

# Multi metals Environment Health Safety People Achieve excellence in everything we do Creating Value Through Integration

# ZINC

Unlocking untapped value  
The Nyrstar Way  
Deliver sustainable growth

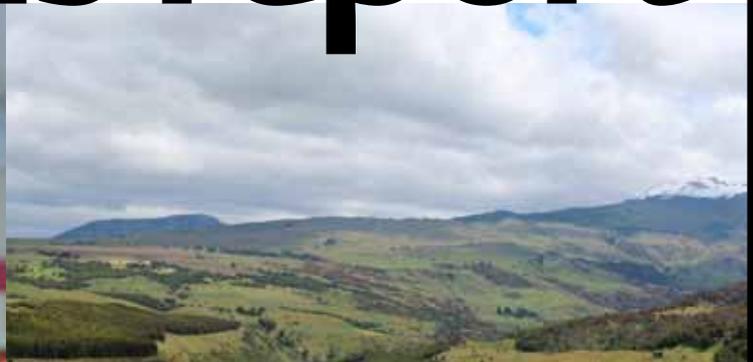
CSR Framework  
Resources for a changing world

## CONTENTS

- 03 About this report**
  - 04 About us
  - 06 Letter from the CEO
- 08 Key sustainability Risks and Opportunities**
- 12 Sustainability in Focus**
- 22 Performance Summary**
  - 24 Safety
  - 28 Health
  - 30 Environment
  - 36 People
  - 40 Community, Customers & Society
  - 44 Economic Contribution
  - 46 Governance
- 48 Independent External Assurance**



# About this report



This is our fourth annual Sustainability Report and includes information on our performance for the 2011 calendar year.

We apply Nyrstar Group policies and procedures at all our wholly Nyrstar owned operations and activities. The information in this report includes only our wholly Nyrstar owned mining and smelting operations, as these activities present the material and significant sustainability risks and opportunities for the Company; however the performance data presented generally only includes those sites where full year performance data is available which could be subject to independent external assurance. The specific Nyrstar operations included in the various sustainability reporting areas are summarised on the 'About us' page and further defined in the relevant sections of the report.

Our approach to managing and reporting our sustainability performance is in line with the AA1000 Accountability Principles Standard 2008, applying the principles of inclusivity, materiality and responsiveness. We have prepared this report considering the Global Reporting Initiative (GRI) Sustainability Reporting Guidelines (Version 3, also known as the G3 Guidelines) and intend for our reporting to qualify for GRI Report Application Level B+. This document should be read in conjunction with the 2011 Nyrstar Annual Report, which provides specific information about the company, its operations, management, business structure and governance arrangements.

Other information about sustainability and our approach to sustainability reporting at Nyrstar and other Nyrstar public reports, including the 2011 Annual Report, a GRI Content Index for our Group level sustainability reporting, and previous Annual Reports and Sustainability Reports, are available on our website: [www.nyrstar.com](http://www.nyrstar.com)

We seek independent external assurance for our sustainability reporting against the AA1000 Accountability Principles and for selected performance data. The assurance statement by ERM is included at the end of this report.

For further information about Nyrstar or about this report please send your question via email to [communications@nyrstar.com](mailto:communications@nyrstar.com)

 nyrstar

Resources for a changing world

Nyrstar is an integrated mining and metals business, with market leading positions in zinc and lead, and growing positions in other base and precious metals; essential resources that are fuelling the rapid urbanisation and industrialisation of our changing world. Nyrstar has mining, smelting, and other operations located in Europe, the Americas, China and Australia and employs over 7,000 people.



# About us

## Nyrstar's vision is to be the leading integrated mining and metals business.

In early 2009, we began a journey of transformation. From our inception as a zinc and lead smelting company, we have rapidly and successfully grown our business, predominantly through carefully selected acquisitions, to become an integrated miner and smelter. We aim to continue our journey towards our vision through acquisitions and organic growth, whilst also continuously improving each of our operations, seeking untapped value and excellence, and leveraging the passion and dedication of our people. Our Sustainability reporting is about communicating our key business sustainability challenges and achievements along that journey.

