

Annual Report 2017Fundacja PlasticsEurope Polska



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From the European perspective

Three overarching goals are part of the Voluntary Commitment of PlasticsEurope published in 2018: preventing the leakage of plastics garbage into the environment, increasing re-use and recycling of plastics packaging and accelerating resource efficiency. These pillars are a direct answer to the EU plastics strategy, presented by the EU Commission in January 2018. In the context of a debate focusing on littering and end of life, the EU sees itself as one of the global forerunner on plastics recovery and circularity.

Plastics is much too valuable to be thrown away, a message spread by PlasticsEurope via various projects like the Polish Recycling Rejs or the German initiative on preventing water pollution "Gemeinsam für mehr Gewässerschultz". Furthermore, it is often forgotten that plastics is an important enabler for protecting the environment, the climate and natural resources. With regard to plans on plastic bans and taxes, it is all about being one of the parties in the driver seat of the debate and not only a passive by-stander. PlasticsEurope Polska is impressively active in addressing politics, academia and public on national and European level and very engaged on all the significant stages within PlasticsEurope's networks, thus being an important ally to share views on the value of plastics. Being also a key part of the Central Region of PlasticsEurope, thereby closely partnering up with countries like Austria, Czech Republic, Germany, Hungary, Slovakia, Slovenia or Switzerland, PlasticsEurope Polska is generating much value for the whole pan-European association and far beyond.



Dr. Rüdiger BaunemannDirector of PlasticsEurope Central Region



Jaap Rabou
President of PlasticsEurope Polska

Our priorities

Have you recently heard that plastics are a global success story? Have you recently heard that plastics for food are safe and comply with very strict EU and international regulations? Have you recently heard that using plastics instead of alternative materials can result in lower greenhouse gas emissions?

Probably you have not heard this enough and you are actually witnessing the daily flow of articles challenging the needs for plastics. While plastics have so many benefits to offer to people's life, the same people have different perception of plastics as result of the uncontrolled littering of plastics into the (marine) environment. Due to this number one problem, there are different perceptions: what is a "success story" for the plastics industry, for others may be a "terrifying story".

Many years of efforts to communicate the facts and benefits of plastics and our combined efforts to share the success story of plastics to so many people, can be wiped away with one image of plastic floating in the ocean. We are operating in a changing environment where reality is judged based on immediate perception, not on facts which seem to play less important role and are often forgotten.

With the launch of *Circular Economy Package*, *Strategy on Plastics* and *Single Use Plastics Directive* proposal, the industry is not only facing changing public opinion about plastics, but also facing an increasing regulatory requirements.

PlasticsEurope Polska, associated with PlasticsEurope, shares the common objective of the European plastics industry to improve the image of plastics and plastics industry within society by preventing leakage of plastics into the environment, increase the re-use and recycling of plastics packaging, improve resource efficiency and accelerate innovation (as mentioned in the PlasticsEurope Voluntary Commitment "Plastics 2030").

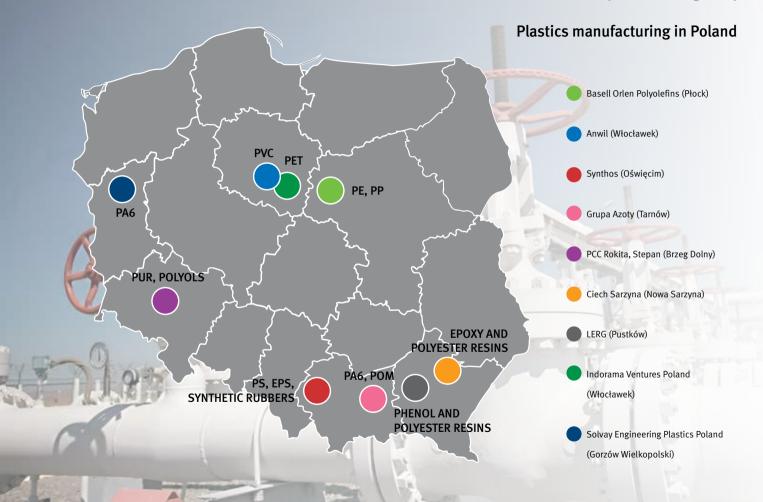
To contribute to those strategic objectives, PlasicsEurope Polska Foundation has accomplished various tasks locally:

- 1. Active participation in discussion on hi-tech waste management, promoting selective collection and plastics waste recycling as well asappropriate environment-focused behaviour
- 2. Communication and education on plastics as innovative and versatile materials as well as on their role in protection of climate and natural resources.
- 3. The promotion and implementation of *Operation Clean Sweep*® Program preventing marine littering with pellets

In this Annual Report you will read more details of activities and achievements of the PlasticsEurope Polska Foundation in the year 2017. We also present in the Annual Report current information regarding the industry, including data on the production of plastics, their consumption and waste management in Poland.

It was an exciting year and for sure more excitement is yet to come! Let's embrace the challenge by cooperating with stakeholders in the value-chain so the plastics industry can deliver better solutions, improving product designs, innovating even more advanced materials and continue our efforts of wrong usage of plastic materials, mainly after their usage phase.

Facts and figures



The plastics industry in Poland

The plastics industry in Poland is an important branch of the economy, with an annual turnover exceeding PLN 80 billion and employing more than 160,000 employees. Together with food and beverages, automotive and metal industries the plastics industry remains in the top industrial sectors significant for the development of the economy.

