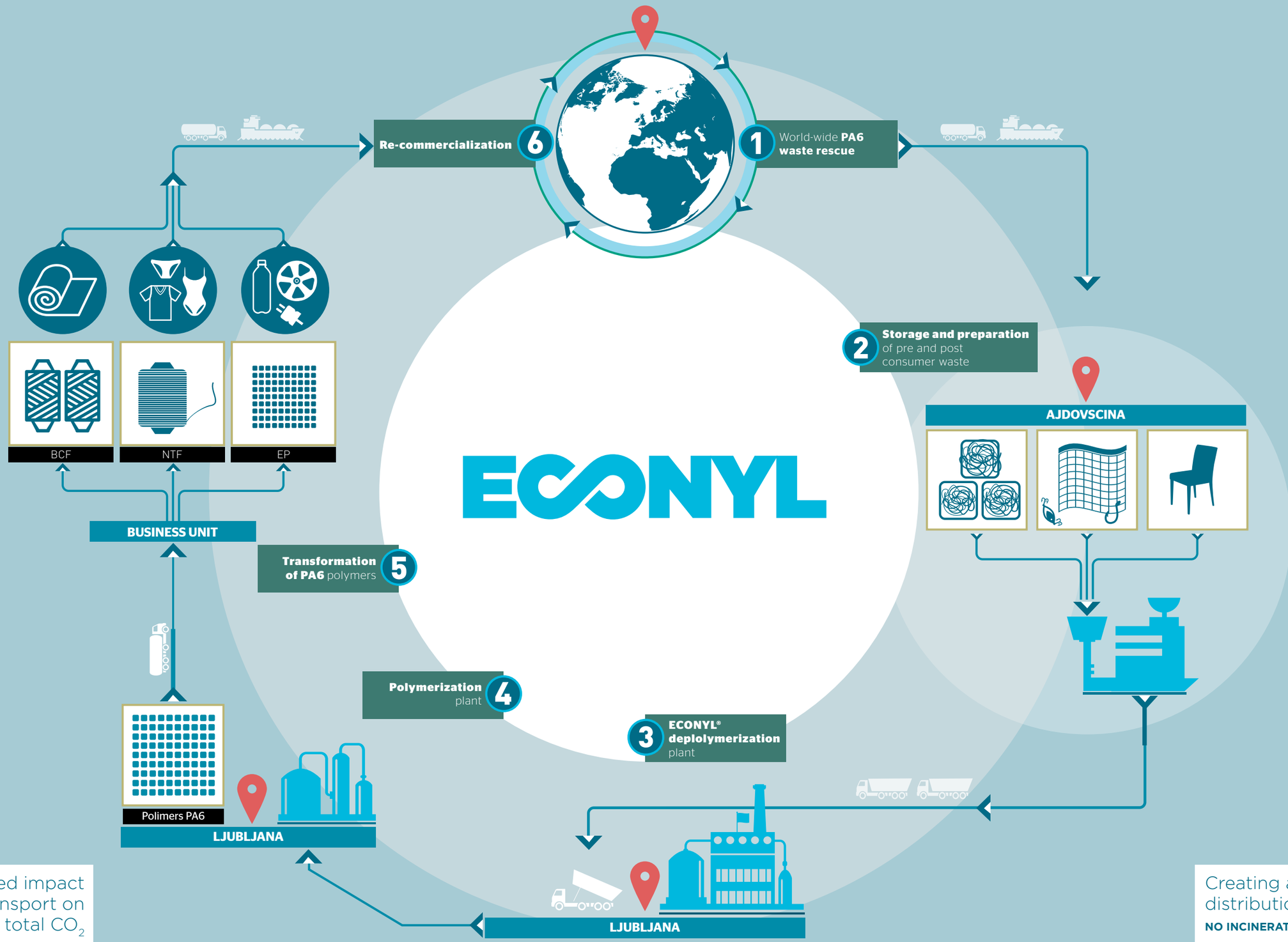
>DESTINATION **WASTE WATER**

	H2O VOLUME (m³)					COD QUANTITY (tons)					AVERAGE CONCENTRATION (mg/litre)				
	2007	2008	2009	2010	2011	2007	2008	2009	2010	2011	2007	2008	2009	2010	2011
>TO TREATMENT	594,581	622,662	548,779	651,101	**763,259**	95	100	91.4	93.2	**338.2**	160	160	167	**143**	**443**
>IN SURFACE DRAINAGE	3,848,489	3,548,415	3,330,411	3,481,468	**3,726,774**	215	180	172	188	**183**	56	51	52	**54**	**49**
TOTAL	4,443,070	4,171,077	3,879,190	4,132,568	**4,490,033**	310	280	263	281	**521**	-	-	-	-	-

Advanced search innovation and development

Circular evolution the production system

ECONYL® Regeneration System



Reduced impact of transport on the issue total CO_2

Creating a new distribution chain:

NO INCINERATOR NO LANDFILL

ECONYL®
Regeneration System

This is a production model which takes pre- and post-consumer waste containing polyamide 6 and transforms it in a mechanical-chemical process into regenerated Caprolactam, a fundamental raw material for the Group's production activities.
The process is practically infinite and enables the recovery of material which would otherwise be sent to landfills, incinerated or dumped in the environment.

The steps of the ECONYL® REGENERATION SYSTEM:

1. WORLD-WIDE PA6 WASTE RESCUE

The Aquafil Group collects non-hazardous pre- and post-consumer waste containing polyamide 6 from sources world-wide.
This has created a new flow of material to feed the regeneration plant at the Julon facility in Ljubljana which produces ECONYL® 100% regenerated Nylon 6. The wastes thus become a NEW RAW MATERIAL for use in the production activities of the Aquafil Group. This radically changes the traditional production cycle based on the need to purchase fossil-based raw material (Caprolactam).

Particularly, the introduction of ECONYL® Regeneration System has requested:
A) TO PROJECT, TO BUILD AND TO MAKE SUSTAINABLE A NEW SUPPLY CHAIN.
The Aquafil Group has defined channels and sources for the recovery of both pre and post consumer waste such as fluff (the top part of carpeting), fishing nets, fabrics and plastic components. Actually, the Group is identifying new available supply chain to feed the ECONYL production cycle.
B) TO REDEFINE THE RELATIONSHIPS WITH STAKEHOLDERS (customers, local communities and authorities, waste recycling consortia).