The scope of this report covers all Nyrstar's wholly owned mining and smelting assets; however, as more than half our mines were acquired during the 2011 year, in some cases we do not have assured performance data available on the measures that Nyrstar collects for external reporting. Our goal is that all mine sites owned by Nyrstar at the end of 2011 will have assured data available for our 2012 report.

Significant changes during 2011 were the acquisition of the Campo Morado (Mexico), El Mochito (Honduras), El Toqui (Chile), Myra Falls (BC, Canada) and Langlois (Quebec, Canada) Mines, which saw our company grow significantly in geographical spread and number of employees.

### Myra Falls\*

**Operation**  
Mining & production of zinc, lead & copper concentrates; silver & gold as byproducts

**Production ('000 Tonnes)**  
Zinc in concentrates 15  
Lead in concentrates 0.4  
Copper in concentrates 1.6  
Silver 0.007  
Gold 0.0002

**Site employees**  
282

**Location**  
Vancouver Island, British Columbia, Canada

### Langlois\*

**Operation**  
Mining & production of zinc & copper concentrates

**Production ('000 Tonnes)**  
Zinc in concentrates 1  
Copper in concentrates 0.1

**Site employees**  
180

**Location**  
Quebec, Canada

### Tennessee Mines

**Operation**  
Mining & production of zinc concentrates

**Production ('000 Tonnes)**  
Zinc in concentrates 80

**Site employees**  
817

**Location**  
Tennessee, USA

### Clarksville

**Operation**  
Zinc smelting & alloying

**Production ('000 Tonnes)**  
Zinc metal 110

**Site employees**  
244

**Location**  
Tennessee, USA

### Campo Morado\*

**Operation**  
Mining & production of zinc & copper, concentrates; silver & gold as byproducts

**Production ('000 Tonnes)**  
Zinc in concentrates 46  
Copper in concentrates 5.2  
Silver 0.057  
Gold 0.0005

**Site employees**  
481

**Location**  
Mexico

### Peru Mines: Coricancha & Contonga

**Operation**  
Mining & production of zinc, lead & copper concentrates; silver / gold dore

**Production ('000 Tonnes)**  
Zinc in concentrates 12  
Lead in concentrates 2.3  
Copper in concentrates 1.0  
Silver 0.030  
Gold 0.019

**Site employees**  
1006

**Location**  
Peru

### El Mochito\*

**Operation**  
Mining & production of zinc, lead concentrates; silver as a byproduct

**Production ('000 Tonnes)**  
Zinc in concentrates 10  
Lead in concentrates 4.9  
Silver 0.019

**Site employees**  
826

**Location**  
Honduras

### El Toqui\*

**Operation**  
mining & production of zinc & lead concentrates, silver & gold as byproducts

**Production ('000 Tonnes)**  
Zinc in concentrates 9  
Lead in concentrates 0.2  
Silver 0.001  
Gold 0.0004

**Site employees**  
501

**Location**  
Chile

\* acquired by Nyrstar in 2011

Scope of performance data for this report:

Site	Key sustainability risk issues and narrative	Safety Performance Data	Environment Performance Data	People Performance Data
<b>Smelters</b>				
Auby	A	A	A	B
Balen / Overpelt	A	A	A	B
Budel	A	A	A	B
Clarksville	A	A	A	B
Hobart	A	A	A	B
Port Pirie	A	A	A	B
<b>Mines</b>				
Campo Morado	A	A	A	B
Coricancha	A	A	A	B
Contonga	A	B	B	B
El Mochito	A	B	C	B
El Toqui	A	B	C	B
Langlois	A	B	C	B
Myra Falls	A	B	C	B
TN Mines	A	A	A	B

A - included in this report. Selected performance data included in the scope of the independent external assurance conducted by ERM

B - included in the report. Performance data not included in the scope of the independent external assurance conducted by ERM.

C - not included in the report (full year performance data is not available or is of insufficient quality to be included in scope of the independent external assurance).