The plastics industry consists of plastics manufacturers (including manufacturers of additives, compounders and distributors), plastics converters (manufacturing semi-finished and finished plastic products), plastics machinery manufacturers and recyclers. A plastics business is usually a small enterprise with fewer than 20 employees.

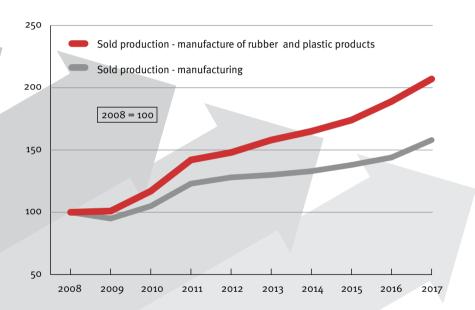
The biggest and the fastest growing sector is plastics processing, which constitutes approximately 85% of the industry's turnover. The main areas of plastics processing in Poland are plastics packaging (containers, bottles, boxes, and flexible plastic packaging), pipes and profiles (used for construction purposes), products for the automotive industry and cable manufacturing.

All types of commodity polymers, such as polyolefins (HDPE, LDPE, PP), polyvinyl chloride (PVC), polystyrene (PS, EPS) and polyethylene terephthalate (PET) are manufactured in Poland. The domestically produced engineering plastics include polyamides (PA6), polyoxymethylene (POM), resins (polyesters, epoxy and phenolic) and polyurethane systems. All the leading global manufacturers of plastics operate in the Polish market as well, delivering products by their local representatives or distribution companies.

Due to a high foreign trade deficit in the plastics industry, investment projects are carried out to increase the production capacities of polymers. The biggest plastics manufacturer in Poland, Basell Orlen Polyolefins, has increased its polypropylene manufacturing capacity by 20%, and the Grupa Azoty has recently announced the doubling of its PA6 polyamide manufacturing capacity up to 160,000 tons. Grupa Azoty is aslo currently working on a large propylene and polypropylene production project with a manufacturing capacity of approximatley 400,000 tons.

According to the Central Statistical Office in Poland (GUS), the plastics industry has maintained a high growth rate for several years, exceeding the growth of GDP and industry as a whole. In 2017 sales increased by more than 9% vs sales in 2016 (compared to a GDP growth rate of 4.4%). In the last 10 years, the average annual growth rate of the plastics industry was 8.4%, and was 60% higher than the growth rate of the entire processing industry and more than twice the average annual GDP growth rate.

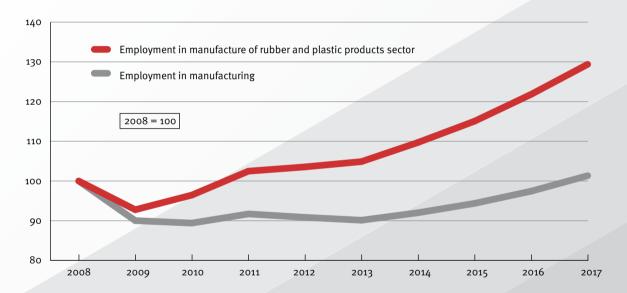
Plastics industry - a part of the Polish economy Dynamics of sales



Source: Own study of PlasticsEurope Polska based on GUS data

Plastics industry - a part of the Polish economy

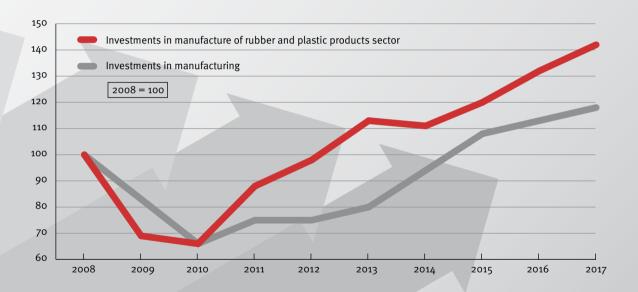
Dynamics of employment



Source: Own study of PlasticsEurope Polska based on GUS data

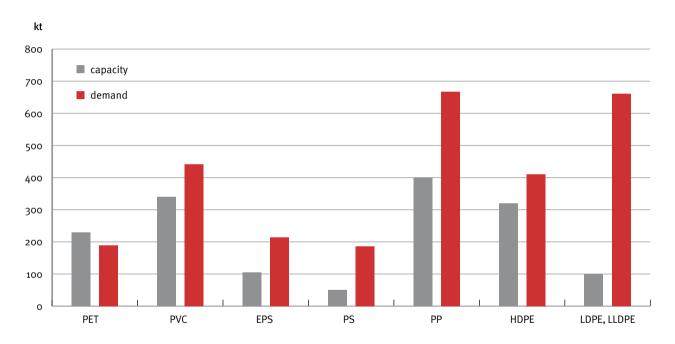
Plastics industry - a part of the Polish economy

Dynamics of investments



Source: Own study of PlasticsEurope Polska based on GUS data

Plastics production capacity* versus demand** for commodity plastics in Poland



^{*} Capacity of plants located in Poland (2017)

Source: Own study of PlasticsEurope Polska

^{**} Estimates for 2017

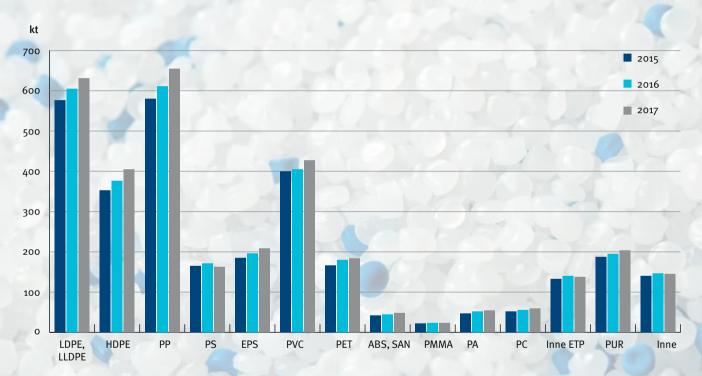
Plastics demand in Poland

On a European scale, Poland is an important market: in terms of plastics demand, Poland ranks sixth in Europe following Germany, Italy, France, Spain and Great Britain.

