Sustainability report 2014
I n 2014, we made progress on many fronts to strengthen our financial position and performance. This gave us an opportunity to reinforce our customer focus: we signed some groundbreaking deals, revamped our organization and worked across the company to further improve our delivery performance and quality.

Customers are also at the heart of our sustainability approach. We create materials that are long lasting, durable and fully recyclable. In other words, sustainable materials that help realize our vision of a world that lasts forever. We strive to be the best experts in the industry so that we can help our customers find the best and most sustainable material for their application. In 2014, we further developed the sustainability knowledge of our sales teams and technical support through training.

Earning and keeping a reputation as an expert requires credibility, so we continuously challenge ourselves to improve our sustainability performance in our own operations. In 2014, we achieved many of our ambitious targets: we met our target to further increase the use of recycled content in our products and reduce climate impact. We also made progress in environmental management, where an important milestone was reached with the ISO 14 001 certification for Outokumpu Nirosta stainless steel production.

Safety remained at the top of our agenda in 2014 as well: we launched a number of engagement efforts to further increase the awareness and safety orientation. The statistics continued to show how our relentless focus on safety is pushing us forward: our lost time injuries per million working hours decreased from 4.5 to 2.7.

To reinforce the importance of responsible business practices we renewed our Code of Conduct, and launched a comprehensive training program to reinforce the importance of responsible business practices as well as compliance law training for all key audiences. We also conducted a company-wide employee survey to encourage dialog and feedback in the company, and seek further areas where we can improve leadership, employee engagement and communication.

Since the acquisition of Outokumpu and Inoxum two years ago, we have been going through a massive transformation. The changes that have been necessary to reverse the trend of continuous losses have been fundamental, and many of them very painful. In 2014 we reached an agreement with the labor unions in Germany regarding the closure of Bochum melt shop, and made the decision to close our Kloster mill in Sweden. The commitment and perseverance of our employees across the company under these turbulent times speaks for their professionalism, and is a source of pride for our company.

Mika Seilolahti

CEO
Highlights 2014

Our year was a clear demonstration of the power of joint efforts. Outokumpu truly made progress towards one company with a common culture. Our results in the field of sustainability show what can be achieved by dedicated work towards common goals.

1. Improved performance
During 2014, our stainless steel recycled content rose above 85%. Emission efficiency was improved 3.5% against the baseline and our overall carbon profile was reduced in line with our long-term target – 20% by 2020. Outokumpu continued quarterly to follow Sustainability Key Performance Indicators (KPIs) to secure the continual improvement and more frequent systematic monitoring of the progress. The KPIs are recycled content, energy efficiency and carbon efficiency. In addition, the KPIs also indicate financial savings against a target baseline, making the economic benefits of sustainability more concrete. All this comes down to the fact that – again after year 2014 – we can offer stainless steel products to our customers with even lower environmental impact and energy demands.

2. Sustainability trainings for sales
At Outokumpu we wish to put the customer at the center of everything we do – including sustainability work. The great sustainability prospects of our products are only realized through our customers’ solutions. The unique value proposition that we can offer in the field of sustainability needs to be efficiently communicated to customers. During 2014, the Sustainability Training project for Sales was started. This exercise included training of our technical support professionals and sales teams, enabling us to better reveal the sustainability benefits of our material. Customers face growing demands for sustainability facts and supporting documents such as: Life cycle analysis data, product declarations, green building rating factsheets and, carbon footprint data. Therefore, our customer interface has to further improve our delivery performance and quality.

3. Code of Conduct and compliance training
Outokumpu is strongly committed to responsible business practices. Outokumpu’s Code of Conduct, which sets the Group’s ethical standard and guidelines for a common way of working, was revised and updated in 2014. The revised Code of Conduct is available in all nine major languages of the Group. It was implemented with a strong involvement and message from the top management and through a wide internal communication campaign and e-learning training. As part of the training, Outokumpu launched an e-learning in its Code of Conduct, compulsory for all white collar employees. The first stage in 2014 covered some 3,000 people out of which 95% completed the training. Other compliance training carried out during 2014 included e-learning in competition law compliance for the relevant personnel in the Group. The training has been successfully completed by some 1,400 employees in 2014.

4. Building Outokumpu Spirit and listening feedback through O’people survey
Outokumpu spirit workshops aiming to pave the way for new Outokumpu culture were carried out in the units throughout the year. Cornerstones of the spirit are four Winning Behaviors, our common understanding on what will bring us to success. Winning Behaviors are putting the customer first, turning volumes into profit, acting with speed and working together. Outokumpu Spirit workshops rolled out in all major locations and some 2,000 Outokumpu employees took part. For example in Mexico, each employee was invited to participate and some 90% of the workforce took part in workshops. Each employee made a promise at the end of the workshop on what they can immediately do to improve their work.

5. Environmental management systems
Sustainability is one of our company’s fundamental principles, we want to minimize the environmental risks and impact of our production processes. Outokumpu has a firm policy that all production units have environmental management systems. The objective is also that the Environmental Management Systems are certified according to ISO 14 001. This is a new requirement for former Inoxum units. Outokumpu Nirosta started work for certification right after the integration. As a result of fast determined work, the Outokumpu Nirosta business line received certification for its environmental management system according to EN ISO 14 001 during summer of 2014.

6. Sustainability awards and recognition
During the year 2014, Outokumpu received many prestigious awards. First in May Outokumpu received International Stainless Steel Forum (ISSF) Sustainability award for the groundbreaking tireless work in the health and safety, based on the past three decades’ long research of the health impacts of stainless steel production. During November International Chromium Development Association (ICDA) awarded Outokumpu’s Tornio operations in Finland on long-term successful work in waste water treatment and protection of the sea environment. During 2014 Outokumpu was rated by RobecoSam as one of the top-scoring companies in our industry, Outokumpu qualified for inclusion in the 2014 Sustainability Yearbook and received the Silver Class distinction for its excellent sustainability performance.
A world that lasts forever

SUSTAINABLE PROCESSES

Sustainability is key to Outokumpu’s long-term prosperity and growth. We develop our operations every day, step by step. This takes us closer to our target – a sustainable society.

85% RECYCLED CONTENT

- Ferrochrome (Kemi mine)
- Nickel
- Molybdenum
- Other alloys such as Titanium

RECYCLED STEEL USE ANNUALLY OVER 2,000,000 TONNES

SUSTAINABLE SUPPLY CHAIN

Our top priority is a safe and healthy workplace

5% RECYCLED CONTENT

Melting of stainless steel

Continuous casting

Landfill wastes reduced by 80%

Over 100,000 tonnes of metals recovered from waste and utilized as raw material

CUSTOMER BENEFITS

- Clean tech material
- Low environmental footprint
- Uniquely sustainable production
- Life Cycle Inventory (LCI) available for all main products

STAINLESS STEEL IS 100% RECYCLABLE

SUSTAINABLE STAINLESS STEEL

Outokumpu’s stainless steel enables efficient solutions benefiting both customer and society as a whole. Stainless steels superior life cycle properties give customer advance in sustainability.

Steel is the most recycled material in the world.

6:1 EFFICIENT LIFE CYCLE AVOIDS 6 x EMISSIONS USED TO MAKE IT

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MEGATRENDS DRIVING THE DEMAND FOR STAINLESS STEEL

POPULATION GROWTH AND URBANIZATION, INCREASING MOBILITY, CLIMATE CHANGE, SCARCITY OF RESOURCES AND ENERGY.

White goods and other appliances ~13 years

Food and drink, kitchenware ~23 years

Transportation ~23 years

Building and construction (ABC) 50+ years

End use of stainless steel ~20 years

Landfill wastes reduced by 80%

Over 100,000 tonnes of metals recovered from waste and utilized as raw material

Our aim is to maximize recycling

Melting of stainless steel

Continuous casting

Hot rolling

Cold rolling

Packaging and delivery

Recycling and delivery

Outokumpu recycling processes

Metal industry and machinery ~18 years

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Sustainable Stainless

As a material, stainless steel is strong, corrosion-resistant, durable and hygienic: in many ways, it is the perfect answer to global challenges such as resource scarcity, urbanization, and global climate and water challenges.

The average recycled content for all stainless steel produced by the Group in 2014 was over 85%.

Stainless steel offers properties for superior life cycle

Global megatrends such as addressing humanity’s growing demand for clean energy and pure water put higher expectations on material properties. Search for more efficient solutions is constant ongoing trend in all of our customer segments. Stainless steel is often the optimal choice, for example in applications such as solar power, biofuels and wind power. These require sustainably sourced materials that enable low life cycle costs.

We build the future from the past

Steel is the world’s most recycled material. Estimates indicate that the current end-of-life recycling rate for stainless steel is some 82%. In global terms, approximately 50% of the raw material used in making new stainless steel is recycled steel. In Outokumpu’s manufacturing operations, the average recycled content for all stainless steel products produced by the Group in 2014 was over 85%.

The most important raw materials used by Outokumpu in producing stainless steel are recycled stainless and carbon steels. Together with metals recovered from waste products and by-products of the production process, they enable the recycled content of stainless steel produced by the Group to be raised significantly higher than the global industry average of 50%. In addition to recycled steel, alloying elements, including iron-containing alloys and other metals such as chromium, nickel and molybdenum, are also required.

Stainless steel is fully recyclable and suffers no degradation during reprocessing. Its constituents (including iron, nickel and chromium) can therefore be reused indefinitely in producing new stainless steel. These excellent recycling characteristics mean that stainless steel is well positioned to meet the demands of a future sustainable society. Outokumpu recognizes that recycling and the life cycle approach are important elements in achieving sustainable operations.
Outokumpu stainless steel is used in a wide range of different products, from industrial machinery and tanks to kitchen utensils and mobile phones. Both service life and other expectations on the products show large variations over this large span of end-applications. However, there are some characteristics of Outokumpu stainless steel that benefit humankind and the environment regardless of where in society the material ends up.

Stainless steel is practically inert when the appropriate steel is chosen, which means that only extremely low levels of metal ions are released from exposed stainless products, resulting in no harmful impact on the environment. In addition to its corrosion resistance, stainless steel also has good mechanical properties, and these can be exploited by manufacturing lighter components and products without compromising safety requirements.

The safe choice in food processing

The fact that no emissions arise from stainless steel when in use is one of the success factors for its use in the food processing industry, where stainless steel has proven that it is an ideal material as it is easy to clean and hygienic. The requirements on food contact materials keep getting tougher to ensure that our food does not get contaminated. There are, for example, new conservative limit values proposed in the industry has examined how different stainless steels meet these new guidelines by testing different steels, including some supplied by Outokumpu. The results have confirmed the suitability of stainless steel as a material in contact with food.

Life cycle of steel products

Outokumpu’s production of stainless steel can be divided into five core processes.
- 1. Exploration
- 2. Mining & Concentration
- 3. Production of ferrochrome
- 4. Intergrated FeCr Production
- 5. Alloys & Virgin materials

Outokumpu stainless steel is used in a wide range of different products, from industrial machinery and tanks to kitchen utensils and mobile phones.
Product and application development

The direction of Outokumpu’s product development is given by global trends like economic and population growth, mobility, urbanization, climate change and limited resources. We work closely together with our customers in order to align our product development with customers’ current and future needs. The development of long-lasting, sustainable material solutions providing advantages over the whole product life cycle is the key focus. The product development involves development of new steel grades, new surface finishes and improvement of existing steel grades.

Outokumpu has recently launched several new steel grades, including ferritic 215 Cr stainless steel 4622, austenitic 4420 and formable duplex stainless steels FDX 25™ and FDX 27™. All these grades provide life cycle efficient alternatives for conventional nickel-containing austenitic steel grades. During 2014, commercialization activities related to these new products were continued. These activities include, for instance, testing of the new materials in customers’ applications and ramping up and fine tuning of the production processes.

Outokumpu’s R&D teams work closely together with our customers and sales organization. Our R&D experts provide our customers with technical support and advice related to material selection, fabrication and material performance in customers’ applications. Furthermore, our R&D teams have a strong business development focus. We actively search and develop new application areas and markets for Outokumpu’s products together with our customers and potential new users of stainless steel. In the following, two examples of our recent activities are given.

Outokumpu’s material combined with know how leads to sustainable innovation and public recognition

PVI Industries LLC, an American water heaters manufacturer has chosen Outokumpu’s proprietary lean duplex grade LDX 2101® to replace carbon steel in its water heaters. Using lean duplex has significantly reduced PVI Industries’ waste stream and increased the useful life of its water heaters.

Outokumpu’s stainless steel has enabled PVI to reduce nearly 600,000 kg of waste a year, because stainless steel does not require any coating or plating. Previously, PVI was using electroless nickel plating to reduce corrosion in the carbon steel water heater tanks. The process generated significant waste stream which is now completely avoided.

Clear savings are achieved since no maintenance is required. In 2009, PVI Industries built a water heater prototype, test Unit #1, using Outokumpu LDX 2101®. The prototype went through an accelerated life testing equivalent of 30 years of normal life use at highly elevated temperatures of about ninety 90 degrees Celsius (190°F). Five years after development, the prototype is still operational. The useful life expectancy of carbon steel water heater tanks was five to fifteen years, depending on application. PVI now warranties standard duplex water heater tanks for up to 25 years. The additional cost of the stainless steel is offset by the savings from no longer coating and plating the carbon steel material.

Sustainability achieved

Moving to duplex stainless steel also reduced PVI’s waste stream to nearly zero. The efforts were recognized on May 7, 2014 by the State of Texas at the 2014 Environmental Excellence Awards where PVI received the honor for Pollution Prevention.

“We are thrilled to be recognized in the largest industrial state in America as the number one green company in this area, and it is a sustainable footprint we expect to carry forward for years to come. Our experience started with a desire to have a more sustainable production operation. But this quickly expanded to a broader mission. There is a huge movement in the marketplace for materials that follow a longer life principle. And this parallels with PVI’s belief. In Outokumpu, I know we have a business partner who shares that core value.” Chris Bollas reports.

Stainless steel is an important enabler in clean technologies.

Outokumpu Sustainability report 2014
Our impact on the environment

Stainless steel is 100% recyclable, hygienic and corrosion resistant and the environmental impacts resulting from its use are almost non-existent. On the other hand, its production – both the manufacturing and reprocessing stages – does have an impact on the environment.

The life cycle of stainless steel products is very long and the recycling rate among the highest. Therefore, the environmental impacts have to be analyzed always per life span, not only related to the production phase. The use of steel in the modern society minimizes emissions by creating efficiency in for example transport, construction, industries and energy production. Due to these facts, steel products are solutions in climate combat and the protection of the environment.

Environmental data and reporting for 2014 covers Outokumpu’s stainless steel, ferrochrome and mining operations in the continuing operations.

Unless otherwise stated, the environmental data for 2013 and 2012 has been restated to reflect Outokumpu’s continuing operations at the end of the reporting period.
Environmental goals and results

Outokumpu is committed to the long-term target of reducing the Group’s carbon emissions profile (direct and indirect emissions) by 20% per tonne produced by 2020. The setting of this challenging target is a clear demonstration of Outokumpu’s desire to improve the Group’s energy efficiency, to contribute to reducing global emissions of carbon dioxide, and to participate in the transformation towards a low-carbon society.

All environmental target setting and associated long-term goals cover all Outokumpu units globally. The baseline for long-term targets was kept the same: the 2007–2009 period. Progress and reported 2014 results include all current production units and programs.

Group-wide results 2014

Based on the outcome of Group-wide targets for 2014, environmental work once again yielded great results. Below you can find the results on the targets and short comments:

- No significant environmental incidents: The target was achieved; there were no significant environmental incidents involving Outokumpu operations during 2014. This demonstrates the excellent standards maintained in our operations.
- Climate change: Reduction of emissions was in line with Outokumpu’s long-term target of achieving a 20% reduction in direct and indirect CO₂ emissions by 2020, against the program baseline 2007–2009. The Group’s total carbon profile per tonne of steel produced was reduced by some 9% compared to baseline figures. The main contributors to this achievement were higher capacity utilization rates at processes, improved energy efficiency and lower specific emissions.
- Energy efficiency: The target of achieving a further improvement of 1% from the 10% achieved in 2013 to a very ambitious 11% in energy consumption per tonne of stainless steel processed (with 2007–2009 as the base period) was not achieved. Energy efficiency improvement was affected by changes in the production and some production interruptions. Total cumulative improvement achieved during the year was 2%.
- Material efficiency: Further reduction in the amount of waste landfilled per produced tonne of stainless steel produced. Material efficiency was improved against the baseline, and we especially succeeded in utilization of steel making slag.

Site-specific results 2014

- Kemi mine: Reuse over 250,000 tonnes of lumpy rock and barren rock from the Kemi concentrating plant to the underground mine. This target was not achieved, since Kemi mine underground mining practices were changed during the year and instead of these above ground materials, other barren rock from underground was used directly.
- Aviša: Increase energy efficiency by 2% per processed tonne. This target was achieved, resulting in an increase in energy efficiency of 3.5% per tonne.
- Sheffield melt shop: Increase material efficiency by reducing waste landfilled 2% per produced tonne. This target was achieved with an amount of waste to landfill decreased from 49 kg/t to 44 kg/t.
- San Luis Potosí: Reduce fresh water consumption to 1.50 m³/tonne processed and reduce waste to landfill below 74 kg/tonne processed. These targets were also achieved. Fresh water consumption was reduced to 1.17 m³/t and waste to landfill to 69.4 kg/t.
- Calvert: Develop solution for on-site melt shop slabs recovery process. This target is ongoing, there are several solutions developed. These are being analyzed, final decision on the implementation has not yet been done.

Efficient management systems save environment, costs and time

Outokumpu’s firm objective is to minimize the environmental burden of the Group’s operations as much as is economically and technically feasible. The basis of this work is the Environment, Health, Safety and Quality (EHSQ) Policy. This policy was renewed in March 2014 by the CEO according to feedback from internal units and customers.

Outokumpu has coordinated internal Environment, Health and Safety, Quality and Energy Efficiency (EHSQ&EEn) management systems since 2009. These systems, policy, instructions, targets and audit findings are systematically reviewed. The aim is to simplify and integrate all these systems and instructions when and where possible.

The EHSQ&EEn Group perspective is aligned with the Group’s management process and annual planning. Outokumpu’s aim is also to harmonize and integrate internal management systems as much as is possible and reasonable. For example, Coil EMEA operations in Finland and in the Netherlands operate under integrated environmental and quality certifications, and environment and energy efficiency management systems are integrated in Outokumpu Nirosta covering the production sites in Germany.

Operational efficiency of Outokumpu’s systems and certification is monitored using both internal and external audits and ensured by co-operating with certification bodies. The number of non-conformities and corrective actions identified in EHSQ&EEn systems found by external auditors in our units are regularly monitored. In 2014, these non-conformities were typically minor and corrective actions were made as soon as possible. The Group also provides the relevant authorities with reports on Outokumpu’s operations in all the countries in which we operate.

Outokumpu’s production sites have employed risk-based management systems, which help in avoiding spills and accidents that could be harmful to humans or to the environment. All these systems operate in accordance with the Group EHSQ policy. All our production chains have certified ISO 9001 quality management system and almost all production sites have certified their Environmental Management Systems (EMS) according to ISO 14 001. Typically, energy efficiency is integrated into the Environmental management system, although many of the Group’s sites also have ISO 50 003 certification standards for energy efficiency.

In 2013, the Group decided that all our production chains should be certified by the ISO 14 001 certification system (EHSQ&EEn) by 2015. This meant that the work started towards certification in our German and Mexico units and in Calvert, which were still un-certified.

In 2014, the main progress in this area took place in the EMEA Coils Service Centers and in Nirosta units in Germany. The Nirosta environmental management system achieved certification in June according to ISO 14 001 and Group’s principles. The Calvert site in Alabama, USA and the Mexico cold rolling plant in San Luis Potosi, Mexico have started projects to certify their environmental management systems similarly. The Outokumpu Leadership Team also agreed that all major plants and production units should certify their existing Health and Safety systems by the end of 2016.

In EMEA Coils Service Centers, a common and integrated management system set-up was established during the year. With the new integrated management system successfully in place, the Coil EMEA Service Center network now has a common way of working and joint KPIs.

After the acquisition of Inoxum Outokumpu had Service Centers from several separate companies including different business models and ways of working. Now the new integrated multi-site system and registration saves both money and efforts. All management systems (Health and Safety, Quality and Environment) are audited simultaneously.

Group-wide goals for 2015

- No significant environmental incidents.
- Climate change: Reduction of emissions in line with Outokumpu’s long-term target of achieving a 20% reduction in direct and indirect CO₂ emissions by 2020, against the program baseline 2007–2009.
- Annual progress of this target is followed as an internal quarterly KPI; the target for 2015 is split into separate energy efficiency and CO₂ emission targets.
- Energy efficiency: A further reduction of 1% in energy consumption per tonne of stainless steel processed, cumulating to 10% with 2007–2009 as the base period.
- Direct CO₂ emissions from production operations reduced by 1% per tonne of stainless steel processed, cumulating to 4.5% with 2007–2009 as the baseline period.
- Recycling: Further 1% increase in the use of recycled metal through higher input of recycled materials per tonne of stainless steel. Target aiming 89% (= 890 kg recycled input per tonne of crude steel produced). The Group’s mid-term ambition is to achieve a level of over 90% (900 kg of recycled metals per tonne of crude steel produced) by 2028.
- Materials efficiency: Further reduction in the amount of waste landfilled per tonne produced.