The Group is defining new tasks and dynamics, particularly for the collection of post-consumer waste and for design for re-manufacturing.
For the first point, the Group will have to seek a wider involvement of its customers in the collection process, asking them to define clear, efficient procedures for collecting end-of-life-cycle material. A wider involvement of the communities using Polyamide 6 materials (such as the fisher communities, which use polyamide 6 fishing nets) will also be required. At the same time, together with customers, researchers and designers, the Aquafil Group is developing totally recycled and recyclable products. These products are designed to be easily separated in their different components and directed to their specific regeneration streams once they arrive at the end of their life. A step in this direction has already been taken with the official start of the EcoMeTex European Project, which focuses on redefining the structure of products. In particular, the Group is participating in the recovery and regeneration of post-consumer waste and in defining the level of recyclability of the polyamide 6 contained in the objects developed during the research step.

ECONYL®
Regeneration System

2. STORAGE AND PREPARATION OF PRE AND POST CONSUMER WASTE

The waste collected world-wide (United States, British Columbia (Canada), Greece, Turkey, Pakistan, Egypt, Thailand and Norway) are then stored at Ajdovscina, in a big warehouse located at 80 Km to Ljubljana. The different types of waste are then cleaned, separated and prepared for despatch to the Ljubljana plant. In this step of the process, most of other materials which would prevent use in the regeneration plant are removed.
For example, fishing nets contain large amounts of organic waste (seaweed, marine remains, dead fish, etc.), hooks made from lead and other metals, polypropylene ropes and straps. All these have to be removed before regeneration. Personnel clean the waste and separate the polyamide 6 waste from all the other waste material. Non-polyamide 6 material is sent for dedicated reprocessing in processes similar to the ECONYL® Regeneration System. All the waste prepared for treatment in the regeneration plant is shredded and compacted using special machinery. When preparation has been completed, the waste is put into Big Bags and sent to Ljubljana for use in the ECONYL® regeneration plant.

3. ECONYL® DEPLOLYMERIZATION PLANT

Taking advantage of the particular characteristics of Nylon 6, we have developed a mechanical-chemical process which transforms PA6 into a new regenerated raw material (Caprolactam) with the SAME CHEMICAL, PHYSICAL AND PERFORMANCE CHARACTERISTICS as virgin raw material; the regenerated and the virgin raw material are perfectly interchangeable. This chemical process was developed by the Energy & Recycling business unit working in close collaboration with international universities including the University of Trento (IT), Georgia Tech University (USA), University of Maribor (SL) and the University of Ljubljana (SL). Four years of research, design and construction and expenditure of € 17 million to date have enabled the construction of a plant which will produce 10,000 tons of polymer once the plant is fully operational. To maximise output, minimise energy consumption and reduce CO_2 emissions, the ECONYl® regeneration plant was installed at Julon, Ljubljana where the Group already had a polymerization facility and there was sufficient free space. In 2012 work was started to double the size of the regeneration plant.

Fishing nets discarded.

ECONYL®
Regeneration System

ECONYL plant in Ljubljana.

4. POLYMERIZATION PLANT

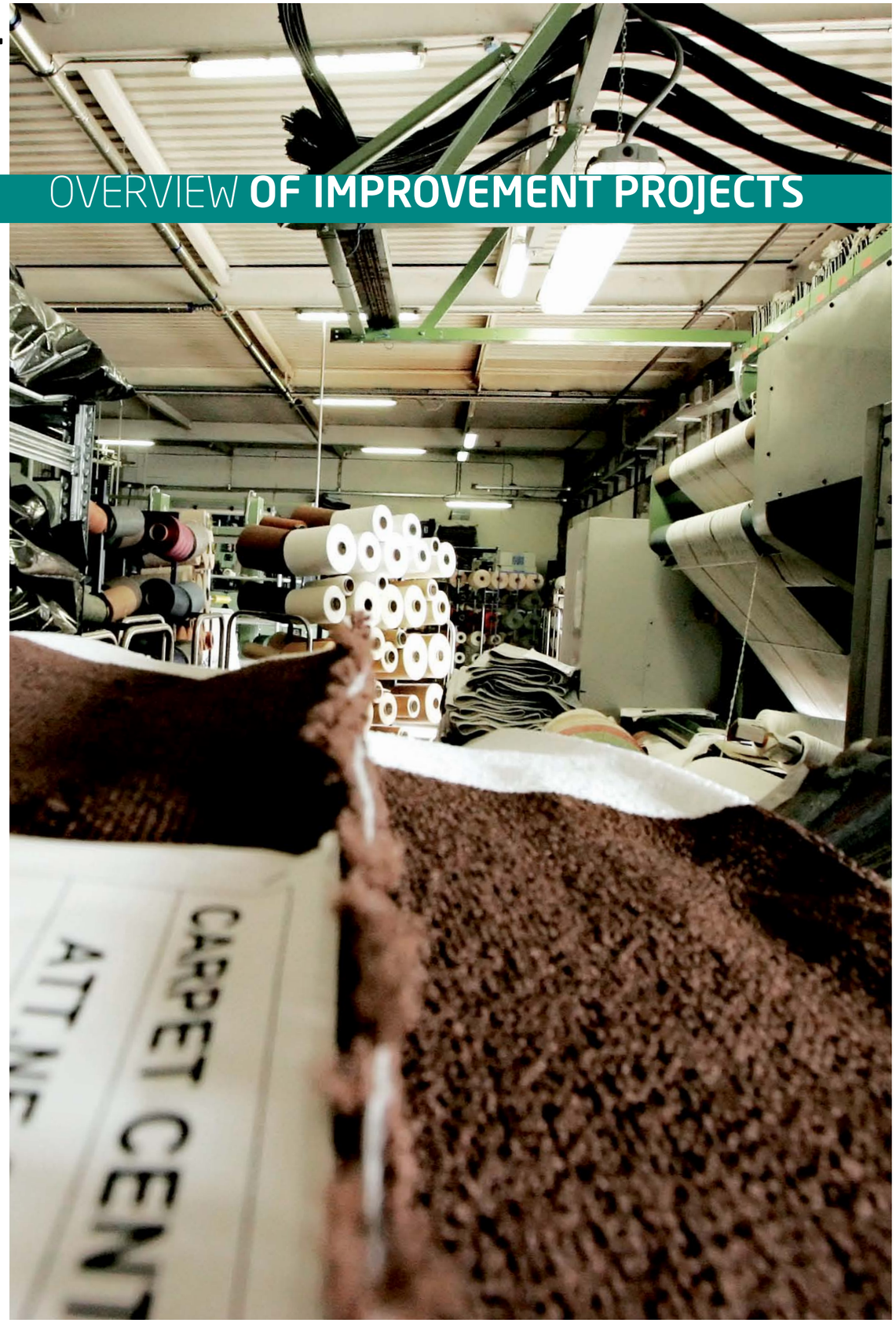
The depolymerisation step produces regenerated Caprolactam which has exactly the same chemical and performance characteristics as virgin raw material.
The passage from the regeneration step to the new polymerization step is performed employing the usual methods for virgin monomers. In effect, the regenerated product is returned to the polymerization plant and to the process for producing Nylon 6 polymers.