In 2017 (1), the demand for plastics in Europe amounted to 51.2 million tons, whereas growth of plastics consumption in Poland was at a much higher level. In 2017 the Polish plastics processing industry consumed approximately 3.4 million tons of various polymer materials, which means an increase of approximately 4.6% compared to 2016. Other indicators, such as the investment rate and employment growth in the plastics industry, exceeded the relevant indicators in the whole industry, with an investment growth in 2017 of over 6% and an employment increase of more than 7% (GUS data).

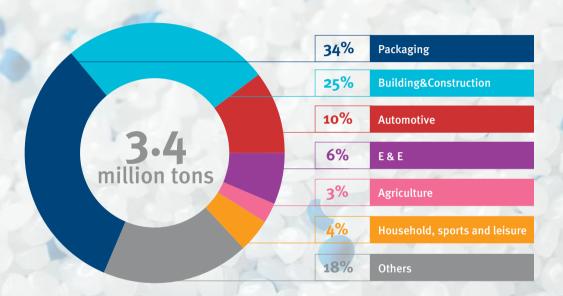
The main plastics applications in Poland include packaging (34%), construction (25%) and the automotive (10%) industry, as well as the manufacture of electrical and electronic equipment (6%). In Europe, packaging production accounts for 39% vs. 19% for construction, but in Poland the difference is less pronounced (34% vs. 25%). However, observations over several years show that the fastest growing related industries are the packaging and automotive industries. Therefore, it can be assumed that in the next few years, consumption structure of plastics demand in Poland based on applications will approach the European average. By polymer type, the greatest share is represented by polyethylenes (LDPE, LLDPE, HDPE; approximately 31%), followed by polypropylene (20%), polyvinyl chloride (13%), and polystyrene (PS and EPS; 11%), polyurethanes (6%) and PET (5%).

Plastics demand in Poland - by polymer type



Source: Eurostat / PlasticsEurope Market Research Group (PEMRG) / Conversio Market&Strategy GmbH

Plastics demand in Poland - by segments (2017)



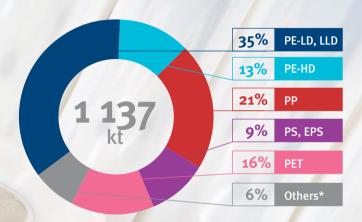
Source: Eurostat / PlasticsEurope Market Research Group (PEMRG) / Conversio Market&Strategy GmbH

Plastics demand for packaging in Poland

Local demand 2013-2017 (kt)



Demand by polymer (2017)



*Others: PVC, ABS, SAN, ASA, PMMA, PA, PCS, PUR, other plastics

Source: Eurostat / PlasticsEurope Market Research Group (PEMRG) / Conversio Market&Strategy GmbH

Plastics in packaging

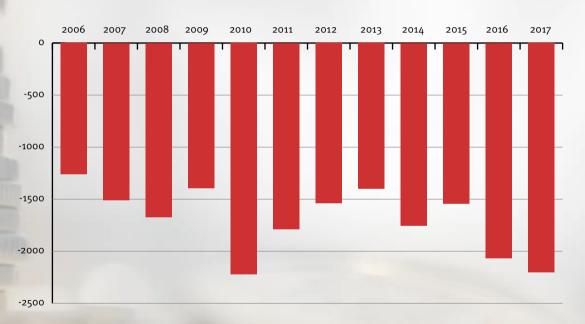
The packaging sector is the largest consumer of plastics. Plastic packaging is light, durable, and can take various forms and shapes. It provides good protection against pollution and contamination thanks to eg. safety closures. Moreover smart packagings used for perishable food hamper the development of microorganisms considerably extending the product shelvelife. Reduced food waste provides tangible benefits to the environment. Plastic packaging is also environmentally friendly due to the low weight compared to packaging made of other materials. Transporting a product with reduced weight means resource efficiency - less fuel demand and a reduction of CO2 emissions.

Export – import

The rapidly growing demand for polymers in Poland is not matched by an increase in domestic production. The negative trade balance in the plastics industry has been increasing for some time – in 2017 the dominance of import over export exceeded 2 million tons (worth over 3 billion euros). Poland imports mainly raw materials for processing, i.e. polymers in primary forms. For many years, Germany has been Poland's main trading partner within the EU, both in the export and import of plastics in primary forms, as well as plastic products. 80–90% of Poland's trading partners are EU countries, whereas in 2017 our biggest export markets among non-EU countries were Ukraine and Russia, and the main import partners were South Korea, Saudi Arabia and Russia.