Site-specific goals for 2015

- Outokumpu UK units: – Increase energy efficiency from 2.05 to 2.0328 MWh/t per liquid steel.
- Decrease waste to landfill from 36.5 kg/t to 32 kg/t.
- Avseda, Sweden: – Reduction of direct process-related CO₂ emissions by 4% per tonne.
- Tomix, Finland: – Energy efficiency: Reuse rate of carbon monoxide gas from ferrochrome production > 95%.
- Emission control and decreasing: Improvement of cleaning treatment equipment at ferrochrome sintering plant according to the detailed program.
- Increase of environmental awareness: New environmental safety training for own employees.
- SKS, China: – A new target: Maintain the plant site and landscaping in excellent condition.
After necessary preparation an integrated multiple registration was successfully realized during the fall, and official certificates were issued in January 2015. The multiple registration covers the EMEA-Civil Service Centers in France, Hungary, Italy, Poland, Sweden and UK as well as in Krefeld as the central function. The work continues in 2015 with the integration of the two remaining Coil Service Centers in Germany.

At the Group level, Outokumpu also has a long tradition of internally steering environmental performance: the first Group-wide internal Environmental Committee was established in 1969. The activity now is named Outokumpu Environment Officer Network, which meets regularly each quarter to manage and steer environmental operations and share best practices. It also has clear responsibilities and mandates according to the internal EMS (Management System) covering (Environment, Health and Safety, Quality and Energy efficiency management and requirements). In environmental matters, a similar network was established to coordinate European CO2 Emission Trading. The Group perspective is aligned with the Group’s management process – our German Nirosta production units (Krefeld, Dillenburg, Bochum, Benrath) have successfully passed all external annual ISO 14 001 audits and achieved the certification. After these, the coverage of Outokumpu’s main stainless steel production lines applies to 100% of all stainless steel production units. The implementation of EU chemical REACH regulation is a business risk for many industries, also for Outokumpu. One tool in REACH is to ban certain chemicals and substitute dangerous substances through an authorization process. The implementation of EU chemical REACH regulation is a business risk for many industries, also for Outokumpu. One tool in REACH is to ban certain chemicals and substitute dangerous substances through an authorization process.

Regulatory environment, policy and legislation developments affect competitiveness

Emerging environmental, energy and other legislation is reviewed in accordance with the Group risk management policy and integrated together with other risks. Outokumpu has identified changes in the regulatory environment as one of the most significant issues and has introduced a process to consider changes in the form of emerging and planned legislation stemming from current policies. Whether policy related changes are local, regional or global, the change always poses potential risks. Policy and authority involvement in the business environment has a direct impact since our operations are always conducted according to the laws and regulations. Our way of identifying and mitigating these risks is similar to risk management in general and these are integrated into the Group-wide risk management process.

Outokumpu’s risk management instructions; we assess regularly the external regulatory environment changes and its potential impact on the company. One relevant area is so called political risks coming from new legislative initiatives and regulations. These might be global / international like EU processes (for example the climate targets and negotiations in the coming COP process), regional like the EU-wide emission trading legislation, based on different other frameworks and policies (such as the Japanese, US, European policies) or local like for example on the Baltic Sea (like International Maritime Organisation, IMO) or national (like extra border tax for steel products or industry tax policy).

All these identified areas are followed up by a certain Group function on the environmental and energy management and assessed against the internal instructions. For example, in the environmental area the new political initiatives and legislation are dealt with in internal Outokumpu Environment Officer Network. The information flow between the external and internal initiatives comes mainly through industrial associations or through our local units which are obligated to report the relevant and possible risks coming from changing legislation. In practice, our company co-operates significantly in these matters with industrial organizations (see chapter Associations and federations).

The main new or upcoming items of legislation which have been identified as potential business risks are mainly coming from the area of energy and climate, environmental, chemical or tax policies. During last year, these included for example renewed EU Climate and Energy package 2030 and EU Emissions Trading rules and similar initiatives in the US and China and some unexpected changes in national environmental or tax regulation.

From our perspective, energy and climate policies are widespread and different on each continent. The global climate negotiations in Lima, Peru in December 2014 did not reach any new common view or decisions. For our company this means that we have to constantly assess and predict the changes in materials and energy prices in our production regions and countries.

Emerging legislation

In Europe, the EU Commission came forward with comprehensive “Energy and climate framework 2030” in early 2014. This policy initiative has significant direct and indirect effects on the Group’s operations. The framework has direct impact through binding EU legislation (for example on energy performance of buildings as a measure to increase energy efficiency). The framework also affects competitive advantages both within the EU and in relation to third countries. The European Council has concluded on the framework during their October summit. There are nevertheless a lot of uncertainty and unpredictable issues which depend on the implementation in the form of related directives and decisions.

The EU has many other partially overlapping energy policies in place and emerging with huge impact on EU energy markets as a whole and on Outokumpu operations. These changes have an impact on the business environment and from Outokumpu’s point of view the most important EU policies are: the EU Emissions Trading Directive, State Aid Guidelines for ETS compensation, Energy Taxation Directive, Energy Efficiency Directive, Renewable Energy Sources targets and long term EU 2030/2050 climate and energy targets and 2050 Energy Roadmap. As an energy intensive industry, Outokumpu faces difficulties from time to time from national and rapid changes in energy policy. The latest of these changes has been the tax in the US place in Germany due to the extra fees in electricity prices for renewable energy sources. This was costly for all electricity intensive industries and caused uncertainty for the future and investments. Similar unexpected changes took place in Finland during last year and energy prices in the coming years. These types of changes are difficult to see and expect beforehand and it makes the future and investment planning difficult.

In Germany the so called EEG tax for renewable energy created also significant cost implications for energy intensive processes. This additional tax was levied for all electricity intensive enterprises during 2013. However, last year 2013 it was planned to grant significant tax refund which Outokumpu received during 2014. After a long period of negotiations between industry and the German Government it is now likely that EEG costs will be reduced to some EUR 2 million in coming years for Outokumpu operations in Germany.

Many challenges in environmental initiatives and legislation were followed. In chemical and environmental area similar or new challenges in 2014 were for example:

• European legislation related to chemicals (REACH) and product safety (CLP) including the REACH authorization processes;
• Implementation of the Industrial Emissions Directive in the European Union together with binding Best Available Techniques (BAT) requirements;
• The EU’s initiatives on air quality policy and national emissions ceilings (the EU Air Quality Review Package);
• The International Maritime Organisation’s decision on the sulphur content of marine fuels and the EU Sulphur Directive, effective as of 2015; some water and air quality targets in our main production countries;
• EU resource efficiency initiatives which may have impacts on regulatory environment and challenges.

In Finland a new Environmental Protection Act entered into force in September. It has been reviewed in Kemio-Units to be sure that we are working according to new legislation.

For our type of industry some non-fact based or non-comprehensive definitions in legislation are causing unexpected impacts. For instance the EU listing of nickel as “a suspect potential carcinogen” automatically leads to similar classification of austenitic stainless steel products (such as Outokumpu) which also includes nickel as a non-scientific criterion to classify materials and to ban nickel on own inherent properties, which are not the same as those of the raw material constituents. This non-scientific classification as a criterion to exclude substances from use is included in the EU Ecolabel Regulation and in some other initiatives. A derogation on EU Ecolabel is possible and already approved for certain product groups (mobile phones, laptops, computers) but needs intensive communication. However, this is causing unnecessary doubt among our customers. The impact of all these initiatives on Outokumpu’s operations is analyzed as part of the Group’s annual environmental risk process. This political and non-fact based situation has required intensive communication from Outokumpu in many European countries.

The implementation of EU chemical REACH regulation is a business risk for many industries, also for Outokumpu. One tool in REACH is to ban and substitute dangerous substances through an authorization process. Among the 22 new chemicals proposed for authorization in 2014 are two substances that are important to Outokumpu: Coal Tar Pitch high temperature (CTP) and Disodium Iotexlate (product name “Eloxan”). Both chemicals are used in our production processes, although not present in the products. CTP is an essential substance in the production process, extra fees in electricity prices for renewable energy sources. This was costly for all electricity intensive industries and caused uncertainty for the future and investments. Similar unexpected changes took place in Finland during last year and energy prices in the coming years. These types of changes are difficult to see and expect beforehand and it makes the future and investment planning difficult.
The coming International Maritime Organization’s and the EU’s sulphur restrictions of the sea transport will increase our Tornio plant’s transport costs. This will be realized during 2015 and afterwards. However, Outokumpu has cooperated with our line ship operator Lango Ship Company to avoid the cost increase. Lango Ship has developed and installed their own sulphur filter installations to all Tornio route ships already during the summer and autumn 2014.

Our active communication together with some industry associations and Members of the European Parliament on proposed restrictions on truck transport in the EU was a success. This means that existing large trucks can be used in the Nordic countries for our products as so far.

During 2014 also some other regulations or political initiatives required our communication towards regulators, for instance:

- Update of the EU Best Available Technique Reference document (BAT BREF) related to ferrochrome production
- Updates of some building material standards under the EU Construction Product Directive
- Review of the US and EU waste lists
- National Green Building standards
- Some national Environmental Quality Standards (EQS)

Outokumpu continuously monitors and evaluates legislative initiatives and evaluates their impact on the Group’s operations. The initiatives and environmental legal compliance are discussed regularly in internal Environmental Network meetings. Outokumpu also participates in communicating the effects of emerging legislation and aims to supply data for 2014 shows that there were a total of 21 environmental non-compliances or breaches of permitted limits (2013: 20). None of them were significant environmental incidents and on all those occasions, the environmental authorities were informed and no environmental damage was reported. These were for example:

- Kloster, SWE: leakage of neutron fuel (high Cr6+) into soil.
- Canon, LA, US: the permit deviation for SO2 from EA.
- LP SMACC, UK: dust emission from DC Arc Furnace and leachates in landfill but without the pollution risk outside.
- Avesta, SWE: chromium, molybdenum and suspended solids in waste water, a temporary dust emission.
- New Castle, IN, US: pH of waste water and a delayed emission from FeCr sintering.
- Tornio, FIN: chromium in waste waters, NOx emissions from hot rolling and a dust emission from FeCr sintering.

During 2014 Outokumpu paid twice fines related to environmental incidents:

- Outokumpu N提高, Germany: Delayed emission measurements some year ago at Krefeld cold rolling mill caused €5,357 and €1,582 fines.
- New Castle, IN, US: transport of filter cakes to external landfill without appropriate measures relating to hazardous waste caused penalty of USD 5,625.

In 2014, the cold rolling sites Mexinox in San Luis Potosí and SKS in In HDUST, Mexico have taken action to reduce impacts of the upcoming sulphur emission regulation, Outokumpu is participating in the liquid natural gas (LNG) terminal project in Tornio harbor, Finland, which for Environmental Impact Assessment was done in 2013. The permit was granted in 2014. Krefeld, Germany, started the first steps in legal environmental procedures to close the melt shop.

Permit process was still ongoing on several sites. For instance, the melt shop in Sheffield, the UK is waiting for a new IB-permit. Avesta, Sweden for example final permit conditions for the acid regeneration plant, Krefeld, Germany, the permit for its revised NFG project (NFG flocs), the California. Outokumpu’s strategy is to improve production processes as to facilitate the recovery of valuable elements from the material streams. Outokumpu’s strategy is to improve production processes through R&D projects, continuous improvement tools like business excellence projects or by research programs which are often carried out together with external partners like universities or technology companies.

The follow-up of site environmental permit status and legal compliance is a routine in the quarterly internal Environmental Network meetings. In 2014, the Environmental Network made a prioritization for internal environmental audits and internal legal compliance audits and the site audits that were carried out in 2013. Site audits will continue in 2015 according to revised internal list. During 2014 many production sites got new environmental permits or updates or had a permit process ongoing.

For example in Dillenburg, Germany, exception permit for oil for the cold rolling mills has been granted as an action to reduce impacts of the upcoming sulphur emission regulation, Outokumpu is participating in the liquid natural gas (LNG) terminal project in Tornio harbor, Finland, for which Environmental Impact Assessment was done in 2013. The permit was granted in 2014. Krefeld, Germany, started the first steps in legal environmental procedures to close the melt shop.

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Radioactive material detected before it entered the production process

As recycled steel is used in Outokumpu’s manufacturing process, radioactive material can enter the stainless steel production chain. While such radiation usually derives from naturally-occurring sources, the source of radiation in some cases consists of components from items of measuring equipment extensively used by heavy industry. The amounts of radioactive isotopes involved are small, with maximum quantities measured in grams, and sources of this type are usually detected before they enter the Outokumpu production process. Major Outokumpu sites presscreen recycled steel for radioactivity using special radiation monitoring equipment. During 2012 and 2013 the internal guidelines for radioactivity control were updated.

In 2014, two incidents which involved radioactive material entering an electric arc furnace despite the presence of alarm systems occurred at Outokumpu’s melting shops in Sweden and Finland. The radioactive material concerned was identified as americium-241, an isotope employed in measurement instruments. All radioactive materials were stored separately in accordance with guidelines provided by the appropriate national authorities. The dose rate associated with the radioactive material encountered in these cases was not at a level harmful to humans.

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Materials efficiency

Outokumpu’s aim is the production of steel where all the materials resulting from the production are fully utilized either in their primary form for example steel or in the case of swarf recycled back to in the steel production process. Our ultimate aim is zero-waste to landfill.

Outokumpu’s manufacturing processes are developed in such a way as to facilitate the recovery of valuable elements from the material streams. Outokumpu’s strategy is to improve production processes through R&D projects, continuous improvement tools like business excellence projects or by research programs which are often carried out together with external partners like universities or technology companies.

Twin approach

Outokumpu has two aims when improving the Group’s material efficiency, Firstly we minimize the initial use of virgin materials in our primary production of stainless steel. We use Electric Arc Furnaces (EAF’s) to recycle steel from post-consumer and post-industrial users. Outokumpu’s recycled material input is very high adding to the general transformation towards a more circular economy. The second aim is reduction of the quantities of waste sent to landfill after the manufacturing process. By paying special attention to waste management and segregation techniques, many waste fractions resulting from production operations are now recycled or recovered. For example the specific amount of steel slags sent to landfill have consequently been reduced by 30% over the last 3 years.

Recycling and recovery of waste

Slag, dust, scales and other production-related material streams are avoidable in steel production. As a result of the manufacturing process these material streams contain valuable metals. Recovery of these so-called ‘valuable dusts’ and return of waste and helps Outokumpu meet its sustainability objectives.

Success in materials efficiency – All slag utilized instead of landfilling

In the Tornio site located in north Finland 1,100,000 tonnes of slag is produced from stainless steel and ferrochrome production. These are manufactured to meet CE-marked aggregate product standards. As a result of extensive research and development and optimized slag treatment processes the site has achieved zero slag to landfill. Major process modifications were done to the slag treatment facilities to increase the metal recovery further increasing material efficiency at the site. New processing innovations have led to dramatically improved metal circulation from the slag back to a raw material input of stainless steel production. Improvements in 2014 also include filtering systems for both slag treatment plants in order to reduce dust generation from these processes.
Recovery of alloying elements

Dust and scales collected from stainless steel manufacturing operations are collected by Outokumpu to be significant waste streams. Wherever practical, these waste materials are collected and recycled to recover the valuable alloying elements they contain—these include nickel, chromium and molybdenum. In order to fully recover the valuable elements in the dust secondary metallurgical processes are used. Outokumpu operates one such unit in Sheffield, UK, while other Outokumpu sites use external partners to perform this recovery operation. Through these processes nickel, chromium and molybdenum are returnable to Outokumpu’s EAF sites and other elements such as zinc can be sent for use as a secondary raw material. Outokumpu’s downstream units are also recovering all metallic particles as far as feasible from waste streams, such as dust and scales.

Steel slag transformed into products and the reused of refractory materials

In stainless steel making slag forms a critical part of the production process. Slag prevents the loss of crucial alloying elements during melting and ads the refining stages. They can also play a critical role in energy efficient steel making. It is also by far the biggest material dependence on virgin material has decreased. With this material being reused in the steel making process as a slag conditioner and effectively ending up in the slag it is effectively used three times, once as refractory brick, secondly as a substitute for dolomite and thirdly as a substitute for road stone in asphalt production. In this way we can say that the refractory undergoes a double reused, eliminating two virgin finite resources (dolomite and road stone).

Continuous development to increase material efficiency

Waste materials are generated during the downstream operations at Outokumpu. These are treated in various ways to minimize environmental impact and increase utilization of the material. Group’s guiding principle is to utilize wastes according to waste hierarchy by first recycling, recovering or as an energy source.

Outokumpu continues to invest in new material recovery and reuse techniques. Often this is carried out in conjunction with a local contractor, like in Calvert, AL US: during 2014 new slag treatment facilities were completed (USD 5.4 million).

Hazardous waste facts

Wastes from Outokumpu production units are sent to appropriate treatment facilities or to landfill sites licensed to accept such materials. Hazardous wastes generated by the Group’s operations in 2014 totaled 184,341 tonnes, this number includes also some materials used to neutralization. Of this amount, some 49,000 tonnes were exported from the country of origin to be treated and its metal content to be recovered. Hazardous waste consisting of oily wastes, acid regeneration and hydroxide sludge generated by the Group’s operations in 2014 totaled 70,967 tonnes.

All such materials are treated, reused or disposed of in accordance with current legislation and best practices.

Material balance

<table>
<thead>
<tr>
<th>Materials used, tonnes</th>
<th>2014</th>
<th>2013</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Steel used</td>
<td>2 430 388</td>
<td>2 111 093</td>
<td>2 328 984</td>
</tr>
<tr>
<td>Recycled steel</td>
<td>419 143</td>
<td>148 320</td>
<td>130 780</td>
</tr>
<tr>
<td>Ferrochrome</td>
<td>482 459</td>
<td>434 191</td>
<td>456 683</td>
</tr>
<tr>
<td>Nickel alloys</td>
<td>207 225</td>
<td>202 118</td>
<td>210 541</td>
</tr>
<tr>
<td>Other alloys</td>
<td>129 071</td>
<td>122 836</td>
<td>126 212</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Additives, tonnes</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Slag formers</td>
<td>405 131</td>
<td>384 028</td>
<td>376 997</td>
</tr>
<tr>
<td>Metallurgy process gases</td>
<td>414 071</td>
<td>313 804</td>
<td>308 578</td>
</tr>
<tr>
<td>Picking acids bought</td>
<td>40 151</td>
<td>37 702</td>
<td>31 249</td>
</tr>
<tr>
<td>Pollution prevention materials</td>
<td>54 314</td>
<td>46 107</td>
<td>45 363</td>
</tr>
<tr>
<td>Packaging materials used for final products</td>
<td>20 682</td>
<td>20 498</td>
<td>20 237</td>
</tr>
<tr>
<td>Energy, GWh</td>
<td>8 349</td>
<td>8 131</td>
<td>7 481</td>
</tr>
<tr>
<td>Electricity</td>
<td>4 771</td>
<td>4 715</td>
<td>3 940</td>
</tr>
<tr>
<td>Propane</td>
<td>1 193</td>
<td>1 015</td>
<td>1 151</td>
</tr>
<tr>
<td>Carbon monoxide gas</td>
<td>631</td>
<td>541</td>
<td>342</td>
</tr>
<tr>
<td>Natural Gas</td>
<td>1 578</td>
<td>1 705</td>
<td>1 844</td>
</tr>
<tr>
<td>Diesel, Light and heavy fuel oil, other</td>
<td>176</td>
<td>155</td>
<td>204</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Output, tonnes</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Steel</td>
<td>2 919 413</td>
<td>2 598 006</td>
<td>2 684 282</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Emissions to air, tonnes*</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon dioxide</td>
<td>1 400 754</td>
<td>1 274 515</td>
<td>1 083 978</td>
</tr>
<tr>
<td>Nitrogen oxides</td>
<td>2245</td>
<td>2 634</td>
<td>2 362</td>
</tr>
<tr>
<td>Sulphur oxides</td>
<td>383</td>
<td>348</td>
<td>446</td>
</tr>
<tr>
<td>Dust</td>
<td>441</td>
<td>447</td>
<td>524</td>
</tr>
<tr>
<td>Ozone-depleting substances</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Other Green House Gas, t. CO2 eqv.</td>
<td>81</td>
<td>89</td>
<td>34</td>
</tr>
<tr>
<td>Carbon dioxide per tonne of steel</td>
<td>0.48</td>
<td>0.45</td>
<td>0.40</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Emissions to water, tonnes</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Metals</td>
<td>53</td>
<td>44</td>
<td>59</td>
</tr>
<tr>
<td>Nitrates</td>
<td>2 408</td>
<td>1 809</td>
<td>1 662</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hazardous waste, tonnes</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydroxide sludge</td>
<td>23 002</td>
<td>18 582</td>
<td>18 901</td>
</tr>
<tr>
<td>Other sludge</td>
<td>47 964</td>
<td>73 635</td>
<td>66 280</td>
</tr>
<tr>
<td>Steel making dust to recovery</td>
<td>47 964</td>
<td>73 635</td>
<td>66 280</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Wastes and by-products, tonnes</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Steel slag, total</td>
<td>899 451</td>
<td>906 143</td>
<td>821 086</td>
</tr>
<tr>
<td>Steel slag utilized</td>
<td>720 091</td>
<td>735 087</td>
<td>586 321</td>
</tr>
<tr>
<td>Steel slags utilization rate (recycle, reuse, recycling)</td>
<td>80.1%</td>
<td>81.1%</td>
<td>71.4%</td>
</tr>
</tbody>
</table>

* All emissions to air are scope 1 emissions, including all direct emissions from our operations. Scope 2 and 3 emissions are reported under section Climate change.
Energy efficiency

The steel industry is energy intensive and Outokumpu’s steelmaking and rolling processes are no exception. Achieving the highest possible level of energy efficiency is very important for the Group. Outokumpu’s aim is to minimize total energy usage and related environmental impact. Even though significant amounts of energy are used in its production, stainless steel is an enabler for more energy-efficient solutions that save energy during the use phase. Steel grades whose production consumes more energy than others can sometimes be the most efficient solution when viewed from a life cycle perspective. Improvements in energy efficiency are, in many cases, based on the use of stainless steel. In the energy industry, in transportation, and in building and architecture, the use of stainless steel is essential as its energy efficiency offers a way of satisfying new stricter standards and achieving society’s targets. Some biofuel applications which require specific levels of corrosion resistance, for example, would not be possible in practice without the use of stainless steel.