**Budel**  
**Operation**  
 Zinc smelting & alloying  
**Production ('000 Tonnes)**  
 Zinc metal 261  
**Site employees**  
 451  
**Location**  
 The Netherlands

**Balen / Overpelt**  
**Operation**  
 Zinc smelting, alloying & oxide washing  
**Production ('000 Tonnes)**  
 Zinc metal 282  
**Site employees**  
 562  
**Location**  
 Belgium

**Auby**  
**Operation**  
 Zinc smelting  
**Production ('000 Tonnes)**  
 Zinc metal 164  
**Site employees**  
 276  
**Location**  
 France

**Port Pirie**  
**Operation**  
 Multi-metal smelting  
**Production ('000 Tonnes)**  
 Lead metal 195  
 Zinc metal 30  
 Copper cathode 4  
 Silver 0.577  
 Gold 0.0011  
**Site employees**  
 726  
**Location**  
 South Australia, Australia

**Hobart**  
**Operation**  
 Zinc smelting & alloying  
**Production ('000 Tonnes)**  
 Zinc metal 279  
**Site employees**  
 498  
**Location**  
 Tasmania, Australia

Production data relates to the 2011 year.  
 Site employee numbers are as at 31 December 2011



**Roland Junck**  
Chief Executive Officer

# Nyrstar & Sustainability in 2011

# 2011 has been a year in which the company achieved considerable growth. We also have focused on communicating our Nyrstar2020 strategy to our people and our stakeholders, and on implementing underpinning processes to deliver upon our vision for the future – to be a leading integrated mining and metals business.

Towards the end of the year we launched Strategy into Action, a disciplined approach of taking our vision and our strategy into every part of our business. Achieving our vision will require us to maintain a sharp focus on the key strategic priorities that we believe will deliver success; namely through organic growth and acquisitions whilst also continually improving our operations by driving excellence in everything we do and seeking to unlock untapped value. By leveraging the passion and dedication of our people, and our unique culture that we call the Nyrstar Way, we are absolutely confident in our ability to deliver on these promises.

We achieved several key milestones in 2011, including significant growth of the mining segment via the acquisition of the Campo Morado mine in Mexico in January 2011 and the acquisition of El Mochito mine in Honduras, El Toqui mine in Chile and the Myra Falls and Langlois mines in Canada, in August 2011. We also delivered upon our smelting segment objectives, with another year of record production.

Through the acquisition of mines we have seen a significant growth and change in our workforce composition. We grew from 3588 full time employees at the end of 2010 to 7042 at the end of 2011, with around a third of these employees located at our new mining operations. In 2010 the greatest number of employees were in Europe, now over 60% are in the Americas. To support our growing mining business in the Americas we established a new corporate office in Vancouver and an experienced mining management team will be in place early in 2012. From a sustainability perspective, we see that living the Nyrstar Way is critical in integrating new employees into the business and further building the culture we believe will enable us to deliver our strategy.

The first element of the 7 elements of the Nyrstar Way is 'Prevent Harm' – to our people, our communities and our environment. Safety is a core value at Nyrstar, a non-negotiable factor in the way we do business. We have a fundamental obligation to ensure that our people return home safely at the end of their work shifts. It is therefore with much sadness that I report that two of our employees were fatally injured in separate incidents at the Coricancha mine in the past year. In spite of the progress made at our various sites, much still needs to be done to achieve our safety goal of world class performance.

To ensure that we are proactively taking steps to build world class safety performance, we commissioned an external baseline audit of underground mining practices at all our mining sites. The results of these baseline audits, which were completed in January 2012, will form the basis of a prioritised work plan for the coming year, ensuring our efforts and investments provide the greatest safety return.

In terms of our safety and environmental performance, we made progress on some of our targets, including our lost time injury frequency rate, environmental compliance, energy efficiency and water use, however we still have work to do to improve in other areas.

Energy continues to be a key sustainability issue for us, being a major cost at both our mines and smelters, as smelters in particular are energy intensive operations. We have taken a number of steps to reduce our carbon footprint at sites through developing or expanding generation from renewable sources such as water and wind. Regulators around the world have continued to progress regulatory frameworks to address climate change and we have continued to engage with those in Australia and the EU in particular on this issue; although we are yet to see a global framework which would provide certainty for global companies that produce internationally traded commodities such as metals.

