IK Industrievereinigung
Kunststoffverpackungen e.V.

SUSTAINABILITY REPORT 2012

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About this report

This is the first sustainability report to be published by the IK Industrievereinigung Kunststoffverpackungen e. V. (German Association for Plastics Packaging and Films), which represents the interests of the manufacturers of plastics packaging and films in Germany. The report identifies what the Association deems to be the most important economic, ecological and social challenges the industry is currently facing in Germany. At the same time it shows how the Association is meeting these challenges and informs about the activities of IK between January 2010 and June 2012. The economic, ecological and social performance of our members is reflected in key figures for the calendar years 2010 and 2011.

We are planning to publish a sustainability report every two years. The report will not only inform our own member companies and their business partners but also other economic, environmental and consumer associations and interested members of the public. We see the report as an important basis for objective stakeholder dialogue on sustainable development in the future.

A sustainability strategy for plastics packaging

A foreword from the President

Sustainable development is becoming increasingly important at all levels of our society. We realised a long time ago that, in the long run, our economic success is dependent on an intact natural environment and socially acceptable framework conditions – just as, conversely, environmental protection and social systems require a stable economic situation.

Long-term economic success can therefore only be guaranteed by sustainable business practices. Here the plastics packaging industry gives answers to economic, ecological and social challenges. Plastics packaging can contribute to curbing food spoilage in production, in trading and on the part of the consumer. In an ageing society more easy-to-open packaging is needed. Plastics also offer considerable resource-saving potential compared to other packaging materials: from material savings and reduced transport costs and recovery. These areas present sustainable growth opportunities for our branch.

The plastics packaging industry is, however, also facing ecological challenges. In the last few years the number of reports about oceans polluted by waste (which includes numerous plastics), has proliferated, and not without reason. Failing to introduce efficient disposal and recycling systems at global level will also create considerable problems for our branch in Germany. Further challenges include: closing the material cycles, energy efficiency and the shortage of skilled staff.

It is important that we as an association take up these economic, ecological and social challenges and engage with our stakeholders. If our support helps companies to do the same on a small scale and integrate environmental and social risks and opportunities into their business strategies, then we are well on the way towards sustainability.

Roland Roth
IK President

Towards sustainability

A foreword from the General Managers

We have made a start. In 2010 we founded the IK Sustainability Working Group, which now has over 60 members. This was the start of a systematic approach to sustainable development. We could build on many years of experience in different areas of sustainability, especially the recycling of plastics packaging, ecological balance sheets, consumer protection issues and dangerous goods packaging.

Sustainable development also incorporates constructive corporate dialogue, so it was logical for us to also deal with the demands on sustainability reporting. We discovered that it is far more difficult for an association than for a company to determine the reporting boundaries. Should we report about the activities of the IK office, our member companies or even the entire branch of plastics packaging manufacturers in Germany? In our opinion a strict separation is neither possible nor sensible. We did however try to make it clear at the relevant places in the report, which unit was under discussion.

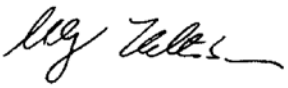
One particular challenge in this context was to determine the economic, ecological and social performance indicators. Our members, as the manufacturers of plastics packaging make a much greater impact on the economy, environment and society, of course, than the IK office. Consequently, the performance indicators are only gathered at member company level. As we are an industry characterized by mid-sized enterprises most of our member companies are not familiar with public reporting. Nevertheless we have introduced a system of voluntary reporting for our members which represents about 21% of the industry as a whole. We aim to increase participation in this system from report to report.

We see this sustainability report as an initial stocktaking on the basis of which we will continue to develop our sustainability strategy and reporting. Following a description of the IK Association, the plastics packaging industry and its products we will present what we see as the greatest economic, ecological and social challenges. In this report we have identified ten areas, to which we attach a particular priority for the plastics packaging industry in Germany. We describe how the Association is meeting these challenges strategically and which specific activities were undertaken in the reporting period.

Besides identifying ten sustainability challenges the particular achievements of IK, with regard to sustainable development in the period covered by this report, include the development of the IK Eco Calculator, a life cycle assessment tool for our member companies, which is particularly suited to the ecological optimisation of plastics packaging. In the period under review IK also organised two food packaging conferences where legal questions about consumer protection were discussed. Other IK Association services are described in the report.

The management would like to give special thanks to the members of the Strategy Group within the IK Sustainability Working Group who played a vital role, in particular in selecting the contents of the report and also in the introduction of voluntary reporting among our members.

Dr. Jürgen Bruder
IK General Manager



Ulf Kelterborn
IK General Manager

About us

IK Industrievereinigung Kunststoffverpackungen e.V.

IK Industrievereinigung Kunststoffverpackungen e. V. is the association of manufacturers of plastics packaging and films in Germany. IK represents the interests of the industry through constructive dialogue with politicians and other social interest groups. It applies the specialised know-how of its member companies to many industry-related issues, such as environmental and consumer protection at national and international level. The key tasks of the IK Association also include informing and advising its members, chairing internal committees and professional groups as well as coordinating projects.

IK Industrievereinigung Kunststoffverpackungen e. V. is located in Bad Homburg. It is financed to over 93 % from membership fees. A team of 12 employees represents more than 300 member companies. The great majority of the member companies either manufacture or trade in plastics packaging and films. In terms of revenue our member companies represent over 80 % of the industry in Germany. About 50 companies from other branches are involved as supporting members. A list of all IK members is published annually in the IK annual report and under www. kunststoffverpackungen.de.

The IK office in Bad Homburg

Dr. Jürgen Bruder,
General Manager

Christine Fischer,
Accounting

Inga Kelkenberg,
Communication and Economy

Ulf Kelterborn,
General Manager

Yvonne Kramer,
Management Assistant

Dr. Fang Luan, Consumer Protection
and Quality Management

Kerstin Meggert, Assistant Consumer
Protection and Environment

Heike Richter,
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Annette Schäfer,
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Andrea Schlittgen,
Assistant Communication

Dr. Isabell Schmidt,
Environment and Sustainability

Regine Simon,
Management Assistant

The IK Industrievereinigung Kunststoffverpackungen e.V. Team

Plastics packaging production in Germany

In 2011 the manufacturers of plastics packaging and films employed about 90,000 people. They processed over 4 million tonnes of plastic and generated sales of approx. 13 billion Euros. About 2 million tonnes, i.e. one half of the plastics packaging produced in Germany, are for use in other countries. The lion's share is exported to other European countries together with the packed goods.

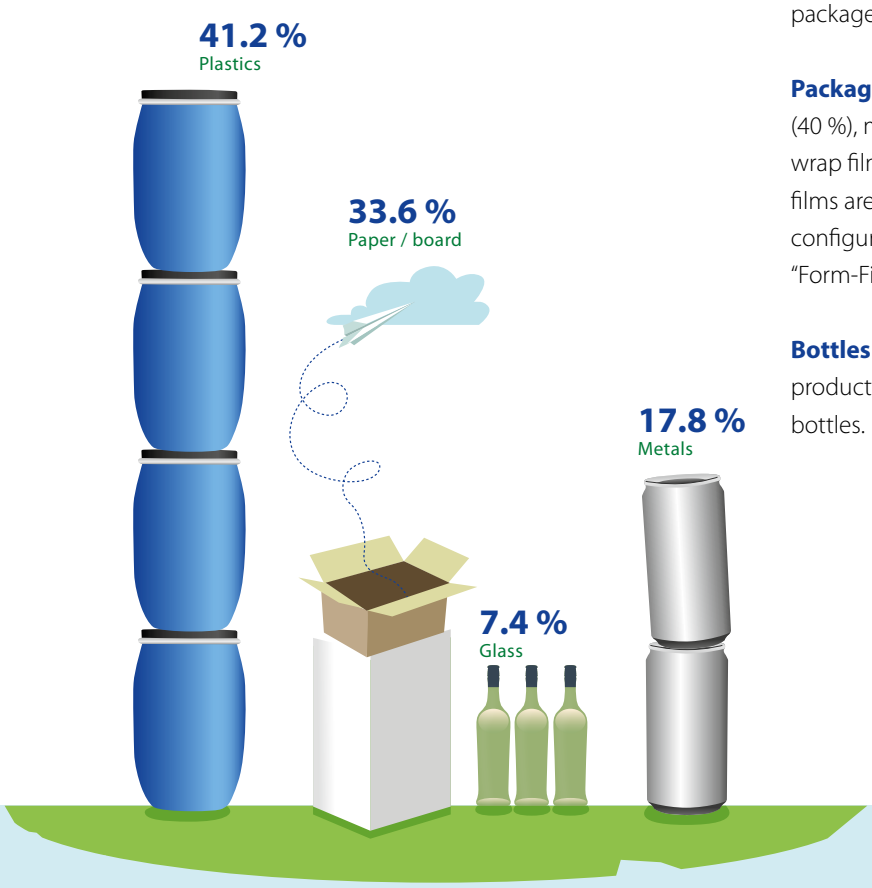


Figure 1: Shares of the German packaging market 2011, by turnover (GADV 2012)

The share of plastics packaging in the whole packaging market has been growing constantly in the last few years. In terms of production value this is currently 41.2 %. Plastics packaging is thus the best-selling material in the packaging market.

Plastics packaging is extremely versatile in form, properties and application. About two thirds go to residential use, while the other third is industrial and commercial packaging. About 50 % of residential packaging is food packaging. 54 % of all packaged food in Germany is packed in plastics (GVM 2012).

Packaging films: The most common plastics packaging (40 %), mainly used for packaging food, also includes bubble wrap films for packaging shock-sensitive articles. Packaging films are usually delivered to the packer on rolls and only configured to the finished packaging during filling, as in the "Form-Fill-Seal"process.

Bottles : Beverages, sauces, liquid detergents, body care products and other liquid glass articles are packaged in bottles.

Cups, jars, crates, pallets: In the cosmetic and pharmaceutical sectors plastic jars are gaining in importance. A large variety of cups is used, particularly for dairy products.

Bags, sacks, carrier bags: This category, which makes up 12.5 % of the market, consists of a wide range of packaging, from the flimsy vest carrier bags in the fruit and vegetable department of the supermarket to the carrier bag and the FIBC, the flexible bulk container with a safe working load of several tonnes.

Closures: Closures are very important to the consumer, because they should be both easy to open and also to re-close when required. Plastic closures are often also on bottles made of other materials.

Drums, containers, buckets: Paints, varnishes, chemicals for industrial and commercial purposes, but also for private use, for example for DIY stores, are filled in drums, containers and buckets. This packaging, with a capacity of 5 to 1,000 litres (IBCs), is also used to transport foodstuffs in the business-to-business sector.

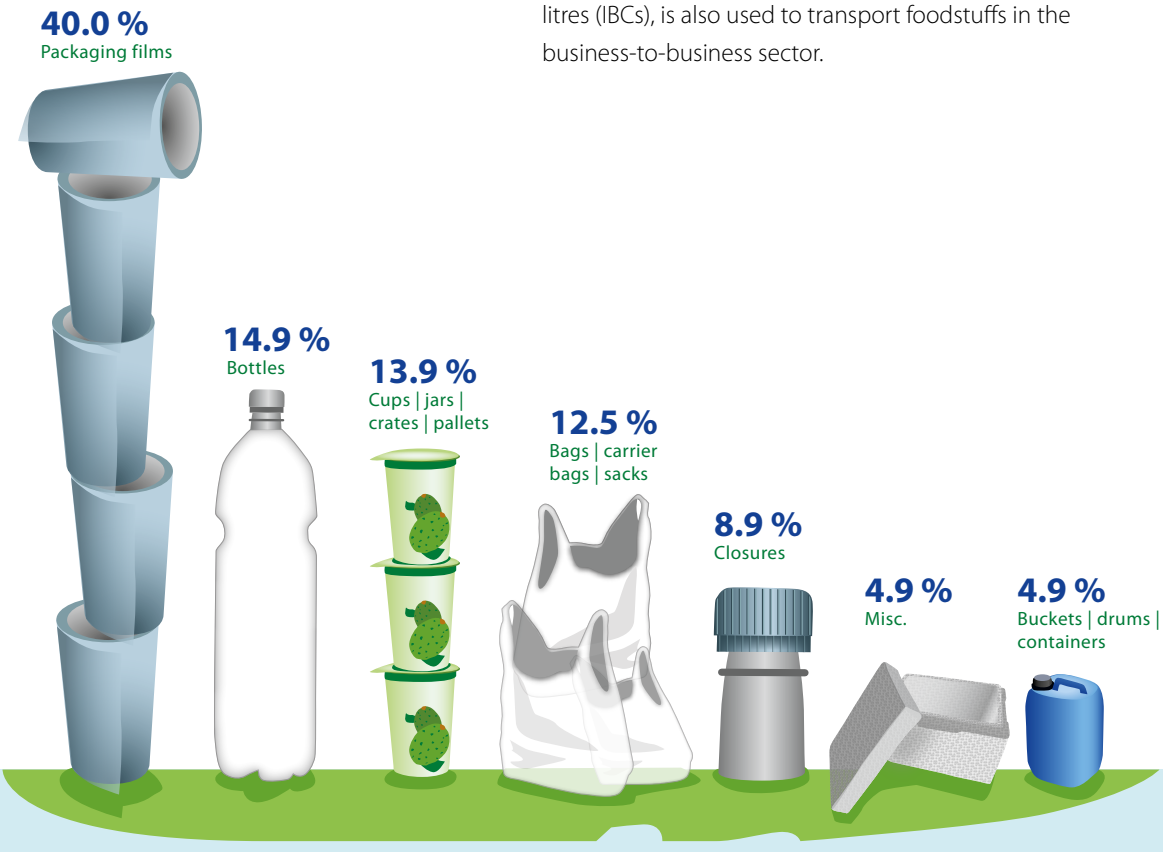


Figure 2: Production of plastics packagings and films in Germany, in terms of tonnage (IK, Federal Statistics Office 2012)

How we act

Association structure and modus operandi

The top management body of the IK Association is the Steering Committee which is composed of the elected chairmen of the 11 product groups and co-opted company owners or managing directors of IK member companies. The Steering Committee determines the basic principles of Association policy.

