1 Progress

Corporate responsibility is a part of our daily conduct and a fundamental prerequisite for our business success. On the following pages we present a selection of our progress and activities in the area of corporate responsibility in 2013.

PROGRESS

Compliance

New process for the selection of business partners

With the introduction of the Global Business Partner Risk Management Policy, Merck made great progress in the field of compliance in 2013.

Merck applies a systematic, risk-oriented approach to the selection of sales-related business partners such as distributors, agents, and wholesalers. In essence, the greater we estimate the risk to be with regard to a certain country, region, type of service, etc., the closer and more carefully we examine the company before doing business with them.

Merck's Global Business Partner Risk Management aims to ensure that business partners are selected diligently in order to minimize the danger of adverse legal, reputational, and financial effects. This process is especially concerned with fighting corrupt practices. Adopted at the end of 2012, the Global Business Partner Risk Management Policy now constitutes a fundamental component of the selection process for business partners, along with their overall assessment. The implementation of this policy is leading to an auditable business partner selection process with system-based documentation of relevant partner and business information, approval and evaluation. Through this systematic process, we are both minimizing our risk as well as taking into account the modified requirements resulting from new anti-corruption legislation such as the UK Bribery Act.

This policy, which is in effect throughout the Merck Group, encapsulates the eight mandatory principles to be taken into account when selecting business partners.

The policy stipulates that we shall only collaborate with partners who comply with all applicable laws, who do not engage in bribery, who adhere to environmental, health and safety guidelines, and who refuse to tolerate discrimination. Furthermore, we require them to demonstrate a commitment to internationally recognized human rights and labor standards (ILO), as well as to our own compliance standards as defined in our Code of Conduct.

In order to train the relevant employees on the revised selection process, Merck's Group Compliance function initiated a training campaign in 2013. "Train the Trainer" kick-off events were held in Darmstadt as well as other regions to spread awareness of the new policy. At these events, employees from our Group Compliance organization received training, which they then took back to their respective sites to share with those (sales and distribution) employees affected by the new policy.

PROGRESS

Human Rights Charter

Group-wide human rights charter adopted

Merck's corporate culture has always been characterized by responsible conduct – whether with respect to products, employees, the environment, or society. In line with this approach, Merck is committed to protecting human rights, as demonstrated by our participation in the UN Global Compact.

In 2012, we conducted an extensive human rights risk assessment in the course of implementing the Guiding Principles for Business and Human Rights, which were endorsed by the UN Human Rights Council in 2011. Based on the results of this assessment, Merck adopted a Group-wide human rights charter at the end of 2013, thereby achieving another milestone.

The charter underscores our commitment to respecting and protecting human rights. It brings together and complements other regulations and guidelines that pertain to human rights, such as our Code of Conduct, our Social Charter, our Environment, Health and Safety Policy, and our Charter on Access to Medicines in Developing Countries. The Human Rights Charter defines our company's expectations while increasing awareness of human rights within the company. It also allows us to more accurately assess Group-specific risks and to align our business operations with our Values.

In the course of drafting the charter, we asked external stakeholders what they thought of our approach to human rights. These stakeholders included experts for companies and human rights from various countries, trade unions, associations, and specialists in individual aspects addressed in the charter. This step was crucial as it allowed us to consider the situation from various perspectives.

Within the German Global Compact Network, Merck is a member of the Human Rights Peer Learning Group, a working group that facilitates best-practice sharing with regard to business and human rights.

PROGRESS

Diabetes awareness

The Merck Capacity Advancement Program (CAP): Awareness and training on diabetes

The rising number of people with diabetes all over the world is a call to prioritize diabetes care and awareness. Merck is committed to improving the accessibility and quality of diabetes treatment.

The Merck Capacity Advancement Program (CAP), established in 2012, is a five-year program that aims to expand the professional capacity in Sub-Saharan Africa with a focus on diabetes in the following areas: R&D, clinical research, supply chain integrity and efficiency, pharmacovigilance, medical education for pre-med undergraduates and healthcare providers in rural areas, and community awareness. Merck is collaborating with ministries of health, healthcare institutions, communities, universities, local research institutes, diabetes patients associations, and media. The common goal is to raise awareness of diabetes by educating the public and supporting healthcare systems on ways to prevent, diagnose and manage diabetes effectively.

One of the key success factors of the CAP is the country-specific, long-term, partnership-based approach, featuring initiatives that are aligned with the national strategies of individual countries. In order to inform our CAP approach, we held 154 stakeholder meetings in Kenya, Uganda, Mauritius, Namibia, Mozambique, and Ghana. A wide variety of stakeholders has been involved in order to explore the countries' needs, thereby tailoring the learning materials and the CAP implementation to suit the local communities.