The Polish plastics industry trade balance

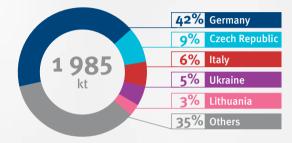
Primary plastics and plastics products (kt)



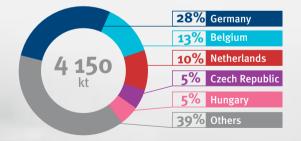
Source: Eurostat / own study of PlasticsEurope Polska

Polish plastics industry 2017 - main foreign trade partners

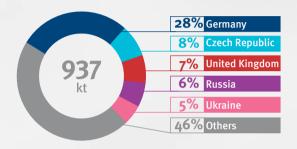
Primary plastics - export



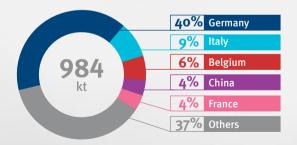
Primary plastics - import



Plastics products - export



Plastics products - import



Source: Eurostat/own study of PlasticsEurope Polska



Information Promotion Education









Dialogue and cooperation

For many years, the Plastics Europe Polska Foundation and the Polish Union of Plastics Converters have been organising annual meetings of the plastics industry. These take the form of one-day conferences under the slogan "Perspectives – Innovations - Challenges". Since 2016, these meetings have been held in Kielce on the day preceding of PLASTPOL - International Fair of Plastics and Rubber Processing. In 2017, the conference mainly focused on the impact of a circular economy and other legislative changes concerning plastics and chemicals on the industry. The conference brought together leading representatives of the plastics industry (manufacturers, distributors, converters) and related industries, as well representatives of the state administration, science and trade media, to discuss innovation and competitiveness of the industry in Poland and Europe. The PlasticsEurope Polska Foundation presented these issues also during other conferences for the plastics industry (Plastech, Plastivent), and meetings organised by member companies. Furthermore PlasticsEurope Polska cooperates with technical universities, inviting their representatives to participate in projects organised by the Foundation, as well as giving lectures for students and academic staff. Continuous cooperation with all the most important players of the industry's value chain provides the PlasticsEurope Polska Foundation with the expertise to successfully represent the industry in a dialogue with government administration. In 2017, the dominant topics of such cooperation included the following: plastics waste management in light of the implementation of new waste management laws in Poland and the CE package (page 42); implementation of mechanisms to reduce the consumption of plastic shopping bags; mutual legislation contexts concerning chemicals and waste, harmonising regulations regarding materials in contact with food and drinking water; as well as opinions and recommendations regarding modifications of the EPBD and EED directives (page 45). The PlasticsEurope PolskaFoundation cooperated on a number of topics with other organisations and associations, such as the Polish Chamber of Chemical Industry, National Chamber of Commerce, Polish Union of Plastics Converters, Polish Association of Plant Protection, the "Polish Recycling" Association, Polish Association of Expanded Polystyrene Manufacturers, and the Association of Producers of Polyurethane Insulation Systems "SIPUR".

Information and promotion

It is difficult to imagine a modern world without plastics. We deal with them in almost every area of life enjoying the convenience and functionality of plastic products. Electronics, IT, medicine, sport, energy production, construction, transport, packaging – in all these fields it would be impossible to maintain contemporary standards and make further progress without the use of innovative plastics. Very often, these solutions are not available using materials other than plastics. Plastics can not only deliver much better performance and lower costs, but above all significantly reduce the consumption of energy and other resources to help protect the planet, as well as increase the safety and security of human life.

Knowledge about the positive role of these materials in various aspects of the modern world is not widespread, and public opinion is often dominated by the negative message on plastics, which is based on false information. Therefore, an important part of the PlasticsEurope Polska Foundation's activity is communication about the plastics industry and the role of plastics as indispensable materials in today's world. To this end, the Foundation organises campaigns for various target groups, maintains an ongoing dialogue with the media through regular press releases and media events, and regularly updates its website and publishes brochures and reports concerning various issues related to the use of plastics. These include, among others, the Foundation's annual report which contains an overview of the major areas of activity and the current data on production and demand for plastics in Poland. The data on the European plastics industry are presented in published on the yearly basis PlasticsEurope report "Plastics – the Facts" available also in Polish language. The PlasticsEurope Polska Foundation also publishes informational and educational fliers and posters on the key issues regarding the use of plastics in everyday life and the proper and eco-effective management of plastic waste. In 2017, the Polish language version of an animation about the life cycle of plastics (Full life cycle thinking) was developed and published on the website. The publications and materials of PlasticsEurope Polska are available at www.plasticseurope.pl.



[Information - Promotion - Education]

Press meetings devoted to the latest data concerning the plastics industry, traditionally held in May, have been organised in cooperation with Targi Kielce during the Plastpol fair. In 2017, the main theme of the meeting were the challenges for the industry in respect of the upcoming legislative changes concerning the CE package.

Regular meetings with the media are also held during educational campaigns (the European Youth Debating Competition, the Recycling Rally or industry events such as the Plastpol fair or the IdentiPlast conference (a conference concerning plastic waste management, held by PlasticsEurope for several years

in various cities around Europe). The seventh edition of the "Recycling

Rally – let's recover plastics" campaign, conducted in 2017 on the route from Masuria

to Warsaw, also received a very good response, both among the local communities and the media (page 36).

A two-week information campaign, "Plastics not to be burnt in stoves", educated Polish citizens on the harmful effects of the incineration of plastic waste in households. In three selected regions of Poland (Cracow, Łódź, Upper Silesia), an animation on this topic was shown on LCD screens on public transport. Information package was also sent to the local media and environmental protection departments concerning the proper management of plastic waste (through recycling and energy recovery) and the negative health impact resulting from the incineration of plastic waste in domestic furnaces.