Nyrstar recognises that we have a responsibility to a number of stakeholder groups, as well as to society in general, which is why we have developed a Corporate Social Responsibility (CSR) framework. The Nyrstar Foundation, launched in Belgium in 2011, is a key part of that framework and has been established as a charitable organisation which embodies our Nyrstar Way elements of 'Create Value' and 'Use Innovative and Creative Thinking'. The Foundation supports breakthrough initiatives aimed at improving conditions relating to health, the environment, education or social welfare in developing countries. The inaugural 2011 round of our social idea competition was on the topic of 'Energy', in recognition of the importance of energy security and cost, not only to our own business, but to social development and enterprise globally. The inaugural Nyrstar Foundation grant will be awarded in April 2012.

Local programs are a critically important part of our CSR framework. All sites have plans and activities to ensure that Nyrstar engages with and supports their local communities. I am pleased to report that one of Nyrstar's first programs, 'Ten for Them' in Port Pirie, continues to deliver progress on reducing blood lead levels in Port Pirie's children. The year end result of 77.5% of children younger than 5 years of age with blood lead levels under 10 µg/dl is encouraging, but we still have more to do.

In the coming year, as we continue to implement our Nyrstar 2020 strategy and grow our business, we will also continue to grow in our sustainability efforts. In particular, we will further develop our CSR approach, engage more formally with our various stakeholder groups to better inform our activities, and review our sustainability performance indicators and reporting areas in line with the increasing mining focus of our business. I welcome this opportunity to share Nyrstar's sustainability progress to date with you and look forward to being able to report more progress on our journey in the year ahead.



**Roland Junck**  
Chief Executive Officer



# Key Sustainability Risks and Opportunities

## Our Business

Nyrstar is a supplier of metal bearing raw materials, intermediates and commodity grade metals, including zinc, lead, silver, gold and copper. We also produce significant quantities of sulphuric acid. Our customers use our products in further processing and manufacturing activities. Our metal bearing raw materials and intermediates are used by Nyrstar smelters or others to produce metallic products. Key users of our zinc metal products are die-casters and galvanisers, and those of our lead metal are lead-acid battery manufacturers. Sulphuric acid is used in the production of other chemical products such as fertilizer and nylon, and as an electrolyte in lead-acid batteries. Zinc is our primary product; it has diverse applications and uses, from construction and infrastructure, to transport, industrial machinery, communications and electronics, and consumer products. This makes it an essential and highly sought after resource, particularly in a changing world.

Nyrstar's products have a key role in sustainable development. In addition to being an essential element for human, crop and ecosystem health, around 50% of the world's zinc production is used in the construction industry and a further 25% in the transportation sector. A key use of zinc is in corrosion protection of steel, reducing the carbon footprint of infrastructure and vehicles by increasing their useful life. Zinc and lead are also used in energy storage systems including batteries, which are an integral part of renewable energy technologies.

# Our approach to Sustainability Management

We undertake a holistic approach to our business sustainability and this is recognized in our Nyrstar2020 Strategy, the Nyrstar Way and our Code of Business Conduct. The Nyrstar Way defines our culture and is central to the way we do business and interact with our stakeholders. The most important elements of the Nyrstar Way from a sustainability perspective are the commitment to prevent harm – to our employees, our communities and the environment; to be open and honest - ensuring transparency in our communications; and to keep our word – building trust by delivering on our commitments.

Underpinning the Nyrstar Way and Code of Business Conduct, Nyrstar has core Corporate Policies for Safety and Health, Environment, Risk Management and Quality. These policies are translated into the relevant local languages and allow us to integrate operations globally by establishing common business processes and procedures, which provide more specific guidance for decision making in key sustainability areas. We have Corporate Safety & Health and Environmental assurance processes to allow us to assess our performance and track our progress against sustainability objectives.

## Stakeholder Engagement

Nyrstar's reputation is greatly influenced by our ability to communicate in a consistent and professional manner with all of our stakeholders. We consider our key external stakeholders to be our shareholders, our customers, our suppliers, our regulators and the local communities around our operating sites. We engage with our stakeholders in a number of different ways, more information on stakeholder engagement is provided on the website at [www.nyrstar.com/sustainability](http://www.nyrstar.com/sustainability). With the development of our Nyrstar2020 strategy and the growth of our business over the past year, enhancing communications with our internal and external stakeholders was seen as a critical issue and we took a number of significant actions in this area:

- Developed a formal communications plan for better engaging with both internal and external stakeholders;
- Launched an updated Nyrstar website to better communicate our business to external stakeholders;
- Developed formal stakeholder identification and engagement plans for all our operating sites;
- Implemented an organisational health survey process for our employees to provide formal feedback which we will use to inform and refine our internal communications, programs and processes; and
- Continued the development of our Corporate Social Responsibility (CSR) framework and launched the Nyrstar Foundation. These outline how we will work with our stakeholders for mutual benefit as our company continues to grow in size and geographical spread.