5. TRANSFORMATION OF PA6 POLYMERS

The polymers produced by the ECONYL® plant are distributed to the production facilities of the three product business units. The polymers are then processed again and transformed into BCF yarns for synthetic carpeting, NTF yarn for textiles and clothing and EP technical polymers for extrusion and injection moulding.

6. RE-COMMERCIALIZATION

The final products of the Aquafil Group, derived from waste and not from fossil based raw materials, are marketed to customers and then onwards to the final markets. Once again the objective of the Group in this area has been to rewrite the rules of commercial and production relationships. The final objective guiding the Group's actions is to reach a situation where final products (e.g. carpet tiles or swim wear) are made entirely from regenerated material and in turn are fully recyclable. The aim is to produce a virtuous production cycle.
In this case the role of Aquafil is to lead other companies towards adopting revolutionary and sustainable behaviour. This is a process which starts with design and finishes by establishing the collection and pre-treatment of post-consumer waste. This is a highway into the future which requires commitment, research, effort and skill.



OVERVIEW **OF IMPROVEMENT PROJECTS**

A picture of the Carpet Center in Arco.

> ENERGY

	PROJECT	Facility	Progress	ACTIONS AND BENEFITS	CO_2 2011 ton	CO_2/y ton	Mwh 2011	Mwh/Y
01>	Aquafil (Arco): Completion of efficiency improvements of the self-generation power plant, as planned for 2009-2010. The planned objective is a growth in production capacity of 2600 Mwh/year.	AQUAFIL	**30%**	Increase in the production of electricity of 2600 Mwh/year. In 2011, completed engineering works and the preconstruction of piping for the new equipment.	**0**	**333**	**0**	**2.600**
02>	Aquafil (Arco): Use of hot water recovered from the cogeneration plant during winter to substitute the steam in the two heating systems.	AQUAFIL	**100%**	Savings of 400 kwh/h of heat in 6 coldest months with savings of natural gas of 45 Sm^3/h. Savings of 100 Kwh/h or 11 Sm^3/h in the hottest months of the year. Started in July 2011: total gas saved 240000 Sm^3/a.	**194**	**466**	**900**	**2.160**
03>	Aquafil (Arco): Heating with diathermal oil in the place of electrical resistances.	AQUAFIL	**0%**	The replacement of resistances with an innovative technology will result in a 450 Mwh/year reduction in electricity consumption.	**0**	**239**	**0**	**450**
04>	Aquafil USA: Optimisation of compressor use, leading to a reduction of 3% in the Kwh per product unit used for cooling the water and air in the compression system thanks to improvements in efficiency.	AQUAFIL USA	**100%**	In 2011, completion of modification to the circuit towards the end of the year: the efficiency of energy saving will be calculated in 2012: a saving of 3% per product unit is expected.	-	-	-	-
05>	Borgolon: Study for the substitution of neon lights with energy-efficient bulbs in offices, laboratories and the packaging area.	BORGOLON	**0%**	The start of this project is planned for 2012. This will lead to a 30% drop in consumption in the areas indicated.	-	-	-	-
06>	Oroslavje: Optimisation of cover motors leading to savings of 40%.	BULGARI	**100%**	Linking process of the motors on 11 Menegatto machines, which will lead to an overall saving of 650 Kw/day. Started and fully operational in the second half of 2011.	**49**	**98**	**114**	**228**
07>	Oroslavje: Installation of a LED lighting system.	BULGARI	**100%**	LED installation completed.	**3**	**7**	**8**	**16**
08>	Ajdovscina: Replacement of the warehouse lighting system, with an energy saving of 20%.	AJDOVSCINA	**100%**	Substitution completed, electricity consumption reduced by 20%.	**0,6**	**1**	**1,5**	**3**
09>	Ljubljana: Reduction in energy consumption thanks to the substitution of light bulbs.	JULON	**100%**	Completed the project to replace traditional bulbs with energy-saving bulbs: 60% savings in electricity consumption.	**8**	**16**	**19**	**37,1**
10>	Ljubljana: Use of inverters on the conditioning system motors.	JULON	**100%**	Installation of inverters on conditioning motors in the warping department: unit saving 40 Kwh/h. Started and fully operational in the second half of the year.	**69**	**138**	**160**	**320**
11>	Aquafil (Arco): Installation of a photovoltaic system on the Arco facility roof, output 288.97 Kwp.	AQUAFIL	**100%**	Project not planned in 2010 but created in 2011. Started in May 2011.	**116**	**186**	**219**	**350**
12>	Aquafil USA: Installation of a photovoltaic system on the roof of the building; system power is 400.4 Kwp.	AQUAFIL	**80%**	Project not planned in 2010 but created in 2011 and started in January 2012.	**0**	**502**	**0**	**2484**
13>	Aquafil USA: Installation of a photovoltaic system on the roof of the building; system power is 400.4 Kwp.	AQUAFIL USA	**15%**	Project not planned in 2010 but created in 2011 and started in January 2012.	**0**	**381**	**0**	**525**

> EMISSIONS

	PROJECT	Facility	Progress	ACTIONS AND BENEFITS	CO_2 2011 ton	CO_2/y ton	Mwh 2011	Mwh/Y
01>	Tessil 4: Study project for the possible creation of a 600 Kwp photovoltaic system.	TESSIL 4	**25%**	Activity involving third parties who provided the roofing surfaces of the building. The design stage has been completed. Works will be completed in 2012.	**0**	-	**0**	-
02>	Improvement in the efficiency of filters with reduction of emissions of 10%.	AQUAFIL	**0%**		-	-	-	-
03>	Aquafil USA: 20% reduction, in the two-year period, in the emission of VOC per product unit thanks to the activation of a new extrusion tower and thanks to the implementation of structural improvements.	AQUAFIL USA	**75%**	The project was started at the same time as the expansion of the spinning department. In 2011, reduced VOC emissions in g/t of product by 8.3%. The reduction down to 20% will be consolidated in 2012.	-	-	-	-
04>	Ajdovscina: Substitution of asbestos roofing.	AJVDOSCINA	**100%**	Completed substitution throughout the building, completely eliminating the risk of dispersion.	-	-	-	-