Under the Capacity Advancement Program, by the end of 2013 more than 500 medical students from the University of Nairobi, the University of Namibia and the Makerere University in Uganda had benefited from a clinical diabetes management training program accredited in Europe, enabling them to act as diabetes ambassadors in rural and underserved regions. In 2014, the program will expand to Tanzania, Mozambique, Angola, Ghana, Nigeria, and Ethiopia; it aims to reach about 9,000 pre-med undergraduates by 2018.

The Merck community awareness campaign "Get Informed- Get Active- Get Healthier" has thus far reached more than 3,000 people in Kenya and Uganda, providing them with free screening and medical checkups. The campaign has been implemented in partnership with the Ministries of Health of both Kenya and Uganda, the Kenya Diabetes Management & Information Centre, the Uganda Diabetes Association, and universities located in the individual countries. Patient education materials were tailored in collaboration with local patient diabetes foundations. More than 50,000 leaflets and 4,000 posters have been distributed at supermarkets, healthcare centers and "Get Informed- Get Active- Get Healthier" training camps in order to reach community members. By 2018, up to 20,000 people will have received free screening and medical checkups.

PROGRESS

Smart windows

Smart windows improve the energy efficiency of buildings

Besides liquid crystals for displays such as televisions, monitors and tablets, Merck is also developing liquid crystals for new applications. For instance, we are working with architects, glass makers and facade manufacturers to create the windows of tomorrow. Our ambitious goal is to utilize smart windows to make buildings more energy-efficient. The idea behind these windows is that their properties can be modified at the touch of a button. They can be tinted darker or made more transparent depending on environmental conditions such as the season or the time of day, thereby allowing more or less light and/or warmth to enter the building. The windows thus help regulate the temperature in interior spaces; in winter, more light is let in, and in summer less.

Merck's smart energy glass technology is based on liquid crystal mixtures containing tailor-made rod-shaped dyes. When a small electric field is applied, the dye-doped liquid crystals change their orientation to absorb either more or less light. This makes it possible to control the transparency of the glass as desired. Within seconds, the window can be switched from a bright, transparent state to a defined colored, dark state. These windows boost the energy efficiency of buildings since they reduce HVAC costs. To protect people in buildings from glaring sunlight, it is also possible to adjust the window's level of tinting individually. The advantage here over external blinds is that the window is not completely darkened nor the outside view blocked. Consequently, lights need not be turned on during the day, and employees can still look out of their windows, resulting in a pleasant work environment.

Merck's smart energy glass technology can also make the windows self-powering. Part of the light absorbed by the dyes is channeled to the glass edges, where solar cells embedded in the frames convert it into electricity to power the windows. Merck is collaborating with the Dutch company Peer+ to develop this concept. The first set of pilot projects were initiated in the Netherlands in 2013 and have proven successful. These windows will also be installed in the innovation center under construction at Merck Group headquarters in Darmstadt, which is scheduled for completion by the end of 2014.

Merck's smart energy glass technology boosts the energy efficiency of buildings, conserves energy, and increases people's sense of well-being – a sustainable and innovative solution for the future.

PROGRESS

Design for Sustainability

Design for Sustainability: Improving product properties and reducing environmental impacts

Design for Sustainability (DfS) is an approach to product development at Merck Millipore that looks to minimize the environmental and health impact at each stage of the product life cycle from manufacturing through use to disposal. At the same time, we look to maximize features that improve product performance and ease of use. We incorporate sustainability considerations early in the design process before impacts of design decisions are locked in, and we use a set of criteria for major impact areas like materials, energy and waste to measure improvements. These approaches help reduce energy and water consumption, create more productive processes that minimize waste, streamline packaging, and potentially reduce associated costs. The benefits come both during the manufacturing process at Merck Millipore as well as during product usage for the customer.

A cross-functional DfS working group including R&D, Marketing, Quality, EHS (Environment, Health and Safety), and Operations (packaging) has worked to develop the DfS processes and criteria as well as propose that the process be a formal part of our product development. Starting in 2014, the DfS process is being applied to Merck Millipore product development projects.

DESIGN FOR SUSTAINABILITY PRINCIPLES IN ACTION:

Clarisolve® Depth Filters, used in cell culture processing, were launched in 2013. With reduced pre-flushing requirements of the product as an important goal of the design, we completed a Life Cycle Assessment to quantify this reduction and other environment-related improvements. The results show that significant progress has been achieved, especially for the use phase of the product. Compared to the alternative product (Millistak+ Pod depth filter) for producing one batch at the customer, Clarisolve® is characterized by 63% reduction in use-phase energy consumption, which is equivalent to avoiding emissions from 21 gallons of gas, by a 46% reduction in use-phase water consumption, and by a 24% reduction in solid waste mass at the user facility. This lowers the environmental burden and helps customers to meet their own sustainability goals.