Outokumpu manufacturing sites use a range of fuels including direct energy sources such as natural gas, propane, heavy fuel oil and electricity. Energy use by the Group totaled 30.1 million GJ (8.3 million megawatt hours) in 2014 of which electricity consumption totaled 17.2 million GJ (4.8 million megawatt hours). Total energy consumption increased by 2.7% compared to the previous year of Outokumpu, due to the ferrochrome expansion. Total annual energy consumption by Outokumpu is approximately equivalent to the amount of energy consumed by 245,000 Scandinavian households. The electricity consumption compares to about 45% of the annual output of a modern 1,200 MW nuclear power plant.

Energy used 2014

<table>
<thead>
<tr>
<th>Country</th>
<th>Electricity</th>
<th>Fuel energy</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Finland</td>
<td>2,787,576</td>
<td>1,455,731</td>
<td>4,243,307</td>
</tr>
<tr>
<td>Sweden</td>
<td>480,722</td>
<td>534,245</td>
<td>1,014,967</td>
</tr>
<tr>
<td>Germany</td>
<td>479,344</td>
<td>689,149</td>
<td>1,168,493</td>
</tr>
<tr>
<td>The United Kingdom</td>
<td>174,476</td>
<td>98,714</td>
<td>273,190</td>
</tr>
<tr>
<td>North America</td>
<td>756,854</td>
<td>574,896</td>
<td>1,331,750</td>
</tr>
<tr>
<td>ROW</td>
<td>83,094</td>
<td>325,004</td>
<td>408,098</td>
</tr>
<tr>
<td>Total</td>
<td>4,771,066</td>
<td>3,577,828</td>
<td>8,348,894</td>
</tr>
</tbody>
</table>

Outokumpu’s approach to energy efficiency is long-term and the target is continuous improvement. Energy efficiency is a component in the environmental management systems at Group mills. Major Outokumpu production sites also have long-term, prioritized energy efficiency investments. In overall terms, the largest energy-saving potential lies in the recovery of waste heat, improved process integration and improved efficiency in using raw materials.

In all new investments or replacement investments energy saving is a target. Last year’s replacement investments of new oxygen plant and new cooling water capacity (EUR 6.5 million, Degerfors, Sweden) for new batch furnaces were taken into full use. At the melt shop in Sheffield, the UK, the new EAF transformer regulator and control system (EUR 2 million) was similarly taken into use. All these investments gained already significant energy and cost savings. For example the Degerfors new two batch furnaces on the heat treatment line result up to 50% savings in energy consumption to heat treat the plate compared to the previous equipment. This reduces also CO₂ and nitrogen oxide emissions.

Large, energy-specific investments are, however, not the only way of improving energy efficiency within the Group. The systematic monitoring and analysis of energy consumption plays a very important role. As deep life cycle analysis when purchases of new electrical equipment are being considered. Outokumpu provides its production personnel with training in energy efficiency.

For instance in the SMACC melting shop located in Sheffield, United Kingdom, energy efficiency has been a top priority for many years. In order to continuously lower the demand for electricity new and innovative projects must be developed often using cross functional teams. One example where this has succeeded is on the fume extraction and cleaning plant serving the melting shop. Often these plants use a large proportion of site electricity and provide a critical role in protecting the environment. Conversely, these plant’s can be optimized to reduce the energy they use without lowering the standard of environmental protection. The Sheffield site has, since 2009, progressively worked through numerous improvements in both the plant’s operation and the installation of heat available technology to reduce energy demand. As a result of installation of variable speed drives, using fume pressure to set extraction rates, replacing old generators, developing the control philosophy and establishing preventative maintenance measures, the energy consumption has been reduced by 38%.

To meet long-term targets for improvements in energy efficiency, Outokumpu maps energy efficiency initiatives and investment proposals in order to quantify their improvement potential and any associated costs. This mapping process supports the optimization of energy efficiency investments at Group level; the original aim was a 5% improvement in Outokumpu’s energy efficiency by 2020. This target was achieved already during 2013. The process of mapping and identifying highest energy savings potentials continued in 2014. Late 2014 it was also decided to start an internal mapping of further heat recovery possibilities at the Group’s European melt shops. Our aim is to start to combine business-level programs during 2015 and proceed with the Group level program sharing best practices and implementing projects harvesting the most feasible identified potentials.

Improvements in energy efficiency achieved by Outokumpu during 2010–2014 totaled 9%, equivalent to annual savings of some 751 GWh. The proportion of low-carbon electricity obtained from renewables and nuclear power was 58%. Read more about Outokumpu’s investments on p. 37.

Energy sources in 2014

- Electricity 57.1%
- Natural Gas 18.9%
- Propane 14.3%
- Carbon monoxide gas 7.6%
- Light and heavy fuel oil, others 2.1%

Outokumpu participates in low-carbon electricity production

Outokumpu’s aim is to have access to additional low-carbon power production sources in the future. To achieve this, the Group participates in new power plant projects and enters into agreements with parties in the power market. By participating in new power plant projects, Outokumpu can also promote competition in Nordic power markets and contribute to adequate power production capacity being constructed in the future.

Nuclear power

Outokumpu has a 12.5% share in the Fennovoima nuclear project. In 2014, Finnish Parliament approved Fennovoima’s supplement to the decision-in-principle regarding the construction of a new 1,200 MW nuclear power plant in Finland. According to the plans, infrastructure work at the site begins in 2015 and is expected to last approximately two to three years. The construction of the plant would begin after the infrastructure work and the power plant would start commercial operations in 2024.

Outokumpu has a minor 0.3% share in the OKIkkari 3 nuclear power plant project by Teollisuuden Voima Oyj (TVO). Construction of the power plant in Finland is currently ongoing. In addition, Outokumpu has a minor 0.7% share in the TVO’s Oikiluoto 4 project.

Price of electricity

In 2014 the average system price of electricity in Nord Pool, the Nordic Power Exchange, was 29.61 euros per MWh. The average of the Finnish area price was 30.02 euros per MWh, considerably higher than the system price. The quite strong hydrological situation, mild weather and low consumption kept power prices at relatively low levels.

Outokumpu’s power procurement is executed using a long-term procurement strategy, in which the Group’s aim is to achieve predictable, competitive and stable prices for the Group’s future power supply. Other important tasks carried out by the Energy function include the management and optimization of Outokumpu’s physical energy portfolio and energy-production assets, participating in new low-carbon energy projects, promoting low-carbon fuel energy sources, and providing support for Outokumpu companies in their energy-related activities.

Sustainable power solutions

Outokumpu’s Energy function is responsible for the Group’s energy strategy and procurement of the electrical energy employed in Outokumpu’s operations. The primary objective is to secure predictable, competitive and stable prices for the Group’s future power supply. Outokumpu has a minor 0.3% share in the OKIkkari 3 nuclear power plant project by Teollisuuden Voima Oyj (TVO). Construction of the power plant in Finland is currently ongoing. In addition, Outokumpu has a minor 0.7% share in the TVO’s Oikiluoto 4 project.

Outokumpu Sustainability report 2014
Hydropower
Since 2005, Outokumpu has had a 104 MW share of Norwegian hydropower capacity through its 50% majority acquisition in the River Volme. The site gets 10% of its electricity from the plant. The power plant was renewed four years ago.

Wind power
Outokumpu is a minority shareholder in Rajakivi Oy, a wind power company. Rajakivi installed eight shoreline wind turbines with a total capacity of 28.8 MW in Tornio in 2010, and commercial production of electricity started at the end of that year. The technical availability of the wind turbines has been excellent during their first years of operation.

Combined Heat and Power
Outokumpu has a minority stake in a Combined Heat and Power (CHP) plant in Tornio. This plant delivers heat to the production facilities in Tornio, and a proportion of the fuel used is carbon monoxide gas created as a by-product of the ferrochrome production process. The CHP plant has also acquired a local heating business in Tornio.

Tomio Manga LNG project
In 2014, Outokumpu and SSAB Ruukki Metals Oy, the energy company Epi Energy Ltd and the gas company Skanøgysa Oy decided on a project to utilize liquefied natural gas (LNG) in industrial processes, energy production and shipping. The project development company Manga LNG Oy has signed a contract to construct an LNG terminal, to procure gas for its own use and to ensure optimal logistics. LNG will replace fossil fuels in industrial use and energy production and substantially reduces particles, NOx, SOx and CO2 emissions compared to current levels.

According to the decisions made, reception, unloading and bunkering facilities, an LNG vaporizing facility and one 50,000 m³ storage tank will be constructed at the terminal, located in the harbor area in Outokumpu’s industrial site in Ryttla, Tornio. For gas deliveries, a pipeline will be built to the Ryttla industrial site. In addition, a truck loading facility for LNG trucks will be built. From the Tomio terminal, the LNG will be delivered by trucks or railroad to customer terminals and consumption destinations in Northern Finland and Sweden. The building phase of the terminal is 2014–2017, and LNG deliveries will commence in 2018. In October 2014 the project received the preliminary state financing decision from government of Finland.

Voluntary energy efficiency programs
In 2014 at Outokumpu Germany sites the energy management system ISO 50 001 was combined with the environmental management system ISO 14 011 into one and Hinatra production sites covering efficient and certified leading system. In relation to voluntary certifications all these sites have good routines for annual energy efficiency work, including monitoring progress, implementing and identifying improvement possibilities.

Outokumpu has participated in voluntary national energy efficiency agreements in Finland, Sweden and the UK for many years. In connection with energy issues, Outokumpu usually works closely with national organizations – with Motiva in Finland and Jernkontoret in Sweden.

Outokumpu has participated in voluntary national energy efficiency agreements in Finland, Sweden and the UK for many years. The Tomio site joined the Finnish program at the beginning of the 1990s. Energy savings in electricity, heat and fuel achieved during 2014 totaled 5,408 GWh. To ensure that systematic improvements in energy efficiency continue to be achieved, Outokumpu sites in Finland signed new energy-efficiency agreements in December 2007 covering the 2008–2018 period. For example, the Group’s Tomio operations decided in 2011 to align their internal targets and action programs in an agreement aimed at achieving annual savings of 150 GWh by 2016.

In Sweden Outokumpu has also participated in the second round of the PFE (Programmet för effektiv och energieffektiv leverans av industri) agreement from 2009 to 2014. The target in this second period is to achieve annual savings in electricity consumption of 11 GWh. The final result was excellent, in total 13.5 GWh annual savings were achieved and this is not including other energy efficiency projects outside of the program.

For example, in 2014 energy efficiency projects in Avesta included: electromagnetic stier, a new temperature robot, optimisation of the flux gas cleaning filter at the melt shop, optimization of hydraulic aggregates, investment in new LED lighting and optimization of the waving beam furnace at the hot rolling mill. The total amounts of calculated energy savings from these projects are approximately 20 GWh annually which is significantly larger efficiency improvement than the target in national PFE program.

Our actions and the results achieved
Primary actions included in the program consist of making further improvements in energy efficiency, increasing the proportion of low-carbon electricity in the targets, and targeting efficiency improvement at optimal levels of production. An internal air-travel compensation scheme has been implemented for business travel and sustainable aspects are gradually being integrated into our logistics and transportation solutions. These actions involve Outokumpu operations in all locations and business areas.

Outokumpu’s energy and low-carbon program
In the past ten years, Outokumpu has reduced significantly the Group’s direct carbon dioxide (CO2) emissions per tonne of stainless steel produced. Outokumpu targets to further reduce the Group’s specific carbon footprint by 5% in stainless steel production by 2020, as announced in the Group’s energy and low-carbon program in 2010. When assessing and measuring the Group’s carbon footprint, we utilize a method of calculation which focuses on factors that Outokumpu can manage and control.

The targets set in Outokumpu’s energy and low-carbon program highlight not only specific reductions but also the Group’s production efficiency, as emissions are calculated per tonne of stainless steel produced. These targets connect our materials and energy efficiency and supply chain management to the Group’s business targets. The figure for monitoring progress is a three-year moving average that is comparable to baseline figures from the 2007–2009 period. The targets of the energy and low-carbon program represent optimal Group-wide environmental objectives for both Outokumpu and combating climate change. They also support the Group’s strategic goals and their achievement is supported by different energy and quality programs. As the targets are both quantitative and a clear demonstration of our long-term commitment in this area, they encourage continuous improvement.

Emissions trading
Outokumpu’s main production operations in terms of energy consumption and carbon emissions are located in Europe. Some 80% of the Group’s direct emissions fall under the CO2 Cap and Trade system. The European Union Emissions Trading Scheme (EU ETS) places a direct financial cost on production emissions and the indirect costs of emissions trading are reflected through higher electricity prices. Indirect extra electricity costs for Outokumpu were during the previous EU Emission Trading period 2005–2014 some EUR 45 million per annum. These two elements raise Outokumpu’s marginal production costs in relation to our global competitors. Outokumpu emphasizes the need for global regulation in efforts to transfer to low-carbon forms of society. EU Commission’s decision to “set-a-side” and postpone auctioning of emission allowances during this emission trading period 2013–2020 would increase these costs further and is harmful for whole European manufacturing and electricity intensive industry.

Climate change
Outokumpu’s carbon footprint consists of emissions from production operations, indirect emissions from electricity consumed and the emissions resulting from the transportation of products and business travel, expressed as a quantity per tonne of stainless steel produced. After 2014, the Group’s carbon profile was 9% lower than the program’s baseline average for 2007–2009. This result is primarily due to lower specific emissions in production and improvements in energy efficiency. On the other hand, indirect scope 2 emissions from electricity consumption were 1,140,285 tonnes of CO2, which was somewhat higher than previous (2013) year scope 2 emissions 1,070,208 tonnes of CO2.

CO2 emissions resulting from business travel by Outokumpu personnel in 2014 totaled 5,803 tonnes (includes business air travel and company cars). To compensate for emissions resulting from business air travel in accordance with guidelines in the energy and low-carbon program that reflect such activity, an investment was made in environmental projects that lead to emissions reductions. The level of such investments will depend on the price of emission allowances, the total number of kilometres travelled and specific emissions by air carriers. During 2014, a project in order to improve production of pressurized air and optimise air conditioning and cooling at Tomio was completed, saving 3,312 MWh. These energy efficiency investments are part of a long-term energy efficiency program. Annual cumulative savings were 1,408 GWh of energy and reduction in CO2 amounts to 451,572 tonnes annualized at the end of 2014.
Major emissions of greenhouse gases by Group operations are twofold: direct releases of CO₂ from the company’s sites as a result of combusting fossil fuels and process-related emissions from Outokumpu’s steam-making operations. Outokumpu’s CO₂ emissions in 2014 totalled 1,400,754 tonnes.

Outokumpu has in total seven active sites operating under ETS. Outokumpu’s emissions trading activities fully comply with the relevant laws and regulations, with a particular focus on the Group’s trading and risk policies. Carbon dioxide emissions under the EU ETS continued to be lower than normal levels in 2014 due to reduced levels of production, which totaled approximately 1,100,000 tonnes.

The allocation for the year 2014 was and allocation for 2015 is estimated to be sufficient for Group operations during that period.

Carbon profile 2012–2014

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The EU Emissions Trading Scheme 2013–2020

The EU Emissions Trading Scheme (ETS) continued, with the current trading period being 2013–2020 according to the decision made by the European Commission (EC) and the European Parliament. During this third emissions trading period, 2013–2020, the ETS will become more restrictive. The target of 4% cut on total annual emissions in Europe and the proportion of free allocations of emission allowances will gradually be reduced. Auctions will be the main form of issuing allowances. Outokumpu’s operations under ETS will continue to receive free allocations of emission allowances according to efficiency-based benchmarks and historical activity.

As emissions are correlated with production activity and capacity utilization, sales volume is an important indicator of emissions during the initial years of the trading period and that the situation within Group companies will probably vary more than before. One important issue for Outokumpu has been to qualify for a free allocation of emission allowances during 2013–2020 by being part of an industry sector in which there is a significant risk of carbon leakage. As a result of this decision, all of Outokumpu ETS operations currently qualify. All seven Outokumpu sites covered by the emissions trading system have applied for free allocations for the upcoming trading period and are in full compliance with authority requirements.

The renewed ETS directive states that member states can compensate for CO₂-related increases in electricity prices. As Outokumpu has electricity-intensive installations in four different EU countries, this is an important aspect. Outokumpu considers it to be an important correction mechanism for the most profound flaw in the ETS system. Direct and indirect costs of outokumpu’s trading has become an important factor in the competitiveness of European steel manufacturing.

Outokumpu views the possible consequences of climate change as a matter of serious concern and wishes to make a contribution to global efforts aimed at addressing the related challenges affecting European business. The current outcome is that the Group’s European production units are at a competitive disadvantage in relation to stainless steel and ferrochrome.

The EU ETS is region so-called “cap and trade” system that sets total cap for industrial emission. This total cap is levied through market based trading. As emission allowances that remain unused can be traded on financial markets, the ETS is designed to create a financial incentive for companies to restrict their emissions of carbon dioxide. Conversely, if the level of a company’s carbon dioxide emissions exceeds the rights it possesses, corresponding allowances must be purchased. Outokumpu’s production sites in Finland, Germany, Sweden and the UK fall within the scope of the EU ETS scheme.

Even though Outokumpu was granted emission allowances at no cost in the 2008–2012 trading period, the EU ETS will become a more restrictive system in the current third emissions trading period (2013–2020). The cap on total annual emissions in Europe and the proportion of emission allowances allocated at no cost will gradually be reduced and auction will become the main form for issuing allowances. As the iron and steel industry is therefore affected by these allowance-related costs. Even though the iron and steel industry is therefore affected by these allowance-related costs. Even though the iron and steel industry is therefore affected by these allowance-related costs. Even though the iron and steel industry is therefore affected by these allowance-related costs. Even though the iron and steel industry is therefore affected by these allowance-related costs. Even though the iron and steel industry is therefore affected by these allowance-related costs. Even though the iron and steel industry is therefore affected by these allowance-related costs.

The risk of climate change induced by human activity and its possible consequences have attracted increasing attention within Outokumpu in recent years. Outokumpu has established a long-term program, implementing determined actions as our response. The issue is a regular item in the Group’s long-term strategic planning.

Regulatory risks

The greatest uncertainty for Outokumpu in connection with emissions related regulatory measures stems from the EU Emissions Trading Scheme and other related consequences affecting European business. The current outcome is that the Group’s European production units at a competitive disadvantage in relation to stainless steel and ferrochrome.

Energy and Climate Framework 2030

During January 2014 European Commission published new energy and emission framework 2030. This EC proposal was developed and decided on by European council during Outokumpu’s negotiations. The European Commission and Parliament will affect the outcome and legislation significantly during years 2015 and 2016. On the conclusion Council reserved option to review all elements of 2030 framework after international climate conference at Paris in 2015 and The European Commission will review to this issue after the Paris Conference. The European Council will keep all the elements of the framework under review, notably also with respect to ETS.

This framework sets initial binding CO₂ reduction target to 40% (x 1990) by 2030 and indicative target for renewable energy 27% also by 2030. For more restrictive target the target is 43% and 32% respectively in 2050 levels, non-ETS 30%. In order to bring about the required emissions reduction in the ETS sector, the annual target by which the cap on the maximum permitted emissions within the ETS will have to be reduced from 1.74% currently to 2.2% after 2020. Overall legislation including new ETS directive is expected to be in place during 2016.

Together with the above package European Commission (EC) introduced also a market-based ETS (ETS) reform. This package would give EC right to withdraw EUAs from the market (reduce supply) in case surpluses exist. This mechanism would be an important correction to the price of carbon allowances. The scheme is designed to be “backloading” for EC to control EUA supply and keep prices on warranted level or in price is an overlapping measure making EUA markets more complicated and unpredictable.

Climate change risks

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In the future, emissions reduction targets (e.g. the EU Climate and Energy package) will become more stringent and Outokumpu continues preparations for conducting the Group’s operations in a more restrictive environment. To manage related risks and prepare for expected developments connected with emissions trading, Outokumpu has an internal Emission Trading Network, which includes representatives from all Outokumpu operations affected by the system.

The responsibilities of this network include providing assistance in defining Outokumpu’s emissions management strategy and securing its implementation.

Cost-related risks

From a Group perspective, identifying and controlling the cost of compliance with emissions allowance schemes is crucial. Both forecast and realized emissions as well as the allowances generated were monitored by Outokumpu on a regular basis. The Group has also taken action to reduce the costs associated with emissions regulation compliance by entering into financial arrangements such as swapping EU emission allowances for Certified Emissions Reductions (CERs) and investing in carbon funds. Marginal cost pricing means that all forms of electricity production compete are therefore affected by these allowance-related costs. Even though the electricity purchased by Outokumpu is of the low-carbon variety, costs of this type have a negative impact on the Group’s financial performance and these effects are not mitigated by cost allocations of emission allowances. Risks connected with the future cost of emission allowances are an important factor in the planning of new investment projects and may affect future investment decisions.

Weather-related risks

Extreme weather conditions associated with the effects of climate change could have an indirect impact on Outokumpu’s business and operations. Physical risks due to changes in the climate system and weather patterns can cause damage to property or the loss of production as a consequence of flooding, tornadoes or hurricanes may be exacerbated in the future. Normal measures designed to mitigate such weather-related risks may not prove effective if extreme weather is incorporated into the Group’s risk management and related policies.

Currently, Outokumpu’s production facilities are situated in Florida, and melt shop and cold rolling mill in Alabama are located in areas, which are defined as “regional hotspots”. These sites are moderately exposed to these risks. The Group has general instructions and tools for implementing plans to ensure business continuity within production facilities.