The 12 management employees, consisting of two General Managers, Technical Specialists and Assistants, work on the basis of a distribution of responsibilities plan with clearly-defined competences. IK has a Consumer Protection and Quality Management Department and another for Environment and Sustainable Development. Another focal point is the economic development of the industry, legal and compliance matters and communication.

From left to right: Heike Richter, Ulf Kelterborn, Kerstin Meggert, Christine Fischer, Dr. Fang Luan, Andrea Schlittgen, Roland Roth, Regine Simon, Inga Kelkenberg, Yvonne Kramer, Dr. Isabell Schmidt, Dr. Jürgen Bruder, Annette Schäfer

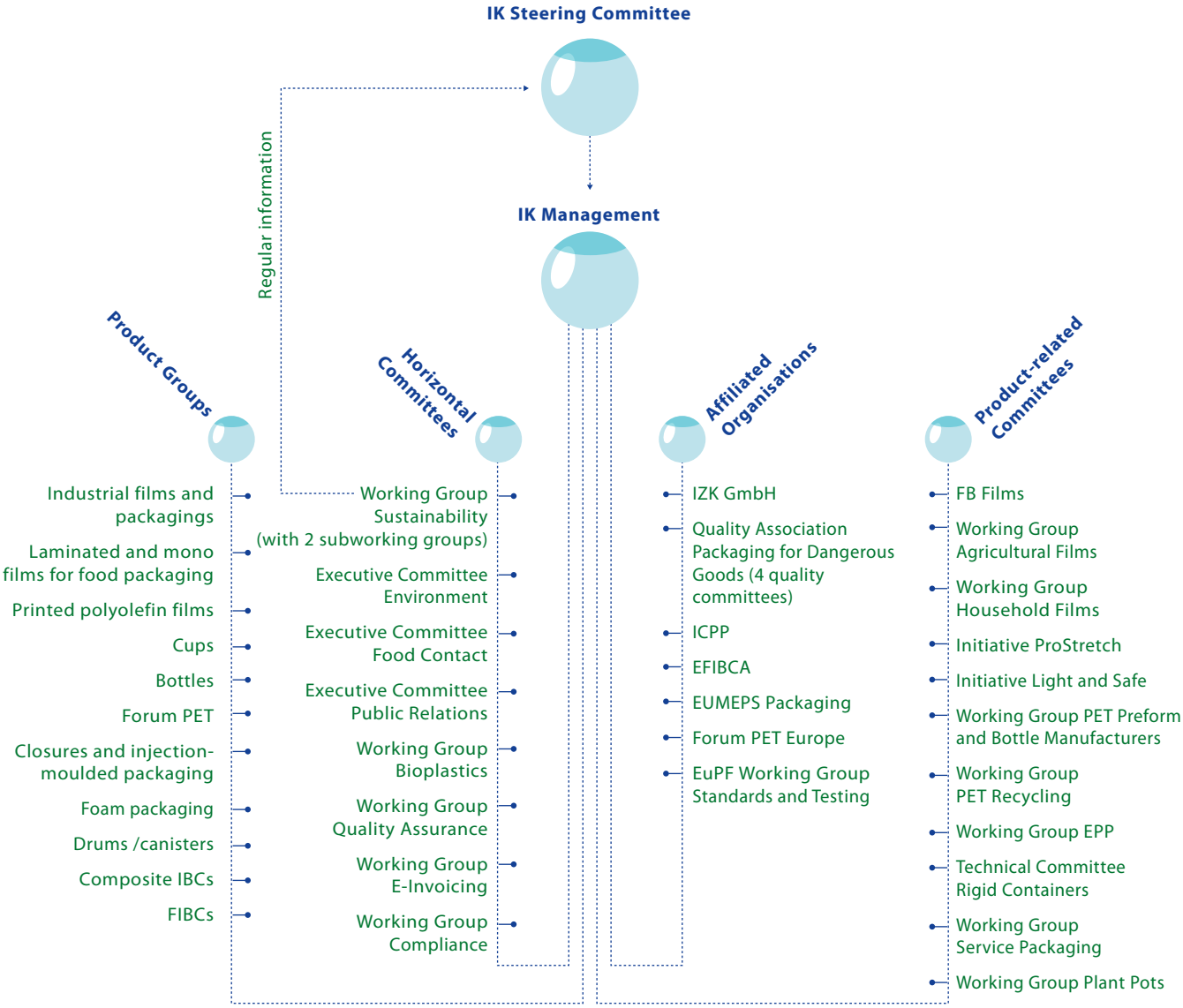


Figure 3: Structure of the IK Industrievereinigung Kunststoffverpackungen e. V.

The plastics packaging industry is a widely diversified product-and market-oriented branch, a fact which is reflected in the high number of over 40 IK committees. Of key importance are the Association's 11 product groups which represent the various kinds of plastics packaging – such as films, bottles or cups. These are supplemented by 11 more product-related committees. The product groups and product-related committees give the IK members a platform to discuss specific concerns in their sector and, should the situation arise, to launch their own projects. These groups meet three or four times every year.

The other half of the IK committees have a more across-the-board character and deal with certain issues such as the environment, food contact, public relations, sustainability, bioplastics and quality assurance as well as technical working groups and affiliated organisations. The dual structure of the IK committees – both product and topic-related – provide a firm basis to pinpoint issues important to our sector. By providing information and elaborating the Association's position on various issues IK generates a concrete added value to its members.

IK public relations are conducted by the IZK Informationszentrum Kunststoffverpackungen GmbH, whose sole shareholder is IK. The IK Academy offers seminars to its members.

Home to the secretariats of 4 European and international associations, IK represents the interests of its members and other foreign companies and associations in this sector. The Association structure adapts easily to the needs of the members with new working groups being set up on pressing issues, in order to establish our positions promptly in collaboration with representatives from the industry.
IK represents the interests of the branch to politics, public authorities, other associations and organisations in more than 50 external national and European committees. The management cooperates actively with the representatives of the member companies.

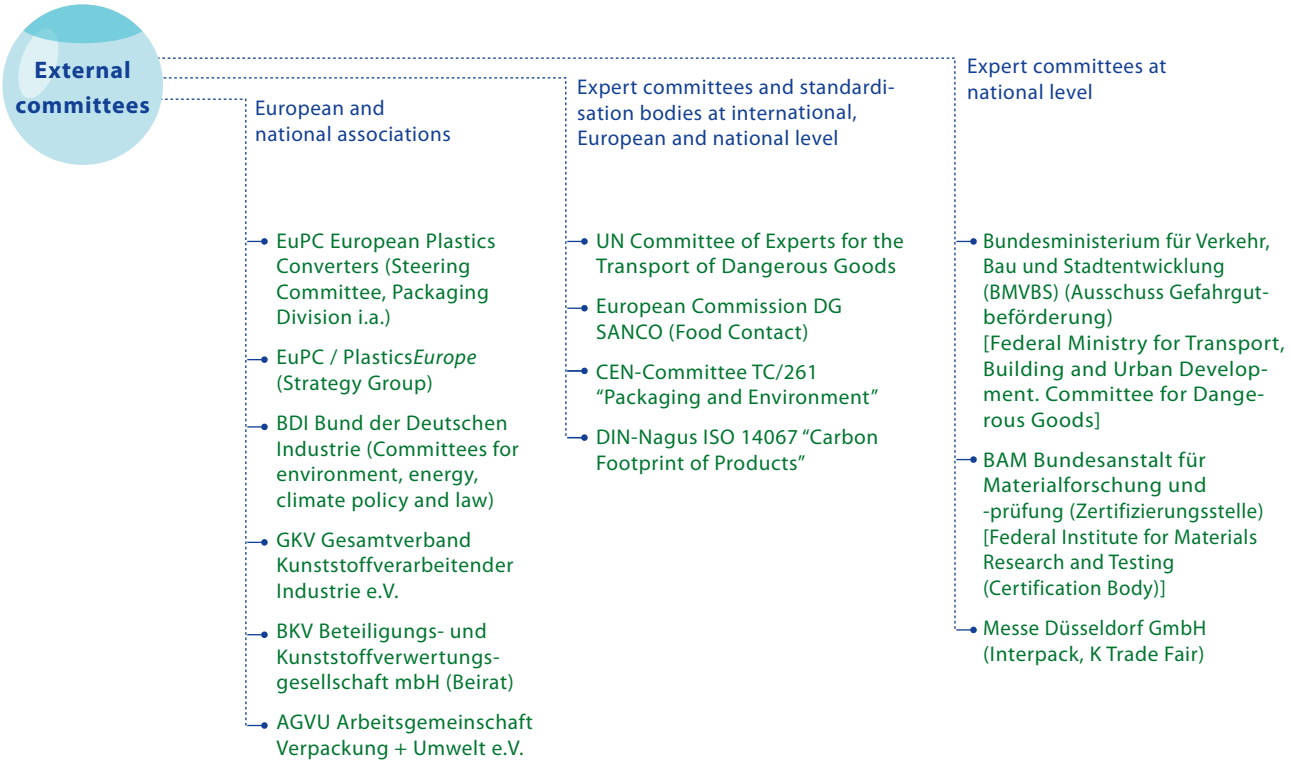


Figure 4: Examples of External Committees

The IK Sustainability Working Group

The IK Sustainability Working Group was founded in 2010 with the aim of fostering the sustainable development of the Association and its member companies. Over 60 member companies are actively involved in the Working Group.
The Working Group deals with the sustainability strategy of the Association as well as with specific projects and activities. It has, for example, identified the key medium- and long-term issues for the industry in the areas of ecology, economy and social affairs. The IK Sustainability Working Group has also developed the IK Eco Calculator, a tool with which IK member companies can produce their own life cycle assessments for plastics packaging and optimise their products ecologically.

Finally, this sustainability report results from the initiative of the IK Sustainability Working Group and was actively supported by its members. This included the creation of a system of voluntary reporting of key economic, ecological and social data on the part of the member companies. The data collected for 2010 und 2011 have been included in the indicators in this report.

Strategy Group within the IK Sustainability Working Group

From left to right:
Axel Loos, RPC Verpackungen Kutenholz GmbH
Dr. Susanne Holzer, Treofan Germany GmbH & Co. KG
Christina Schupp, Schütz GmbH & Co. KGaA
Klaus Peter Schmidt, Mauser-Werke GmbH
Monika Korbmann, Weidenhammer Packaging Group GmbH
Dr. Henning Seidel, RKW SE (stellvertretender Vorsitzender)
Dr. Andreas Gasse, allvac Folien GmbH (Vorsitzender)
Daniel Stauber, Nordfolien GmbH
Heidi Warsawsky, Nordfolien GmbH
Dr. Isabell Schmidt, IK Industrievereinigung Kunststoffverpackungen e.V.

Other members of the Strategy Group (not shown)
Andrea Steinkamp, Nordenia International AG
Fabian Neumann, Mitteldeutsche Erfrischungsgetränke GmbH & Co. KG
Heinz Mundt, Alesco GmbH & Co. KG
Matthias Lesch, Pöppelmann GmbH & Co. KG
Benjamin Kampmann, Pöppelmann GmbH & Co. KG
Sonja Haug, Huhtamaki Deutschland GmbH & Co.
Tammy Joy Friedrich, Emil Deiss KG (GmbH + Co.)

Stakeholder engagement

One of the Association's key tasks is the stakeholder dialogue. Stakeholders are individuals, groups or organisations which are substantially affected by the activities and products of the branch or which can exert considerable influence on the strategy and target attainment of our member companies and the branch as a whole. In 2011 IK made a status report of its stakeholder relations and prioritised the stakeholder groups in accordance with Standard AA1000SES according to the level of their influence and dependence. The most important stakeholder categories and the nature of their involvement are described in figure 5.

The greater part of the dialogue with stakeholders is conducted through the technical cooperation in external committees. A selection of these committees can be seen in figure 4.

In these committees representatives of IK and from the supply chain, politics and the authorities – such as the Federal Environmental Agency – and environmental and consumer associations work together on strategies, projects and regulations, which cover specific areas of sustainability and for which the know-how of the plastics packaging industry is indispensable.