Educational programmes for schools

There is a lack of programmes and content dedicated to plastics in the education curriculum, and yet these materials, due to their unique properties, have effectively revolutionised our lives. The PlasticsEurope Polska Foundation give much attention to educational activities, conducting programmes for schools, organising local and international educational projects, and cooperating with universities, educational centres and member companies.

"Plastek and his magical box" is PlasticsEurope educational programme for younger primary school students. It helps science education by giving children the opportunity to discover plastics materials through experiments. The Foundation has been conducting the project in Poland for eight years in cooperation with local centres for methodological advice and teacher training centres, with free-of-charge training workshops for teachers of early school education and science. The programme includes the distribution of packages consisting of an experimentation kit that enables children to perform easy experiments with plastics and a set of books for students, along with supplementary materials for teachers.

Overall, between 2011 and 2017, the Foundation has provided schools all over Poland (see map) with more than 1460 Plastek educational packages and has conducted 57 training courses, attended by nearly 1500 teachers.

In 2017, the Plastek programme was introduced in Katowice, Gliwice, Opole, Giżycko and Gdańsk, and an informational brochure about the program was distributed during the Science Festival in Katowice, educational trade fairs and other educational events.

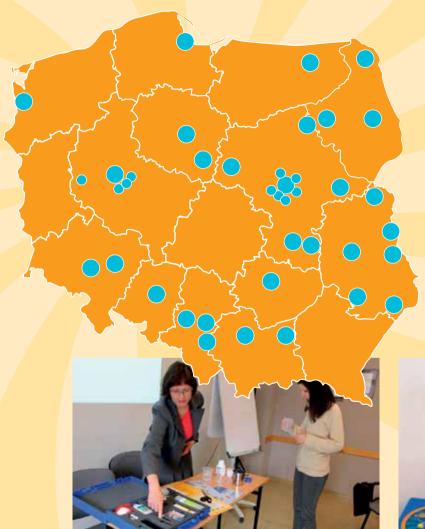












[Information - Promotion - Education]

"Plastek and his magical box" programme in 2011-2017 was implemented in following locations:

Biała Podlaska, Białystok, Chełm, Gdańsk, Giżycko, Gliwice, Katowice, Kielce, Kraków, Legionowo, Lublin, Łomża, Nowy Tomyśl, Opole, Ostrołęka, Oświęcim, Otwock, Ożarów Maz., Piaseczno, Płock, Poznań i powiaty okołopoznańskie, Pruszków, Radom, Siedlce, Suwałki, Szczecin, Środa Śląska, Tarnów, Tomaszów Lubelski, Toruń, Warszawa, Włocławek, Włodawa, Wołomin, Wrocław, Zwoleń



"Plastics – Modern Materials" is an educational project about polymer materials, dedicated to students of post-primary schools. Interested schools receive, free-of-charge, a set of books and experimentation kits for testing the properties of polymers (samples of materials along with an informational brochure).

In 2017, the project was promoted in vocational schools that offered courses related to chemistry, through cooperation with the Centre for Education Development (ORE), as well as during the Science Festival in Katowice and summer courses for teachers organised by the Small-Scale Chemistry Centre in Toruń. The educational kits were distributed during workshops for teachers organised by the



Foundation and during other educational projects such as European Youth Debating Competition (see page 30). Within the project, teachers can also participate in webinars on plastics and receive educational kits free-of-charge. The webinars discuss, among others, issues described in the book and show experiments with plastics. These are very popular among teachers: in feedback surveys they emphasise a high value of such projects and demand for education concerning plastics. The Centre for Education Development has also published a positive review of the book on its website.

Joint educational projects

The Foundation also organises educational events in cooperation with external partners. In 2017, a workshop for children - "Packaging - don't litter! From selective collection through recycling to new products" – was held in schools, public libraries and shopping malls, accompanied by a thematic poster exhibition. The workshops focused on litter prevention and on separate collection of waste, and demonstrated the significance of recycling and energy recovery of plastic waste. For many years, PlasticsEurope Polska has also supported educational projects and CSR activities of its member companies, e.g. a competition for schools from the Płock region organised by Basell Orlen Polyolefins. In 2017, the Foundation's representatives supported a film competition concerning the use of plastics as innovative materials in various applications.















European initiatives of PlasticsEurope: the EYDC Project

In 2017, following the success of the first edition of the European Youth Debating Competition, PlasticsEurope and the European Petrochemical Association (EPCA) organised a series of debates for students in seven European countries (France, Spain, Holland, Germany, Poland, Italy and Great Britain). The aim of this multidimensional project for teenagers aged between 16 and 19 is to encourage young people to study natural sciences, technology, engineering and mathematics (STEM), and to provide young people with an international discussion forum to express their opinions and thoughts in a convincing way according to the "Connect – Listen – Learn – Collaborate" principle. The Polish final debate, entitled "People, planet, profit in the digital age: With or without petrochemistry and plastics?", was held on May 30 at the Faculty of Chemistry at the Warsaw University of Technology. Students from 13 upper-secondary schools from all over Poland discussed the role and importance of petrochemistry and plastics in today's digital age. The speakers were evaluated by a jury consisting of representatives of the industry, non-governmental organisations and the media. The three winners represented Poland during the final debate, which was held at the beginning of October in Berlin, during the 51st Annual Meeting of the EPCA. One of the Polish students was ranked third among the five best young speakers from Europe.