Also in 2013 the EZ-Fit Manifold for laboratory filtration was launched. During the design process, the DfS approach was followed, leading to improved handling, reduced energy use in autoclave, and reduced waste from materials, packaging and disposal (compared to the predecessor Hydrosol Manifold). The 38% reduction in emissions from shipping one unit to a typical customer location is equivalent to saving 240 hours of light bulb use (75 watt incandescent bulb).

EXAMPLE
EZ-FIT™ MANIFOLD FOR UNIVERSAL LAB FILTRATION

- Simplified handling, easy cleaning
- Reduced energy use in autoclave
- Reduced waste from materials, packaging and disposal

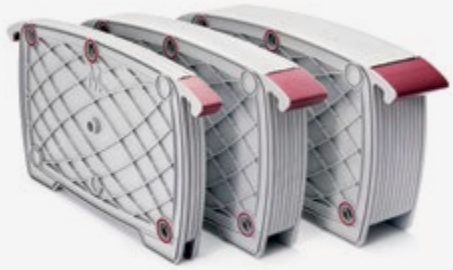
MATERIALS
47%
weight reduction, cutting raw material consumption and shipping emissions

EMISSIONS & ENERGY
91%
less emissions from autoclaving

PACKAGING
100%
recyclable corrugated packaging

END-OF-LIFE
99%
of the product can be recycled

EXAMPLE
CLARISOLVE® TIEFENFILTER



- Reduced operating costs
- Reduced energy and water consumption
- Reduced waste from materials

MATERIALS
24%
reduction in product material mass*

EMISSIONS & ENERGY
63%
less use-phase energy consumption*

WATER
46%
less use-phase water consumption*

WASTE
24%
less solid waste mass at user facility*

* Compared to EMD Millipore's process-scale Millistak+ Pod depth filter

PROGRESS

Supply chain

Social and environmental standards further incorporated into supplier management process

In 2013, Merck revised its procurement strategy to take into account corporate responsibility (CR) aspects. The aim was to further improve adherence to internationally recognized compliance, environmental, and social standards along supply chains, as well as to prevent violations of those standards.

Throughout the world, Merck procures raw materials, products and services from several thousand business associates, who in turn have their own suppliers and sub-suppliers. It is therefore an enormous undertaking to ensure that supply chains comply with CR standards. Our activities focus on our direct business partners.

Through our Group Procurement Policy, updated in 2013, we are ensuring that our procurement processes adhere to CR standards, which includes the selection, assessment and management of suppliers. This procurement policy reflects numerous internal and external guidelines, such as the Merck Code of Conduct, our Social Charter, our EHS policy, and ISO standard 14001. Standard operating procedures for Group Procurement have been revised to reflect this policy.

To complement our procurement policy, we drafted the Merck Responsible Sourcing Principles and integrated them Group-wide into our general terms and conditions in 2013. These principles define what we require of our suppliers with regard to responsible conduct, highlighting the responsibility of our suppliers to apply our corporate responsibility standards to their upstream value chain.

A key element of our optimized supplier management is reviewing and monitoring the CR standards applied by our suppliers. In addition to requiring supplier self-disclosures from both new and existing suppliers, Merck conducts annual sustainability audits based on the potential risk posed by a supplier. In 2013, we conducted 22 audits. We found four suppliers with critical flaws, and 20 suppliers with major defects. We demanded that these suppliers provide us with a corrective action plan (CAPA), which describes the course of action needed to address the issues. Auditors will be reviewing their progress. Particularly when it comes to critical flaws, we consider the option of terminating business relations if the problems are not sufficiently corrected.

PROGRESS

Climate protection & energy efficiency

EDISON – our program for climate protection and energy efficiency

Being a responsible company, we are resolute in our quest to help reduce greenhouse gas emissions. Merck has set itself the goal of reducing its greenhouse gas emissions by 20% by 2020 (relative to the 2006 baseline).

While our energy-related emissions remained largely stable in 2013, we recorded an increase in our process-related emissions[1]. Although we reduced process-related emissions per product unit by 21%, overall total emissions rose due to a significant increase in production volume. Overall CO_2eq emissions in 2013 totaled 524 metric kilotons (2012: 502 metric kilotons).