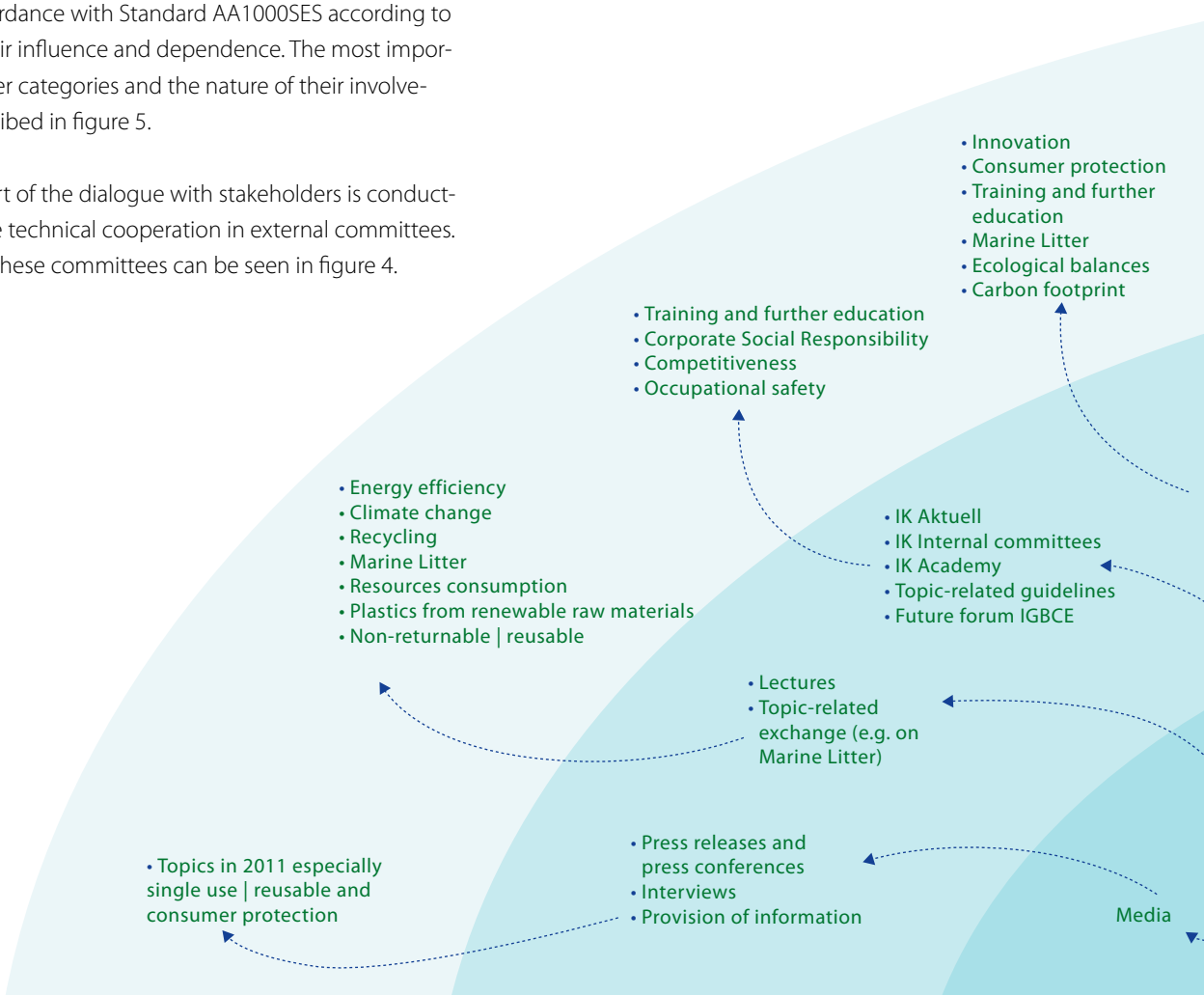
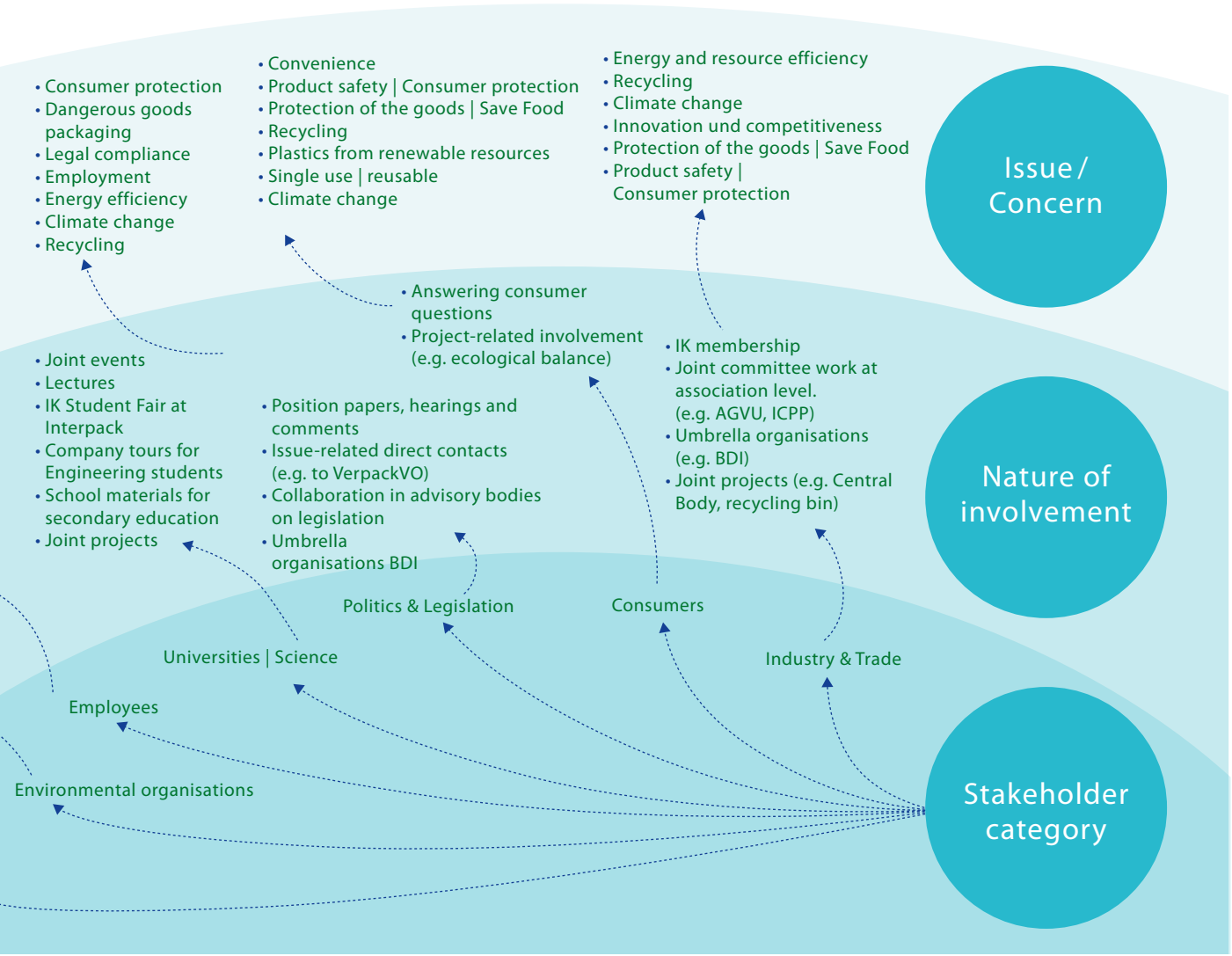


Figure 5:
Stakeholder involvement of IK

Stakeholder dialogue is also fostered by extensive communication work, in particular position papers, publications and press releases on a variety of questions. Interviews in different media, such as TV and radio, as well as presentations and discussions within the framework of events, reach other target groups. IK also uses its trade fair presences and the members' magazine "IK Aktuell" as communication forums.



Plastics packaging and sustainability

The role of packaging

To understand and classify plastics packaging in relation to sustainability, we must first consider the most important functions of packaging.

These are:

Packaging protects

Whether it is the film packaging for cheese or the drum for transporting dangerous goods by road, packaging protects the product, for example from mechanical damage, light and unwanted oxygen. The packaging also affects the quality and shelf life of a product which also produces clear environmental benefits, as fewer products end up as waste.

Packaging informs

The packaging contains important information for the consumer or industrial user, such as composition, instructions for use and disposal or expiry date.

Packaging works

The packaging must allow the easy and safe use of the products. In most cases, it is the packaging which makes a product transportable and storable at all. Packaging also often gives tips on how to use the product, for example dispensers.

Packaging saves

The manufacturers of plastics packaging are working continuously to reduce the packaging and make it more economical and environmentally-friendly. The weight of a yoghurt cup for example has been halved since 1980 from 7 to 3.5 grams. This saves packaging material and resources in production and transport while reducing costs.

Packaging is visually appealing

Consumer packaging is excellent advertising and an ideal business partner. Quality packaging increases the value of the product. Plastics packaging is particularly versatile and this inspires innovative design.

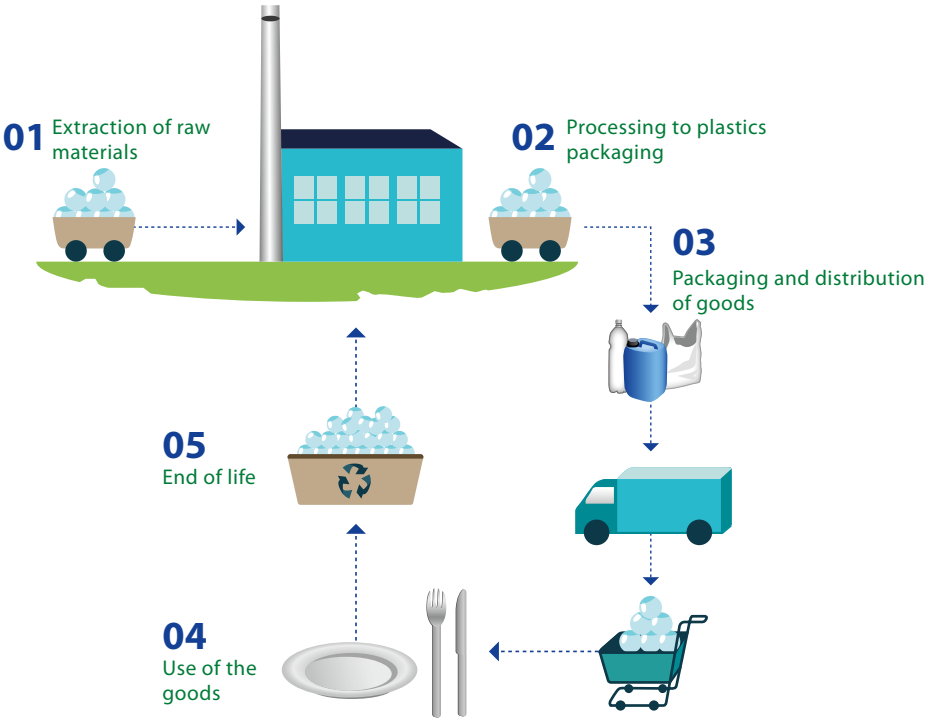


Figure 6:
The life cycle of plastics packaging
(ECR Europe, EUROPEN 2009)

The life cycle of plastics packaging

The typical life cycle of a packaging begins with the extraction of the raw materials for the packaging and the production of the packaging. Then it moves on to the packing and transport of the goods and the use of the product in industry, commerce or private households. Ultimately it ends in disposal of the used packaging or in the return and cleaning of reusable packaging. Within this life cycle the packaging encounters a variety of ecological and social sustainability challenges.

01 Extraction of raw materials
Extraction and processing of oil, natural gas or renewable raw materials, production of plastics
Relevance to sustainability: Extraction and consumption of fossil resources, prices of raw materials

02 Processing to plastics packaging
Relevance to sustainability: Increased competitiveness and innovation, compliance and corporate culture, energy efficiency, climate change, eco design

03 Packaging and distribution of goods
Relevance to sustainability: protection of goods, occupational safety and hazard goods transport, avoidance of product waste

04 Use of the goods
In industry, commerce and private households
Relevance to sustainability: product safety, consumer protection

05 End of life
Collection and recovery of packaging waste / Return and cleaning of reusable packaging
Relevance to sustainability: recycling and energy recovery, adverse effects on the environment and biological diversity from littering, especially Marine Litter

Sustainability challenges from the standpoint of the plastics packaging industry

In 2010 the IK Sustainability Working Group conducted an evaluation of the sustainability challenges from the standpoint of the German plastics packaging industry. The Working Group applied the methodology proposed in the Sustainability Reporting Guidelines of the Global Reporting Initiative, Version 3.0 (GRI G3). The evaluation took into account not only the assumed influence on the appraisals and decisions of the stakeholders but also the special significance of the issue for our industry in Germany. The main challenges in the fields of ecology, economy and social affairs can be seen in the following tables. To help understand the tables: at the top right are the high-priority issues, in the bottom left the lower priority issues. Lower priority topics, such as land use or customer data protection are not however considered to be less important but the analysts are of the opinion that these issues do not represent a challenge currently to the plastics packaging industry in Germany.