To date our formal external stakeholder feedback processes at a Corporate level have primarily focussed on investors and customers. In 2012 we will be implementing a program to formally seek feedback from a broader range of external stakeholders. This will allow us to validate the significance of key business issues we have identified, to each of our stakeholder groups. It will also help identify any issues that our stakeholders consider important, but which they consider we may not yet be adequately addressing.

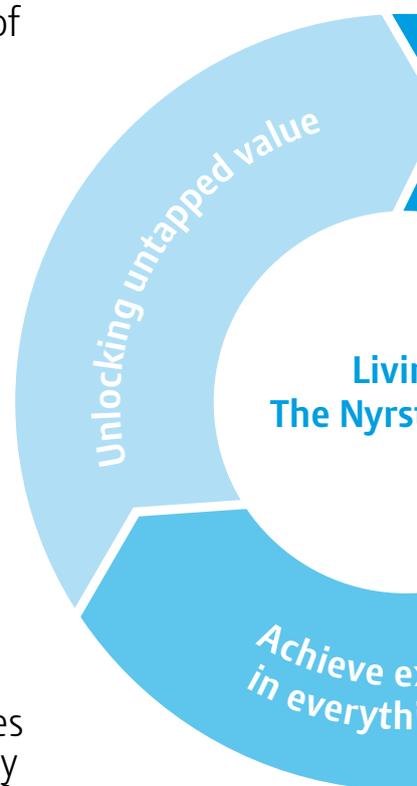
## Risk Management

During the year we performed a business risk review focusing on the most critical risks for the Nyrstar Group. Risks were assessed in the light of our identified strategic priorities: living the Nyrstar Way, achieving excellence in everything we do, unlocking untapped value and delivering sustainable growth. In the coming year, risk workshops will be held at all mines and existing smelter risk registers will be reviewed; to ensure that all sites have a risk register in line with the Nyrstar strategy and Group Risk Management Standard, and that all key business risk controls are documented. The review of these key risk controls forms part of the various Group level assurance processes.

## Key Sustainability Risks and Opportunities

The key Group level sustainability issues as identified by our risk management processes have been aligned to our identified strategic priorities and are listed below. The most significant changes to our company in the past year that have affected our sustainability risk profile relate to: delivering on the strategy that we announced for our company; and the acquisition of new mines in Mexico, Chile, Honduras and Canada.

While the types of sustainability risk issues are similar to previous years, some issues have different aspects or a greater significance due to: the increased proportion of our business that relates to mining activities; changes in the geographical and cultural profile in the company; and the history of new assets in our portfolio prior to them being under Nyrstar control. Due to their differing locations, processes and operating histories, our mines generally have different risk profiles and performance characteristics to our smelters. Where relevant, this has been reflected in the various risk and performance description sections of this report.



From an overarching sustainability perspective, our key risks and opportunities can be aligned to our Nyrstar Strategy under the strategic priorities of 'Live the Nyrstar Way' and 'Excellence in everything we do' as follows:

## Live the Nyrstar Way

### - World class safety & environmental performance

- Ensuring that our activities do not adversely affect the health and safety of people that work for Nyrstar or those that live close to our operating sites;
  - Ensuring that our activities do not harm the physical environment or its ability to meet the needs of our local communities; and
  - Ensuring that we comply with local legislation and our operating licences and that our regulators and local communities trust us to meet our commitments.

### - Build on the Nyrstar brand

- Engaging with and seeking feedback from our stakeholders to ensure we are meeting their expectations, building our reputation and maintaining our social licence to operate and ability to grow as a company.

### - Manage critical risks

- Having sound risk management and corporate governance processes to ensure that we deliver mutual benefit to our stakeholders and prevent harm from unintended events.