> WATER

	PROJECT	Facility	Progress	ACTIONS AND BENEFITS	CO_2 2011 ton	CO_2/y ton	Mwh 2011	Mwh/Y
01>	Aquafil (Arco): Continuation of the project to reduce the consumption of polymer cooling water used in autoclaves.	AQUAFIL	**80%**(1)	System started and in the process of optimisation; some problems related to deposits on heat exchangers to be eliminated.	-	-	-	-
02>	Tessil 4: Connection to the new local waste water treatment system.	TESSIL 4	**75%**	Administrative procedures are in progress for connection to the municipal purification plant.	-	-	-	-
03>	Aquafil: Second stage in reducing COD (in terms of ton/year and Kg/t) aiming for a reduction of -6.5%. At present the project is 50% complete.	AQUAFIL	**70-80%**	We came close to the target thanks to closer monitoring of the process (particularly polymerization) and immediate intervention with corrective action in the event of variations. We still have to confirm the stability of the data into 2012.	-	-	-	-
04>	Aquafil (Arco): Installation of evaporation towers for some compressors to substitute the well water.	AQUAFIL	**0%**	Intercoolers with tower water, saving 250,000 m^3/year (-5%).	-	-	-	-
05>	Aquafil USA: Activation of an EP monitoring system.	AQUAFIL USA	**100%**	Activated the monitoring system for the EP line with parameter values set below the limits specified by the authorising agency.	-	-	-	-
06>	Ljubljana: System for monitoring rain water before releasing it into the collection system.	JULON	**100%**	Complete system of collecting, monitoring and sedimenting rain water before discharge into the municipal drainage network.	-	-	-	-

(1) *Construction in 2011 of an 80% closed circuit with a section consisting of a line with two autoclaves.*

> WASTE

	PROJECT	Facility	Progress	ACTIONS AND BENEFITS	CO_2 2011 ton	CO_2/y ton	Mwh 2011	Mwh/Y
01>	BCF Italy: Completion of the project to reduce separated waste through the use of recyclable separators for the intercompany handling of bobbins at Italian sites (-15% or 90% remaining).	AQUAFIL	**0%**		-	-	-	-
02>	All sites: Further 3% reduction in non-separated waste at all sites as a continuation of the the policy started in 2010.	ALL SITES	-	On 6 of the 13 sites reductions of between 20% and 50% were made. A site was started this year. At the remaining sites there were substantial increases in production with the result that the situation for the amount of non-separated wastes worsened.	-	-	-	-
03>	Aquafil USA: Programme to recycle and reuse all the post-industrial polymer waste currently sent to external companies. The objective is to create a collection and reprocessing system for the post-industrial and post-consumer waste from our customers, so as to eliminate our production of waste sent to external companies for recycling.	AQUAFIL USA	**100%**	In 2011, activation of a plant for the production of EP with startup towards the second half of the year. The recovery of PA 6 in-house waste was 50%, the plant will be fully operational in 2012.	-	-	-	-

> EMPLOYEES

	PROJECT	Facility	Progress	ACTIONS AND BENEFITS	CO_2 2011 ton	CO_2/y ton	Mwh 2011	Mwh/Y
01>	All sites: Maintain the level and hours of safety training at all sites at current levels.	ALL SITES	**100%**	Not only was safety training maintained at current levels at all sites but also underwent a general increase of more than 10%.	-	-	-	-
02>	All sites: Critical review of the systems and procedures to improve safety standards at all the sites.	ALL SITES	**15%**	USA: Workstations were subject to a risk analysis and the related work instructions were implemented in all areas.	-	-	-	-
03>	Tessil 4: Installation of protected loading/unloading bays to eliminate outdoor operations.	TESSIL 4	**100%**	Improvement in working conditions irrespective of climate and environmental conditions.	-	-	-	-
04>	Aquafil USA: Maintenance of a OSHA rating below 5.0. The objective for 2012 is to take this rating to 4.0.	AQUAFIL USA	**0%**	In 2011 a rating of 7.1 was achieved. The final objective for 2012 is a rating below 4. Corrective action was started to ensure achievement of the 2012 target of a 4 rating.	-	-	-	-
05>	Ajdovscina: Reorganisation of the fire-fighting hydrant system to ensure that there is sufficient water available in the event of an emergency.	AJDOVSCINA	**100%**	Completed the construction and integration of the hydrant system for the facility responsible storing and pre-processing the post-industrial and post-consumer PA 6 waste for the recovery of original monomer.	-	-	-	-
06>	Ljubljana: Application of fire-fighting safety measures, with the adoption of an sprinkler system to prevent the fire risk in the PA6 production plant.	JULON	**100%**	In 2011 installed the firefighting sprinkler system and the fire doors.	-	-	-	-

OVERVIEW OF THE PROJECTS FOR THE 2012-2013 PERIOD

ENERGY

>01 **Aquafil, Italy** > Completion of efficiency improvements of the self-generation power plant, as planned for 2009-2011. The planned objective is a growth in production capacity of 2600 Mwh/year.

>02 **Aquafil, Italy** > Completion of district heating project with neighbouring company DANA (basic saving of 750 Kwh or 400 Kwh heat depending on time of the year).

>03 **Aquafil, Italy** > Reduction of 1 bar in the compressed air cycle thus reducing energy consumption by 10%; this was achieved by extending an innovative texturizing system to the spinning machines producing unfinished yarns. Planned reduction target of 300 kwh/h for a total saving of 2500 Mwh/year.

>04 **Aquafil, Italy** > Use of refrigerated water for conditioning the Spinning Department in the Neumag machine section; water taken mainly from the trigeneration absorber cycles. The electric motor refrigeration units will be used as backup only during the hottest months of the year. The reduction in the consumption of electricity is estimated at 432 Mwh this prevents the production of 230 ton/year of CO_2.

>05 **Borgolon** > Study for the substitution of neon lights with energy-efficient bulbs in offices, laboratories and the packaging area.

>06 **Borgolon** > Installation of new Broell yarn guide oilers and RPE, SPF type 16-20-1-12-00 interlacers for spinning. Tests show the following improvements: a reduction of 0.2 bar in compressed air; a reduction of splash effect in the surroundings resulting in a reduction of 15% of the oil dosed. Overall this saves on the electricity need to produce compressed air, reduces by 1 m2 per day the amount of water used to produce the finish oil and consequently also reduces the amount of waste water solution.

>07 **Julon** > Substitution of outdoor lighting to reduce energy consumption and light pollution.

>08 **Aquaset Celje** > Substitution of outdoor lighting to reduce energy consumption and light pollution.

>09 **Aquaset Celje** > Renovation of the facility building facade to improve insulation and reduce energy consumption.

>10 **Aquaset Celje** > Improvement in the efficiency of the cooling system and prevention of quality problems caused by the loss of condensate (reduction in electricity and water consumption).

>11 **Bulgari** > Reduction of approx. 50% in the steam pressure of the compressed air equipment for texturizing (from 7 to 3 bar).