Plastics and environment



Don't litter! A plastic bottle with water brought to the beach weighs over 1.5 kg, and an empty one - only 35 g. It shouldn't be a problem then to drop it into a waste container, or – if there are none nearby – take it back with you.



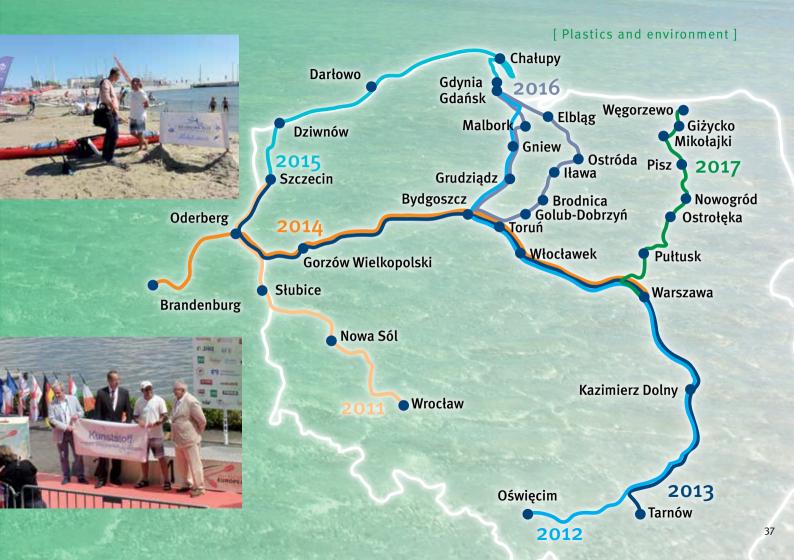
Plastic waste does not belong in the environment

The problem of marine litter is not a new phenomenon but it has become increasingly visible. Waste in the environment, not only in water, is the responsibility of an inefficient waste management system and of the people who leave it there. Any litter dropped on land, in particular litter as light as plastic waste, will sooner or later be directed to the aquatic environment – carried by rain or blown by the wind. Plastic waste, so visible in the water environment, shouldn't be there at all, because it has a high value as a secondary raw material, e.g. in the recycling process. For the first time the necessity to reduce marine litter has been emphasised in legislation concerning waste management, through a new Circular Economy Package which included a reduction of marine litter in the Action Plan. As part of the "Marine Litter Solutions", an initiative conducted since 2011, plastics industry organisations all over the world have been involved in a number of programmes aimed at assessing the scale of water environment pollution by plastic waste, its actual impact on the ecosystem, and the promotion of appropriate environment-focused behaviour. When dealing with the environmental pollution, we promote selective collection of waste, which constitutes the basis for an increase of recycling and the return of raw materials to circulation. An annual report is published summarising the actions within this initiative (www.marinelittersolutions.com), which currently involves 74 organisations from 70 countries.

Operation Clean Sweep® (OCS) is a voluntary programme organized by the plastics industry aiming at preventing losses of plastic pellets and their possible leakage into the environment. PlasticsEurope Polska published the Polish version of the supplementary brochure detailing the implementation of OCS, and developed a series of training courses for companies participating in the programme. Basell Orlen Polyolefins, a manufacturer of polyethylene and polypropylene, was the first company in Poland to implement the programme. In Europe, the programme has been implemented by plastics industry companies since 2015 and the report on the realization of OCS programme published by PlasticsEurope is available at www.opcleansweep.eu. Supplementary documents for companies implementing the programme and a declaration to join the programme can be downloaded from the website.

Among 260 informational and educational projects implemented within "Marine Litter Solutions" with the aim of raising residents' awareness concerning proper waste management, the action "Recycling Rally – let's recover plastics", organised by PlasticsEurope Polska and the traveller and ecologist Dominik Dobrowolski, has an important place. The seventh edition was a canoe expedition "Recycling Rally 2017 Masuria – Warsaw", which started in Węgorzewo on June 5 and finished in Warsaw on June 19. The expedition was accompanied by meetings with the media and local communities. During the final meeting in Warsaw, 7 years of campaign events were summarised: more than 5300 km in total, almost 100 days in a canoe, rowing through the biggest Polish rivers, visiting 13 voivodeships, crossing the national border (Recycling Rally 2014 from Warsaw to Berlin), and an expedition along the Baltic coast from Szczecin to Gdynia (Recycling Rally 2015). The campaign gained positive responses from the press, radio and TV, and its course was available on-line on the website www.recykling-rejs.pl.