Main issues in the three sectors

Ecological sector [Figure 7. 1]:
Some issues were classified here as particularly important. Climate change is a global threat for which the industrial nations bear the main responsibility. It is mainly for this reason that energy efficiency is not only a monetary, but also an ecological challenge to our industry. Another challenge is the consumption of resources, which is closely linked to the issue of renewable raw materials and recycling. Even though the collection and recovery of plastics packaging waste has reached a very high level in Germany, there has been an increase in the number of reports regarding the pollution of the world's oceans by waste. Consequently, Marine Litter has been classified as a global challenge – the awareness of this is also likely to grow in Germany. Avoiding product and food waste by optimum protection is one of the key tasks of our industry, and is of major ecological significance. Last, but not least, ecological packaging design, which is based on energy and resource conservation and greatest recovery potential, is an integral challenge to companies.

Economic sector [Figure 7. 2]:
From an economic point of view innovation and economic performance are crucial factors for the branch. One huge challenge is the shortage of skilled staff and also employee education and training. The availability of raw materials and compliance issues also play an important role in future economic development.

Social sector [Figure 7. 3]:
According to the IK Sustainability Working Group, consumer protection and employment are the two most important social challenges, followed by occupational safety.

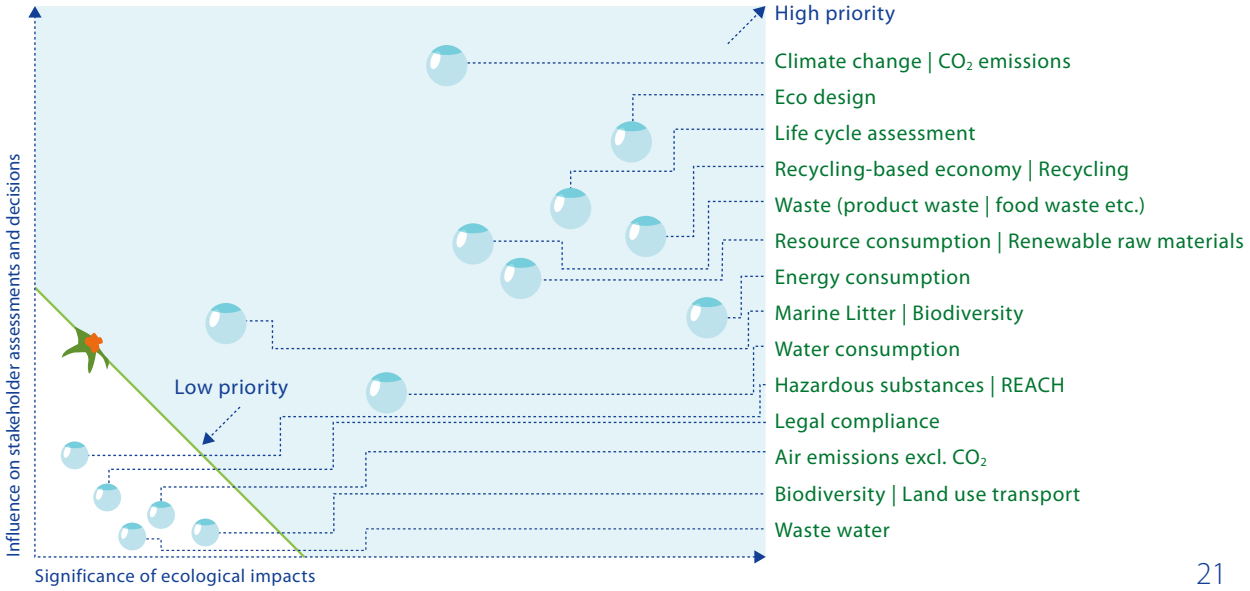


Figure 7.1:
Key topics in the ecological sector

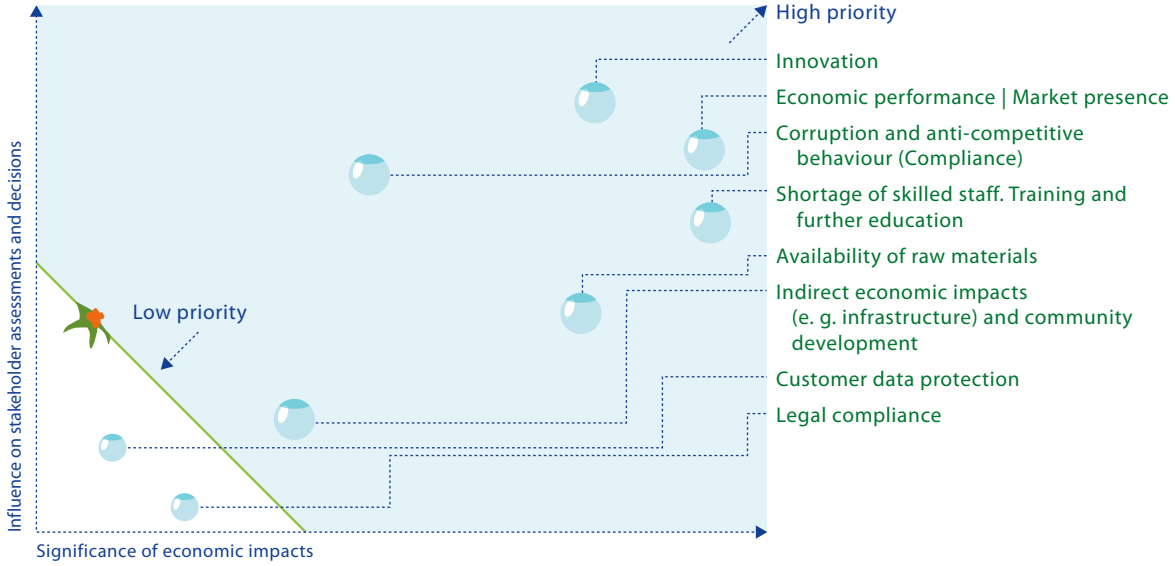


Figure 7.2:
Key topics in the economic sector

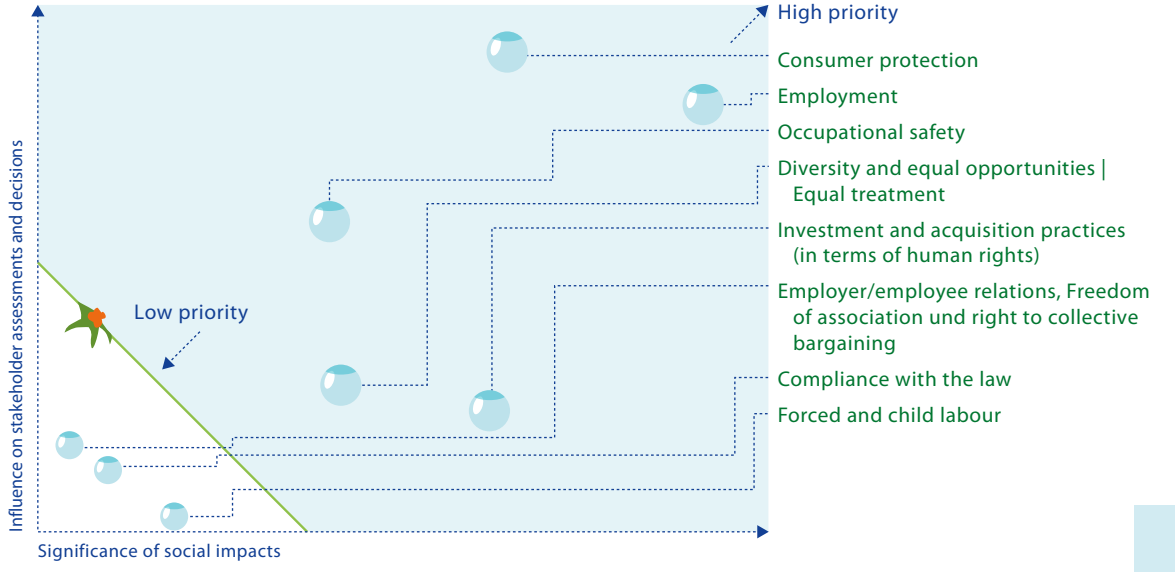


Figure 7.3:
Key topics in the social sector

The 10 most important sustainability issues

On the basis of the above-mentioned prioritization of issues by the IK Sustainability Working Group the IK management has compiled a list of ten issues which they consider to be the main challenges to the German plastics packaging industry. A separate chapter is devoted to each of these challenges.

1 Resource efficiency and recycling-based economy

When plastics packaging waste is recycled or subjected to thermal energy recovery it can be disposed safely and replace valuable primary resources.

2 Climate protection and energy efficiency

The emission of climate-damaging CO_2 is closely linked to the energy consumption in the production of plastics packaging. Increasing energy efficiency is thus a priority objective in the branch.

3 Protecting the oceans from plastic waste

Huge amounts of waste, including plastic waste, accumulate in the world's oceans with negative effects on the fauna living in the water or in coastal areas. Cooperation at global level is urgently needed to prevent plastic waste being dumped in the oceans.

4 Ecological life cycle assessments (LCAs) and eco design

Ecological LCAs appraise the environmental friendliness of a packaging during its entire product life span, from extraction of the raw materials to disposal. The aim of eco design is to always take the environmental friendliness of a packaging into account, right from the early development stage.

5 Protecting the goods

Protecting the goods is the most important function of packaging. The environmental impact of discarded food and other products is enormous. Plastics packaging makes an important contribution to reducing food losses. Its multi-faceted protective functions counteract the premature spoilage of foodstuffs and protect the goods during transport, so that they arrive safely at their destination.

6 Occupational safety and dangerous goods packaging

Plastics packaging for dangerous goods guarantees the safe transport, storage and use of goods, so neither people nor environment come to harm.

7 Consumer protection

A packaging which is completely safe and which also facilitates the use of the goods is vital for customer acceptance.

8 Innovation and competitiveness

In the highly competitive packaging market the manufacturers of plastics packaging can only continue to exist and expand economically with innovation and competitive prices.

9 Long-term securing of qualified employees

The competition for qualified employees has intensified dramatically, not least because of demographic changes. More than ever, companies must offer an attractive working environment in order to bind new employees.

10 Compliance and corporate ethics

For most entrepreneurs ethical business practices, such as compliance with the principles of free competition and workers' rights, are a matter of course. It is, however, important to increase the employees' awareness of these issues both at home and abroad and also among the suppliers.

Resource efficiency and recycling-based economy

The basic materials in the production of plastics packaging are normally synthetic granulates. The proportion of material costs in plastics packaging production lies between 40 and 80 % depending on the type of packaging, finishing quality and processing technology. Packaging plastics processed in Western Europe are mainly oil-based with only a minor part being gas-based, and less than 1 % of the plastics based on renewable raw materials. Oil and gas reserves are limited. A continuous increase in world market prices, especially for oil, can be observed resulting from the growing global demand. Accordingly, there is an economic and ecological need to develop a long-term strategy for the resource plastic. This covers the origin of the plastics (raw materials strategy) and its rational use in packaging (lightweighting) and closing the materials cycle at the end of the life cycle of the plastics packaging (recycling and recovery).

Raw materials strategy

In essence, IK is pursuing three main aims with regard to the sources of raw materials for plastics:

- **Long-term securing of packaging plastics supply in Europe**

The vast majority of the four packaging plastics Polyethylene (PE), Polypropylene (PP), Polyethylene terephthalate (PET) and Polystyrene (PS), which constitute about 90 % of the plastics packaging market in Germany, are produced in Europe. New plastic production plants are currently under construction outside Europe in regions with good economic growth or particularly low-cost sources of raw materials, above all in Asia, the Middle East and North America. In talks with globally-positioned plastic manufacturers, IK (in conjunction with other European plastics processing associations) advocates further developing Europe as the location for research, development and production, in order to guarantee the long-term security of supply from European production plants.

- **Restricting the extreme volatility of plastics prices**

One great problem in the day-to-day operations of plastics processors is the high volatility of the prices of the plastics used. Extreme price hikes within a very short space of time are major challenges to medium-sized converters. IK has referred to this problem in press releases on numerous occasions. IK also invites financial experts to inform its members about risk-minimising financial instruments.