>12 **Aquafil USA** > Installation of a photovoltaic system on the roof of the building; system power is 400.4 Kwp; planned to generate 525,000 Kwh and prevent the emission of 364 tons of CO_2.

>13 **Aquaspace** > Reduction in the consumption of outsourced purchased steam thanks to improvements in monitoring instruments, automatic control and reduced consumption of hot water during the washing stages. The savings of thermal energy of the KdK machines is estimated at 15%.

>14 **Aquaspace** > Recycling of the thermal energy produced by the air compressors in the process; at present the heat produced by the compressors is dispersed into the surroundings; it will be used to preheat the washing water. The washing water is currently heated using outsourced purchased steam. Using oil-air heat exchangers, the new system will enable a reduction in the consumption of steam of 2.5%.

>15 **Tessil4** > Reduction of 3% in the energy consumed to compress the process air; this will be done by decreasing the operating pressure. Improvement in the management of technical parameters will enable a reduction of approx. 500 Mwh/year.

>16 **Tessil4** > Reduction of 30% in the consumption of LPG fuel for heating the facility; this will be achieved by recycling the heat produced by the process air compressors and by insulating the work and store areas.

EMISSIONS

>01 **Tessil 4** > Test project completed in 2011 with the installation of a 600 Kwp photovoltaic system on roofs granted in use by a third party; CO_2 prevented = approx. 600-700 tons per year.

>02 **Aquafil Italy** > Improvement in filter efficiency with a 10% reduction in emissions. This was done by improving the distribution of absorbed water and optimising the process parameters using automatic regulation and control systems.

>03 **Aquafil Italy** > Modification to the system for loading BCF base yarn destined for reprocessing; the modification involving an increase of 20% in the amount for each load. This enabled a reduction in the number of truck journeys necessary resulting in fuel savings of 15 TOE/year (100 barrels/year) and a reduction of CO_2 emissions of approx. 50 ton/year.

>04 **Julon** > Completion of plant for eliminating fumes and reducing dust and TOC emissions in the ECONYL depolymerization department.

>05 **Aquafil USA** > Completion of a project to reduce VOC emissions per product unit by 20% through the activation of a new extrusion tower and the implementation of structural improvements.

>06 **Aquafil USA** > Further 5% reduction in the VOC per product unit.

WASTE

>01 **BCF, Italy** > Completion of the project to reduce separated waste (remaining 90%) through the use of recyclable separators for the intercompany handling of bobbins at Italian sites (-15%).

>02 **All sites** > Further reduction of 3% of non-separated waste at all sites continuing the policy implemented for the 2007-2011 period.

>03 **Bulgari** > Reduction of 10% in the number of waste cardboard tubes use for texturizing.

>04 **Aquafil USA** > Consolidation of the project to recycle and re-use all the post-industrial polymer waste previously sent to external agencies. Now the waste is sent to the new EP line which has started to use this type of waste and the waste from the colouring process. The line now manages to reprocess all this waste so there is no longer any need to send recyclable PA6 waste for processing to the outside.

>05 **Aquaspace** > Modification to the packaging of Space yarn bobbins. These were previously packed in cardboard boxes with separators and are now packed with stretch film and separators. This modification has been made to product sent to final customers (75%) and product sent for intercompany reprocessing (25%).

WATER

>01 **Aquafil, Italy** > Continuation of the project to reduce the consumption of polymer cooling water used in autoclaves through the completion of setting up of the Aut 1-2 line built in 2011.

>02 **Tessil4** > Connection to the new local waste water treatment plant after completion of the works started in 2011.

>03 **Aquafil, Italy** > Second stage in reducing COD (in terms of ton/year and Kg/t) aiming for a reduction of 6.5%. At present the project is 70-80% complete.

>04 **Aquafil, Italy** > Installation of evaporation towers for some compressors to substitute the well water.

>05 **Aquaspace** > Reduction of 20% in the water drawn from wells. This reduction was obtained by recycling part of waste water which after purification and special filtering is used as washing water.

>06 **Aquafil USA** > Implementation of waste water treatment and monitoring systems.

>07 **Aquafil USA** > Study of projects to reduce the consumption of water in industrial processes.

>08 **Aquaset Celje** > Recycling of condensate from the air conditioning equipment in the production area.

SAFETY

>01 **All sites** > Maintenance of current levels and hours of safety training at all sites.

>02 **All sites** > Critical review of the plant and procedures for improving safety standards at all sites.

>03 **Julon** > Augmentation of safety systems in the ECONYL depolymerization department.

>04 **Julon** > Removal of asbestos roofing from the warehouse.

>05 **Aquaset Celje** > Installation of a sprinkler system.

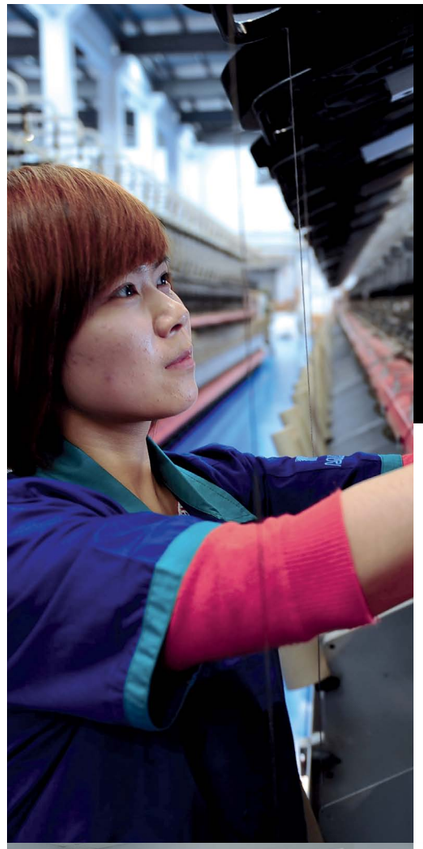
>06 **Julon** > Construction of a storage tank for finish oil.

>07 **Aquaset Celje** > Construction of a storage tank for containing hazardous substances (to reduce the risk of environmental pollution).

>08 **Borgolon** > Renewal of the flooring in the POY spinning shop to reduce the risk of slipping and falling. A non-slip, high-roughness flooring resin will be used for the floors in front of the collection areas.

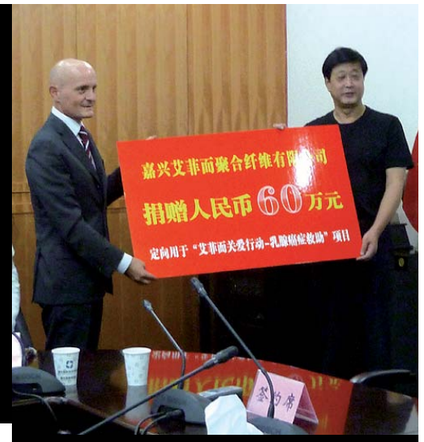
>09 **Borgolon** > Substitution of the texturizer bobbin holder carriage wheels to reduce the risk of accidents (to acceptable levels according to the NIOSH index analysis).