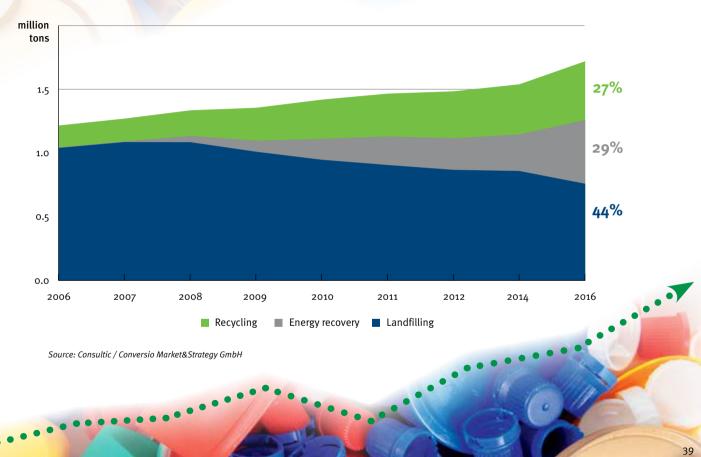
Plastic waste in figures

"Waste revolution" was implemented in Poland in 2013 to transfer the ownership of municipal solid waste on municipalities, introducing new principles for the planning the waste management system. Last year, a unified pattern for selective collection was implemented across the entire country, which is expected to result in bigger amount of good quality materials for recycling. Within 10 years, Poland has made a huge progress in plastic waste recovery – currently, the recovery level is more than 50% of plastic waste compared to 14% in 2006 (figure page 39). A further radical increase in the recovery with focus on recycling of all municipal waste, including plastic waste, is essential considering the new requirements of European and domestic regulations. CE package requires recycling of 55% of municipal waste by 2025 and 65% by 2035. With regard to plastic packaging waste the EU requires that 50% is to be recycled by 2025 and 55% by 2030. The difficulty of achieving these goals is shown by actual data on recycling in Poland – only 28% of municipal waste was recycled in 2016 (Central Statistic Office data).

We estimate that Poland generated 1.72 million tons of post-consumer plastic waste in 2016. Between 2014 and 2016, plastic waste recycling in Poland increased slightly from 25% to 27% and there was a significant increase in the energy recovery rate from 19% to 29%. For the first time, the majority of plastic waste was recovered, and less than half the waste (44%) was landfilled. Plastic packaging recycling reached 38% in 2016 (PEMRG data), but that mostly relied on easily collected waste from commercial and transport packaging. A further increase in the recycling rate will only be possible with a significant improvement of selective collection and recycling of plastic waste from households.

Analyses indicate that still not enough recycled plastic waste comes from the packaging stream of waste selectively collected from households and from retail. In Poland this equates to 19%, whereas in a country with a significantly better organised waste management system like Germany, it amounts to 38%.

Plastics waste management in Poland in 2006-2016



Increased amounts of waste from selective collection, which is usually less contaminated than mixed waste, contributes not only to the growth of waste recycling rates but also to a better quality of recyclates and products manufactured from them.

The vast majority of plastic waste processed in a mechanical recycling is packaging waste (figure page 41). This constitutes almost 80% of recycled waste, followed by agricultural waste (7%) and electronic and electrical equipment waste (7%).

Energy recovery from plastic waste in industrial processes is mainly achieved through the use of Refused Derived Fuel (RDF) in which the main energy component is plastic waste. The introduction in 2016 of an official ban on the landfilling of high-calorific waste resulted in an increased interest in RDF. However, as a result of a limited market capacity, a huge oversupply of such fuel occurs.

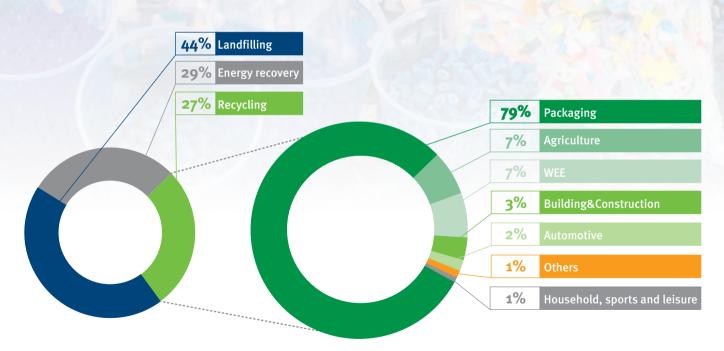
RDF is commonly used in cement kilns where it replaces fossil fuels in furnaces for clinker manufacturing. Significant quantities of not-recycled plastic waste have been used as a batch component with a high calorific value in newly opened municipal waste incineration plants. Polish official statistics also indicate that the first attempts for co-incineration of RDF in combined heat and

There is no demand for fuels of worse quality, contrary to RDF with good and repeatable parameters. According to official reports by voivodeship marshals, unprocessed plastic waste is almost never landfilled, whereas large quantities of waste are stored at waste processing plants. Therefore, diverting plastics waste from landfills is happening officially, however, the temporary storage in manufacturers' storage facilities amounts to several million tons. Therefore, despite this tangible progress in plastic waste recycling in Poland, achieving the final aim of the plastics industry, "Zero plastics to landfills", is still far away.

power plants have started, in which this fuel can be a substitute for coal. Currently, it does not however constitute an important field

of application.

Plastics waste management and waste streams share in Poland (2016)



Source: Consultic / Conversio Market & Strategy GmbH

Circular Economy

In 2017, the legislative process concerning the Circular Economy Package entered the final stage. The PlasticsEurope Polska Foundation presented the viewpoint of the industry at national discussions for focused on the Circular Economy, organised by various interested entities, including the government administration, the National Fund for Environmental Protection and Water Management, the National Chamber of Commerce, and packaging recovery organisations or industry organisations.

Foundation experts participated in ministerial working groups established to discuss the Roadmap for the Circular Economy in Poland (programming document of the Ministry of Economy), as well as providing opinions (at the request for the Ministry of Environment) on the OECD reports "Secondary Plastics Market" and "Design of Sustainable Plastics from a Chemical Perspective".

At the European forum, the Foundation commented on and provided amendments to the Circular Economy package proposed by the European plastics industry to experts of the European Commission and Polish MEPs working at the Committee on the Environment, Public Health and Food Safety (ENVI) and at the Committee on Industry, Research and Energy (ITRE) of the European Parliament. In the national legislative process in 2017 most important part from the viewpoint of the plastics industry, were proposals of legal acts and executive acts to laws regulating waste management. Among others, the Foundation presented industry opinions on recycling fee rates for light plastic shopping bags and on draft regulations regarding standards for selective collection of waste, and participated in sessions of Polish Parliament committees regarding waste management.