- **Fostering the use of bio-based plastics with particular focus on ecological and ethical aspects**

IK follows the development of bioplastics and the political framework via the IK Bioplastics Working Group which was founded in1997. Although today it is possible in principle to produce any type of plastic based on renewable raw materials, the capacities of the market are still very low despite high growth rates. In an IK position paper on bioplastics the Association advocates the use of renewable raw materials for plastics packaging. IK is of the opinion that there are a number of reasons why this is worth striving for:

- Although only about 1.5 % of oil consumption is used in the production of plastics packaging, a long-term, gradual supplement or substitution of fossil-based plastics packaging by bio-based plastics packaging accompanied by the necessary scientific- technical preparations must be guaranteed.
- These young technologies and markets connected to bio-based plastics should continue to develop, in order to heighten their competitiveness not only when it comes to material properties and price, but also to environmental

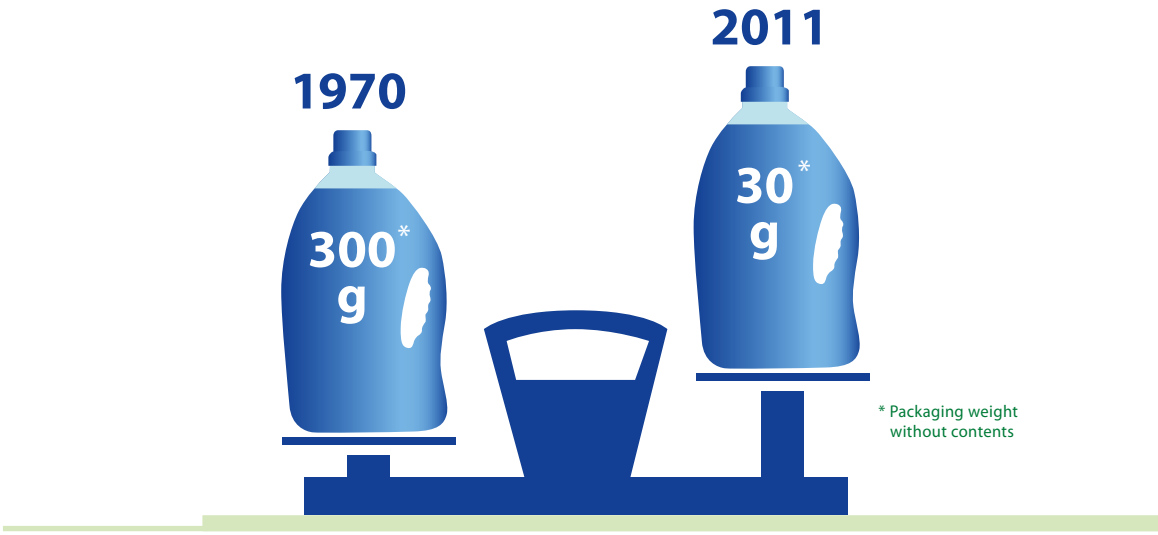


Figure 8: Lightweighting in case of 4 litre detergent bottle

performance. Essentially, bio-based plastics have a high potential for reducing the ecological footprint of plastics packaging, particularly in terms of climate protection. On the other hand new life cycle assessment has shown that packaging made of bioplastics is often not more environmentally-friendly than plastics packaging based on fossil raw materials.

- In view of the long-term rise in prices for fossil raw materials, the raw material base for plastics packaging manufacturers must also be expanded.
- Bio-based plastics packaging opens up new business areas and differentiation options for IK member companies.

At the same time IK points out that the use of agricultural cultures suitable for food production in the production of bioplastics are increasingly being replaced by agricultural and forestry waste as well as other non-food biomasses.

Lightweighting

Lightweighting is the continuous saving of packaging material. This is made possible by innovative packaging design and technological advances. While it is difficult to gauge success for the whole sector there are numerous examples from individual product segments (films, bottles, closures, cups, canisters etc.). In the last twenty years IK members have achieved a great deal in every application area of plastics packaging. Reductions in weight of over 50 % are not uncommon with peak values of over 90 %. For example, the average weight of a 4 litre detergent bottle in1970 was 300 grams. Today this is a mere 30 grams – one tenth of the original weight.

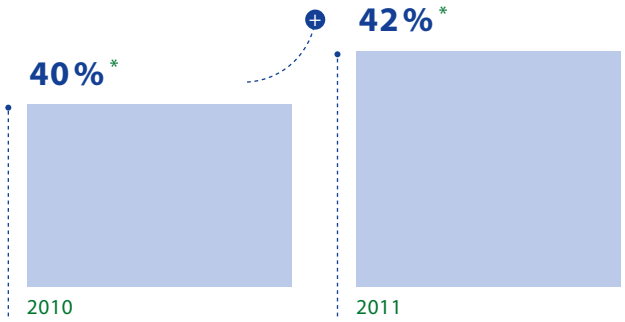
As part of a study, initiated and financed by IK, into the optimisation of plastics packaging in private final consumption, quantity structure and especially weight changes in the German plastics packaging market were analysed for the period from 1991 to 2000. The findings showed that in this period lightweighting led to about 300,000 tonnes of plastics packaging being avoided (GVM 2002), which is equivalent to one quarter of the household plastics packaging used in 2000. IK is currently reviewing whether a similar investigation for the last 10 years is worth considering.

Recycling and recycling-based economy

Packaging is one of the products within the manufacturing industries which generally have a decidedly short life cycle. In particular the packaging of fast-moving consumer goods for everyday use, such as food, care products and detergents, becomes waste within months or even weeks. After use the practical product protection function of a packaging becomes the challenge to use this packaging with its material and energy resources within the framework of the five-tier waste hierarchy stipulated by the Closed Loop Economy Act as efficiently as possible.

In 2011 almost 100 % of plastics packaging waste in Germany was recovered. 39.8 % was mechanically recycled, 2 % chemically recycled and 57.8 % energetically recovered, in other words used to generate electricity and heat (Consultic 2012). Currently the Government is working on a concept to introduce a recycling bin, in which not only packaging waste but also used plastic and metal household articles can be placed, in order to further promote recycling.

Production sites with environmental management system



* Percentages related to the production sites of the reporting companies

In 2011 IK contributed its expertise in the conceptional development of the recycling bin as part of a business game organised by the Federal Environment Ministry and the Federal Environmental Agency. The special responsibility of IK rests on the fact that an estimated two thirds of the materials in the recycling bin will be plastic waste – mainly used plastics packaging. In conjunction with three other trade and industry associations IK has already stated that it will participate in the development and responsibility of a „Zentrale Stelle" (Central Body) funded by the business world as an essential prerequisite for the introduction of the recycling bin. IK co-initiated the foundation of a project company in July 2012. For setting up the Zentrale Stelle IK can call on over 20 years of experience in organising collection and recovery structures. The Association played a crucial role, for example, in the creation and financing of the BKV Beteiligungs- und Kunststoffverwertungsgesellschaft mbH, the Plastics Recovery Holding of the German Plastics Industry, which is concerned with product responsibility for plastics packaging.

IK is also taking a position on the use of recycled plastics in packaging. The Association advocates the use of recycling plastics to improve the ecological profile, reduce material costs and diversify the supplier structure, whereby the quality requirements made on the packaging must always be observed. Several IK committees are discussing specific questions about improving recycling and the use of recycled plastics. One of these is the IK Recycling Working Group of the Forum PET, in which PET bottle recyclers are working together with bottle and machine manufacturers to draw up generally-accepted quality and environmental standards for PET bottles and in particular to improve the bottle recyclability and increase the proportion of secondary raw materials in the bottles. This should also keep the collected single use bottles with deposit in Germany/Central Europe.

Another example is the IK Agricultural Films Working Group. Together with the RIGK GmbH IK is currently preparing a nationwide return and recovery system for agricultural films. The environmental management systems introduced in many companies offer a systematic framework for in-house optimisation of resources consumption. Of the reporting locations of IK member companies in 2011 42 % were certified to ISO 14001 or validated according to EMAS – 2 % more than 2010. In 2010 and 2011 the reporting IK member companies used an average of 7.5 and 7.3 % recycling materials. This is equal to about 70,000 tonnes.

2 Climate protection and energy efficiency

Climate change is regarded by many as one of the greatest ecological, economic and humanitarian challenges of our age. The major cause of climate change is carbon dioxide (CO_2), which is created inter alia during the combustion of coal, oil and gas for energy generation. This is why energy efficiency is a key factor for the manufacturing industries in curbing climate change.

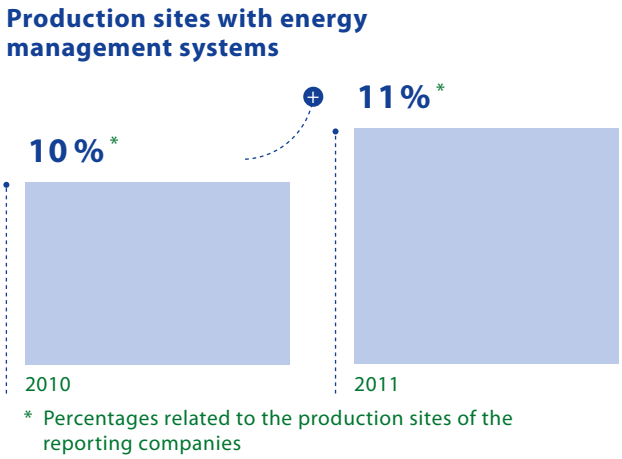
Increased energy efficiency and expanding renewable energy sources are at the forefront of the Federal Government's energy turnaround. Accordingly, the politicians are offering clear energy-saving incentives to industry. A trend can be observed currently in which benefits in the electricity and energy taxes will be tied to energy or environmental management systems and to the demonstrable increase in energy efficiency.

The activities of IK in climate protection are primarily concerned with supporting its members in implementing energy management systems and increasing energy efficiency in production. Besides climate protection, this is also of utmost importance in safeguarding the international competitiveness of the German packaging industry because, in a European comparison, German electricity prices are well above the average. In 2011 the IK Academy organised a practical seminar "Energieeffizient handeln – jetzt!" (Be energy-efficient – now!) for its members which demonstrated feasible saving potential in important technologies and methods of energy controlling in the enterprise. In February 2012 IK also organised a two-day seminar on energy management systems. The seminar focussed on the requirements of DIN EN ISO 50001, on energy management systems, which was newly-issued in December 2011 and will replace DIN EN 16001 by April 2013. Over 60 member companies took part in the two seminars. IK is also planning more events in the future to cope with increasing energy efficiency.

Another aim of IK's activities is to make an objective contribution to the ongoing debate regarding the greenhouse gas balances of products (product carbon footprints). In recent years a trend has been observed in different countries across the world that the development of carbon footprint labelling for products and their packaging has been impelled forwards, partly by industry and trade, partly by public agencies. Since more and more IK members have questions about the carbon footprints of packaging, IK is taking part in the DIN Standards Committee on the development of the ISO Standard 14067 "Carbon Footprint of Products".

Under the umbrella of the AGVU Arbeitsgemeinschaft Verpackung und Umwelt e. V. (Working Group for Packaging and Environment) the IK and other packaging organisations collaborated in the „Carbon Footprint" project, which was concluded in 2010. In the project the packaging industry took a critical stand towards product carbon footprinting. They criticised, for example, the fact that most environmental effects, apart from climate change, were disregarded. They also found that it is an extremely difficult challenge to develop a standardised, accurate method of calculating carbon footprints which guarantees the comparability of carbon footprint data with alternative products. Moreover, it should be ensured that consumers only receive useable information about climate protection – the proper usage of many products has a much greater impact on greenhouse gas emissions than production. However, without these conditions, there is the danger that a carbon footprint on the packaging merely serves marketing purposes („greenwashing").

For self-assessment and communication with customers, NGOs and other stakeholders an analysis of the contribution of plastics packaging to greenhouse gas emissions is still important. Packaging in total accounts for an estimated



1 % of the average CO_2 footprint of a German citizen, which amounts to 11 tonnes of CO_2 a year (IFEU 2008). Food and miscellaneous personal consumption (over 40 %), energy consumption in the private household (25 %) and personal mobility (23 %) account for make up the largest share (Figure 9).

In most cases the CO_2 emissions of the packaged goods far exceed those of the packaging, as a study of selected plastic food pacs shows (Figure 10). For high-quality consumer goods, such as mobile phones, the ratio is even more pronounced. Protecting the goods makes an important contribution to climate protection.