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New opportunities

Even though the unpredictable consequences of climate change may be associated with significant future challenges, new business opportunities for Outokumpu may also result. The sustainable nature of stainless steel is vital to the economies and society at large. For example, the ongoing construction of a new sintering and ferrochromium plant will further improve the production efficiency of the Group’s operations. The new plant will lower environmental impacts and save energy, as it will employ state-of-the-art technology.

Carbon funds

In order to decrease the cost of compliance to EU emissions trading scheme (ETS), Outokumpu has also invested in the Target Ground Facility (TGF), a Nordic carbon fund managed by the Nordic Environmental Finance Corporation. States and companies can invest in the carbon fund, which purchases emission reduction units for its investors from projects that benefit the environment. The fund closed its operations during 2013 according to the original plan, but Outokumpu still expects to receive some ERUs, which Outokumpu uses for compliance instead of EUAs. In 2014, Outokumpu did not receive emission reduction units from TGF; 13,000 tonnes excluding former Inumin site, although some capital was returned. The TGF emission reduction units received earlier were used to cover the actual carbon dioxide emissions in 2013.

Efficient systems help prevent spills and instances of non-compliance

All Outokumpu’s production sites employ either Environmental Management Systems (EMS) or risk-based management systems which help avoid spills and accidents that could be harmful to humans or to the environment. All of these Group systems operate in accordance with ISO 14,001, the international standard for environmental management systems (see page 15, chapter Efficient management systems to prevent negative impacts in section).

Investments in technology are reducing levels of dust emissions

Dust of different types has traditionally formed the most significant environmental impact on the Group, since the Group’s operations have been carried out. The latest technology will be employed to minimize airborne emissions, mainly dust. There are now several new baghouses to capture dust emissions, SCR units to reduce NOx emissions and various scrubbers. The Calvert Cold Anneal Pickling (CAPL) and Hot Anneal Pickling lines (HAPL) have the newest mist eliminators/drop separators for their furnaces sections (scourds partculate), acid scrubbers for their acid bath fumes (scourds acids out of the air and other gases NOx, HF, SC2). Also, the HAPL has a mini baghouse to filter dust in the shot blasting section. All these units were taken in full use during 2014.

At Tomio, more than EUR 60 million was invested in environmental applications during construction of the new ferrochrome sintering and melting line that was ramped up during 2013 and in 2014 they were in full use without problems. The largest individual investments were dust filtering units, gas scrubbers and a new unit for handling process water. Year 2014 proved that these investments were efficient; the emissions from the new sintering and ferrochrome plant were lower than what was expected. In 2014 at Tomio site totally EUR 8 million were invested together with our contractors to prevent further dust emissions from the slag treatment processess and replace in time kilo heavy ash oil as fuel by local carbon monoxyde gas which is a by-product from our ferrochrome production.

In Degerfors, Sweden, during the first half of 2014 investments in a new oxygen gas plant, new water treatment plant (EUR 0.5 million) for new batch furnaces (EUR 1.5 million) and upgrading of a walking beam furnace (EUR 1.5 million) were taken into use. These investments decreased already local CO2, NOx emissions and water discharges in 2014. The Askö plant in Sweden continued a project with a consultant to optimize the production and energy use during hot rolling which will also have impact on emission decreases.

Dust emissions by Outokumpu in 2014 totaled 441 tonnes, 1.4% less than in 2013. This was an excellent result since the processed volumes increased. Since the dust-filtering system is extremely efficient, normally catching 99% of dust emissions, even a brief malfunctioning leads to high increase in total emissions. Therefore, the lower dust emission levels are also an indicator of operational improvement in the Group’s dust emission control efficiency.

Emissions, effluents and waste

One of Outokumpu’s operating principles is to use best available techniques (BAT) to reduce emissions and minimize harmful environmental impacts which could result from the Group’s operations. In this context, BAT means the best available pollution prevention technology from both technical and economic perspectives. Employing BAT solutions means that the latest technology will be used to keep emissions from Outokumpu’s operations at the lowest achievable level.

Outokumpu continuously develops Group processes and pollution-prevention techniques to maintain high levels of emissions control also in the future. Outokumpu is also an active participant in the process of updating the reference documents (BREF) which specify related technologies, helping to set the high standards applicable within the European Union.

Investments in new Sustainable technology

New Degerfors investments in Sweden decrease emissions and save energy significantly. Environmental investments were completed in 2014 as a part of larger production investment program. These two heat treatment furnace replacements and upgrade of existing walking beam furnace improves significantly environmental performance. The old equipment required the plate to cool down to room temperature before reheating. The result is up to 50% savings in energy consumption to heat treat the plate. Similarly it reduces CO2 and nitrogen oxide emissions.

Strategic chromite ore – sustainable mining

Stainless steel is indispensable for the modern society as it plays an important role for infrastructure, energy and food supply as well as healthcare. The main alloying element in stainless steel, chromium, is defined by the European Commission as one of the economically most important critical metals for Europe.

The Outokumpu Kemi mine is the only chromium mine within the European Union. As the ore-bearing minerals are very stable and chemicals are not used in the beneficiation process, mining operations have only a minor effect on local water quality. Metal discharges from mining activities are small, and their effect is only observable as slightly elevated concentrations of nitrogen, solids, calcium and iron in watercourses. The largest emissions into the air result from the transportation of ore and baren rock, from operations in the product loading area and from piles of concentrates. All mining operations are now carried out underground after the shift from open-pit to underground operation was completed during 2005. Even though dust emissions into the air have therefore become minimal (totalling approximately less than half a tonne in 2014), the effect of particulate emissions on air quality is still monitored regularly by studying levels of suspended particulate matter. The results of the monitoring showed that the emissions situation has remained stable and that concentrations of dust in air and around the site are low.

At the Kemi chrome mine, piles of baren rock, former open-pit mining activities and the beneficiation and clarification basins all have long-term effects on the environment. The fund managed by the Nordic Environmental Finance Corporation.

Outokumpu uses for compliance instead of EUAs. Outokumpu’s operating principles is to use best available techniques (BAT) to reduce emissions and minimize harmful environmental impacts which could result from the Group’s operations.
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Road close to Tomio plant that was taken into use in 2010, minimizing any potential disturbance to residential areas.

Reductions in emissions

Air quality is top priority

Dust emissions from Outokumpu’s operations typically contain small quantities of metals (including iron, chromium and nickel), most of which are present in harmless forms. Chromium, for example, is usually found in its trivalent form and not in the hazardous hexavalent form. In recent years, the Group has supported many studies investigating the effects of metal emissions on both human health and the natural environment.

Outokumpu’s emissions of nitrogen oxides (NOx) were reduced to 2,245 tonnes in 2014. Despite the increased levels of stainless steel production in 2014 the resulting emissions were lower than in 2013. To minimize NOx emissions, the Group’s production sites in Avesta and Nyby in Sweden and Tomio in Finland have started to use the latest burner technology and Selective Catalytic Reduction (SCR) technologies in processes. Our Shanghai SKS unit in China started to use a “CLEAND” equipment in order to minimize NOx emissions.

Degerfors adjusted also operations to reduce NOx emissions according to new production volumes and permit limits.

Emissions of sulphur dioxide (SO2) from the FeCr sintering plant at Degerfors adjusted also operations to reduce NOx emissions according to new production volumes and permit limits.

In Dillenburg, Germany, the planned expansion of the municipal wastewater treatment plant seems to be a cost-efficient way of arranging the de-nitrification instead of having our own treatment plant. This is why the cold rolling plants decided to finance the expansion of the municipal wastewater treatment plant (EUR 1.5 million). Investment with the community will be started soon.

At Tomio, Finland, a larger sedimentation pool for wastewater was in full use. This arrangement allows almost all suspended solids to be filtered out and reduces metal loadings drastically.

Test fishing campaigns in Tomio (in the post-sedimentation pool) and in the Kemi mine tailings ponds showed that in both cases there are healthy and numerous fish populations (pikes, perches and other typical local fauna). The chemical analysis revealed that there is no metal accumulation in the fishes, they are healthy and breed normally.

During construction of the new ferrochrome sintering and melting plant in Tomio, the wastewater handling system was renovated and the circulation of process water is now almost totally closed. Water is circulated through cooling towers and solid material is separated in settling ponds and by using centrifuges. Only a small fraction of water is used in the circulation system, reducing metal loading on the environment.

Increased water recycling – reduced costs and waste

In early 2014 the new water treatment plant was taken into use at Degerfors site, Sweden for all production waters. The recycling rate of waters reached 97% level of all production water in 2014 – a remarkable improvement compared to the waste and recycling rate from the old plant. The impact of the cost savings is even greater. In addition, sludge from the water treatment plant is reused in the Avesta melt shop.

Carbon dioxide to air

Landfills

Outokumpu owns and manages landfill sites at some production sites in Finland, Germany, Sweden and the UK. Operations in these locations meet stringent EU and national requirements. In addition to the actively used landfill sites, Outokumpu is taking care of some old landfills. These sites are carefully monitored in order to be assured that the environmental impacts, for example on surrounding water, are minimal. The sites are typically also landscaped.

For example in Dillenburg, Germany, the cold rolling unit uses an off-site deposit site for neutralization sludge, but also takes care of some liabilities of old landfills. At the Nyby site in Torshälla in Sweden, the cold rolling plant uses its own landfill and old ones are closed. In Sheffield, the partial capping of the operational landfill has helped to limit the influx of rainwater and thereby reduced the generation of landfill leachate that requires treatment prior to being removed from the landfill cell.

The Bochum disposal site at Blüchenstrasse, Germany was technically closed. The new permit for Marbach disposal site in Bochum Hamm, Germany created public concerns in 2013 and Outokumpu established a voluntary advisory committee in Marbach to share information and views with neighbors and other interest groups. However, after the decision to close down the Bochum melt shop the official permit process and local committee activities will be affected.

Our impact on the environment
Working hard to prevent leakage and soil contamination

Some of Outokumpu’s production sites have been in use by the metal industry for decades or even centuries. This increases the likelihood that some contamination exists at these sites. Typically, soil or groundwater at old production sites might be contaminated by oil or metals. Outokumpu’s principle is that contamination is always treated and remediated according to current legislation and guidance from the authorities. These caves do not have significant or material effects on the Group’s finances but remediation may last quite a long time. Often the main action is the cleaning of contaminated groundwater for a local waste water treatment plant.

In Dahlenbruck, Germany, the remediation of groundwater and site banks of the river Volme has succeeded and has been completed. In Tornio, Finland, the old landfill is closed. The new landfill area is built according to stringent EU legislation, for example all seepage waters from the area are carefully treated to remove all harmful elements. Groundwater around the area is monitored regularly.

Water

Water is an important resource for steel making. Almost all Outokumpu production units are located in areas in which there is a lot of water available. Most of the sites are located by rivers and in areas with a lot of rain. However, the Mesico cold rolling unit’s surroundings in San Luis Potosi, Mexico, is arid and dry. There, the water source for production is groundwater and its use is restricted by local environmental permits.

The Mesico cold rolling unit uses water well below the permit limits and recycles almost all water for production processes. Process wastewater is recycled and treated by proper neutralization, clarification, filtration, reverse osmosis, evaporation and crystallization procedures. Sanitary wastewater receives flotation and disinfection treatment. Oily wastewater is treated in an ultrafiltration process and recycled. The amount of wastewater sent to the municipal sewer outlet is only 500 m³ but the total use of water is 30,000 m³ per month. So almost all water is bound in the soil and the contamination of nearby waters is very low. In Krefeld, Germany, risk assessment of soil and groundwater impact of the closed steel plant is in progress in coordination with the authorities. In Kölsch, Sweden, planning work regarding the closure of the site was started. Planned remediation work was ongoing at some Group sites in 2014, for example in Krefeld and Dillenburg, Germany. In Berkhe, Germany, groundwater is treated by an air stripper, de-ionized, de-manganized and used as production water. The groundwater remediation in Wildwood, USA, has decreased contaminants significantly. Also remediation work at the former warehouse site in Montreal, Canada continued as planned during 2014.

The efficient recycling of water was a principle already in planning the new Calvert facility, Alabama, US. The water system there uses closed loop recirculation for cooling processes. The site reuses the industrial water in a number of cycles allowing for maximum efficiency, and of course less water usage. All these are now in use and functioned well in 2014.

In the Bochum melt shop in Germany, drinking water is used for all process purposes because natural ground or surface water is not available in the area due to large-scale underground coal mines. Due to costs in the melt shop, there is a totally closed loop in water use.

Water withdrawal and discharges

<table>
<thead>
<tr>
<th>Year</th>
<th>Surface water, million m³</th>
<th>Municipal water, million m³</th>
<th>Groundwater, million m³</th>
<th>Rainwater, million m³</th>
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<tr>
<td>2014</td>
<td>35.4</td>
<td>1.8</td>
<td>1.4</td>
<td>1.8</td>
</tr>
<tr>
<td>2013</td>
<td>32.1</td>
<td>1.9</td>
<td>1.5</td>
<td>1.0</td>
</tr>
<tr>
<td>2012</td>
<td>29.9</td>
<td>2.2</td>
<td>2.1</td>
<td>1.6</td>
</tr>
</tbody>
</table>

Water discharges by type and destination

<table>
<thead>
<tr>
<th>Type and destination</th>
<th>Cooling water out, million m³</th>
<th>Waste water out, million m³</th>
<th>Metal discharges to water, t</th>
<th>Nitrogen in nitrates, t</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>31.4</td>
<td>21</td>
<td>53</td>
<td>1.608</td>
</tr>
<tr>
<td></td>
<td>29.8</td>
<td>20.2</td>
<td>44</td>
<td>1.810</td>
</tr>
<tr>
<td></td>
<td>31.8</td>
<td>18.7</td>
<td>50</td>
<td>1.662</td>
</tr>
</tbody>
</table>

Biodiversity

Natural surroundings at stainless steel production sites remain unharmed. The production of stainless steel does not employ or reserve large areas of land, or have a significant effect on biodiversity in the surrounding natural environment. Outokumpu production facilities are not located in sensitive areas such as UNESCO World Heritage sites, Ramsar sites or UNESCO Biosphere reserves. During recent decades, Group sites have not been found to disturb local biodiversity in any manner which is generally considered unacceptable.

Environmental impacts are regularly evaluated

None of the species included in the International Union for the Conservation of the Nature and Natural Resources (IUCN) Red List (a list which identifies and documents species most in need of conservation attention if global extinction rates are to be reduced) are known to be affected by Outokumpu’s activities. Although the Group does not have any significant operations in ecologically sensitive areas, impacts on biodiversity at Outokumpu production sites are evaluated on a regular basis as part of the Group’s environmental management processes.

Actions to protect the local biodiversity at those sites in which valuable biodiversity or species are recognized, Outokumpu staff have also actively protected the nature, wildlife and animal species. For instance, a part of the Calvert production site in Alabama, US, is defined as wetland and is home to quite a wide array of wildlife. At the site it is possible to see deer, wild turkey, wild bear, fox squirrels, gopher tortoises and various snakes, even Alabama black bear. Since the gopher tortoise and Alabama black bear are threatened species, the environmental team has worked with regulators on a voluntary basis to help trap and move gopher tortoises to safe locations and even a “bear friendly” fence was installed to allow the Alabama black bear to better travel through its natural migratory pathways.

An EU nature protection area (Natura 2000) is planned to be established on part of the company’s property in Dahlenbruck, Germany. According to the conservation program, there is a rare cliff forest rich with some endangered animal and plant species. Environmental authorities have investigated the EU nature areas located near the Outokumpu site in Tornio. Reports and statements issued in the 2000s indicate that the Group’s activities do not have a significant negative impact or threaten biodiversity in these areas, which include popular bird nesting habitats near the Tornio facilities and two bird watching

Reducing emissions and energy use by new water treatment

Water recycling at Mexinos in San Luis Potosi is very efficient (some 98%) and the use of fresh water was under the Mexinos own internal target for the whole year 2014 and much lower than the permit limit. To improve water recycling further, an expansion of the crystallization process of the wastewater treatment plant was taken into use. This is recycling more water, replacing two old units with a new electrical evaporation unit, improving energy efficiency and decreasing CO₂ emissions by 95%.
Measures to improve the condition of the Baltic Sea continue

Outokumpu is participating in the Baltic Sea Challenge. Practical measures instituted at the Torro site in the 2000s continue to be employed and the Group will also take action in the future to improve the condition of the Baltic Sea. A new 70-hectare sedimentation pond before filtering waste water into the sea has significantly reduced suspended solids and metals discharged into the sea.

The quantities of nitrogen in wastewater released by Outokumpu have also been at lower levels than for previous years. As of the end of last year, all Torro site sanitary waters have been conducted to the local municipality water cleaning unit and this will even further decrease the load on the sea compared to previous years.

For more information on the Baltic Sea Action program, please visit our Sustainability website.

Sustainable Supply Chain

The sustainability of the Outokumpu supply chain is important to the Group. We want to secure sustainable sourcing and manufacturing of our products and promote sustainability towards our suppliers.

The aim is threefold: to carry out business operations in a responsible manner, to develop continuously our performance, and to improve the sustainability of Outokumpu’s supply chain together with the Group’s business partners and subcontractors. The target is full accountability and sound, as well as stable and fair business relationships with our suppliers. In addition, Outokumpu provides customers with continually updated product statements and declarations covering the supply chain.

Supplier requirements renewed

An essential element in ensuring Outokumpu’s sustainability is regular evaluation of our suppliers’ sustainability policies, practices, and related performance. Internal common supplier requirements were further developed and approved. These requirements are in line with our policies and statements regarding sustainability. Implementation of these requirements was started 2014, and now all new suppliers are to be assessed against the common supplier requirements. To develop their performance, Outokumpu provides the Group personnel with regular training. The principles underlying sustainability, responsible business practices and good corporate governance are integrated into the materials used in commercial training, all the way from introductory courses to training courses designed to enhance contracting and procurement skills.

Regular dialog in supply chain

During 2014 we evaluated the existing ways of working related to the supply chain, especially since we want to be ahead of the increasing issues is the only way to provide Outokumpu’s customers with accurate processes within the new Group operations and evaluate our new suppliers according to the new supplier requirements, including all central sustainability criteria.

The latest round of the Group’s sustainability evaluation of current suppliers was finalized in 2012. The frequency is planned to be triennial, the scope of the evaluation is all raw-material producers and strategic suppliers in general procurement. Coverage of completed answers and evaluated companies was more than 90% of Outokumpu’s total spending on materials and supplies to these companies (excluded energy purchases).

Going forward, in general procurement we are aiming to assess our suppliers at an ongoing basis. In 2015 evaluation of our current and new suppliers against the common supplier requirements will be integrated into the general procurement strategy and tracking the coverage of supplier assessments will be included in the internal General Procurement KPI reporting.

The data collected is used in the Group’s program for developing a comprehensive and sustainable sourcing process. The results obtained from the evaluations form the basis of both development work and audit planning. Outokumpu monitors the performance of Group suppliers and subcontractors through auditing. Regular external audits carried out in accordance with local ES&H (Environmental Health Safety and Quality) management systems used at Outokumpu’s operational sites were conducted during 2014 as planned. The process is also an important element in managing supply chain risks. Awareness of such issues is the only way to provide Outokumpu’s customers with accurate sustainability information, and to guarantee to end-users that the Group’s stainless steel products are produced in a responsible manner.

Marine ecosystems are in good health

The main discharges into recipient water from stainless steel production are metals and nitrates. These are monitored according to national guidance at every production site. For instance, as Outokumpu’s Torro site is located on the Torronjoki river estuary on the coast of the Gulf of Bothnia and close to nature reserves, the Group’s manufacturing operations have, from the beginning, been developed to be environmentally sound. Many studies monitoring the biological, physical and chemical conditions which prevail near the Torro site have been carried out since the 1970s. The latest research report concerning the impact of nitrates on recipient water at the Torro site and the Kemi chrome mine showed that impacts are restricted to the immediate proximity of the discharge points at Torro and cause only slight eutrophication. At the Kemi mine, the impacts on sea areas are essentially negligible.

Pollution prevention techniques being employed by Outokumpu mean that increases in emissions can be avoided. Further reductions from earlier emissions levels will also be achieved in many cases, even at higher-current production levels. Annual studies carried out by Pöyry, a consulting company, have shown that impacts on sea areas close to the Group’s production plants have diminished over the last ten years and that associated marine ecosystems are in good health.

The results of the latest biological and fish population monitoring study confirmed the positive development. The new monitoring of bottom fauna, the levels of metal in fishes and water quality showed that fish populations were healthy and the levels of metals (Cr, Ni and Zn) were very low and similar to the non-loaded reference sea area 30 km from the site. Also from bottom fauna even very sensitive species were found in the vicinity of the site. The quality of the sea water was good and metal concentrations were below the drinking water limits at all sampling points during the whole year. Annualy some twenty professional fishermen are working close to Torro and catch around 50 tonnes of fish. The effluent from the Torro site has not deteriorated the reproductive capability of the fish either. For instance, the summer of 2014 was the best salmon fishing season ever according to statistics from the Torronjoki river.

A number of studies, including the continuous monitoring of discharge levels, have shown that discharges of chromium and nickel are now 60-80% below the levels over ten years in the past. For the last ten years, they have been at a stable, low level despite the fact that stainless steel and ferrochrome production levels have increased during that time. Considered to be the most significant metals released into the sea by Outokumpu’s production activities at Torro, current discharges of chromium and nickel only represent a fraction of the total metal loading, which originates in the main from natural sources in the northern part of the Gulf of Bothnia. Torronjoki and Kemi, the two major rivers in the locality, carry far greater concentrations of these metals into the sea than the total amount discharged by Group facilities. Activity in local fisheries located near the Torro plants is at healthy levels and commercial fishing operations are carried out close to Outokumpu’s production plant. Research indicates that the metals released from Group facilities do not accumulate in marine food chains. Even in sedimentation ponds of wastewaters there are healthy fish populations.
Sustainability is a precondition for new suppliers

In addition to evaluating and auditing our current suppliers and contractors we have integrated sustainability into the approval process for new suppliers. Sustainability requirements need to be acknowledged and signed up to by new suppliers; these issues are also part of Outokumpu’s internal qualitative supplier evaluation system.