>10 **Aquafil USA** > Maintenance of a OSHA rating below 5.0. The objective for 2012 is to take this rating to 4.0.



AQUAFIL IN SOCIETY

Indicators and activities



AQUAFIL AND ITS EMPLOYEES: THE FOUNDATION FOR BUSINESS SUCCESS

The international economic crisis which has assailed the western world in the last five years reached a critical juncture in 2011. Also in 2011, the Group maintained satisfying employment levels for the second year running. This has been made possible by careful consolidation of existing production organisations and the opening of new activities and facilities. Our workforce increased from 1,945 employees in 2010 to 2,166 employees in 2011, an increase of 11.8%. This positive performance is the result of a variety of factors including the start of production activities in China, the development of the complete ECONYL® Regeneration System and the growth in operations on the US market.

64.9% (1,405 people) of our total workforce is employed inside the BCF business unit, 27.7% (601 people) is employed in the NTF business unit and 7.1% (153 people) is employed in the Engineering Plastics business unit.

The fourth business unit, Energy & Recycling, employs 7 people or 0.3% of the Aquafil Group's total workforce.

If we break down the figures for the growth in our workforce by geographical area, we can see that the biggest increases are in the United States (+ 31.9%) and Thailand (+ 9.5%). In Italy (+ 4.6%) and Slovenia (+ 3.8%) the growth in Group employment levels has been relatively modest but nevertheless runs counter to the general decline in employment experienced in these two countries during 2011. In Croatia, on the other hand, there was a drop of 4.1% in Group employment due in particular to a falling off in the demand for processing.

VARIOUS PROJECTS ARE BEING STUDIED TO RETURN EMPLOYMENT HERE TO PREVIOUS LEVELS.

TOTAL employees 2011

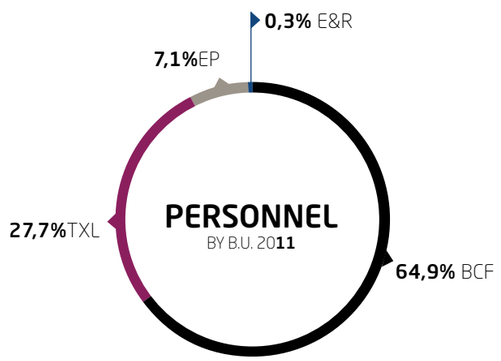
2166

Table 3 shows that women account for 33.1% of the workforce while men comprise 66.9% of all Group employees. In Croatia, women are by far the largest part of the workforce (81%). In Thailand 69.6% of our employees are women.
The percentage of women in our workforce then begins to fall in Italy (25.1%), Slovenia (27.2%), USA (26.3%) and China (41.7%). These large differences in the percentage of women employed at our various sites is related mainly to the differences in production types and processes at production facilities. Production and process types have a strong influence on the composition of the workforce.

The radical process of internationalisation experienced by the Group from 1995 onwards has made no difference to the size of the workforce employed in Italy and in particular in the region of Trentino. **FORTY-FOUR PERCENT OF ALL GROUP EMPLOYEES WORK IN ITALY; FORTY-ONE PERCENTAGE OF THESE EMPLOYEES WORK IN THE TRENTINO REGION.**

> Table 2 **PERSONNEL BY BUSINESS UNIT 2011**

	BCF	TXL	EP	E&R	Total
ITALY	737	95	131	7	**970**
ABROAD	668	506	22	0	**1196**
TOTAL	**1405**	**601**	**153**	**7**	**2166**



> Table 1 **EMPLOYMENT LEVELS FOR THE AQUAFIL GROUP**

	2007	2008	2009	2010	2011
MEN	1,201	1,170	1,167	1,290	**1,448**
WOMEN	568	648	623	655	**718**
TOTAL	1,769	1,818	1,790	1,945	**2,166**

> Table 5 **TURNOVER RATE AND REASONS**

	ITALY	ABROAD	Total
Death	1	1	2
Resignations	17	129	146
Retirement	1	0	1
End of contract	2	92	94
Termination of employment	5	89	94
Pension	7	4	11
Transfer with the Group	9	0	9
Labour mobility	0	0	0
	42	**315**	**357**

> Table 3 **PERSONNEL BY AQUAFIL GROUP PRODUCTION FACILITIES**

	MEN					WOMAN					TOTAL				
	2007	2008	2009	2010	2011	2007	2008	2009	2010	2011	2007	2008	2009	2010	2011
ITALY	637	653	661	697	**727**	216	245	232	230	**243**	853	898	893	927	**970**
SLOVENIA	443	389	419	419	**442**	195	177	166	166	**165**	638	566	538	585	**607**
CROATIA	15	31	36	53	**45**	94	161	161	190	**188**	109	192	197	243	**233**
USA	100	89	89	110	**157**	57	53	53	52	**56**	157	142	142	162	**213**
THAILAND	6	8	9	8	**7**	6	12	11	13	**16**	12	20	20	21	**23**
CHINA	-	.	-	-	**-**	-	-	-	-	**-**	-	-	-	-	**120**
TOTAL	**1201**	**1170**	**1167**	**1287**	1448	**568**	**648**	**623**	**651**	718	**1769**	**1818**	**1790**	**1938**	2166

> Table 4 **PERSONNEL BY ROLE**

	>ITALY										>ABROAD										>TOTAL				
	MEN					WOMAN					MEN					WOMAN									
	07	08	09	10	11	07	08	09	10	11	07	08	09	10	11	07	08	09	10	11	07	08	09	10	11
Top Managers	18	21	21	23	**21**	1	2	2	2	**2**	4	6	8	8	**6**	0	0	0	0	**0**	23	29	31	33	**29**
Middle Manag.	35	32	35	40	**35**	5	5	5	5	**5**	54	46	44	65	**71**	17	15	14	11	**10**	111	98	98	121	**121**
White-collar	100	105	106	112	**120**	79	82	82	85	**81**	35	30	33	30	**37**	49	70	70	68	**90**	263	287	291	295	**328**
Blue-collar	484	499	499	522	**558**	131	152	143	138	**148**	471	435	422	487	**606**	286	318	306	342	**376**	1372	1404	1370	1489	**1688**
TOTAL	**637**	**657**	**661**	**697**	734	**216**	**241**	**232**	**230**	236	**564**	**517**	**507**	**590**	720	**352**	**403**	**390**	**421**	476	**1769**	**1818**	**1790**	**1938**	2166

HEALTH AND SAFETY FOR HARMONIC DEVELOPMENT

During its years of activity, the Aquafil Group has given great importance to the policies for reducing accidents in the workplace and to reducing risk factors inside its production facilities.