### - A productive and engaged workforce aligned with the Nyrstar Way

- Establishing and maintaining a culture that lives the Nyrstar Way, ongoing learning and development processes to ensure people reach their potential and being able to attract and retain the right people with the right skills to grow our business.



## Achieve excellence in everything we do

### - Market driven decisions

- Ensure that we are providing value to our customers and meeting their expectations with respect to product performance, product delivery and customer support.

### - Excellence in communications

- Effectively communicating our Nyrstar strategy and our performance to all our stakeholders.

### - Sustainable effective operations

- Efficiently using natural raw materials, particularly energy, water and minerals;
- Responding to climate change and energy risks, including participating in policy and regulatory development where this significantly impacts our operations; and
- Ensuring life of mine and asset integrity to deliver on operational performance expectations

More detailed information relating to sustainability risks and opportunities are detailed in the relevant sustainability performance area sections of this report.

In focus

nyrstar

En esta navidad queremos compartir contigo nuestros  
amor, con la esperanza



# Corporate Social Responsibility

Nyrstar has been developing a formal Corporate Social Responsibility (CSR) approach, with the Corporate level element, the Nyrstar Foundation being launched earlier in 2011 and due to announce its first award in early 2012.

We also have a significant number of programs at a local level to support the socio-economic, educational, cultural and environmental sustainability of the communities in which we operate.

## Playing to support childhood education and development - Coricancha Mine

The 'Right to Play' is a global initiative which is aimed at improving the lives of children by using the power of sport and play for development, health and peace. The Coricancha Mine has supported the 'Right to Play' initiative in the local community since 2010. The multi-faceted program addresses not only poorly-designed and sparsely-attended early-childhood education programs, but also tackles the low literacy and numeracy levels in elementary and primary schools.

The programs in San Mateo de Huanchor District in Huarochiri Province of Peru focus on six primary activities: teacher training, the integration of Red Ball Child Play and Early Child Play activities into regular school hours, Youth As Leader workshops and the execution of youth-designed events, parental capacity building, and advocacy work with the government.

Nyrstar's contribution of over US \$150,000 to the program has helped make a marked improvement in the literacy and numeracy skills of program participants. Furthermore, the children's socialization skills have greatly improved and the project's



educational contribution has become recognised in the District, with it now being promoted through educational institutions, communities and local government.

Since its inception in 2010, over 400 students and 200 families have benefited from the program. With 26 teachers now trained and with continued training for more of the area's teachers and schools planned for the coming year, it is expected that the program will continue to deliver sustainable benefits. Our focus for next year will be to support the program's development in the largest primary school in San Mateo.

## Working together for a healthy and vibrant community - Port Pirie Ten for them

The 'Ten for them' campaign in Port Pirie in South Australia aims to lower blood lead levels in the local children. The program was established in 2006 in conjunction with South Australian Health and Environmental authorities and the Port Pirie Regional Council under the banner of Tenby10, a commitment that Nyrstar has continued since 2010 under the banner of the 'Ten for them' program. Our target is to ensure: that at least 95% of local children between 0-4 have lead levels below 10 µg/dl; and a sustainable future for Port Pirie.

Much has been achieved since the project launch when just 49.6% of children had blood lead levels below 10ug/dl; At the end of 2011 this had improved to 77.5%. Nyrstar Port Pirie General Manager Glenn Poynter said "the latest results are very pleasing and reflect the commitment of Nyrstar in lowering blood lead levels in the community. This results has been driven by a number of factors including community involvement, education programs, media coverage as well as significant capital investment by Nyrstar in the Port Pirie site, aimed specifically at reducing emissions. This effort will continue to be maintained through the 'Ten for them' program."

## Developing the future workforce - El Mochito Mine

Having been in operation for 64 years, El Mochito has a comprehensive CSR program valued at over US \$2.5 Million per year that is directed at training, social infrastructure, environment, emergency relief, community health and education programs. The mine works closely with and enjoys strong relationships with local residents, as we all aim to achieve a longer term sustainable future for the Las Vegas community.

A shortage of skilled workers, an issue facing much of the mining industry worldwide, is something that Nyrstar is not immune to. At the El Mochito mine, we are addressing this issue by developing our

own technical and trade-specific training program and training our own people. At the core of the program is our partnership with the Polytechnic Institute of Central America (IPC), a leading technical training institution based in San Pedro Sula, Honduras. As a founding partner, El Mochito mine has helped to transform the lives of many young Hondurans and create job opportunities for graduates.