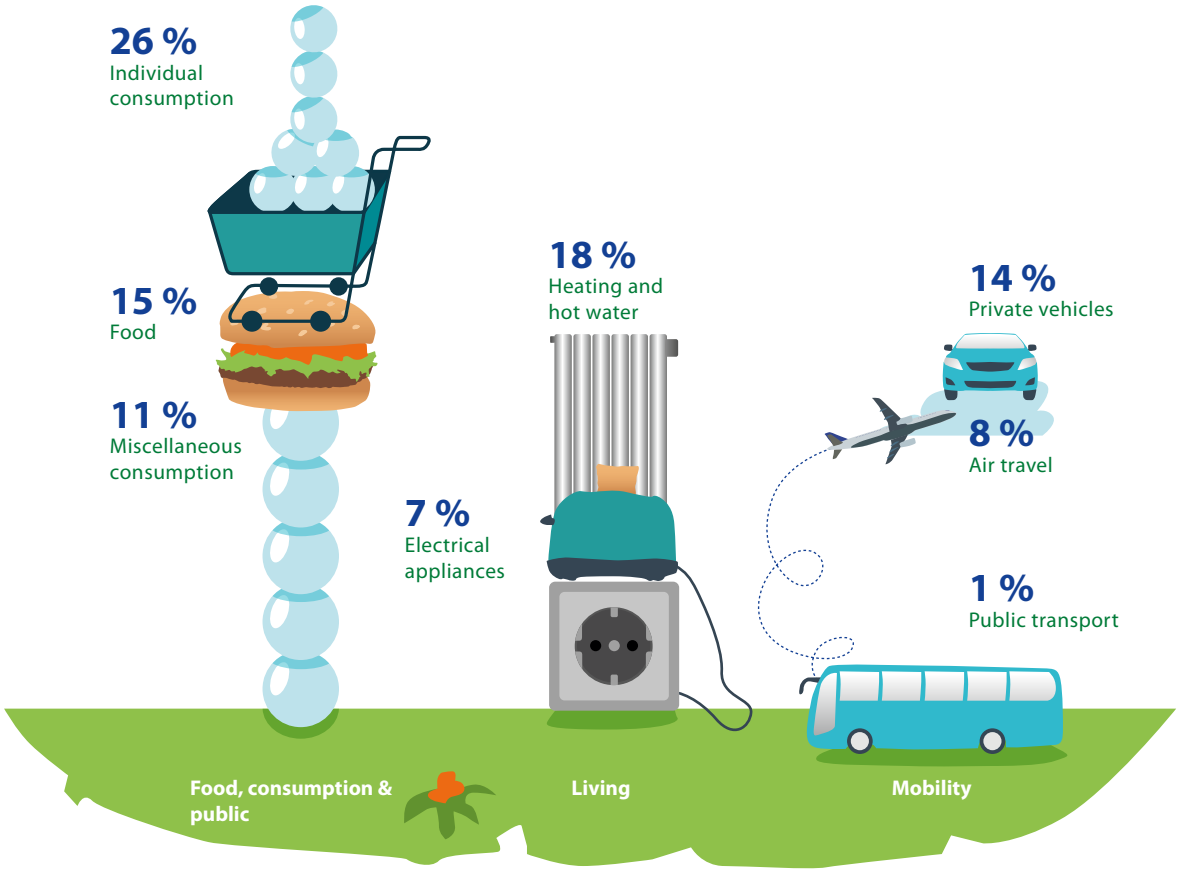
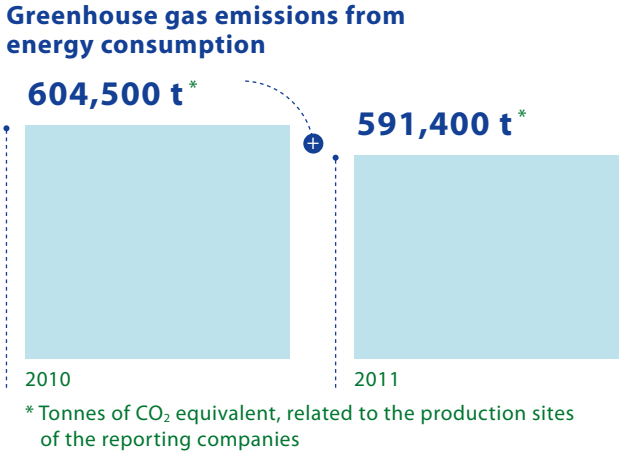


Figure 9: Average CO_2 emissions per capita in German households (IFEU 2008)



As part of the voluntary sustainability reporting IK also determines the key figures of its members on climate change and energy efficiency. Among the reporting member companies the number of production sites which have a certified energy management system according to DIN EN 16001 or DIN EN ISO 50001, grew in one year from 10 % (2010) to 11 % (2011). In addition, over 40 % of the production sites have implemented environmental management systems according to ISO 14001 or EMAS. The energy efficiency average is 1,357 (2010) and 1,350 (2011) kWh/Tonne packaging and remains almost unchanged.

In 2011 greenhouse gas emissions arising from energy consumption in the reporting member companies fell from 604,500 (2010) to 591,400 tonnes CO_2 equivalent.

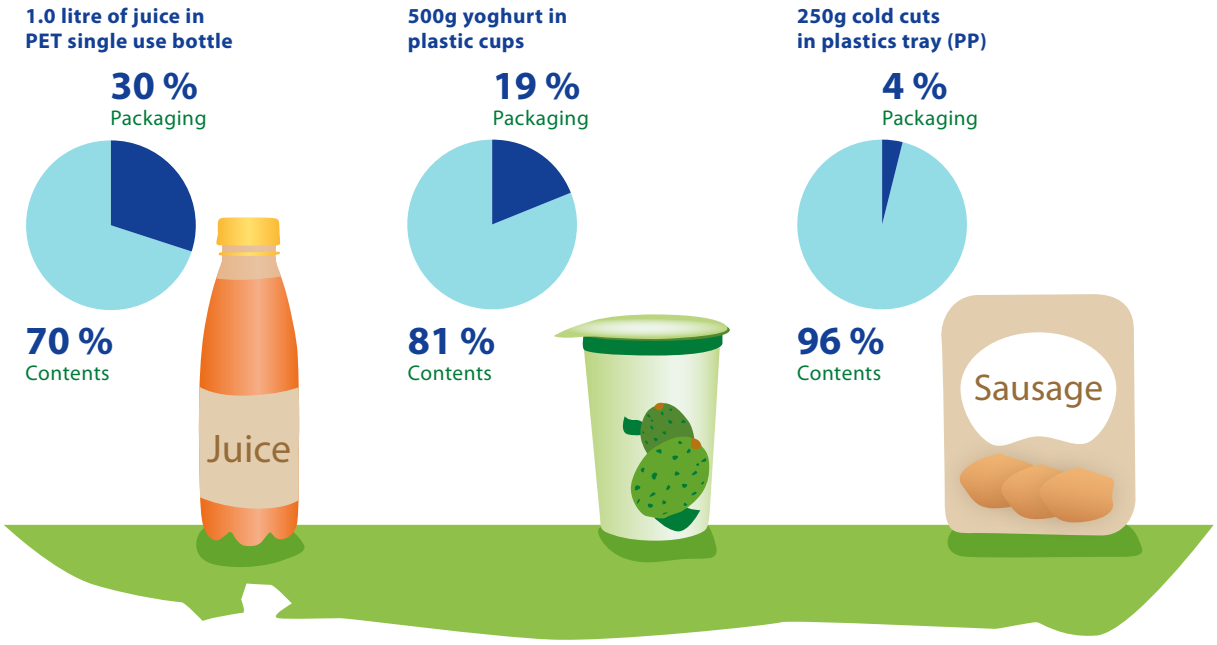


Figure 10: Proportion of packaging in CO_2 footprint of selected foodstuffs (AGVU 2010, based on IFEU 2008)

3 Protecting the oceans from plastic litter

Due to its complexity the global problem of Marine Litter is one of the greatest challenges the plastics industry has faced so far. The causes include a lack of, or inefficient, waste management systems and socio-cultural causes, such as traditional behaviours and the lack of environmental awareness in many parts of the world. The overwhelming share of the floating and suspended particles is plastic – in the North Sea this is about 75 %. They consist of both plastics packaging and non-packaging such as fishing nets, cigarette lighters and the like. Partly since they are assimilated into the food chain the plastic particles cause different kinds of ecological damage in the sea and on the coasts. As manufacturers of these products, which were not disposed of properly at the end of their life cycle, the global plastics industry is confronted with the task of developing solutions to this problem, in cooperation with stakeholders from politics, business, the fishing industry, local authorities, NGOs and others.

In March 2011 at the 5th International Conference on Marine Debris in Hawaii a joint declaration was presented by the global plastics industry. In June 2012 this declaration was substantiated as part of Rio+20 conference with approx. 100 activities in the individual regions. IK is cosignatory of the declaration. The declaration and other information on the projects can be found under www.marinelittersolutions.com.

IK, in conjunction with the BKV Beteiligungs- und Kunststoff-Verwertungsgesellschaft mbH, the Austrian and the Swiss plastics associations, is making a positive contribution to the action point „Förderung wissenschaftlicher Erkenntnisse und politischer Vorgehensweise, um Meeresabfälle zu vermeiden" (Promotion of comprehensive science-based policies and enforcement of existing laws to prevent Marine Litter) in the in the Global Declaration.

The study "Land-Sourced Litter in the Marine Environment", initiated and developed by IK, was completed by the Ökoinstitut e. V. Freiburg at the beginning of 2012. This forms the basis for further scientific investigation and future debate regarding effective solutions to avoiding land-based Marine Litter. As the next step, IK is preparing, in cooperation with three other organisations in the plastics industry, a stakeholder workshop which will take place in March 2013 to discuss possible solutions together with environmental associations, politics and other interested groups.

IK also supports other activities, such as the "Waste-Free Oceans" project, financed by the European umbrella association EuPC, which is advocating literally fishing the floating waste out of seas. IK is also participating financially in two research projects examining the ecological impact of plastic micro particles on the oceans.

IK is calling for a European-wide ban on landfilling plastic waste. In this context IK is taking part in the initiative "Zero Plastics to Landfill by 2020" proposed at the start of 2012 by the two European plastics industry associations, EuPC and Plastics*Europe*. The main objective of this project is to raise recovery rates, but it will also have a positive effect on preventing Marine Litter. IK contributes the positive German experience with the implementation of the landfill ban, which has been in force since 2005, to the preliminary task force of these associations.

4 Product life cycle assessments and eco design

Eco design is an integrated development approach to accompany products through their entire life cycle in the most environmentally-friendly manner possible. In the case of packaging this includes resource and energy-saving production as well as optimum recovery of the packaging waste.

Eco design also uses an integrated approach to make a balanced appraisal of environmental influences such as climate change, resource consumption and damage to ecosystems caused by eutrophication and acidification. The weapon of choice for this kind of integrated product evaluation is product life cycle assessments in accordance with DIN ISO 14040 / 14044.

IK Eco Calculator

Since June 2012 the IK Eco Calculator has been available to the members of the Association. This is an eco design tool specially designed for plastics packaging. Supported by the members of the IK Sustainability Working Group the service provider PE International in Stuttgart programmed this web-based life cycle assessment calculator. The IK Eco Calculator gives IK member companies a standardised, methodical process of creating a balance sheet for the environmental impact of plastics packaging – from production of the packaging to usage and disposal. The IK member companies can optimise their product range from an environmental angle and react competently to customers' questions about the environment. In June 2012 IK organised a free introduction course with about 60 participants. Another course is planned for Autumn 2012.

PET life cycle assessment 2010

Although the use of PET bottles for mineral water and soft drinks has been increasing steadily for many years, (in particular PET single use bottles), in Germany the traditional reusable glass bottle is still seen as the benchmark for environmental friendliness. While reusable PET bottles have already proved their ecological advantages in diverse life cycle assessments in the past, single use bottles still had an ecological backlog. Through large-scale investment in modern production and filling plants, lightweighting and more recycled material in the bottle wall, as well as improved logistics, the ecological performance of the single use bottles has improved considerably, as the PET life cycle assessment, conducted by the IFEU Institut and commissioned by the IK in 2010 proved (Figure 11). In the study the popular 1.5 litre single use PET bottle is closing the gap to the traditional 0.7 litre refillable glass bottle. The obligatory deposit for non-reusable beverage packaging, introduced in 2003, has also led to an improvement in the ecological profile, as it has had positive effects on the collection and recycling of single use PET bottles. The Forum PET in the IK advocates the continuous enhancement of the ecological profile of PET bottles.

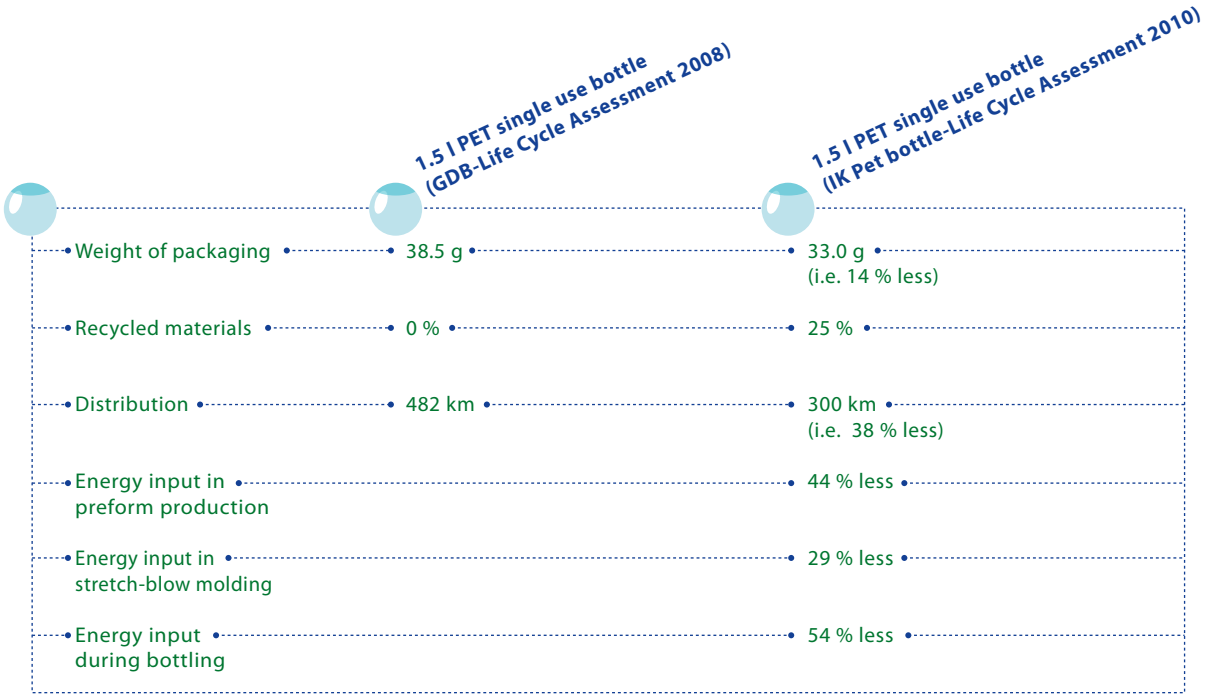


Figure 11: Ecological optimisation of the 1.5 litre single use PET bottle of carbonated mineral waters and soft drinks compared to the GDB -Life Cycle Assessment of 2008 last (IFEU 2010)

European food industry round table

IK has been taking part in the European Food Sustainable Consumption and Production Round Table since 2009. The aim of this public-private partnership between the European food and beverages industry and the EU Commission is to create a life cycle assessment method for evaluating beverages and food. Rules for communication are also to be developed and the continuous improvement in the environmental performance along the entire value chain, which also includes packaging.