As a leading producer of stainless steel Outokumpu makes public product statements such as a conflict minerals statement, a statement related to product safety and health, radioactivity and chemical safety statements, and environmental product declarations. All of these statements require the Group to have knowledge of its suppliers and suppliers.

Outokumpu ensures safety of our products

Outokumpu product safety information for customers and the Safety Information Sheet is made available for the company. Because life cycle and environmental data of products is becoming more important Outokumpu has expanded Environmental Product Declarations (EPDs) to also cover our long products and rebar. Our EPDs are verified by an external independent institute. Read more about EPDs on p. 16.

Work continues to improve efficiency in transport

Efforts continued to minimize the environmental burden resulting from activities in Outokumpu’s supply chain logistics and transportation. The emissions that result from product transportation are included in the Group’s carbon profile and integrated into Outokumpu’s long-term climate-change-related targets.

In 2014, the scope of reported emission data was enlarged to also include our main internal product transfers. Due to this, the numbers are not directly comparable with those published in the previous years’ reports. Comparable data for previous years has been calculated for this report.

Total CO2 emissions resulting from transportation of products to customers in 2014 totaled 239,672 tonnes. The proportion of products and deliveries transported externally to customers by road, rail, and sea were 67%, 17%, and 15%, respectively. In total, the internal and external transports of products amounted to 12,456 million km (tonne kilometres).

Transportation of Group products by mode

For internal product flows, the efforts to shift to train and ship are showing results. Almost 80% of the Group’s internal transportation is by ship, followed by 15% by train.

Although there is an ambition to increase the share of train and ship in transports, truck is still the main mode of transportation when it comes to transport to finished goods to customers. Especially in Central Europe there has been some success in using intermodal transportation, which means combining truck and train.

Transportation of products by mode 2014

<table>
<thead>
<tr>
<th>Mode</th>
<th>2014</th>
<th>2013</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>By road</td>
<td>50</td>
<td>56</td>
<td>38</td>
</tr>
<tr>
<td>By sea</td>
<td>35</td>
<td>31</td>
<td>30</td>
</tr>
<tr>
<td>By rail</td>
<td>15</td>
<td>15</td>
<td>15</td>
</tr>
</tbody>
</table>

2012 figures for transportation of products by mode have not been restated and is the Outokumpu stand alone figure before Inoxum acquisition, therefore not comparable. 2013 figures have been restated.

Reduction of sulphur emissions in the Baltic Sea environment

The new European Directive restricts the emissions of sulphur from sea transport in the Baltic Sea region further from January 1 2015. This impacts transports from Tornio, where a lot of transport goes by ship. To cope with the new, strict requirements, the ships used by Outokumpu to transport coals and other products from Tomio to Turku have been equipped with scrubbers. When cleaning the gas, about 50 kg/day of sulphur is removed and collected for further processing at a waste disposal plant. These gas cleaning scrubbers were taken in use during 2014, among the first in the Baltic and North sea area.

Environmental investments and expenditures

Costs for environment-related activities within Outokumpu totaled EUR 101.4 million in 2014, of which costs associated with operational environmental management totaled EUR 95.5 million. Operational costs include process-related treatment, disposal and remediation costs for waste and emissions into air and water.

Provisions and guarantees in connection with environmental considerations totaled EUR 68 million including provisions for the aftercare of former mining sites of EUR 1.4 million. Environmental investments by Outokumpu and its contractors at the production sites in 2014 of approximately EUR 25 million, from these Outokumpu invested directly EUR 15.5 million. The amount was smaller than in the previous year due to big environmental investments made during past years and the very challenging business environment.

Main recent environmental investments

At Calvert, AL US: the environmental investments related to establishing new production site were in 2014 in full use and amounted to over EUR 100 million. The most significant investments in this area were:

- Water treatment plant USD 61 million
- Acid regeneration plant USD 22 million
- Electric arc furnace dust filter baghouse USD 22 million
- AOD converter dust filter baghouse USD 21 million
- AOD material handling dust filter baghouse USD 8 million
- Other dust filter baghouses USD 8 million

At our Degerfors site, Sweden, new environmental investments were also taken into full use during the early part of 2014: a water treatment plant (EUR 6.5 million) and two heat treatment furnace replacements and an upgrade of existing walking beam furnace.

Other significant environmental or energy efficiency investments were:

- Tomio, Finland: in order to decrease CO2 emissions and increase energy efficiency, the new gas pipeline and new equipment to replace heavy oil being used as fuel in the time kiln with local carbon monoxide gas, which is a by-product of the ferrochrome production. The total investment was EUR 7 million; this was joint investment with on site contractor SMA Minerals.
- Avesta, Sweden: modifications to melt shop EAF for better energy efficiency (EUR 3 million).
- Bochum, Germany: Marbach landfill: (EUR 1.2 million), remediation purposes.
- SMACC, UK: to reduce energy use and CO2 emissions, new EAF transformer regulator and control system (EUR 2 million).
- Tomio, Finland: EUR 0.7 million together with contractors to prevent further dust emissions from the slag treatment processes and EUR 2.9 million (0.2 MEUR remains for 2015) for material efficiency and metal recovery from the same process.
- Calvert, AL: new slag treatment units totaling USD 5.4 million were completed by our on-site contractor.

In Tomio Outokumpu and the long term on-site contractor Tapioravinte decided to invest a total of 3 MEUR for stainless steel slag treatment plant to decrease dust emissions and increase the metal recovery. These investments will be in full use in 2015.

Environmental investments of the new Outokumpu during the last decade were some EUR 400 million, including for example new acid regeneration plants for Avesta and Krefeld, improvement projects for energy efficiency and dedusting equipment for several units.

Outokumpu decided to switch over to using liquefied natural gas (LNG) at the Tomio mill instead of propane. Outokumpu invests approximately EUR 30 million, phased over 2015–2018, of which the vast majority is used to make the required equipment modifications at the Tomio mill.

Process development

An essential area of our research and development operations is the continuous development of our production processes and technologies. Process and technology development activities focus on reduction of the environmental impact, improvement of the cost efficiency of our production processes and the quality of our products. During year 2014 one of the main tasks of our process development teams was to support Outokumpu’s strategic initiatives related to EMEA restructuring and ramp-up of Calvert operations. Operation of Core Technology Competence groups, Group-wide expert teams dedicated to development of certain production process steps, was kicked off. The Core Technology Competence groups are utilized as an important vehicle to transfer technical knowledge and best practices between our production units.

An excellent example of recent results of our process development is that at Tomio plants there is no longer need to landfill any slag after treatment. Annually 1.1 million tonnes of slag is produced in Tomio by the stainless steel and ferrochrome production, which all are processed into CE-marked aggregate products. Major process development in slag treatment facilities has led to substantially improved metal recovery. New processing innovations have enabled drastically improved metal recovery from the slag back to stainless steel production. Improvements in 2014 include also filtering systems for both slag treatment plants in order to make slag treatment as dustless as possible. Also many other developments to material efficiency have been made, for example, improved handling and reuse of molybdenum containing dusts and slags.

Inter-company integration for energy efficiency and climate protection

During 2014 Outokumpu and on-site contractor SMA Mineral jointly invested EUR 7 million in SMA Mineral’s calcium oxide plant in Tornio. A 1.1 km long carbon monoxide line was built for the plant from Outokumpu’s ferrochrome ovens. CO gas replaces heavy oil in the SMA Mineral’s processes totaling 370 full oil truck loads per year. The investment increases also significantly energy and cost efficiency of the time kiln, which is the main driver of production. Improvements in 2014 include also filtering systems for both slag treatment plants in order to make slag treatment as dustless as possible. Also many other developments to material efficiency have been made, for example, improved handling and reuse of molybdenum containing dusts and slags.
Our people

The year 2014 was twofold for Outokumpu employees. First, the execution of necessary restructuring measures to turn the company back to profitability continued. Second, the year marked a turning point from just restructuring towards sustainable development of the organization.

Necessary restructuring continued

Continued restructuring measures at Outokumpu meant difficult decisions and execution of plans, for example, in outsourcing and headcount reduction to keep on track with reducing 3,500 positions worldwide by 2017 as announced earlier. However, it is clear why Outokumpu needs to improve profitability after several years of making losses. Outokumpu negotiated with its employees in the affected locations and the most important result of these negotiations was the agreement between Outokumpu and German unions on the closure of the Bochum melt shop in 2015, two years ahead of the original plan. The agreement meant that Outokumpu was able to accelerate the restructuring its European operations.

The first results from the restructuring work showed already during the year, when the Group posted its first positive operating result excluding non-recurring items (such as one-time costs from restructuring) in the third quarter since the acquisition of Inoxum at the end of 2012, showing that Outokumpu is on the right track. While the first positive harvests were reaped, the full-year results were still negative – this shows clearly that the restructuring measures, continuing until 2017, need to be executed according to the plans also in 2015–2017.

Towards commercial superiority

As the restructuring progressed, Outokumpu was also able to look beyond it during 2014 and start the journey to commercial superiority by means of the continuous improvement of the organization.

Moving Outokumpu towards commercial superiority, the new generation of top management from the commercial rather than operative side took their positions after summer, when the business areas were reorganized to better respond to the needs of the customers. Outokumpu also did a talent review regarding key positions and set up a Talent Council across the business areas to support mobility and exchange of talent across all businesses.

A new short-term incentive system was built and taken into use for the top management, with the next management levels to follow in 2015. At the end of the year, Outokumpu completed the first employee engagement survey (O’People) for the new organization. The survey will set the basis for organizational development in the coming years.

At the end of the year, Outokumpu completed the first employee engagement survey (O’People) for the new organization.
In 2014, Outokumpu continued necessary restructuring work to turn the company around and back to sustainable profitability. The reason for the turnaround was clear, since both Outokumpu and Inoxum had been making losses already before the acquisition of Inoxum by Outokumpu. In order to achieve this, Outokumpu needed to make difficult but necessary decisions during the year.

In February, Outokumpu sold its high-performance alloys business (VDM) and decided to close down the thin-strip production unit Klostar in Sweden by the end of 2014. In March, Outokumpu and German unions completed negotiations regarding the industrial plan in Europe, which targeted to accelerate the closure of the Bochum melt shop and cut cold-rolling capacity in Europe. After constructive negotiations ended, the work to implement the industrial plan started immediately. The Bochum team is cooperating with the teams in Avesta, Sweden and Tornio, Finland to ensure that all production will transfer smoothly and safely to these production units in 2015.

In Europe, the number of personnel declined by 506 in total, mainly following the industrial plan implemented in Germany. With regards to the other main location countries in Europe, reductions in Sweden (2014: 14%, 2012: 6%) and Finland (2014: 14%, 2012: 17%) and 86% men (2013: 86%, 2012: 83%). By the end of 2014, 30% of the employees worked in Germany, 20% in Finland, 16% in Sweden, 10% in the US and 9% in Mexico.

Outokumpu’s permanent employees mostly work on a full-time basis and some 745 people work on a part-time basis. This corresponds to 646 positions in full-time equivalents. The share of blue-collar workers remained stable at 65% (2013: 65%, 2012: 63%) of Outokumpu employees, 54% were women (2013: 14%, 2012: 17%) and 86% men (2013: 86%, 2012: 83%). By the end of 2014, 30% of the employees worked in Germany, 20% in Finland, 16% in Sweden, 10% in the US and 9% in Mexico.

In 2014, ramping up new facilities raised the hiring rate to 4.7% (2013: 3.4%). Additionally, restructuring work led to an increase in the leaving rate which was 8.2% (2013: 7.9%). At the same time, the voluntary leaving rate slightly declined to 3.3% (2013: 3.5%). The described shifts within the Group’s structure resulted in an increase of the average turnover rate to 6.5% (2013: 5.7%).

The number of people on fixed-term contracts was 549. In all restructuring work and lay-offs, Outokumpu complied with local legislation, collective bargaining agreements and other applicable regulations.

### Personnel in numbers

In 2014, Outokumpu continued necessary restructuring work to turn the company around and back to sustainable profitability. The reason for the turnaround was clear, since both Outokumpu and Inoxum had been making losses already before the acquisition of Inoxum by Outokumpu. In order to achieve this, Outokumpu needed to make difficult but necessary decisions during the year.

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### Personnel by region, gender and contract type

**Total number of employees as per Dec 31, 2014**

<table>
<thead>
<tr>
<th>Region</th>
<th>Total</th>
<th>thereof male</th>
<th>thereof female</th>
<th>thereof male</th>
<th>thereof female</th>
<th>thereof male</th>
<th>thereof female</th>
<th>thereof male</th>
<th>thereof female</th>
<th>thereof male</th>
<th>thereof female</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group total</td>
<td>12 125</td>
<td>10 481</td>
<td>1 644</td>
<td>9 708</td>
<td>65%</td>
<td>3 456</td>
<td>4%</td>
<td>3 404</td>
<td>35%</td>
<td>2 905</td>
<td>69%</td>
</tr>
<tr>
<td>Europe</td>
<td>9 104</td>
<td>7 826</td>
<td>1 278</td>
<td>5 992</td>
<td>66%</td>
<td>2 706</td>
<td>95%</td>
<td>2 666</td>
<td>3 412</td>
<td>2 120</td>
<td>68%</td>
</tr>
<tr>
<td>Asia</td>
<td>581</td>
<td>485</td>
<td>96</td>
<td>309</td>
<td>53%</td>
<td>299</td>
<td>97%</td>
<td>10</td>
<td>272</td>
<td>186</td>
<td>68%</td>
</tr>
<tr>
<td>Africa</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>50%</td>
<td>2</td>
<td>100%</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>100%</td>
</tr>
</tbody>
</table>

* Data covers 95% of permanent employees.

### Personnel by years of service, permanent employees

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Number of employees</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-5</td>
<td>500</td>
</tr>
<tr>
<td>6-10</td>
<td>2 000</td>
</tr>
<tr>
<td>11-15</td>
<td>1 500</td>
</tr>
<tr>
<td>16-20</td>
<td>1 000</td>
</tr>
<tr>
<td>21-25</td>
<td>1 200</td>
</tr>
<tr>
<td>26-30</td>
<td>1 200</td>
</tr>
<tr>
<td>31-35</td>
<td>1 000</td>
</tr>
<tr>
<td>36-40</td>
<td>500</td>
</tr>
<tr>
<td>41-45</td>
<td>500</td>
</tr>
<tr>
<td>46-50</td>
<td>500</td>
</tr>
<tr>
<td>51-55</td>
<td>500</td>
</tr>
<tr>
<td>56-60</td>
<td>500</td>
</tr>
<tr>
<td>61-65</td>
<td>500</td>
</tr>
<tr>
<td>66-70</td>
<td>500</td>
</tr>
<tr>
<td>71-75</td>
<td>500</td>
</tr>
<tr>
<td>76-80</td>
<td>500</td>
</tr>
</tbody>
</table>

* Data covers 95% of permanent employees.

### Educational background, permanent employees

- Primary and lower secondary level: 21%
- Upper secondary level and lower university degree: 69%
- Higher university degree and postgraduate: 10%

* Data covers 95% of permanent employees.

### Hires and Leavers by business area

<table>
<thead>
<tr>
<th>Business Area</th>
<th>Number of employees</th>
<th>New hires</th>
<th>Leavers</th>
<th>Hiring rate %</th>
<th>Leasing rate %</th>
<th>Voluntary Leasing rate %</th>
<th>Avg. Turnover rate %</th>
<th>Hires vs Leavers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group total</td>
<td>12 125</td>
<td>10 481</td>
<td>86%</td>
<td>1 644</td>
<td>35%</td>
<td>2 706</td>
<td>95%</td>
<td>2 404</td>
</tr>
<tr>
<td>coil EMEA</td>
<td>7 164</td>
<td>664</td>
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<td>71%</td>
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<tr>
<td>coil Americas</td>
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<td>183</td>
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<tr>
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<td>17%</td>
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<td>50</td>
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<tr>
<td>Other Operations</td>
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<td>23</td>
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<td>63</td>
<td>7%</td>
<td>13%</td>
<td>10%</td>
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* Data covers 95% of permanent employees.
Outokumpu Sustainability report 2014

Personnel by countries

<table>
<thead>
<tr>
<th>Country</th>
<th>2014</th>
<th>2013*</th>
<th>2012*</th>
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<tbody>
<tr>
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<tr>
<td>The United Arab Emirates</td>
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<td>Africa</td>
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</tr>
<tr>
<td>South Africa</td>
<td>4</td>
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<tr>
<td>Group total</td>
<td>12,125</td>
<td>11,686</td>
<td>17,714</td>
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</table>

* Including discontinued operations.

Goals and results

Results 2014

For 2014, the overriding objectives were to implement the ongoing restructuring measures and to move the company beyond restructuring and into business excellence. The focus areas for 2014 were increased focus on job rotation, building up capabilities and looking into fundamental business processes to ensure customer satisfaction and internal efficiency.

Restructuring measures continued – for example, synergy savings were ahead of schedule and headcount reductions continued. The hard work in restructuring and cost-cutting started to show financial results, when first EBITDA in the second and then the operating result excluding non-recurring items in the third quarter were positive for the first time since the acquisition of Inoxum. The full-year results remained however in the red. This means that the implementation of restructuring measures, which stretched until 2017, needs to continue according to plan.

At the same time, when restructuring work progressed, Outokumpu was able to look also beyond restructuring and to further improve its customer focus. To this end, business areas were reorganized to become more customer-driven. For example, all European coil operations, whether standard or specialty grades, were moved into one business area and commercial expertise increased both in top and business area management. Outokumpu also kicked off the Chorus program, which is about looking into fundamental business processes and unifying them across Outokumpu to gain efficiencies. The work started in 2014 and continues in the coming years, but the results are expected to start showing effects in 2015 onwards.

Performance management

A lot of work was put into developing performance management in 2014 with changes both to the process and the documentation system. This work started in 2014 and continues in the coming years, starting in 2015. Also, the employee engagement survey, O’People, will give guidance on the areas which need to be developed for Outokumpu to become a high performing organization. This development work will start in 2015 in all parts of Outokumpu.

During the second half of 2014, activities were developed to start changing the way performance is managed in the whole company. A workshop was designed for managers to initiate the new approach to performance management in all parts of Outokumpu and a new short-term incentive plan was communicated to the organization at the end of 2014. One of the implications of these changes for 2015 will be that every employee is expected to have a quarterly performance and development discussion with their manager.

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Compliance and benefits

In compensation and benefits, Outokumpu has an overall framework and principles defined by Corporate Human Resources. Within the framework, the business areas can develop solutions which best support the needs of their business and which are competitive according to local market practices. In 2014, the overall principles remained unchanged and due to Outokumpu’s financial challenges, salary increase budgets were very limited and only the most critical cases were addressed. Some changes were made to incentives for field sales employees, for example, in the Colin EM&A and APAC business areas. In APAC, in addition to the introduction of a separate sales incentive plan, the pay mix was also changed somewhat to put more weight on variable pay in the total compensation.

When it comes to performance share plans, some of the annual criteria were reached, but according to the terms and conditions of the plans, the earned reward shares will not be paid until the end of the three-year performance period. The structure of the short-term incentive plan for top management was changed to strengthen the link between the financial performance of the company and the payouts, and it was implemented at the beginning of the year. The same short-term incentive structure will be applied to subsequent management levels from the beginning of 2015.

Training and development

While restructuring progressed, the building of the new company continued as well. Outokumpu introduced Winning Behavior workshops at the end of 2013 to build up common understanding on the common behaviors that bring us success. Winning Behaviors are about putting the customer first, turning volumes into profit, acting with speed and working together. Workshops continued nearly throughout the whole of 2014 in the units and almost 2,000 Outokumpu employees took part in them. For example in Mexico, the management decided that they wanted each employee to participate and some 95% of the workforce took part in workshops. Each employee made a promise at the end of the workshop on what they could do immediately to improve their work. The feedback from the workshops was positive and people were enthusiastic about them.

During the year, Winning Behavior workshops evolved into a Champions’ League where employees could nominate colleagues or work teams that were bringing Winning Behaviors to life in everyday work. At all in all, almost 200 employees were nominated across the globe and their achievements were shared in the global internet over the year. The Outokumpu Leadership Team selected twelve champions who in their opinion had demonstrated the Outokumpu Spirit and Winning Behaviors in an especially good way. At year end, employees voted for the top four Winning Behaviors champions, one for Profit, Customer, Speed and Together respectively.

Otherwise, due to the savings programs, only business-critical and necessary training programs, such as safety training, continued in the units. For example in the Americas, where Outokumpu is ramping up the Calvert mill in Alabama, as one of the major profitability levers, the training courses are critical to the ramp up and continued throughout the year. Also, in Quarto Plate Business in Dagargent we undertook training for many employees associated with new investments in increased capacity and product capability. There were two compliance-related e-learning programs, one for the renewed Code of Conduct for all white-collar employees and the other for competition law compliance issues. These programs were completed during 2014. A pilot development program for young talent in Europe was initiated in late 2014 and will be expanded in line with the new Training and Development Frame during 2015.

Compliance

During the year, Outokumpu’s Code of Conduct, which sets the Group’s ethical standards and guidelines for a common way of working, was revised and updated. The revised Code of Conduct is available in all main languages of the Group – Chinese, Dutch, English, Finnish, French, German, Italian, Spanish and Swedish. It was implemented with strong involvement and message from the top management as well as through a wide internal communication campaign and e-learning training. As part of the training, Outokumpu launched an e-learning in its Code of Conduct, compulsory for all white collar employees. The first stage in 2014 covered some 3,000 people out of which 99% completed the training.