Working in partnership to design programs in electronics, welding, and mechanics, IPC takes an holistic approach to training. Not only do the students undertake intensive hands on training programs in the trade specific training rooms, many of them live in the onsite residential facilities where they learn life and social skills. Core values are instilled in the students and they receive ongoing support and mentoring. The results are well rounded, 'work ready' individuals, many of whom have gone on to supervisory positions within our operations.

General Manager Nyrstar El Mochito - Gordon Babcock, said that this partnership is creating mutually beneficial outcomes. "By developing our own industry -specific training programs we are able to retain our locally based employment rate of more than 95% from the Municipality of Las Vegas in the department of Santa Barbara. In the same way as a trained workforce creates value for our business, we are building capacity in the local community (and Honduras as a country) and ensuring that our people have cross-transferrable skills, making this a sustainable business model," he said.

## Supporting a thriving habitat - Clarksville Smelter

For over 30 years, the Nyrstar zinc smelter in Clarksville, Tennessee, has demonstrated that industry, farming and nature can thrive together. Located adjacent to the Cumberland River, the Clarksville smelter maintains a 1 km wide buffer zone between the river and operating areas. The greenbelt has two main uses: farmland and wetlands preserved for wildlife habitat.

The greenbelt covers an area of over 180 hectares and is managed in cooperation with state wildlife agencies to provide a habitat for native waterfowl and mammals. In December 2011, members of the National Audubon Society conducted a survey of birds in this buffer zone to allow us to better understand the wetland ecosystem on our property. Forty-three different species of birds were catalogued on our land and the survey results will be used to monitor the health of birds in the region.

In addition to the bird survey, Nyrstar assists in the annual planting and harvesting of the farming areas. During harvesting we do things such as leaving corn stalks on the ground to provide a more conducive habitat for wildlife. The buffer zone also includes a spring-fed lake where the annual catch and release fishing tournament is held for employees and their families.