5 Protecting of goods

In the product range of manufactured goods industry packagings are something "special". This is because their significance and necessity only emerge in relation to the packaged product. The main purpose of packaging is to protect the goods from environmental influences. This is particularly apparent in the case of food packaging, which is decisive in determining the shelf life of the valuable foodstuffs. During transport plastics packaging protects the expensively-produced goods from damage before they reach the consumer. Its manifold properties and flexible design guarantee optimum product protection.

Saving food

One third of all the food produced in the world is lost before it can be consumed. It becomes waste. In Germany food losses amount to about 11 million tonnes a year (81.6 kilos per capita), of which over 60 % can be attributed to private households (University of Stuttgart 2012). Preventing food loss in the chain from farm to consumption is a major technical, economic and above all socio-political challenge, to which the plastics packaging industry, as the largest packaging sector, is making an important contribution. On the subject of enhanced foodstuffs protection: IK member companies – also in cooperation with scientific institutes, suppliers and customers – are bringing forth packaging innovations which combine optimum protection of the food, a longer shelf life and enhanced convenience for the consumer, such as easy resealing. Plastics packaging adapt ideally to consumer needs, which ensue from demographic change or changing lifestyles, such as out-of-home consumption, more portion packaging or easy-opening features. In this way they also make a definite contribution to preventing food losses.

Reacting to the high socio-political challenge of preventing or minimising food losses, IK has joined the SAVE FOOD initiative as sustaining member and supports, for example, exhibitions and conferences dedicated to the problem of spoilage and destruction of food.

The SAVE FOOD initiative was founded in connection with the interpack 2011 by FAO and Messe Düsseldorf. The Association's role concerning the packaging-related and socio-political aspects of spoilage prevention is mainly as information broker to the members and as the mouthpiece for industry to other stakeholders in this sector. For example IK informs its members about precompetitive research projects to improve the protection function of the packagings, as for active und intelligent packagings.

initiative save FOOD ® solutions for a world aware of its resources

6 Occupational safety and dangerous goods packaging

Health and safety regulations and transport law are two important legislative fields which protect employees and the environment in the manufacturing sector. Besides the classic fields of activity in occupational safety, due to the importance of industrial plastics packaging for the transportation of chemicals, IK is also focussing on the issue of dangerous goods packagings. The protection of people, fauna and flora through packaging is essential especially during transport, storage and the use of goods which are a threat to health and environmentally.

The IK Environment Executive Committee has developed a guideline on occupational safety, containing all the relevant branch-related legal regulations for our members. It forms the basis for introducing the complex matter quickly especially to newcomers in the field of occupational safety. Among the reporting member companies the number of reportable industrial accidents per 100,000 working hours fell from 2.4 (2010) to 2.2 (2011).

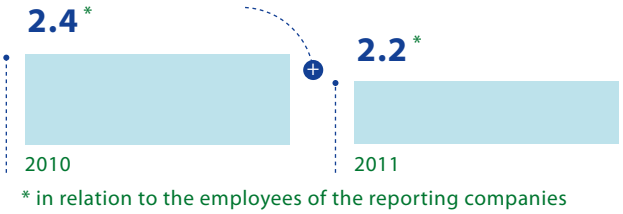
In the area of dangerous goods packaging, maintaining a high level of quality in the production and an appropriate further development of the international regulations of dangerous goods transport are the focal points of the Association's work. In Germany, with its highly-developed chemical industry, about 20 million tonnes of hazardous goods are packed in plastics packaging, such as plastic drums, IBCs, Big Bags and plastic sacks. This gives plastics packaging the biggest market share also in this packaging segment. German manufacturers of plastics packaging for hazardous goods have always played a leading role in Europe and worldwide, both in terms of technological and market leadership.

As early as the mid-1980's IK members founded the RAL Quality Assurance Association for dangerous goods packaging in order to attain a high level of quality in the production of plastic dangerous goods packagings.

The RAL Quality Assurance Association, with its 21 member companies and 43 production plants, directed by the IK office reached this aim many years ago with a system of internal and external monitoring of production which is recognised by the competent authorities. Over 60 % of the manufacturers of dangerous goods plastics packaging in Germany are monitored by the Quality Assurance Association.

Through the UN-accredited International Confederation of Plastics Packaging Manufacturers with head office and secretariat at IK, the Association provides its expertise in the further development of the updated regulations on international dangerous goods transport agreed upon in Geneva.

Reportable accidents per 100,000 working hours



* in relation to the employees of the reporting companies

7 Consumer protection

54 % of all the food offered on the German market in packed form is plastic-packed (GVM 2012). The European and national regulations developed in the last 30 years regarding the use of plastics packaging in the food sector are at their most complex in the area of packaging and articles in contact with food. Consumer protection also involves comprehensive legislation such as the European Chemicals Regulation (REACH) and the hazardous substances law (CLP) up to laws for the protection of certain consumer groups, such as by means of child-resistant packaging. As a result, the plastics packaging manufacturers see themselves having to fulfil continuously increasing demands on the safety of the packaging. It follows that the issue of health and consumer protection is a central sphere of activity for the work of the Association.

Information and qualification of the IK member companies

IK informs its members promptly and fully with articles in the members' magazine "IK Aktuell" and members' circulars about current issues concerning consumer protection. These include new and upcoming legislation, scientific opinions and statements on materials currently under discussion or research projects. Our members receive information about services offered by IK such as guidelines, seminars or conferences. The meetings of the IK Quality Management Working Group give the quality control managers of the member companies a platform for exchanging information and experience. Issues concerning legislation and standardisation – whether this be food contact, product safety or hygiene management – are of major importance to the manufacturers of plastics packaging and are processed by IK.

Accordingly, another important indicator is the number of companies with a certified hygiene management system. Among the reporting IK members 44 % of the production sites have implemented such a system. As long ago as the 1990's members of the IK Food Contact Executive Committee developed the guideline "Kunststoffverpackungen im Direktkontakt mit Lebensmitteln" (Plastics packaging in direct contact with foodstuffs), which is updated at regular intervals. This gives the members a practical guide through the complex material. One part of the guideline is the form "Lebensmittelrechtliche Konformitätserklärung" (Food Law Declaration of Conformity), which is recognised nationwide both by companies of the whole delivery chain as well as by official authorities.

At the traditional IK Food Packaging Conference, which takes place every 18 months, IK members and their business partners are given a compact overview of the current issues in food contact. Both the 6th Food Packaging Conference in spring 2010 and the 7th conference in Autumn 2011 attracted over 100 participants. In 2011 and 2012 IK also organised two workshops on the EU-plastics regulation and adhesives for food packaging. Another seminar on the legal basis for food packaging is being planned for Autumn 2012.

Answering external questions

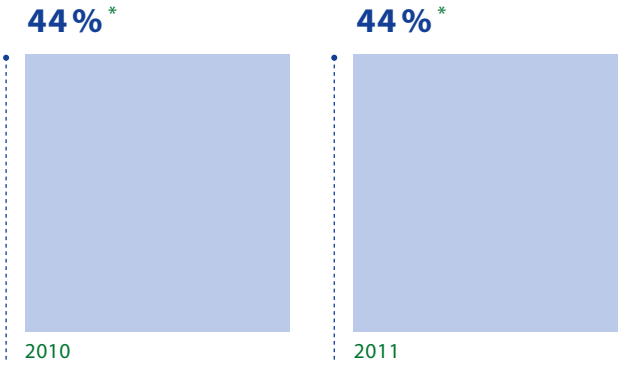
Calling on its extensive know-how IK gives detailed answers to questions from member companies, journalists, students, private individuals and other interest groups on the subject of food contact, migration testing, declarations of conformity, health safety and similar issues. From January 2010 to June 2012 IK answered about 400 questions on these topics.

Further development of regulatory frameworks

IK's involvement in developing regulatory frameworks is based on the principle: "maximum security through clear, enforceable, EU-wide standardised regulations ". The central idea behind this is that only regulations which are enforceable in practice ensure a high degree of consumer protection. This also means a clear division of responsibilities in the supply chain. Qualified expert knowledge enables the Association to take an active role in specialist external consumer protection committees deliberating on amendments, changes and developments in legislation relating to articles for food contact. IK, as the representative of the European plastics packaging industry, is involved, for example, in the DG SANCO panel "Food Contact Material" of the EU Commission. IK is also involved in national committees such as the working group "Food Contact Materials" of the Bund für Lebensmittelrecht und Lebensmittelkunde e. V. (BLL), the German Federation for Food Law and Food Science.

Last year the Association also gave financial and content-related support to the European research projects „Migresives" and "Exposure Matrix" as well as the ongoing FACET project. The findings of these projects are the fundament for planned legislative changes.

Production sites with hygiene management systems



* related to the production sites of the reporting companies

8 Innovation and competitiveness

The international competitiveness of medium-sized enterprises is increasingly dependent on their innovative skills. In the past 20 years the German plastics packaging industry has been able to build on these skills to foster growth and employment. However, it is not only company-specific aspects which play a role in developing innovation potential.
The macroeconomic framework, such as infrastructure, power supply and flexible mechanisms on the labour market are also crucial parameters. For this reason, the IK assists companies, for example, with energy benchmarks to enable them to increase their energy efficiency potential. The quarterly IK economic survey, which serves as a barometer to the sector, highlights the prevailing moods and challenges in this sector.

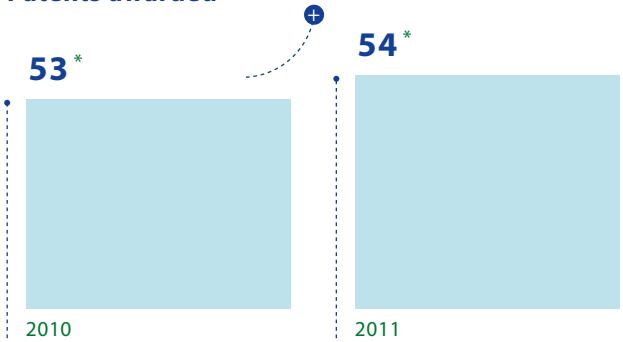
Targeted investments in education and research also remain of importance in ensuring the innovation edge needed for satisfactory competitiveness. Accordingly, the companies continue to intensify their cooperation with research institutes and universities. The Association maintains close contact to a number of universities and institutes, such as the Technical University Darmstadt and the Rheinisch-Westfälische Technische Hochschule (RWTH) Aachen.

Packagings developed in Germany are in demand worldwide. Particularly due to the optimised use of materials and enhanced product protection, plastic packagings will show a huge potential for innovation in the future. German plastics packaging continue to perform well on an international level and the packagings of several IK member companies are leaders on the European market.

The 34 IK member companies participating in voluntary reporting registered a total of 53 patents and utility models granted in 2010 and 54 in 2011. In these two years they were awarded 4 prizes and distinctions.

- At the 8th. International DuPont Grand Prix Cyrel® 2010 RKW SE received a special award for outstanding print quality in the category„ Flexible Packaging ".
- The Deutscher Verpackungspreis (German Packaging Award) 2011 in the category "Consumer Packaging" went to Weidenhammer Packaging Group for their PermaSafe packaging for the fish specialities of their customer Appel Feinkost.
- The 2011 IMDA Award "Best Thin Wall Packaging" was also awarded to Weidenhammer Packaging Group for the Rügenwalder Teewurst packaging. The prize is awarded annually by the In-Mold Decorating Association (IMDA) in the USA.
- Runner-up in the DFTA Award 2011 for Flexo precision printing was the Horn & Bauer Unternehmensgruppe, Germany. This prize is awarded by the Deutschsprachige Flexodruck Fachverband e.V. (DFTA), the German flexoprinting association.