The Foundation was also a co-organiser of the conference "Plastics in the EU Action Plan for the Circular Economy" organised by EurActiv.pl in cooperation with the Information Office of the European Parliament in Poland under the honorary patronage of the Delegation of the European Commission in Poland. The discussions between representatives of the European Commission, European Parliament and Polish public administration and business communities focused primarily on plastics as one of five priority issues regarding the success of the Circular Economy. This highlighted the challenges implied by the Circular Economy

for entrepreneurs and the entire economy on the one hand, and the necessity to change the behaviour and consumer attitude, especially with regard to plastic products on the other hand. The discussion also focused on the difficulty of reaching new targets of recycling for the majority of EU countries.

PlasticsEurope has for years been presenting the benefits of diverting plastics from landfills ("Zero Plastics to Landfill" initiative) and emphasising the importance of a holistic approach towards the management of this type of waste, by promoting recycling and energy recovery, taking account of both environmental and economic benefits. This means that considering recycling to be the most profitable option of recovery, attention should be given to its eco-efficiency, i.e. the evaluation of cost and benefits (Cost-Benefits Analysis) in terms of both economy and ecology. Recycling technologies available today and waste collection standards enable recycling at a level of approximately 50–55%. Above this threshold, recycling is no longer eco-efficient: it becomes more expensive and can cause more damage to the environment than advantages.



Discussions on new business models, such as the Circular Economy must be based on reliable data. For several years, the Foundation had analysed available data concerning waste management in Poland, such as the reports of the voivodeships marshals. Although the quality of national data improves year by year, still the most reliable and credible data includes that elaborated by Conversio (previously called Consultic), which specialises in the research of the waste sector for the European plastics industry.

The Foundation shared its expert knowledge concerning waste data and the best practice with regard to rational waste management with a broad range of stakeholders during conference presentations and workshops. Such events, organised individually by the Foundation or by external partners (such as ABRYS, EKORUM, the "Polish Recycling" Association, REKOPOL, UNEP/GRIP, the National Chamber of Commerce, self-governmental organisations, such us the Masurian Inter-municipial Union, or the waste industry company Novago) were attended by representatives of all industrial sectors and the waste management industry.





Climate protection and quality of air

due to a limitation of the building energy demand and reduction of exhaust emissions, including greenhouse gases. Work on the package of regulations "Clean Energy for All Europeans" presented by the European Commission, which commenced at the end of 2016, was continued last year. This contains, among others, proposals for amendments to EU directives on energy efficiency (EED directive), energy performance of buildings (EPBD directive), and other legal acts related to the functioning of the energy market. PlasticsEurope Polska presented comments on this package to a MEP rapporteur of the amendment to the EED directive, indicating the need to implement programmes for building thermomodernisation and renovation of the existing building resources, as well as the significance of insulation based on plastics in order to ensure the success of these programmes. PlasticsEurope actively supports the European campaign "Renovate Europe", on an increase in the building renovation rate from the current 1% to 3% until 2020. The "Effective Poland" initiative, of which the Foundation is a member, is the local partner of Renovate Europe in Poland. The National Program for the Building Renovation was the result of jointly conducted activities. in which an implementation programme concept concerning modernisation of single family buildings and proposal to complement the governmental Investment Facilitation with Building Renovation was presented to the government administration. The Foundation initiated regular meetings of the plastic insulation industry, attended by member companies of PlasticsEurope, the Polish Association of Expanded Polystyrene Converters, the Association of Expanded Polystyrene Manufacturers, the Polish Union of Plastics Converters and the Association of Producers and Converters of Polyurethane Insulation Systems (PUR and PIR) "SIPUR".

Meetings in 2017 primarily focused on legislation concerning insulation on building facades.

The implementation of a low-carbon economy and the improvement of air quality in the European Union countries will be possible

About PlasticsEurope Polska

PlasticsEurope Polska – a foundation representing manufacturers of plastics in Poland – associates 20 member organizations (2018) – national manufacturers of plastics, foreign corporations operating in Poland through local companies, as well as other companies of similar business profile operating in Poland:

ALBIS Polska Sp. z o.o.

ARKEMA Sp. z o.o.

Basell Orlen Polyolefins Sp. z o.o.

BASF Polska Sp. z o.o.

Borealis Polska Sp. z o.o.

Brenntag Polska Sp. z o.o.

Celanese Engineered Materials

CIECH Sarzyna S.A.

Covestro MS Global AG - Oddział w Polsce

Dow Polska Sp. z o.o.

Evonik Resource Efficiency GmbH Sp. z o.o. Oddział w Polsce

Ineos Styrolution Poland Sp. z o.o.

Krakchemia S.A.

SABIC Poland Sp. z o.o.

Solvay Engineering Plastics Poland Sp. z o.o.

Synthos S.A.

Total Petrochemicals&Refining SA/NV (Spółka Akcyjna) Oddział w Polsce

Trinseo Europe GmbH Przedstawicielstwo w Polsce

Versalis International SA Oddział w Polsce

VYNOVA International nv

The authorities of the Foundation are the Management Board and the Foundation Council, consisting of representatives of the associated companies.

[Foundation Council]

[Management Board] [Employees of the Foundation]

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