Our climate protection program EDISON consolidates all climate protection and energy efficiency activities of the Merck Group. In 2013, we once more identified a number of projects to help us achieve our CO_2 reduction targets. We are now conducting around 300 individual projects under the auspices of EDISON. Around two-thirds of these have already been launched, or are in the process of being implemented. Larger projects include the construction of carbon-neutral biomass power plants in Jaffrey, New Hampshire (USA) and Goa, India. Approved in 2012 respectively 2013, they are scheduled to go on line in autumn 2014 and will reduce CO_2 emissions by around 3,500 metric tons per year in Jaffrey, and 11,500 metric tons per year in Goa.

Progress 2013

Reduction of greenhouse gas emissions by around 1%, relative to the 2006 baseline

1 At Merck, process-related emissions are released during the chemical reactions of certain production processes.

Through the cogeneration plant at our Gernsheim site in Germany that went on line in mid-2013, we are saving around 6,000 metric tons of CO_2 per year.

Energy management plays a key role in our efforts for sustainable energy efficiency and climate change mitigation. Merck's production sites in Darmstadt and Gernsheim account for around 40% of Merck's global energy consumption. In 2012, both of these sites qualified for ISO 50001 – Energy Management System certificates, which were reaffirmed in 2013. Our Taoyuan site in Taiwan received the ISO 50001 certificate in 2013 for the first time. Counting the Bari and Tiburtina sites in Italy, that makes five of our production sites that have a certified energy management system.

In 2013, we furthermore revised our company car policy and defined a reduction goal. By 2020, we intend to decrease the Group-wide CO_2 emissions of our company car fleet by 30% relative to the 2012 baseline. Merck's vehicles will be more fuel-efficient and emit less CO_2, which will enable us to contribute to climate change mitigation and cut down costs.

CASE STUDY: Getting energy from a nutshell

At our site in Goa, India, we are currently constructing a power plant that will utilize climate-neutral biomass as fuel.

http://www.merckgroup.com/en/responsibility/case_studies/environment.html

PROGRESS

Diversity and inclusion

Increased success through a diverse workforce

A diverse workforce can boost innovation, team performance, and business success, as well as make a company highly attractive as an employer.

We want to benefit from the opportunities offered by a heterogeneous workforce, which is why we established the Diversity Council in 2013. Consisting of executive managers from all divisions as well as from select Group functions, this council is responsible for developing and elaborating Merck's diversity and inclusion strategy. Our current focus areas are internationality, demography, and the gender ratio.

In 2013, 25% of the management positions at Merck were held by women, which means that we reached our strategic goal of raising this percentage up to 25% to 30%. And we intend to further increase this ratio by 2016. Fiscal 2013 was the first time that a woman was appointed as head of a Merck Group division.

Since we are an international global player, one of our fundamental principles is to recruit employees from the countries in which we operate and offer them career development opportunities. Currently, people from 114 nations work at Merck.

Progress 2013

25% of the management positions at Merck held by women

In Europe and the United States particularly, we are addressing demographic change through various programs; this includes adapting workplaces to the needs of older employees as well as establishing a health management program to maintain their ability to do their jobs.

Manager and employee conduct represents a key success factor in the implementation of our corporate strategy. In 2013, we developed a new competency model describing the type of conduct that supports Merck's strategic alignment and fosters business success. The types of behavior represented in the six competencies promote diversity and inclusion within the company; they provide a crucial basis for all development activities, for assessing performance, and for recruiting new employees.

THE 6 CORE COMPETENCIES SUPPORT DIVERSITY & INCLUSION

CUSTOMER-FOCUSED

"Establishes a culture of foreseeing customer and consumer needs and realizing organizational offerings"

RESULT-ORIENTED

"Establishes a culture of setting and achieving challenging goals that take overall business needs into consideration"

GLOBAL

"Owns the alignment of embracing diversity and inclusion as well as working with people from diverse backgrounds and cultural differences"

EFFICIENT

"Establishes a culture of handling ambiguity in the organization"

INNOVATIVE

"Establishes a culture of the implementation of new work routines within own area of responsibility while considering overall business needs"

ENGAGED

"Establishes a culture of building collaborative networks across the organization and creating an open, positive atmosphere at work"

In order to foster diversity and inclusion within the company, we engage in numerous activities both Group-wide and at the local level. These include mentoring programs and special advanced training on topics such as leadership skills and self-marketing. Diversity and inclusion at Merck is also furthered by internal networks initiated by Merck employees, such as the International Community and Women at Merck, each of which represents the interests of a different group. In addition, we are also supporting external networks that work toward diversity and inclusion in the professional world. For instance, in October 2013, Merck hosted the European summit of the Healthcare Businesswomen's Association (HBA) in Darmstadt. There, attendees discussed the development and advancement of leadership skills for professionals in the health industry – in particular pertaining to women.