Patents awarded



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9 Long-term securing of qualified employees

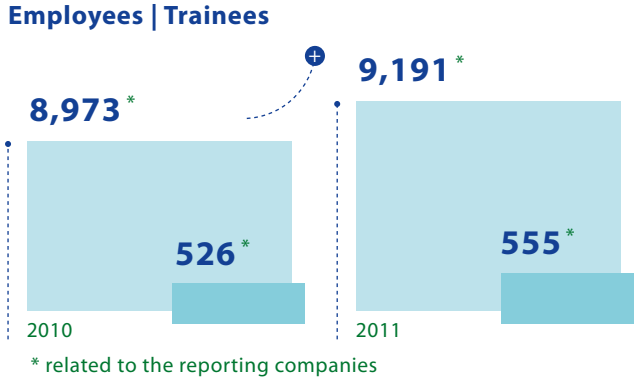
To an ever-increasing extent, the competitiveness of many German companies is suffering from the shortage of qualified staff. The already existing lack of skilled staff, especially in industrial professions, makes it necessary that the sectors affected inform proactively about their occupational image in the public eye. As a result, IK supports the Plastics Training Initiative (KAI), which was set up by the German plastics industry and which gives young people a positive picture of the sector and career opportunities. Information brochures, fairs – such as the K Trade Fair in Düsseldorf – and training events for vocational teachers will offset possible prejudices and information deficits.

Promote the training system

IK, together with other plastic associations, is however also interested in highlighting the present deficits in the training system to the public and the political decision-makers. But it is not only a question of outdated federal structures but especially of optimising the poor technical facilities in the vocational schools, which prevent the pupils from gaining a clearer impression of the profession. It is also necessary to promote the profession of process mechanic for plastics and rubber technologies in response to market requirements. In this context, IK and the IG Bergbau, Chemie, Energie (Union for the Mining, Chemical and Energy Industries) are engaged in a professional training council whose principle aim is to revamp the profession of process mechanic for plastics and rubber technologies.

Training courses also enjoy high priority in the work of the Association with the IK Academy regularly conducting training seminars in the various fields. The films extrusion seminar and the food packaging conference were two highly successful events. At interpack 2011, in cooperation with the Rheinisch-Westfälische Technische Hochschule (RWTH) Aachen, the Association organised guided tours and meetings with exhibiting manufacturers of plastics packaging. These and similar events sensitise male and female students for the branch and its professional challenges.

As an indicator of vocational and further training, IK asked its member companies for their number of trainees. In 2010 526 and in 2011 555 young people found a training position in the 34 reporting IK member companies, a quota of 5.5 % (2010) and 5.7 % (2011). By way of comparison: in 2010 the quota in the processing sector was 5.7 %. For 2011 there are no statistics available yet (BIBB 2012). In the coming years training will gain in significance for the work of the Association.



10 Compliance and corporate ethics

In the course of globalisation compliance, in other words adherence to legal regulations and self-defined ethical standards, is gaining in importance. Management for example is responsible that internationally-operating sales employees are adequately schooled in dealing with corruption and that suppliers in countries with little state control observe the basic human and workers' rights. Consequently, more and more companies are adopting voluntarily codes of conduct on a voluntarily basis which stipulate ethical principles for the management and employees. Signing such a code of conduct is often also expected of the business partners.

The Gesamtverband Kunststoffverarbeitende Industrie (GKV), the umbrella association of the German plastics processing industry, has developed a code of conduct for companies in the sector, to which IK, as the principal supporting member of the GKV, made a significant contribution. Besides cartel and competition law provisions the GKV Code of Conduct contains global guidelines on issues such as human rights, child and forced labour, health and occupational safety, environment and other ethical and social principles. By signing the Code of Conduct, the management of the member companies is committed to providing adequate information and ensuring that their employees adhere to the code.

IK recommends that its member companies adopt the GKV Code of Conduct and insist that their suppliers undertake to observe these ethical principles. The compliance guidelines of the Code of Conduct dealing with cartel and competition law also help the participating companies to lower their liability risks. These risks, which companies run because of neglected or inadequate compliance measures, are plentiful and diverse and are often underestimated. They range from damage to their image to existence-threatening claims for damages to legal consequences. The guidelines and compliance regulations of the GKV Code of Conduct fulfil international standards and thus have all the credential for recognition by the customers and suppliers of the IK member companies.

The GKV Code of Conduct was presented to the IK members at the IK Annual Meeting in September 2011. Since then over 100 IK member companies have adopted the code. A list of the companies and the GKV Code of Conduct, can be found on the GKV homepage under www. gkv. de/service/compliance. html. IK will continue to support the signatory companies in the implementation of the Code of Conduct with targeted activities.

Number of members following the GKV Code of Conduct

110

2011

Conclusions and future outlook / Strategic priorities

So far the focus of our systematic involvement in sustainable development has been the analysis of the most important challenges, opportunities and risks to the plastics packaging industry in Germany. We identified ten core areas which we assume will be vital to the development of our industry in the medium-to-long term. These were resource efficiency and recycling-based economy, climate protection and energy efficiency and protection of the oceans from plastic litter, product life cycle assessments and eco design, protection of goods, occupational safety and hazardous goods packaging, consumer protection, innovation and competitiveness, long-term securing of qualified employees as well as compliance and corporate ethics.

Our aim for the next two years is to continue to develop strategies in these ten key areas and implement them in definite measures. On chosen issues, such as Marine Litter, we want to create problem-solving approaches through focussed stakeholder dialogue.

We also want to develop firm objectives and other measureable indicators in areas where this seems possible and meaningful.

Another task is the internal communication and sensitisation of our member companies towards sustainable development. In this context we would also like participation in the voluntary reporting system for performance indicators to continuously increase.

Performance indicators of the reporting companies

A voluntary reporting system for the IK member companies was created to determine the economic, ecological and social performance indicators. In the reporting years 2010/2011 34 IK member companies with 81 sites in Germany participated in the reporting. In terms of sales they represent approximately 21% of the entire branch. Only activities in the plastics packaging sector and only the sites located in Germany were included in the report.

The following IK member companies took part in the voluntary reporting to determine the performance indicators:

Indicators

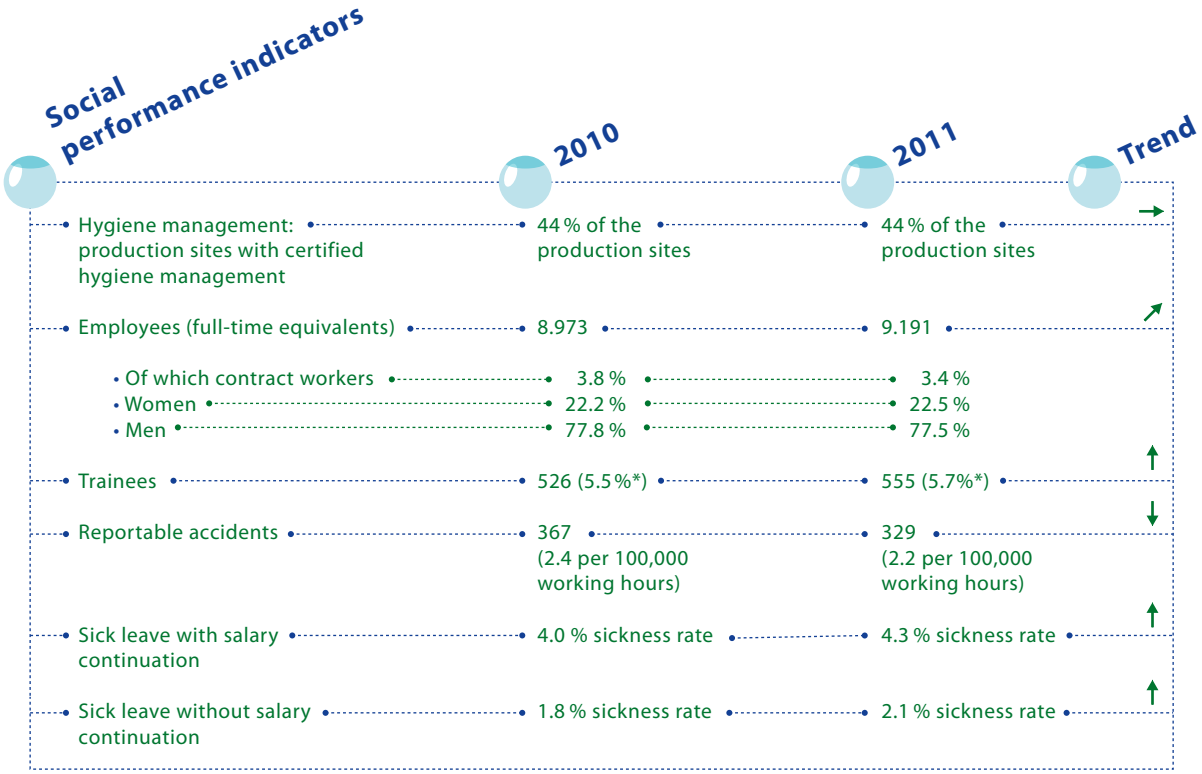
Economic performance indicators

	2010	2011	Trend
Quality management: Production sites certified to ISO 9001note	88 % of the production sites	88 % of the production sites	→
Sales of plastics packaging	924.209 t	901.660 t	↘
Turnover of plastics packaging	2.353 million €	2.503 million €	↑
Prizes and awards received	1	3	↑
Patents und utility patents awarded	53	54	↗

Ecological performance indicators

	2010	2011	Trend
Environmental management: production sites certified to ISO 14001 or validated to EMAS	40 % of the production sites	42 % of the production sites	↗
Energy management: production sites certified to EN 16001 or ISO 50001	10 % of the production sites	11 % of the production sites	↗
Total energy consumption	1,254,073 MWh (1,357 kWh/tonne provided)	1,217,643 MWh (1,350 kWh/tonne provided)	↘
• Electricity, non-renewable sources	61 %	59 %	
• Electricity, renewable sources	16 %	17 %	
• Gas	13 %	14 %	
• Heating oil	4 %	2 %	
• Fuel for company vehicles	2 %	2 %	
• other	4 %	6 %	
Volume of processed plastics	944,923 t (0.98 tonnes provided per tonne of processed plastics)	934,339 t (0.97 tonnes provided per tonne of processed plastics)	↘
• Of which recycled material	71,178 t (7.5 %)	68,567 t (7.3 %)	
Water consumptionh	591,359 m^3 water (0.64 m^3 per tonne provided)	566,161 m^3 water (0.63 m^3 per tonne provided)	↘
Climate change: Greenhouse gas emissions resulting from energy use	604,519 t CO_2 equivalent	591,392 t CO_2 equivalent	↘

Indicators



Social performance indicators	2010	2011	Trend
Hygiene management: production sites with certified hygiene management	44 % of the production sites	44 % of the production sites	→
Employees (full-time equivalents)	8.973	9.191	↗
• Of which contract workers	3.8 %	3.4 %	
• Women	22.2 %	22.5 %	
• Men	77.8 %	77.5 %	
Trainees	526 (5.5 %*)	555 (5.7%*)	↑
Reportable accidents	367 (2.4 per 100,000 working hours)	329 (2.2 per 100,000 working hours)	↓
Sick leave with salary continuation	4.0 % sickness rate	4.3 % sickness rate	↑
Sick leave without salary continuation	1.8 % sickness rate	2.1 % sickness rate	↑

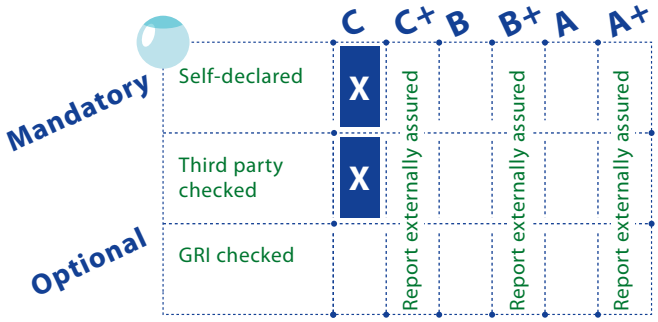
* Percentage of total staff incl. trainees

Key:

- ↑ > 5 % change over previous year (2010 to 2011)
- ↗ 1 to 5 % change over previous year (2010 to 2011)
- → +1 to -1 % change over previous year (2010 to 2011)
- ↘ -1 to -5 % change over previous year (2010 to 2011)
- ↓ -5 % change over previous year (2010 to 2011)

GRI application level and content index

Drawing up this sustainability report we have adhered to the Sustainability Reporting Guidelines of the Global Reporting Initiative, Version 3.0 (GRI G3). The attainment of application level C has been confirmed by the triple innova GmbH in Wuppertal.



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		• Total capitalisation: not relevant	–
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			–
	2.9	Significant changes in size, structure or ownership: none	–
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Strategy and profile disclosure	Detail		Page
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Imprint

IK Sustainability Report 2012

Publisher:
IK Industrievereinigung Kunststoffverpackungen e.V.
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Editorial deadline: 31.08.2012

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Photos: Martin Kaufhold; robbivierte, ionutv91/fotosearch; Ilya Andrew, Trudi Design, beermedia, Fotofermer, seen, dispicture/fotolia; Prill Mediendesign & Fotografie/iStockphoto

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