Other compliance training sessions carried out during 2014 included e-learning in competition law compliance for the relevant personnel in the Group. The training has been successfully completed by some 1,400 employees in 2014. Outokumpu constantly develops its competition law compliance training programs to ensure effectively its policy to fully comply with competition laws.

Outokumpu has a Helpline, a confidential contact channel through which employees or third parties can report suspected misconduct confidentially and anonymously by e-mail, mail or fax, or they can phone directly to Internal Audit. Investigation of one communicated case in 2014 resulted in proof of violation of Health and Safety standards. From eight further special investigations based on allegations brought forward through other channels, no incidents in view of discrimination or human rights violations were noted; however Internal Audit observed theft of material in two instances and potential violations of the Outokumpu Code of Conduct in one case.

Diversity and equal rights

Outokumpu’s ethical principles build on the equal treatment of all people, and there is zero tolerance for any kind of discrimination, whether it is based on ethnic origin, nationality, religion, political views, gender, sexual orientation or age. The Group endorses the values of the United Nations Universal Declaration of Human Rights. A transparent and unified resourcing process is the way to ensure equal opportunities. Outokumpu complies with international labor treaties and condemns the use of forced and child labor.

Outokumpu maintains a consistent policy of freedom of association. All employees of the Group’s operations are free to join trade unions in accordance with local rules and regulations. Altogether 81% of the Group’s permanent employees were covered by collective agreements in 2014. During the year, there were 170 days lost due to strikes (2013: 24; 2012: 8).

14% of Outokumpu’s employees are women (2013: 14%; 2012: 17%; 2011: 18%). At the end of the year, two of the eight members of the Board of Directors and one of ten members of the Leadership Team were women, and altogether 24 women held key leadership positions. These correspond with the overall percentage of women working in Outokumpu.

Almost 2,000 Outokumpu employees participated in the Winning Behavior workshops.
Focus on employee communication supporting the transformation and driving a common culture continued in 2014 after a major integration which began one year previously, while at the same time the company was able to look beyond integration and restructuring as well.

Based on the results from the previous internal communications surveys in 2013, line manager communication and improving the usability of the company intranet continued to be in focus during the year. While intranet and managers are the most important day-to-day sources of information, these were supported by the internal magazine, published four times a year, and internal newsletters. The CEO spoke to the top 200 managers in relation to the most important news during the year in altogether six teleconferences, after which the managers took the message forward in their organizations. As part of the continuous efforts to improve communications at Outokumpu, the first ever Outokumpu all-staff info call was arranged in March. In the all-staff info call, the employees had a chance of hearing directly from the CEO about Group strategy, priorities, achievements and challenges. Due to good feedback, the second all-staff call was arranged in October. Two top management meetings were arranged during the year.

A major part of employee communication related to the ongoing restructuring programs and their targets and progress, but also to sharing successes and common ways of working, such as Winning Behaviors and Outokumpu Champions’ League. The Champions’ League page became the most read campaign page ever in the Outokumpu intranet with over 16,000 views. Also safety was a focus during the year. The number of non-lost time injuries was 727 (2013: 908). The follow-up of proactive safety indicators continued to be a focus for Outokumpu’s operational management. The number of non-lost time injuries was 727 (2013: 908). The number of non-lost time injuries was 727 (2013: 908). A number of plants maintained zero lost time injuries during 2014 and have maintained this for multiple years. These sites are across the production steps, providing evidence of best practice and sharing opportunities.

Focus for 2015 and beyond

Outokumpu’s safety strategy follows our existing safety principles and is built on the three themes of having visible safety leadership, employee ownership of safety and sound safety systems and processes. Improvement action across these three areas will continue in 2015 with increased training particularly in Safety Leadership and Contractor Management and increased focus on near miss and hazard reporting by all employees and development of common safety management systems.

Health

As a responsible company, Outokumpu initiated systematic health studies with world-class independent expert institutes in the 1980s. The main targets of these studies have been individual levels of exposure to chromium and other compounds in the stainless steel production chain and their health effects. Occupational health activities focus on improving working environments and employee health is monitored using a variety of occupational health checks and fitness tests. Occupational hygiene measurements are carried out on an ongoing basis at Group production sites to monitor work-related exposure to noise and irritants in the ambient air, as well as other factors. Issues related to working environments within Outokumpu are also studied through joint research projects carried out in collaboration with universities and specialist institutions.

In 2014, an average of 5,428 days per million hours worked by Outokumpu employees were lost as a result of sickness or injury (2013: 6,689). The number of cases of occupational disease diagnosed in the Group in 2014 was 13 (2013: 11).

Epidemiological studies among Finnish ferrochromium and stainless steel production workers

An epidemiological cancer study was completed and the results were published in the article “Cancer incidence among Finnish ferrochromium and stainless steel production workers in 1967–2011: a cohort study” in the British Medical Journal in November 2013. The cohort consists of 8,100 employees who have been employed at the Outokumpu mine in Kemi and production site in Toros since 1967. The health data related to this cohort have been analysed further, and the results are expected to be published in 2015. Studies on particle characterization in the workplace air and on the acute respiratory health effects caused by occupational exposures are in the reporting phase.

Communication and cooperation

Outokumpu Personnel Forum

Outokumpu has a Personnel Forum, which is a joint consultative body that offers a channel for transferring information between management and employees. The forum was established some ten years ago, when the European Works Council directive entered into force. The Personnel Forum discusses issues of transnational interest – the Group’s economic and financial performance, future business prospects, product and market situations, strategy, investment decisions, annual report, manpower and employment issues, business reorganization, health and safety, environment, technology and research and other matters which have transnational impact or where there is a common interest.

The forum has 33 representatives from European operations and it appoints a working committee (Group Works Council) which is responsible for ongoing cooperation between management and employees. The works council has eight members representing the personnel and three representing the management. In 2014, the forum met once in Espoo, Finland and the working committee altogether four times. In addition, there was one workshop to prepare the O’People personnel survey.

Local cooperation with unions

Since Outokumpu is still in the middle of restructuring programs, during the year there were local cooperation and negotiations related to these. In March 2014, the Group and German unions agreed on the acceleration of the closure of the Bochum melt shop. Changing the existing tariff agreement is very exceptional, and the work to implement EMEA restructuring was begun immediately after the agreement was reached. The cooperation continued regarding financial services and IT outsourcing, and negotiations regarding the closure of Koster operations and to reduce head office headcount were completed during the year. Local negotiations are done according to local practices and regulations.

Safe working environment

At Outokumpu, safety remains the number one priority. Outokumpu is committed to providing a safe and healthy working environment at its production sites and facilities for its own personnel, contractors and visitors.

Safety First

Safety is the number one priority at Outokumpu. The Group Management has continued to raise the profile of safety with it being at the top of every agenda and with visible performance indicators throughout the company.

Outokumpu remains committed to providing a safe and healthy working environment at its production sites and facilities for its own personnel, contractors and visitors. The ambition is to continuously improve our safety practices to ensure that Outokumpu is an industry leader in safety.

Significant improvements have been made to allow a step change in safety performance however opportunities for further development still exist across the Group. Common safety reporting has allowed the opportunity for internal and external benchmarking across a range of lagging and leading indicators. The ultimate goal for Outokumpu remains zero accidents with an underlying management philosophy that all accidents at our sites are avoidable.

Safety performance

In 2014, the total injury frequency for the new company was 30.3 (2013: 34.6). A contractor fatality occurred in the Coil Americas operation during 2014. This was the first fatal injury in Outokumpu for nine years and was felt deeply throughout the company.

The Group LTI rate (lost time injuries per million working hours) significantly improved to 2.7 (2013: 4.5) and was better than target. The number of other severe accidents remained at a low level with many injuries being of a minor nature.

The number of non-lost time injuries was 727 (2013: 908).

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Outokumpu operates in a competitive industry where demand and supply meet on global markets. On the other hand, our production sites are often located in relatively small cities or towns. This means that Outokumpu is significant to the small local community’s economy, and often one of very few private sector employers in the area. Finding balance between global market trends and responsibility towards communities is sometimes difficult, especially in economic downturns. Decisions have a major impact on communities, Outokumpu personnel and their families and local goods suppliers and service providers as well.

Events tailored to creating open and active participation, such as a variety of “open house” events on production sites, are clear signals for local communities that Outokumpu wants to be part of the community and to encourage an open Outokumpu culture.

Outokumpu makes donations to various charitable enterprises and events in line with its ethics. The Group may sponsor research and environmental programs, sporting activities, culture and a variety of events at local level, as well as charity work. We also offer scholarships to students. Organizations that arrange activities for children are also supported.

Outokumpu supports research and development related to its field of industry and maintains close cooperation with educational institutes in the training of engineers, miners and supervisors. Apprenticeships have been offered to local colleges and student placements have been made available in the form of one-year programs, and schoolchildren and local students have been introduced to the Group’s operations. Outokumpu does not participate in or otherwise support political activities whether they are local or national. Outokumpu does not make donations to any political parties or groups.

Outokumpu Sustainability report 2014

### Value added distributed to Outokumpu’s stakeholders

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<th>Generation of value added</th>
<th>Distribution of value added</th>
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<tr>
<td><strong>Customers</strong></td>
<td><strong>Employees</strong></td>
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<tr>
<td>Sales 6 844 € million</td>
<td>Wages and salaries 765 € million</td>
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<tr>
<td><strong>Suppliers</strong></td>
<td><strong>Public sector</strong></td>
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<tr>
<td>Cost of goods and services 5 894 € million</td>
<td>Taxes and social dues 106 € million</td>
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<tr>
<td><strong>Employees</strong></td>
<td><strong>Creditors</strong></td>
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<tr>
<td>Value added 950 € million</td>
<td>Interest on debt and borrowings 132 € million</td>
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<td><strong>Shareholders</strong></td>
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<td></td>
<td>Dividends - € million</td>
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Retained in business: -54 € million
Risks and stakeholders

To expand appreciation of key risks within Outokumpu and to help in mitigating the effects of possible impacts on stakeholders, the Group also monitors potential risks from a corporate responsibility perspective. Sustainability issues in creating stakeholder dialog is an integral part of the Group’s risk management process. This internal risk review process was conducted twice during 2014. In addition, the Group’s risk management participates in the corporate responsibility team of Outokumpu. This secures efficient communication to both directions and strong presence of risk management perspective.

Impacts on stakeholders are reviewed as part of Outokumpu’s risk management process. The evaluation process covers enterprise-wide risks at all organizational levels and includes assessments of the impact of key risks on Group stakeholders. The “Stakeholder perspective” diagram specifies key stakeholder groups and provides examples of the possible impact of different categories of risk on Outokumpu’s operations.

Customers

Putting the customer first was the guiding principle with Outokumpu’s 2014 focus. It is a promise embedded in our everyday operations. Outokumpu serves its customers – distributors, producers of consumer goods and manufacturers of various industrial applications alike – globally. Continuous feedback and interaction with customers help us to improve our understanding of their needs, the challenges they face and the business environment our customers operate in. Customer orientation is a part of target-setting for each employee.

Outokumpu aims to build long-term relationships with its customers. After all, our vision of a ‘world that lasts forever’ can only be achieved through our customers’ applications and solutions. Being a responsible business partner is a pre-condition for long-term partnership. In all communication with its customers, Outokumpu is committed to marketing communications laws, standards and voluntary codes, such as commitment to accurate and truthful advertising. Outokumpu protects the personal data of its customers by ensuring that it is only collected, gathered, processed, used, and stored to the extent necessary for pre-determined and legitimate purposes and in compliance with applicable laws. Training in these practices are frequently held and their implementation is monitored. During 2014, Outokumpu has trained Group sales and technical personnel in compliance with applicable laws. Training in these practices are frequently held and their implementation is monitored.

Outokumpu’s operations.

Business areas and Group functions

Operations

Identification

Risk monitoring and control

Mitigation

Evaluation and prioritization

Risk reporting (external/ internal)

Regular risk updates

Leadership Team

Key risks are evaluated for stakeholder impacts

Enterprise-wide risks

Evaluation of risks impacts on stakeholders

• Customers

• Local communities

• Shareholders

• Personnel

• Future employees

• Associations, federations

• Suppliers

Regular risk updates

Risk monitoring and control

Mitigation

Evaluation and prioritization

Risk reporting (external/ internal)

Leadership Team

Business areas and Group functions

Operations
Suppliers

Outokumpu’s purchasing decisions are made solely based on Outokumpu Group’s best interests, taking into account its Corporate Responsibility Policy’s environmental, economic and social aspects. Suppliers will win Outokumpu business based on lowest total cost of product or service. Total cost means the total amount spent on a particular commitment, including, among other things, the initial contract price, life cycle cost of investment, effect on Outokumpu’s production efficiency and quality, commission fees, as well as other transaction costs and taxes.

Raw material purchases are the largest item in Outokumpu’s costs. In 2014, Outokumpu’s delivery volumes were 3,485,000 tonnes, a comparable increase of 20.4% from the previous year, based on the management estimate for 2013 figures. The cost of goods and services fell by 1.9% from the previous year, mainly due to the synergies in procurement, compared to the comparable figure from the previous year based on management estimate.

Primary raw materials – nickel, ferrochrome, recycled stainless and carbon steel – are purchased on the open market. Part of the ferrochrome is sourced internally from the Group’s own chrome mine and ferrochrome operations. The investment to double ferrochrome production capacity to 530,000 tonnes was ramped up in 2014.

Outokumpu regularly evaluates its suppliers from the sustainability point of view, highlighting the responsibility issues within society and local communities. The scope of the study was all raw material producers and subcontractors in general procurement. In the last round of evaluation, the coverage of all completed answers and evaluated companies was more than 90% of Outokumpu’s total spending on materials and supplies to these companies.

The Outokumpu Code of Conduct, renewed in August 2014, is a tool for Outokumpu employees offering assistance to evaluate suppliers in different situations by setting examples and giving practical guidance. The Code of Conduct states that Outokumpu condemns all forms of corruption and complies with the anti-corruption treaties and laws of the countries in which it does business. Outokumpu expects its suppliers and contractors to act in accordance with the law and recommends that they perform according to Outokumpu’s policies. It is the goal of Outokumpu that its business partners, subcontractors and suppliers become familiar with the Code of Conduct and Outokumpu’s Corporate Responsibility Policy, and that they follow similar standards. Outokumpu is committed to marketing communications laws, standards and voluntary codes in communication with suppliers.

Read more about our sustainable supply chain on p. 35.

Current and future employees

Both current and future employees are very important stakeholders for Outokumpu, their energy and commitment being a fundamental part of the Group’s business.

Outokumpu’s employees are the key building block in reaching commercial superiority. The steps taken to build the new culture after the integration with Inoxum in 2013 were driven forward in 2014. Outokumpu introduced Winning Behavior workshops at the end of 2013 to build up common understanding on the behaviors that bring us to success. Workshops continued throughout nearly the whole of 2014 in the units and almost 2,000 Outokumpu employees took part in them.

Outokumpu’s long-term target is to be an employer of choice. During 2014, Outokumpu continued its long-term efforts to develop the Group’s employer brand. In all countries with bigger plants, Outokumpu has co-operation with schools and universities, or plans to start strategic relationships. Social media is also an important means for future resourcing. In 2015, Outokumpu will redefine its employer value proposition in order to strengthen it employer brand, reputation and awareness level on the external candidate market.

Outokumpu has a long tradition of offering summer jobs and traineeships in its major production locations in Finland, Germany and Sweden. By this, Outokumpu aims to further build its employer brand, and offer an opportunity to students to become acquainted with Outokumpu as an employer and to learn about the job opportunities that Outokumpu offers. During the summer of 2014, the Group employed some 558 summer workers in Finland, mainly in Timrå, and approximately 210 in Sweden. Traineeships were offered particularly within Group services such as marketing and accounting. In Germany, Outokumpu offered internships for 46 students close to graduation as engineers, as well as technical and commercial apprenticeships in all its locations.

Wages and salaries by country

<table>
<thead>
<tr>
<th>Country</th>
<th>2014</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Finland</td>
<td>161</td>
<td>154</td>
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<tr>
<td>Sweden</td>
<td>119</td>
<td>118</td>
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<tr>
<td>The United Kingdom</td>
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<td>28</td>
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<td>Germany</td>
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<td>Other Europe</td>
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<td>Asia and Oceania</td>
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</tr>
<tr>
<td>Other countries</td>
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<td>5</td>
</tr>
<tr>
<td>Total</td>
<td>765</td>
<td>711</td>
</tr>
</tbody>
</table>

Economic impact

Salary payments including pensions and other benefits paid by Outokumpu in 2014 increased compared to the previous year by some 8% to EUR 765 million (2013: EUR 711 million). Bonuses received by Group personnel in 2014 amounted to EUR 18 million (2013: EUR 40 million). The Group’s incentive plans are primarily based on operational or financial targets and vary by country.

Investors and analysts

Outokumpu’s regular and active dialog with capital markets continued globally in 2014. During the first half of the year, key topics discussed with investors and analysts were the comprehensive measures to strengthen the company’s capital structure, including the divestiture of Terni remedy assets and the VDM business to ThyssenKrupp, as well as financial planning to renew the company’s debt portfolio that also included a rights issue. During the year, the focus shifted more towards the operational turnaround of Outokumpu including the Calvert ramp-up in Americas, EMEA restructuring and measures to improve cash flows and reduce debt levels. Furthermore, the nickel price development, as well as the reverse split of Outokumpu shares aroused interest in the capital markets during 2014.

Outokumpu met investors and analysts at various events throughout the year. The company organized the Annual General Meeting in April and two Extraordinary General Meetings in February and June.

In addition, the company hosted quarterly results webcasts for analysts, investors and the media. Outokumpu’s representatives also attended seminars and conferences and organized 18 roadshows in Europe and in the US to meet investors. In addition, Outokumpu hosted a Capital Markets Day in Düsseldorf in September. Three site visits for analysts and institutional investors were arranged in 2014, one to the chrome mine in Kemi and the stainless steel plant in Timrå, Finland, one to the cold rolling mill in Krefeld, Germany, in connection with the Capital Markets Day, and one to the new stainless steel plant in Calvert, USA. A total of over 300 one-on-one meetings, conference calls and video conferences with investors were held during the year.

Read more about Outokumpu share and shareholders, Outokumpu’s activities in the capital markets and stock exchange releases in 2014 in the Annual report in Shares and shareholders and Information for the investors on p. 115.
Local communities

Many Outokumpu production sites have a long and interesting history. For example, Sheffield, Degerfors, Avsast, Nyby (Ekshultuna) and Dahlebrück sites have been an integral part of local society during many centuries. It is natural that existing company and a major employer is involved in local society and activities in many ways.

We are a major employer in for example in Avsast and Degerfors, in Sweden, in Sheffield in the UK, in Calvert and New Castle in the US and in the Kemi-Tornio region in Finland and in Dahlebrück, Dillenburg and Krefeld in Germany. A continuing dialogue is maintained with community officials and representatives, other commercial companies, and with schools and universities.

Outokumpu has new locations where we aim to implement our sustainability program and actively listen to local communities. Outokumpu’s most significant impacts on local communities include direct and indirect employment as well as environmental and energy issues. These are also key topics in discussions with local community representatives. Emissions from the Group’s plants are measured and strictly monitored, and effective corrective actions are taken if deviations from permitted limits occur. Both vigilance and a responsive attitude to issues that affect local communities and their concerns are important.

For example, Tornio implemented a publicily available particle monitoring system in the Tornio-Haparanda area in order to openly disclose information online. The monitoring sequence was completed in 2014 and discontinued due to very low dust and particle concentrations.

In April, Outokumpu arranged a Girls’ Day at the Krefeld and Dillenburg units. The aim of this yearly event is to give 14–15-year-old girls interested in technical work a first insight to career possibilities. The latest strategic investments in Calvert, US were completed and continue to have a positive impact on the surrounding districts: during 2014 some 100 new employees were hired. Other recent investments include the EUR 410 million investment in the expansion of the Group’s ferromchrome production in Tornio, and the EUR 100 million to increase stainless quarto plate production capacity in Degerfors. The ferromochrome expansion resulted in around 120 permanent jobs in the Kemi-Tornio region.

The Group’s Kemi mine collaborates with several educational schools like Lapland University of Applied Sciences in the training of engineers, miners, and supervisors. In Sheffield the UK apprentice ships have been offered to local colleges and student placements have been made available in the form of one-year programs. Outokumpu’s employees have given presentations at local schools and universities and we have worked with local employment agencies to find positions for people within the Group. Schoolchildren and local students have been introduced to the Group’s working environment through tours and discussions with employees.

Managing impacts on local communities

Traffic loads have an impact on local communities, with the Kemi-Tornio region and Sheffield being good examples. Our Tornio site has participated in the new railway connection project in northern Sweden “The North Bothnia Line” (Nordbottnabanan) which would mean an extension of the Bothnia line north of Umeå to Luleå (270 km) and it would provide a new transport route for Tornio plant. The preliminary decision to build it has been made and detailed planning is ongoing including the choice of a route.

In Sheffield, Outokumpu is located very close to the UK’s M1 motorway, and steps are taken to ensure that our operations have minimal impact on this primary transportation route. As the effects associated with the transportation of goods and raw materials can be major, the Group’s general logistical arrangements are carefully planned to avoid road congestion and minimize impacts on other road users. In recent years, increased transportation of alloy by rail has had a positive impact in connection with road traffic densities.