PROGRESS

Occupational health and safety

Number of accidents lower in 2013 as well

Merck considers the prevention of work-related illness and workplace accidents to be a matter of course for any responsible employer. We therefore set ourselves the goal of reducing the lost time injury rate (LTIR – workplace accidents resulting in missed work per million work hours) to 2.5 by 2015.

In 2013, as in previous years, we again outperformed this goal, achieving an LTIR of 2.2. We are now working to maintain this level, although our top priority is of course to prevent any and all accidents.

In 2013, Merck presented the Safety Excellence Award for the fourth time, which recognizes those production sites with no workplace accidents on record for the year. More than half of all Merck's production sites achieved this goal in 2013, with 38 out of 63 sites having received the award.

The consistent reduction in the accident rate is particularly attributable to the BeSafe! program, which was initiated in 2010. Since its launch, numerous accident prevention and occupational safety measures have been implemented at our sites throughout the world. We are focusing heavily

Progress 2013

LTIR of 2.2

on our production sites and on training the employees there on the prevention of behavior-related accidents. Nevertheless, our goal is to reduce the accident rate across all of our sites.

BeSafe! is a Group-wide program with harmonized standards; local modules allow the program to be adapted to fit the particular needs and preconditions of the individual sites. For instance, our sites each take a different approach to engaging managers in the safety culture and building their buy-in; they have their own methods of reinforcing a sense of personal responsibility among staff as well as increasing employee awareness.

In 2013, we continued to sensitize our employees worldwide to workplace hazards through numerous initiatives, activities and awareness campaigns, and we also conducted training programs. For instance, newly minted EHS (Environment, Health, Safety) managers now take part in the EHS StartUp! training seminar on occupational health and safety. Furthermore, regional EHS forums in North America, South America, Europe, and Asia promote best-practice sharing and educate employees on new topics. In September 2013, 26 EHS managers attended the EHS Forum hosted by the Poseung site in South Korea.

Our site in Bari, Italy held the third EHS Best Practice Sharing Meeting in December 2013. The more than 50 participants included EHS managers from various Merck sites, as well as representatives of local and international companies, representatives from the Italian manufacturing and service company association Confindustria, and representatives from the Polytechnic University of Bari. In addition to a presentation on the theory of behavior-based safety, attendees also shared best practices pertaining to safety.

PROGRESS

Schistosomiasis

Working together to fight schistosomiasis in Africa

Since 2007, Merck has been supporting the World Health Organization (WHO) in the fight against the worm disease schistosomiasis in Africa. This ailment is highly prevalent in Africa, Asia and Latin America and is the most commonly occurring tropical disease in Africa. Although the Merck Praziquantel Donation Program was originally intended to run for a limited duration, Merck is continuing the fight until the parasitic disease schistosomiasis has been eliminated in Africa.

In order to reach this goal, in 2012 Merck pledged to significantly expand its donation, a tenfold increase of up to 250 million praziquantel tablets per year in the medium term. Our efforts to fight schistosomiasis reflect the United Nations Millennium Development Goals and also constitute part of the London Declaration initiative to fight neglected tropical diseases, which was launched by the Bill & Melinda Gates Foundation in 2012.

Since the start of the Merck Praziquantel Donation Program, Merck has donated over 160 million tablets. To date, more than 38 million patients in total have thus been treated, consisting primarily of school children. In 2013, around 50 million tablets were provided to the African countries of Angola, Ethiopia, the Democratic Republic of Congo, Cameroon, the Republic of the Congo, Madagascar, Mali, Nigeria, Senegal, Zimbabwe, Sudan, and Tanzania.

WHAT CHILDREN SHOULD KNOW ABOUT SCHISTOSOMIASIS (BILHARZIA)

Download PDF

INFORMATIONAL POSTERS

In addition to the tablet donations, Merck is also supporting an awareness program at schools in Africa to educate people on the causes of schistosomiasis, as well as ways to prevent the disease. Following the success of the pilot projects, the program is now being rolled out in Senegal with 750,000 brochures and in Malawi with 250,000, in addition to the 75,000 informational posters that are being printed. In order to reach more children, Merck is paying for the brochures to be translated into Swahili, Arabic and Portuguese.

Besides its donation and awareness programs, Merck has joined a public-private partnership to research a praziquantel formulation for young children since the current tablets are only approved for adults and children over six. As part of its initiative to fight neglected tropical diseases, the Bill and Melinda Gates foundation has provided US$ 1.15 million to Merck and its project partners Astellas Pharma Inc., the Swiss Tropical and Public Health Institute, and TI Pharma to conduct preclinical research.