We have major training programmes and communication campaigns designed to ensure the continuance of the Group's journey towards sustainability and to increase the health and welfare of local families and communities. All these initiatives are designed to actively involve everyone in the Group in this journey into the future. For example, to spread the culture of recycling we introduced an initiative which was simple to implement and involved everyone personally. We are planning to distribute a work T-shirt made from ECONYL® yarn to all employees with the request that they return these to us when they were no longer usable. The used T-shirts will be sent to the regeneration plant at Ljubljana where they will be transformed into regenerated polymers.

The initiative was simple to implement and provided an unconventional learning opportunity and an occasion for personal growth.

We have for a long time implemented major programmes for promoting health and safety in the workplace and accident prevention. These programmes foster the growth of a health and safety culture among employees and at the same time aim to improve plant, machinery and infrastructure. Thanks to this policy there was a marked reduction in workplace accidents and days of work lost through sickness in the 2007 to 2010 period. This progress continued during 2011.

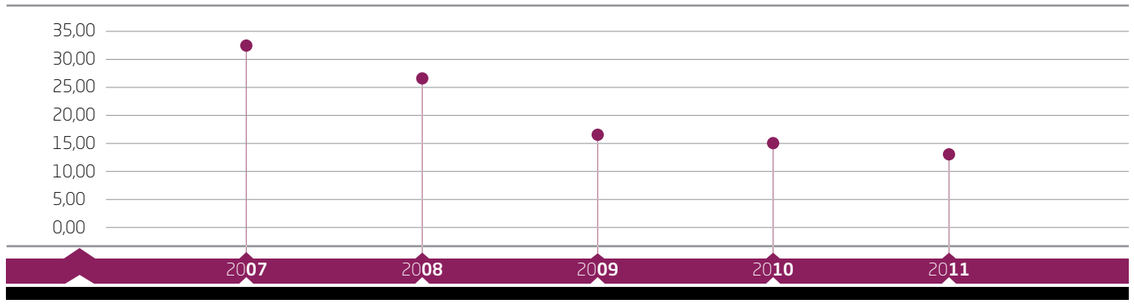
Two factors were particularly important in bringing about this continuous improvement: regular inspections of production facilities by independent agencies; employee training programmes. This policy has paid dividends. Once again in 2011 the Aquafil Group improved its statistics for workplace accidents (see Table 1, Frequency Index, Seriousness Index, Risk Index).

> Table 1 **ACCIDENTS AND DAYS OF WORK LOST** 2007-2011

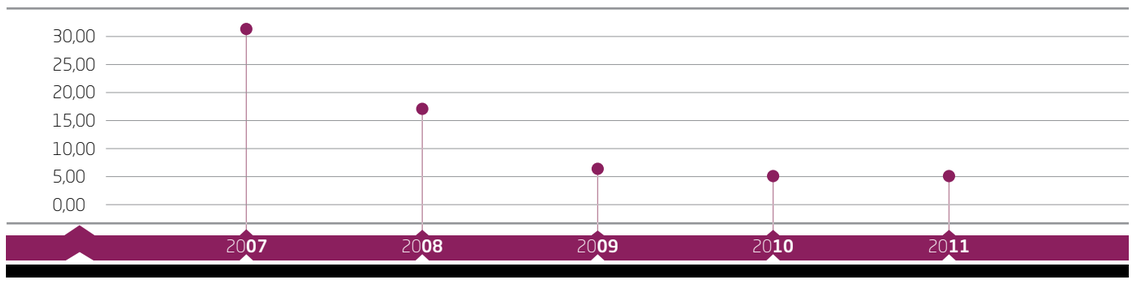
year	hours worked (including temps)	n° inf. accidents	n° of day lost	FI	GI	RI
		>3 days	more than 3 days			
2011	**4.163.723,5**	**54**	**1540**	**12,97**	**0,37**	**4,80**
2010	3.675.689,5	55	1245	15,58	0,36	5,62
2009	3.272.860,5	51	1181	26,28	0,65	16,96
2008	3.233.891,4	85	2087	32,55	0,80	25,88
2007	2.887.834,0	94	2296			

FI > Frequency Index: n° of accidents with lost time >3 days x 1,000,000 / hours worked.
GI > Serious: n° of days lost >3 days x 1,000 hours worked
RI > Risk Index: Fi x SAI

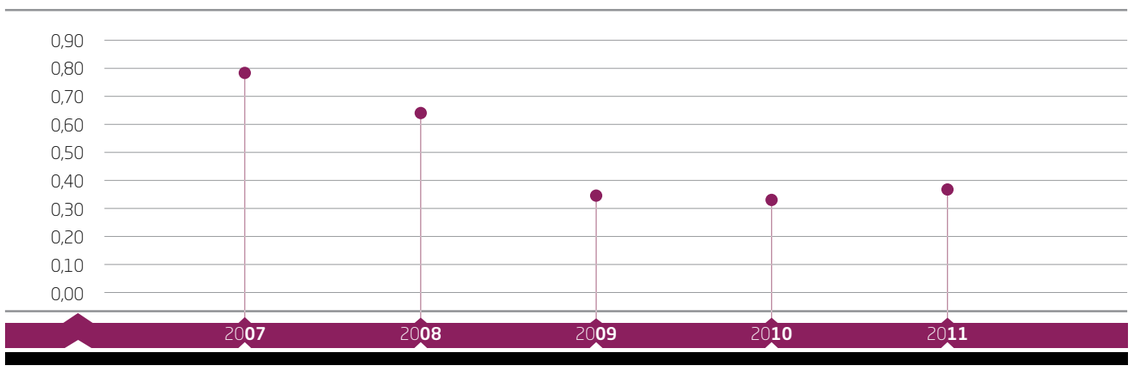
>**FI**



>**RI**



>**GI**



INITIATIVES AND AWARDS

We have for a long time implemented substantial initiatives to promote a culture of health and safety and accident prevention among our employees. At the Julon, Ljubljana facility the "*Zero Workplace Accidents*" initiative every year presents awards to 15 employees who did not have an accident during the year. But that's not all. To reinforce the concept that safety is a joint effort, an award is also given to the department where no accidents were recorded in the year. Another initiative is the PILA Group (Aquafil Workplace Accident Prevention) in Italy. The PILA Group was set up more than twenty years ago at the Arco facility and has now been extended to all Italian facilities. Since 1998 PILA has presented awards to 30 employees who have not had accidents.