Outokumpu and Society

In Germany, the permit for Marbach disposal site in Bochum Hamme created public concerns in 2013 and early 2014. To address the concerns, Outokumpu established a local voluntary advisory committee in Marbach for inhabitants to share information and views, including neighbors, NGOs and other interest groups. Pians regarding the closure of the Bochum melt shop calmed down the media and local discussion about the Marbach landfill. New construction work and the use of the landfill continues as planned for the rest of the operation time of Bochum melt shop.

Due to slag yard dusting our new Calvert site in Alabama, US established meetings with local neighbors. The aim is to decrease the dusting during the coming months. One reason for dusting in certain weather and wind conditions is that the area and slag treatment operations are not yet ready and in full use.

As a large employer, decisions regarding the Group’s operations have a major impact on communities; not only on Outokumpu personnel and their families, but also on local goods suppliers and service providers. The latest strategic investments in Calvert, US were completed and continue to have a positive impact on the surrounding districts: during 2014 some 100 new employees were hired. Other recent investments include the EUR 410 million investment in the expansion of the Group’s ferromchrome production in Tornio, and the EUR 100 million to increase stainless quarto plate production capacity in Degerfors. The ferromchrome expansion resulted in around 120 permanent jobs in the Kemi-Tornio region.

Outokumpu organizes, when needed together with local municipalities open forums and discussions with inhabitants and NGOs. In 2014 there were no large open discussion forums. One visit to Haparanda inhabitants was organized to Tornio plant.

Cooperation with neighbors

Information exchange with neighbors and local community is very important related to activities. During 2014 especially in Germany, the United States and Finland we organized some meetings or cooperation with neighborhood due to various reasons. At Kemi mine, the permit for Marbach disposal site in Bochum Hamme created public concerns in 2013 and early 2014. To address the concerns, Outokumpu established a local voluntary advisory committee in Marbach for inhabitants to share information and views, including neighbors, NGOs and other interest groups. Pians regarding the closure of the Bochum melt shop calmed down the media and local discussion about the Marbach landfill. New construction work and the use of the landfill continues as planned for the rest of the operation time of Bochum melt shop.

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In Sheffield, representatives of the local police force, fire and emergency services, and national health organizations have attended a number of health and safety days organized for Outokumpu’s employees.

Local stakeholders are also taken into account in the Group’s emergency planning.

Communication with employees on sites

Maintaining employee well-being is Outokumpu’s aim, and productive dialogue is the key element in achieving this. Outokumpu’s largest industrial sites have many similarities. In addition to regular meetings with personnel representatives, employees are met once or twice every year at special events. Daily operational meetings include reporting on health and safety and environmental issues. Actions to resolve these are usually taken immediately after completing a risk assessment. Management team members are encouraged to walk through Group facilities, including production plants, and to talk with employees engaged in manufacturing operations.

Production employees are represented by their unions in plant management discussions at Outokumpu Niinola, Avsast and Sheffield. In Avsast, both formal and informal meetings are held at the plant level and on site on a regular basis. In the UK, trade union engagement at Outokumpu sites is active, with work on many issues, including health and safety, salaries, working hours, shift patterns, and other mutually beneficial issues, being conducted in close co-operation. Dialogue between the management team and an employee forum, a cross-functional group, takes place monthly. The issues raised are debated and action plans instituted. Nominated safety and union representatives are able to engage in direct and open dialogue with members of the plant management team. In Tornio, individuals heading large departments are members of the management team and three personnel representatives are members of the board of Tornio steel plant.

Outokumpu’s UK sites arrange open days for employees’ relatives, helping them to become familiar with the locations where their family members work. Quarterly health and safety and well-being sessions are organized for employees and their incorporate the family-related aspects of their occupations. Close work with a local gym, which visits the Group’s UK sites on a quarterly basis, reinforces well-being and fitness programs. At Avsast in Sweden, a recreation committee organizes a wide variety of events for both employees and their families, such as lectures and family days. Participation in sports such as biking, skiing, and swimming is sponsored. At Tornio in Finland, sporting events involving employees’ children are organized in both the summer and winter. Personnel clubs, which reduce the costs associated with enjoying cultural and other events, are supported.

Investing in mental capital and well-being

In Finland a new service provider was chosen to provide occupational health care services for Outokumpu Espos office. As one of the first steps an assessment was carried out with the target to identify resources and risks related to the working environment. Based on the findings an action plan was prepared including for example info sessions related to work ergonomics.

The main principle in the Espos office was to increase individuals’ knowledge of the ways to manage their own well-being. The topics discussed covered different ways to build stress resilience, increase the ability to concentrate and use brains in a productive way. Special support was arranged for teams who had experienced a difficult restructuring and change process. During the ongoing IT outsourcing processes a special attention was put on communications to prevent uncertainty.
Well-being at work

Outokumpu provides its employees with a healthy and safe working environment. The health of the personnel and their wellbeing at work are important preconditions for Outokumpu’s success in day-to-day operations as well as its long-term competitiveness. At Outokumpu, it is the responsibility of the whole workforce to foster mental well-being and to increase occupational health and safety. Company management in particular has set a good example by cultivating fairness and conducting open and interactive communications.

For these kind of purposes, our cold rolling unit in San Luis Potosí, Mexico, started a voluntary but famous competition for working teams to reduce their own individual weight of management and team members. Results have been good and helped to promote healthy life styles and positive attitudes at the work place.

In Tornio the “Good work – Longer career” project continued at Ferrochrome plants and a new survey was conducted in May. The results did not show improvement and the project team will evaluate the future of the project with the local employee representatives.

External R&D collaboration

Outokumpu has an extensive network of external R&D partners and participates in both national and international research programs. Outokumpu is a member of the European Steel Technology Platform (ESTEP). Examples of research programs in which Outokumpu is participating include the Finnish Mechanical and Engineering Competence Cluster (FIMECC), Research Fund for Coal and Steel (RFCS) and Jernkontoret (the Swedish Steel Producers' Association). In Germany, we are collaborating with various universities and research institutes, among others with the Fraunhofer Institute and the Max-Planck-Institut für Eisenforschung.

Launch of two new extensive 5-year research programs coordinated by FIMECC and funded by TEKES (the Finnish Funding Agency for Innovation) was one of the main actions related to our external R&D networks in 2014. In FIMECC SIMP (System Integrated Metal Processess) program, a global unique grouping of leading metal industry companies have come together to further increase its global competitiveness by integrating digitalization and sustainability in metallurgical processes in a system integrated manner. FIMECC BSA (Breakthrough Steels and Applications) program focuses on development of new generations of sustainable steels and their future applications.

Associations and federations

Outokumpu is an active and responsible actor in society. As the global stainless steel producer, the Group’s opinion is voiced in many forums. As committed to sustainability Outokumpu is a signatory to the International Chamber of Commerce (ICC) charter, follows and supports the United Nations Global Compact, and is an active member of the UN Global Compact Nordic Network. To demonstrate the Group’s support for sustainability, Outokumpu has signed the Worldsteel Sustainable Development Charter and the ISSF’s Sustainable Stainless Charter. Although countering bribery and corruption are clearly defined in the Group’s publicly available Code of Conduct, participation in these networks is a way to promote progress throughout the whole business landscape, also outside the Group’s own supply chain.

In 2014, Outokumpu experts and top management continued to maintain effective liaisons with numerous organizations. Top management participated in dialog concerning issues such as social well-being, the global financial situation, megatrends and the future of the stainless steel business. Mika Seilovaara, Outokumpu’s CEO, was an active participant in the discussions, especially those regarding society’s role in creating a competitive environment that can enhance development, knowledge, and investments. Within the Group, comprehension of approaches to social responsibility is expanded through active engagement with a variety of companies and organizations.

Outokumpu is also an active member of the World Steel Association (Worldsteel). Outokumpu provides relevant information to decision-makers and experts relating to the development of the business environment and legislation. The Group participates in the work of trade organizations. Outokumpu does not pressure or use hard lobbying on decision-makers. As a member of Eurofer, Worldsteel and ISSF, Outokumpu participates in different policy groups whose aim is to provide expertise and help decision-makers in connection with issues such as the global mitigation of greenhouse gas emissions by the iron and steel industry. In these forums, members share best practices and obtain benchmark data relating to, among other things, the environment, R&D, product life cycles, product and chemical safety, and occupational safety. Members also contribute their own data for use in official industry or authority reports, such as the World Steel Association Sustainability report.

In Europe, Outokumpu is a member of several federations and associations in Germany, Sweden, Finland, France, Italy, the Netherlands, and the UK. National cooperation organizations advance industry views and contribute to legislation in Europe through national representatives in EU governing bodies. Outokumpu is also a member of business associations in North America and Australia.

In 2014, Outokumpu experts and top management continued to maintain effective liaisons with numerous organizations.
Outokumpu contributes to the well-being of local, national, and international communities through tax payments, through direct and indirect employment, and by participating in other societal activities.

In 2014, taxes and social security contributions paid by the Group totaled EUR 1.06 million (2013: EUR 0.98 million). In 2014, Outokumpu posted a loss and thus also the amount of taxes paid remained low, some EUR 17 million for the financial year (2013: EUR 4 million). The impact of taxes on societal well-being is both direct and indirect.

### Taxes and social dues by country

<table>
<thead>
<tr>
<th>€ Million</th>
<th>2014</th>
<th>2013</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Finland</td>
<td>8</td>
<td>8</td>
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<td>Sweden</td>
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<td>Other countries</td>
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</tr>
<tr>
<td>Total</td>
<td>106</td>
<td>98</td>
<td>57</td>
</tr>
</tbody>
</table>

### Public sector support received

In 2014, Outokumpu received some EUR 0.8 million (2013: EUR 0.6 million) from the public sector to support Group research and development of new technologies, products, and applications.

### Grants and community support given

Traditionally Outokumpu’s units have supported the local community in many ways even during harsh times. In Germany, Sweden, the UK and Finland the local cooperation with schools and universities is typical at every production site. For instance in April 2014 the certificate awards ceremony for 71 trainees of the Outokumpu certificate awards ceremony for 71 trainees of the Outokumpu is typical at every production site. For instance in April 2014 the certificate awards ceremony for 71 trainees of the Outokumpu.

Outokumpu supports higher education and research by donating funds to universities. In 2013, the co-operation with Aalto University, Finland is a new multidisciplinary science and art community, proceeded in the fields of science, economics, art, and design. Outokumpu has supported Aalto University from the establishment of the institution, including an initial fund donation of EUR 1 million.

Co-operation with Aalto University offers Outokumpu the chance to harness top-level know-how and a multidisciplinary approach. Aalto’s core research fields – materials research and design – will round out Outokumpu’s in-house R&D, offering new opportunities for innovation and exchanging know-how.

Social sponsorship of units continued also: traditionally Outokumpu has been the main sponsor in local football and some other sport clubs in Avesta and Degerfors (Sweden) and in Tornio (Finland), also in 2014. Outokumpu in Krefeld, Germany supported the STUPS children’s centre of the Red Cross and cooperation with a local school Kurt-Tucholsky-Gesamtschule continued related to care system with a local retirement home. In Finland Tornio plant sponsored the children visits from kindergartens to the local art museum. In Germany Outokumpu donated new community chalices to the St. Markus Church of Fischeln. In Degerfors, Sweden the company sponsored rankings for the new community fire station.

In Turku, Finland Outokumpu donated material for the statue made by famous artist Stefan Lindfors. The statue is made for donations of the saving of Baltic Sea. In Avesta, Sweden Outokumpu sponsors own art club Visentkonst.

Outokumpu is one of the founders of the Technology Industries of Finland Centennial Foundation Fund for the Association of Finnish Steel and Metal Producers, established by five Finnish steel and metal producing companies. The fund was founded to promote university-level research and teaching of technology and business opportunities in metals production. In 2014, the fund awarded grants of some EUR 0.3 million.

For example Outokumpu has participated in the research project Metro under the FIMECC consortium and one of the project outcomes in 2004 was a thesis studying industrial investments in a sustainability framework. This new approach aimed to quantify investment and changes to the industrial set up from social, economic and environmental dimensions in one model. This type of open attitude towards harnessing of new ideas describes Outokumpu’s open innovation management approach very well.

### Sponsoring

As defined in Outokumpu’s sponsorship policy, the Group’s sponsorship decisions are based on clearly defined pre-conditions of strategic, brand image, and sustainability criteria. Outokumpu also makes discretionary donations for the common good as a responsible corporate citizen. These donations are organized by sustainability management and approved by the Leadership Team or the Board of Directors.

Total grants and community support in 2014 amounted to some EUR 0.4 million.

Outokumpu does not take part in or otherwise support political activities, whether they are local, communal, or national. Outokumpu does not make donations to any political parties or groups.

### Dialogue with environmental NGOs

In 2014, Outokumpu operated with a significantly expanded global presence, which required us to operate with new NGO counterparts. Outokumpu had conducted NGO mapping in 2013 in order to identify new NGOs and to review the existing NGOs. The study concentrated into the impactfulness, size and regional presence of NGOs against pre-defined material sustainability issues and regions and countries of Groups operations. This study served as starting point for stakeholder dialog in the context of the new Outokumpu 2014 and is one reference group for the next update of Outokumpu materiality analysis, planned for 2015.

In addition, Outokumpu continued its dialog with environmental NGOs as a standard process. Issues that were discussed included the role of steel recycling and sustainable stainless steel in tackling the major challenges that we face as a mankind: climate change, resource and energy scarcity together with urbanization and population growth. As a result, Outokumpu aims to increase further the transparency and information related to these issues and our products’ sustainability properties.

Outokumpu has supported Aalto University from the establishment of the institution, including an initial fund donation of EUR 1 million.
Outokumpu produces stainless steel, a sustainable material, by using a sustainable production chain in a responsible manner.

The Group’s corporate responsibility principles cover all aspects of Outokumpu’s operations and strategy and are also integrated into the way that we conduct our business. Outokumpu aims for open and transparent communications. Outokumpu’s reporting reflects the view that all of the Group’s operations – and our dialog with stakeholders – must be based on ethical and sustainable business practices, since these provide the basis for our long-term competitiveness.

The year 2015 will mark 40 years since the first environmental report of Outokumpu was published in 1975. Since 2003 Group has published external sustainability report covering social, economic and environmental dimension annually. These reports are available in digital form at Outokumpu Sustainability web pages.

The report presents the Group’s relevant and material sustainability issues. Issues on Sustainable development and Corporate responsibility requirements are reported openly and transparently following the Global Reporting Initiative (GRI) G3 guidelines.

This sustainability reporting has been assured by an external assurance provider. This report includes a separate GRI and UN Global Compact reporting index, where all the indicators regarding responsibility practices are listed together with links to the pages on which they are addressed.

Outokumpu’s Annual report also meets other requirements within sustainability reporting. Outokumpu decided to adopt the ISO 26 000 “Guidance on social responsibility” standard. This is the second report in which we have the ISO 26 000 core subjects and issues comparison table together with GRI reporting index.

The Group is a signatory to the UN Global Compact. Outokumpu also follows International Chamber of Commerce policies by utilizing ISO-based management systems in connection with issues relating to Environment, Health and Safety and Quality management. Read more about the Group’s social responsibility on p. 39.

The Group has also signed the Sustainable Development Charter published by the World Steel Association and the International Stainless Steel Forum. Together with the Group’s internal policies and practices these frameworks have requirements for external reporting, which have been taken into account in this Sustainability report.

The year 2015 will mark 40 years since the first environmental report of Outokumpu was published in 1975.
Focus on material issues

To ensure that limited resources are allocated in the most efficient manner, Outokumpu analyzed the most material sustainability issues. The results of this analysis, which identified the internal and external issues most relevant to the Group, formed a natural basis for sustainability-related actions and developments in 2014.

The results of the materiality analysis, issues with high significance for both Outokumpu and the Group’s stakeholders, were mostly those which have been on Outokumpu’s sustainability agenda in previous years. This confirms that we are working with the correct issues and that further improvements are still needed. The analysis process has helped the Group to initiate new actions and programs in an optimal manner. During 2014, Outokumpu took action in connection with all issues identified as having a material significance and related developments are detailed in this report.

The Outokumpu Board of Directors reviewed the sustainability analysis and related actions and reviewed and approved the updated ethical statement of the Group at its December 2014 meeting. According to the Group policy on sustainable development and corporate responsibility, the Board of Directors monitors Outokumpu’s corporate responsibility performance at least once each year based on a report submitted by the CEO. This arrangement ensures that sustainability issues are an integral element in Outokumpu operations from the lowest to the highest levels.

Focus on material issues

Focus on material issues

Material efficiency

Environmental footprint

Energy efficiency

Ethical business conduct

Safety at workplace

Sustainable opportunities of stainless steel

Attracting and retaining talented people

Supply of sustainable energy

Changes in legislation and taxation

Significance to Outokumpu

Low

Medium

High

Significance to stakeholders

GRI and UN Global Compact

We have self-declared our reporting to be Application Level B+ of the GRI G3 Guidelines. PricewaterhouseCoopers Oy has checked our reporting and has confirmed it to be Application Level B+.

<table>
<thead>
<tr>
<th>GRI profile disclosures</th>
<th>INCL</th>
<th>Annual report/Sustainability report section 2014</th>
<th>Global Compact</th>
<th>ISO 26000</th>
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<tbody>
<tr>
<td>1. Strategy and Analysis</td>
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<tr>
<td>1.1 CEO’s statement</td>
<td>Yes</td>
<td>CEO’s forward (SR p. 1)</td>
<td></td>
<td>6.2</td>
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<td>1.2 Key impacts, risks and opportunities</td>
<td>Yes</td>
<td>Our impact on the environment (SR p. 13), Risks and stakeholders (SR p. 50–51), Climate change risks (SR p. 26–28), Focus on material issues (SR p. 62), Environmental goals and results (SR p. 14–15), Goals and results (SR p. 40)</td>
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<td>2. Organizational Profile</td>
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<tr>
<td>2.1 Name of the organization</td>
<td>Yes</td>
<td>SR p. 71</td>
<td></td>
<td>6.2, 6.23</td>
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<td>2.2 Primary brands, products and services</td>
<td>Yes</td>
<td>Corporate information (AR p. 30)</td>
<td>6.2.1</td>
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<td>2.3 Operational structure</td>
<td>Yes</td>
<td>Corporate governance statement (AR p. 100)</td>
<td>6.2.1</td>
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<td>2.4 Location of organization’s headquarters</td>
<td>Yes</td>
<td>SR p. 71</td>
<td></td>
<td>6.2</td>
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<td>2.5 Number of countries and location of operations</td>
<td>Yes</td>
<td>Market environment (AR p. 4)</td>
<td>6.2</td>
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<td>2.6 Nature of ownership and legal form</td>
<td>Yes</td>
<td>Corporate information (AR p. 35)</td>
<td>6.2</td>
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<td>2.7 Markets served</td>
<td>Yes</td>
<td>Market environment (AR p. 4–5)</td>
<td>6.7.1</td>
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<td>2.8 Scale of the reporting organization</td>
<td>Yes</td>
<td>Key figures (AR p. 2), Corporate information (AR p. 38)</td>
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<td>2.9 Significant changes regarding size, structure or ownership</td>
<td>Yes</td>
<td>Review by the Board of Directors (AR p. 16)</td>
<td>6.2</td>
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<td>2.10 Awards received in the reporting period</td>
<td>Yes</td>
<td>Highlights 2014 (SR p. 3)</td>
<td>6.2</td>
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<td>3. Report Parameters</td>
<td></td>
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<tr>
<td>3.1 Reporting period</td>
<td>Yes</td>
<td>Reporting principles (SR p. 68)</td>
<td>6.2.1</td>
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<td>3.2 Date of most recent report</td>
<td>Yes</td>
<td>Reporting principles (SR p. 68)</td>
<td>6.2.1</td>
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<td>3.3 Reporting cycle</td>
<td>Yes</td>
<td>Reporting principles (SR p. 68)</td>
<td>6.2.1</td>
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<td>3.4 Contact point for questions regarding the report</td>
<td>Yes</td>
<td>Reporting principles (SR p. 68)</td>
<td>6.2.1</td>
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<td>3.5 Process for defining report content</td>
<td>Yes</td>
<td>Focus on material issues (SR p. 63), Reporting principles (SR p. 68)</td>
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<td>3.6 Boundary of the report</td>
<td>Yes</td>
<td>Reporting principles (SR p. 68)</td>
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<td>3.7 Limitations on the report’s scope or boundary</td>
<td>Yes</td>
<td>Reporting principles (SR p. 68)</td>
<td>6.2.1</td>
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<td>3.8 Basis for reporting subsidiaries and joint ventures</td>
<td>Yes</td>
<td>Reporting principles (SR p. 68)</td>
<td>6.2.1</td>
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<td>3.9 Data measurement techniques and bases of calculations</td>
<td>Yes</td>
<td>Reporting principles (SR p. 68–69)</td>
<td>6.2.1</td>
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<td>3.10 Explanation of re-statements</td>
<td>Yes</td>
<td>Reporting principles (SR p. 68)</td>
<td>6.2.1</td>
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<td>3.11 Significant changes from previous reporting periods in the scope, boundary or measurement methods</td>
<td>Yes</td>
<td>Reporting principles (SR p. 68–69)</td>
<td>6.2.1</td>
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<td>3.12 GRI content index</td>
<td>Yes</td>
<td>GRI and UN Global compact (SR p. 63–67)</td>
<td>6.2.1</td>
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<td>3.13 Assurance policy and practice</td>
<td>Yes</td>
<td>Reporting principles (SR p. 68), Independent Assurance Report (SR p. 70)</td>
<td>7.5.3</td>
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<td>4. Governance, Commitments and Engagement</td>
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<td>4.1 Governance structure of the organization</td>
<td>Yes</td>
<td>Corporate governance statement (AR p. 103–104)</td>
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<td>4.2 Position of the Chairman of the Board</td>
<td>Yes</td>
<td>Board of Directors on Dec 31, 2014 (AR p. 14)</td>
<td>6.2</td>
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<td>4.3 Independence of the Board members</td>
<td>Yes</td>
<td>Board of Directors on Dec 31, 2014 (AR p. 14–15)</td>
<td>6.2</td>
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<td>INCL.</td>
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<td>4.4 Mechanism for shareholder and employee communication</td>
<td>Yes</td>
<td>Corporate governance statement (AR p. 103)</td>
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<td>4.5 Executive compensation and linkage to organization’s performance</td>
<td>Yes</td>
<td>Corporate governance statement (AR p. 105–106)</td>
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<td>4.6 Policies for avoiding conflicts of interest</td>
<td>Yes</td>
<td>Corporate governance statement (AR p. 107)</td>
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<td>4.7 Executive compensation and linkage to organization’s performance</td>
<td>Yes</td>
<td>Corporate governance statement (AR p. 104–105)</td>
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<td>4.8 Implementation of mission and values statements, code of conduct and other principles</td>
<td>Yes</td>
<td>CEO’s forward (SR p. 1), Compliance (SR p. 45)</td>
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<td>4.9 Procedures for handling material issues</td>
<td>Yes</td>
<td>Focus on material issues (SR p. 62)</td>
<td>6.2</td>
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<tr>
<td>4.10 Processes for evaluating the Board’s performance</td>
<td>Yes</td>
<td>Corporate governance statement (AR p. 103)</td>
<td>6.2</td>
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</tbody>
</table>