THE AWARD IS JUST A SMALL PART OF PILA'S WORK. PILA WAS SET UP TO EXAMINE, MONITOR AND ANALYSE ACCIDENT AND INCIDENT DATA AND STATISTICS AND ALSO TO PRODUCE AN ANNUAL REPORT ON THIS TOPIC.

TRAINING

In the Aquafil Group training is considered a fundamental factor in the all round personal growth of employees. This is the reason why training activities have always been assigned great importance. Training focuses primarily on safety in the workplace, employee health, the environment and sustainability.

The training initiatives of previous years have continued. Many hours of training have been dedicated to the growth of technical and language skills and environmental awareness among our employees.

Training is also provided to those outside the company. A day's training was provided for agents, sales personnel, marketing personnel, top management, white collar staff and communications experts on the topics of Life Cycle Assessment. The aim here was to disseminate among those collaborating with the Group an awareness of sustainability and environmental impact and its reduction. This training initiative once again stressed the importance of these topics to the success of the company.

Over the years the Aquafil Group has always attached great importance to creating a dynamic, two-way relationship with technical and professional high schools, research bodies and universities. An example of this is the well-established, close collaboration with the ENAIP training agency at Arco where students are provided with a series of practical skills to assist their entry into the world of work.

OUR TRAINING POLICY ALSO INCLUDES AN INITIATIVE WITH THE ELEMENTARY SCHOOL AT CARTERSVILLE IN GEORGIA (USA) WHERE WE PROVIDE A MAJOR MENTORING AND TUTORING PROJECT.

SPONSORSHIPS AND SOCIAL ACTIVITIES 2011

PROJECT AT JIAXING, CHINA

As part of its social policies, the Aquafil Group funds a project for providing financial support to women suffering from breast cancer in the Jiaxing (China) municipality. In many cases the health insurance schemes in the district of Jiaxing cover only 50% to 75% of the total cost of care for this disease with the women effected having to find the remaining amount. To provide medical assistance where women cannot afford the cost of treatment, the Aquafil Group has set up a fund of 600,000 Rmb to cover the costs not met by the local health service schemes. The agreement was signed by Giulio Bonazzi on 15th September 2011 at the city of Jiaxing in the presence of local government officials representing the municipality and the managers of the institution which will be receiving the funds. This project confirms the Aquafil Group's commitment to assisting with social issues in the local communities where it operates.

FESTIVAL OF ECONOMICS 2011, TRENTO, ITALY

The Aquafil Group was one of the sponsors of the Festival of Economics held at Trento, Italy on 2nd to 5th June 2011. The title of the Festival in 2011 was "*The Borders of Economic Freedom*" and the topics of sustainability and technological innovation were a central feature of many discussions and conferences. The Festival also saw the second edition of "fare green - being green" prize organised by Habitech. Aquafil won the prize in 2010. The prize is awarded to businesses in the Trentino region who promote policies and projects aimed at sustainability and innovation. As winner of the previous year's edition Aquafil provided a representative on the prize giving committee awarding the prizes for 2011.

IFSC, CLIMBING WORLD CHAMPIONSHIP 2011, ARCO

The Aquafil Group was the official sponsor of the IFSC Climbing World Championship 2011 held at Arco between 15th and 24th July 2011.
The Aquafil Group is strongly committed to the world of competitive sport as the sponsorship of this leading event confirms. During one of the events organised around the Championship, Aquafil Group president and CEO Giulio Bonazzi together with CFO Adriano Vivaldi presented four prizes to four big names in sport climbing. Prizes were awarded to two men and two women sport climbers whose activities have contributed to raising the profile and awareness of this increasingly popular sport.

ROLLERSKI WORLD CUP 2011, OROSLAVJE

The Aquafil Group sponsored another leading sports event - the Rollerski World Cup 2011 held at Oroslavje on 17th and 18th September 2011. Substantial sponsorship funds were provided by the Aquafil Group and Bulgari Filati d.o.o. which has a production facility in the Oroslavje area.

R&D Lab at Aquafil plant in Arco.

GLOSSARY 2011

TO AID IN THE CORRECT INTERPRETATION OF THE TOPICS DISCUSSED, REPORTED BELOW ARE THE MEANINGS OF THE ACRONYMS USED.

- **AIA** > *Integrated Environmental Authorization*
  The general authorisation granted by the authorities in charge to the companies subject to IPCC. All the environmental provisions (effluents, emissions, waste, etc.) are reported in a single authorisation document.
- **CO** > Carbon monoxide. A toxic gas produced by the incomplete or partial combustion of fuels and combustible materials.
- **CO_2** > Carbon dioxide, a gas that is naturally present in the atmosphere. It is produced by combustion, respiration, and the decomposition of organic material due to the oxidation of carbon.
- **COD** > *Chemical Oxygen Demand.* The oxygen consumed to oxidize organic and inorganic substances dissolved in water or in suspension. This parameter is mainly used to estimate the content of oxidizable compounds, and thus to evaluate the potential for polluting naturally occurring water and discharge water.
- **CPI** > *Fire Prevention Certificate*
- **CPL** > Caprolactam
- **FMEA** > *Failure Modes and Effect Analisys.*
  Methodology that by analysing the possible faults in terms of probability, gravity and detectability allows us to anticipate risks and errors in both the development and design phase and in the operating phase of industrial operations.
- **IPPC** > *Integrated Pollution Prevention and Control.*
  European Directive aimed at reducing emissions and effluents, no longer on the basis of individual pollution sources but, having analysed their global effect, it imposes restrictions with respect to normal legal limits.
- **NOX** > Nitrogen oxides. These gasses are mainly produced when atmospheric nitrogen is oxidized during normal combustion.
- **OIL** > Oil fog.
- **PAT** > Autonomous Province of Trento.
- **PM10** > Particles suspended in the air (PM: particulate) with an aerodynamic diameter of less than 10 microns.
- **REACH** > *Registration, Evaluation and Authorisation of Chemicals.* The European regulation with the objective to increase safety levels and protect the health of people and the environment from the risks deriving from the use of chemical substances.
- **SO2/SOX** > Sulfur dioxide/sulfur oxides, which are produced by oxidation of sulfur during combustion of fossil fuels containing this element as an impurity.
- **TEP** > Tons of Oil Equivalent - a unit of energy corresponding to the output of 1 ton of oil, used to express the energy production or consumption of a country.
- **TOC** > *Total Organic Carbon.*
  The quantity of carbon contained in an organic compound. This parameter is used as a water quality indicator and to evaluate the content of organic substances present in smokes.
- **VOC** > *Volatile Organic Compounds.*
  Represent the organic substances released in the environment through the emissions. The principal source of these emissions is the use of solvents.

> TABLE OF CONTENTS

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synthetic fibres and polymers

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