**Commitments to External Initiatives**

| 4.11 Addressing precautionary approach | Yes | Risk management (AR p. 110), Climate change risks (SR p. 26–28) | 7 | 6.5 |
| 4.12 Voluntary charters and other initiatives | Yes | Associations and federations (SR p. 56) | 6.5 |
| 4.13 Memberships in associations | Yes | Associations and federations (SR p. 56–57) | 6.5 |

**Stakeholder Engagement**

| 4.14 List of stakeholder groups | Yes | Risks and stakeholders (SR p. 50) | 6.5 |
| 4.15 Identification and selection of stakeholders | Yes | Risks and stakeholders (SR p. 50) | 6.5 |
| 4.16 Approaches to stakeholder engagement | Yes | Outokumpu and society (SR p. 50–59) | 6.5 |

**5. Management Approach and Performance Indicators**

| Management approach to environmental responsibility | Yes | Review by the Board of Directors (2013 AR p. 16); CEO’s review (AR p. 3); Risk management (AR p. 111–114) | 1, 4, 6, 7 | 6.2 |
| Management approach to environmental responsibility | Yes | Environmental goals and results (SR p. 14–16); Highlights 2014 (SR p. 3); Focus on material issues (SR p. 50); Energy efficiency (SR p. 22); Climate change (SR p. 26–28) | 7, 8, 9, 10 | 6.5 |
| Management approach to labor practices and decent work | Yes | Goals and results (SR p. 43); Highlights 2014 (SR p. 3); Our people (SR p. 39); Operational risks (AR p. 113–114); Training and development (SR p. 44) | 1, 3, 4, 6 | 6.4 |
| Management approach to human rights | Yes | Goals and results (SR p. 43); Our people (SR p. 39); Corporate Governance statement (AR p. 105); Highlights 2014 (SR p. 3); Diversity and equal rights (SR p. 45); Risk management (AR p. 113–114) | 6.3 |
| Management approach to society | Yes | Local communities (SR p. 54–56); Corporate Governance statement (AR p. 109); Risk Management (AR p. 112–114); Highlights 2014 (SR p. 3) | 6.6 |
| Management approach to product responsibility | Yes | Corporate Governance statement (AR p. 109); Risk Management (AR p. 112–114); Highlights 2014 (SR p. 3); Customers (SR p. 51–52); Product perspective (SR p. 6) | 6.7 |

**Economic Performance Indicators**

| EC3 Direct economic value generated and distributed | Partly | Outokumpu and society (SR p. 48); Public sector; sponsoring and NGOs (SR p. 50) | 6.8 |
| EC2* Risks and opportunities due to climate change | Yes | Climate change risks (SR p. 26–28) | 7 | 6.8 |
| EC3* Coverage of defined benefit plan obligations | Partly | Employee benefit obligations (AR p. 80–81) | 6.4 |

<table>
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<tr>
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<th>ISO 26000</th>
<th>Comment</th>
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<tbody>
<tr>
<td>EC4 Significant subsidies received from government</td>
<td>Yes</td>
<td>Public sector, sponsoring and NGOs (SR p. 58); Shares and shareholders (AR p. 27)</td>
<td>6.8</td>
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</table>

**Environmental Performance Indicators**

<p>| Materials | EN3* Materials used by weight or volume | Yes | Material balance (SR p. 21) | 8 | 6.5 |
| EN2* Recycled materials used | Yes | Product perspective (AR p. 8); Material balance (SR p. 21) | 8, 9 | 6.5 |
| Energy | EN3 Direct energy consumption | Yes | Material balance (SR p. 21); Energy efficiency (SR p. 22) | 8 | 6.5 |
| EN4 Indirect energy consumption | Partly | Material balance (SR p. 21); Energy efficiency (SR p. 22) | 8 | 6.5 |
| EN5 Energy saved due to conservation and efficiency improvements | Yes | Energy efficiency (SR p. 22, 24) | 8 | 6.5 |
| EN6 Initiatives to provide energy-efficient or sustainable energy based products and services | Yes | Environmental management (SR p. 22) | 8 | 6.5 |
| EN7 Initiatives to reduce indirect energy consumption | Yes | Sustainable supply chain (SR p. 36) | 8 | 6.5 |
| Water | EN3 Total water withdrawal | Yes | Water (SR p. 32) | 8 | 6.5 |
| EN4 Water sources significantly affected by withdrawal of water | Yes | Water (SR p. 32) | 8 | 6.5 |
| EN5 Percentage and total volume of water recycled and reused | Partly | Water (SR p. 32) | 8, 9 | 6.5 |
| Biodiversity | EN13* Location and size of land holdings in areas of high biodiversity | Yes | Biodiversity (SR p. 33) | 8 | 6.5 |
| EN12* Description of significant impact of activities, products, and services on biodiversity | Yes | Biodiversity (SR p. 33) | 8 | 6.5 |
| EN13* Habitats protected or restored | Partly | Biodiversity (SR p. 33) | 8 | 6.5 |
| EN14* Managing impacts on biodiversity | Yes | Biodiversity (SR p. 33–35) | 8 | 6.5 |
| EN15* Species with extinction risk with habitats in areas affected by operations | Yes | Biodiversity (SR p. 33) | 8 | 6.5 |
| Emissions, Effluents and Wastes | EN16* Total direct and indirect greenhouse gas emissions | Yes | Material balance (SR p. 21) | 8 | 6.5 |
| EN7 Other relevant indirect greenhouse gas emissions | Yes | Climate change (SR p. 25) | 8 | 6.5 |
| EN18* Initiatives to reduce greenhouse gas emissions | Yes | Climate change (SR p. 25–26); Environmental goals and results (SR p. 14–15) | 7 | 8, 9 | 6.5 |
| EN19* Emissions of ozone-depleting substances | Yes | Material balance (SR p. 25) | 8 | 6.5 |
| EN20* Volatile organic compounds and other significant air emissions | Yes | Material balance (AR p. 21); Emissions, effluents and water (SR p. 29–30) | 8 | 6.5 |
| EN21* Total water discharge | Yes | Water (SR p. 32) | 8 | 6.5 |
| EN22* Total amount of waste | Yes | Material balance (SR p. 21) | 8 | 6.5 |
| EN23* Significant spills | Yes | No significant spills during the reporting period. | 8 | 6.5 |
| EN24* Transported, imported, exported, or treated hazardous waste | Partly | Materials efficiency (SR p. 20) | 8 | 6.5 |
| EN25* Water bodies and habitats affected by discharges of water | Partly | Water footprint (SR p. 32) | 8 | 6.5 |</p>
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<th>Section</th>
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<th>Report</th>
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<tr>
<td>Products and Services</td>
<td>EN20</td>
<td>Mitigating environmental impacts of products and services</td>
<td>Yes</td>
<td>Environmental gaps &amp; risks (SR p. 14–15), Materiality efficiency (SR p. 19–20)</td>
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<td>EN21</td>
<td>Reclaimable products and reuse</td>
<td>No</td>
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<td>Compliance</td>
<td>EN23</td>
<td>Significant fines and sanctions for non-compliance with environmental regulations</td>
<td>Yes</td>
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<td>LA10*</td>
<td>Total number and rate of employee turnover</td>
<td>Partly</td>
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<td>LA11 Programmes for skills management and career development reviews</td>
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<td></td>
<td>LA12 Employees receiving regular performance reviews</td>
<td>No</td>
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<td>LA13*</td>
<td>Composition of governance bodies and participation of local communities</td>
<td>Partly</td>
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<td>LA14*</td>
<td>Ratio of basic salary of men to women by employment type</td>
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<td>LA15*</td>
<td>Ratio of profit-sharing plan benefit participation of men to women</td>
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<td>LA16</td>
<td>Representation of gender in top management</td>
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<td>LA17</td>
<td>Rates of injury, occupational diseases, lost time, and absence</td>
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<td>LA18 Education and prevention programmes concerning health and safety impacts of products</td>
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<td>LA19</td>
<td>Health and safety topics covered in formal agreements with trade unions</td>
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<td>LA20</td>
<td>Average training hours per year</td>
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<td>LA21</td>
<td>Programmes for skills management and training</td>
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<td>LA22</td>
<td>Employees receiving regular performance and career development reviews</td>
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<td>LA23*</td>
<td>Composition of governance bodies and breakdown of employees</td>
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<td>LA24*</td>
<td>Ratio of basic salary of men to women by employee category</td>
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<td>Human Rights</td>
<td>HR1*</td>
<td>Investment agreements with human rights clauses or that have undergone human rights due diligence</td>
<td>No</td>
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<td>HR2</td>
<td>Suppliers and contractors that have undergone human rights screening</td>
<td>Partly</td>
<td>Sustainable supply chain (SR p. 35)</td>
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<td>HR3</td>
<td>Human rights-related training for employees</td>
<td>No</td>
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<td></td>
<td>HR4</td>
<td>Incidents of discrimination and actions taken</td>
<td>Yes</td>
<td>Internal Audit (AR p. 100)</td>
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<td></td>
<td>HR5*</td>
<td>Supporting right to freedom of association and collective bargaining in risk areas</td>
<td>Yes</td>
<td>Diversity and equal rights (SR p. 45)</td>
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<td>HR6*</td>
<td>Measures taken to eliminate child labour in risk areas</td>
<td>Yes</td>
<td>Diversity and equal rights (SR p. 45)</td>
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* GRI Core indicator
Reporting principles

In Outokumpu’s reporting, the goal is to support open dialogue between the Group and its stakeholders. Our aim is to address the needs of current and future personnel, shareholders, customers, and other parties who have an interest in Outokumpu and its business operations.

We use reporting as an opportunity to illustrate what Outokumpu has done to ensure that the Group’s business operations are sustainable, and to indicate actions we expect to take in the future to enhance individual well-being and the natural environment. Outokumpu has a long history of responsible business practices and we are working to make our operations more sustainable. As well as reporting on matters we consider important and relevant to our business operations, we also cover current global themes, which affect the Group’s operations and our stakeholders.

If you have questions regarding the content of this report, please contact Outokumpu communications (corporate.comms@outokumpu.com).

Scope of the report

Major acquisition of the Inoxum took place on December 28, 2012. Outokumpu as a combined entity started its operation in December 31, 2012. On November 30, 2012, Outokumpu announced the divestment of Terni assets, VDM business and certain service centers which have been classified as discontinued operations in the financial statements for 2013. Outokumpu has completed the divestment of the Terni remedy assets, certain service centers and the VDM-business at the end of February 2014. Sustainability reporting for 2014 is based on the continuing operations of Outokumpu, these before mentioned divested assets are not included into 2014 figures.

Outokumpu’s Sustainability report is published annually, and the reporting period is the same as the Group’s financial reporting period (one calendar year). This report for 2014 was published on March 4, 2015 together with the 2014 Outokumpu Annual report. The previous report for 2013 was published on March 6, 2014.

For 2014, the Group’s Sustainability report has been published as a stand-alone report.

Since 2004, Outokumpu’s reporting has been based on guidelines provided in the Global Reporting Initiative (GRI) G3 guidelines from 2007, but the reporting format now used by Outokumpu does not follow the tripartite division into economic, social, and environmental responsibility suggested by GRI.

A comparison of Outokumpu’s reporting against the GRI G3 Guidelines and the 10 principles of the UN Global Compact together with ISO 26000 core issues can be found on the GRI and UN Global Compact section.

Comparability of statistics

Corrections made to figures reported in previous years are indicated in conjunction with the corrected figures. Since 2007, Outokumpu’s annual Sustainability reports have included an assurance report submitted by independent assurance providers. This independent assurance report is available on p. 70. Figures in the financial statements under the section Financials in the Annual report 2014 have been audited.

Measurement techniques

Economic responsibility

Most figures relating to economic responsibility presented in this report are based on consolidated financial statements issued by the Outokumpu Group and collected through Outokumpu’s internal consolidation system. Financial data has been prepared in accordance with International Financial Reporting Standards (IFRS), Outokumpu’s accounting principles for the Group’s consolidated accounts are available in Note 2 to the consolidated financial statements.

The economic responsibility measures presented in the report for 2014 are comparable to those of 2013 but not to those of 2012 due to Outokumpu’s acquisition of Inoxum, the stainless steel business of ThyssenKrupp in December 2012. As all measures are based on Group’s consolidated financial information, only 2013 and 2014 include the effect of Inoxum, whereas 2012 is presented as Outokumpu standalone.

All financial figures presented have been rounded, and consequently the sum of individual figures may deviate from the presented aggregate figure. Key figures have been calculated using exact figures. Using the GRI guidelines as a basis, economic responsibility figures have been calculated as follows:

\[
\text{GENERATION OF VALUE ADDED} = \text{Sales invoiced to customers during the financial year after calculating the generation of value added. Discounts or indirect taxes are deducted from sales.}\n\]

The cost of goods and services purchased by Outokumpu during the financial year is deducted from sales when calculating the generation of value added by the Group.

\[
\text{DISTRIBUTION OF VALUE ADDED} = \text{Value added which is distributed to employees consists of wages and salaries paid to Outokumpu employees during the financial year. Pension payments and related accruals are included in this figure. The distribution of value added to the public sector includes taxes, social charges, and other payments which resemble taxes. No deferred taxes are included in this figure.}\n\]

To determine creditors’ share of value added, interest costs on debt booked during the financial year are presented. Capitalized interest is excluded from this figure.

The distribution of value added to shareholders is the total dividend which Outokumpu’s Board of Directors proposes for distribution to shareholders from the parent company’s distributable funds.

Environmental responsibility

Financial information related to environmental investments is collected in accordance with Group-wide unified guidance following principles outlined by the GRI and the World Steel Association.

Environmental data concerning Outokumpu operations is aggregated using the Group’s Energy and Environment Reporting System, into which Group guidance has been integrated.

Environmental data is including and reporting covers Outokumpu stainless steel, ferrochrome and mining operations of the continuing operations of the combined Group. The environmental data from operating year 2012 and before has been adjusted to include combined operations, unless otherwise stated. The baseline data from 2007–2006, used as basis for long-term targets, has also been restated to include the combined data. The target set in Outokumpu energy and low-carbon program, the carbon profile, calculated per tonne of stainless steel produced. The figure for monitoring progress is a three-year moving average that is compared to baseline figures from the period 2007–2009. Since the production levels changes due to cyclical nature of our industry, has Outokumpu decided to follow long term target against three year average as baseline, versus one historical year. And similarly also follow the progress as a moving three year average.

The transportation emissions calculation method has been changed 2014 and historical data and share of transport modes for 2013 has been restated, however 2012 data or the shares of transport modes has not been restated and is therefore not comparable.

Outokumpu made extra effort in order to form fully comparable environmental and energy figures. The aim was to report as openly, comparable and complete manner as possible follow GRI principle to publish figures from the two previous years, in addition to the reporting year.

Social responsibility

Health and safety figures

LITTLE INJURIES (LTI) PER MILLION HOURS WORKED

(The world steel association principle)

A lost time injury is an accident that has taken place during working hours and which has caused at least one sick leave day (excluding the day of the injury or accident). Sick leave of one day during the working hours is not defined as a person employed by a third party has not been able to return to work on their next scheduled working day. Returning to work with activity restrictions does not constitute lost-time injury status, regardless of how severe or minimal the associated restrictions.

EU AVERAGE LTI

From statistics supplied by the World Steel Association. Member companies follow the World Steel Association definition of lost time injury (LTI) in related reporting.

To determine miss incidents and hazards refer to events that could have led to an accident but no injury occurred. The number of near miss incidents occurring in all Group companies is collected via Outokumpu’s financial consolidation system. Related information is provided by the Group’s safety reporting system.

SICK LEAVE HOURS

Sick leave hours reported are total sick leave days during a reporting period.Reporting units provide data on absence due to illness, injury and occupational diseases on a monthly basis in connection with financial reporting. With effect from January 1, 2010, sick leave hours have been reported per million hours worked, not as a percentage figure.

Health and safety figures from 2014 include Outokumpu Group continuing operations. Safety is a priority at Outokumpu Group and therefore health and safety figures reflect the scope of Outokumpu operations as they were in 2014. Some of the 2013 OHS comparison figures have minor adjustments due to updated working hour figures.

Personnel figures

From 2012, the Group has been reporting actual headcounts. This has also been applied in calculating some of the personnel figures.

TOTAL PERSONNEL COSTS

This figure includes wages, salaries, bonuses, social costs or other personnel expenses, as well as fringe benefits paid and/or accrued during the reporting period.

TRAINING COSTS

Training includes external training-related expenses such as participation fees. Blended services, and daily allowances for participants in training activities are not included, but the salaries of internal trainers are included.

TRAINING DAYS PER EMPLOYEE

The number of days spent by an employee in training when each training day is counted as ten working days. (2013 and 2014: employee figures = FTE)

BONUSES

A bonus is an additional payment for good performance. These figures are reported without social costs or fringe benefits.

PERSONNEL TURNOVER

(Personnel turnover = (newly hired + leavers)/2)/year end headcount

The divider has since 2011 been changed from twice the average headcount to twice the year-end headcount. Compared to 2012, the formula has been specified in order to unify it with the formula recommended by KILA (Kirjanpitolautakunta).

Days lost due to strikes

The number of days lost due to strikes is calculated by multiplying the number of Outokumpu employees who have been on strike by the number of scheduled working days lost. The day on which a strike starts is included.

All personnel figures of 2013 and 2014 include Outokumpu personnel in the continuing operations and do not therefore include Terni/other remedy assets or VDM business that Outokumpu announced to divest in November 2013 – except for the personnel by countries of 2013, which is counted including the discontinued operations. All figures from 2013 and 2014 include both former Outokumpu and Inoxum employees, unless otherwise stated. Headcount from 2012 has been restated to include Inoxum figures.

Near miss incidents and hazards refer to events that could have led to an accident but no injury occurred. The number of near miss incidents occurring in all Group companies is collected via Outokumpu’s financial consolidation system. Related information is provided by the Group’s safety reporting system.
Independent Assurance Report

To the Management of Outokumpu Oyj

We have been engaged by the Management of Outokumpu Oyj (hereinafter also the Company) to perform a limited assurance engagement on the quantitative information on economic, social and environmental responsibility for the reporting period 1 January to 31 December 2014, disclosed in Outokumpu Oyj’s Sustainability Report 2014 (hereinafter Sustainability Reporting).

Management’s Responsibility

The Management of Outokumpu Oyj is responsible for preparing the Sustainability Reporting in accordance with the Reporting criteria as set out in the Company’s reporting instructions and the G3 Sustainability Reporting Guidelines of the Global Reporting Initiative.

Practitioner’s Responsibility

Our responsibility is to express a conclusion on the Sustainability Reporting based on our work performed. Our assurance report has been prepared in accordance with the terms of our engagement. We do not accept, or assume responsibility to anyone else, except to Outokumpu Oyj for our work, for this report, or for the conclusions that we have reached.

We conducted our work in accordance with the International Standard on Assurance Engagements (ISAE) 3000 “Assurance Engagements Other than Audits or Reviews of Historical Financial Information”. This Standard requires that we comply with ethical requirements and plan and perform the assurance engagement to obtain limited assurance whether any matters come to our attention that cause us to believe that the Sustainability Reporting has not been prepared, in all material respects, in accordance with the Reporting criteria.

In a limited assurance engagement the evidence-gathering procedures are more limited than for a reasonable assurance engagement, and therefore less assurance is obtained than in a reasonable assurance engagement. An assurance engagement involves performing procedures to obtain evidence about the amounts and other disclosures in the Sustainability Reporting. The procedures selected depend on the practitioner’s judgement, including an assessment of the risks of material misstatement of the Sustainability Reporting. Our work consisted of, amongst others, the following procedures:

- Interviewing senior management of the Company.
- Visiting one site in Finland.
- Conducting two video interviews with sites in Sweden and the United States.
- Interviewing employees responsible for collecting and reporting the information presented in the Sustainability Reporting at the Group level and at the site level where our site visit and video interviews were conducted.
- Assessing how Group employees apply the Company’s reporting instructions and procedures.
- Testing the accuracy and completeness of the information from original documents and systems on a sample basis.
- Testing the consolidation of information and performing recalculations on a sample basis.

Conclusion

Based on our work described in this report, nothing has come to our attention that causes us to believe that Outokumpu Oyj’s Sustainability Reporting has not been prepared, in all material respects, in accordance with the Reporting criteria. When reading our assurance report, the inherent limitations to the accuracy and completeness of sustainability information should be taken into consideration.

Helsinki, 3 March 2015

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