In focus



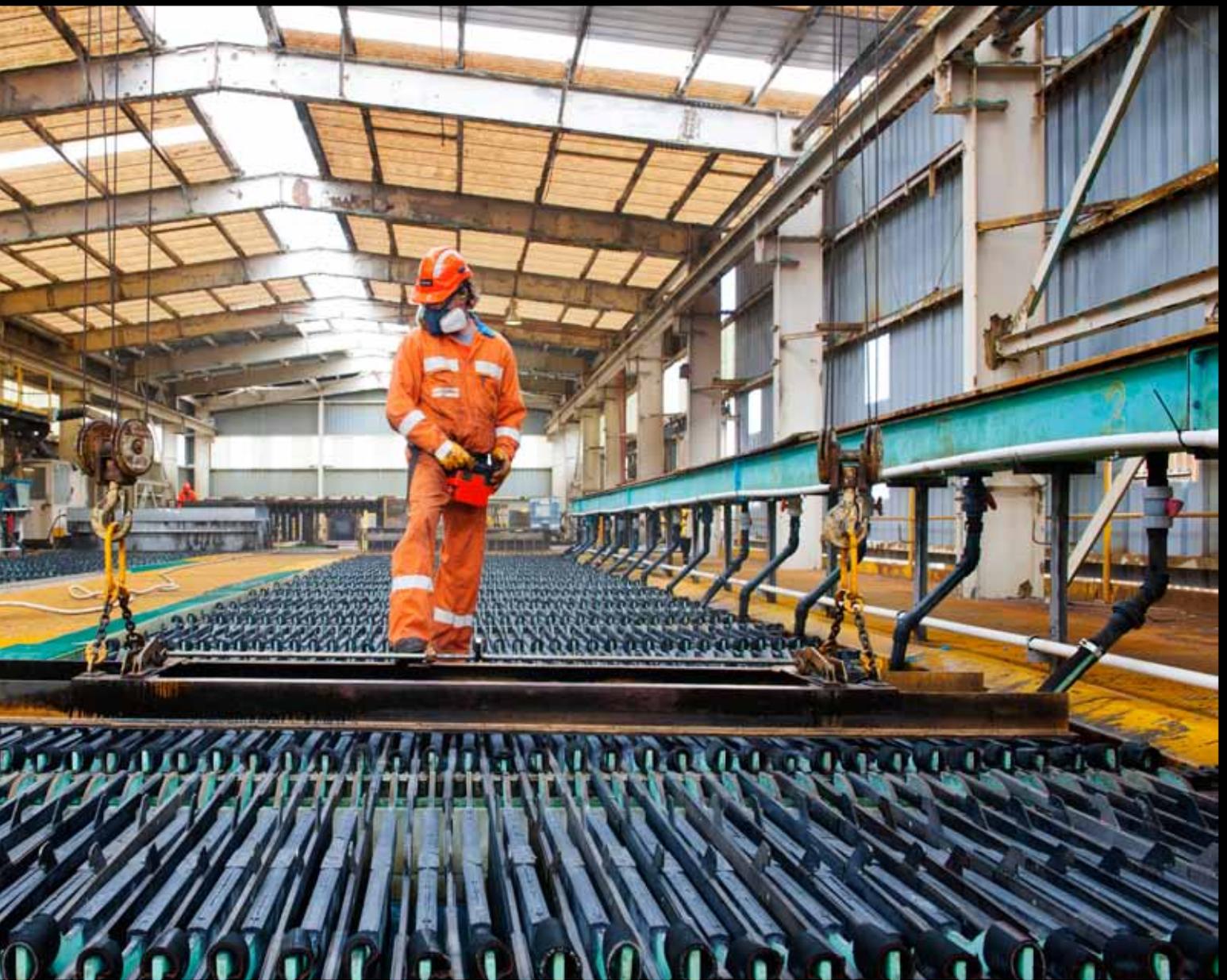
# Energy

Mining and smelting are energy intensive. The availability of competitively priced and reliable energy sources remain a key sustainability driver for all our operations. Increasing energy efficiency and reducing our carbon footprint are the two key levers for us to improve our energy performance and therefore our business sustainability.

## A pioneer for wind generation at Chilean Mines- El Toqui

On September 23, 2011 the El Toqui Wind Farm was officially inaugurated by Chile's Energy Secretary. Back in 2010, El Toqui mine took the lead in Chile's renewable power generation in mining, by starting a project to erect 6 turbines in a wind farm located close to the mine in the Chilean Patagonia to provide part of the mine's energy needs. The project was part of El Toqui's environmental and clean power generation commitments, with an initial investment of 5.5M USD.

With an overall generation capacity of 5.6 Megawatts (MW), the wind farm can generate enough electricity to reduce the mine's fuel oil consumption by up to 1.5m litres per year, which also represents an annual fuel cost saving of up to \$1.5M USD. El Toqui will also generate Carbon credits in the coming year, once all of the current evaluation and inspections processes have been completed. The mine will also be evaluating other opportunities to improve energy security and reduce reliance on fossil fuels for electricity supplies, so that funding can be sought for initiatives that prove to be cost effective.



Chile currently has 561 MW of non-hydro renewable energy capacity, which is 3.7% of the country's total installed capacity. Of this, 171.6 MW is wind power. It is expected that in the coming decade, Chile's power consumption will increase by 6-8% per year and as Chile's wind energy potential is estimated at around 40 GW, El Toqui is demonstrating the mining industry's ability to contribute to that greener energy future.

## Innovative ways to improve energy efficiency - Balen and Overpelt

Nyrstar's Balen and Overpelt plants deliver industry-leading energy efficiency performance. However, being an electricity intensive industry, we are continually on the lookout for cost effective ways to improve. Nyrstar Belgium is also a participant of the Limburg Province's ambitious Climate Parliament, which aims for a climate neutral Limburg. There are a number of projects that the Belgian sites have been implementing that have a positive contribution to the energy performance goals of Nyrstar, and also those of the Limburg Province.

- Cell House modifications at Balen. Electrolysis, where electricity is used to deposit dissolved zinc in solution as solid zinc metal on aluminium cathodes, is the most energy intensive stage of the zinc metal production process. As well as installing more energy efficient anodes, the site modified its cathode stripping process. By introducing a 32 hour cathode stripping cycle in the electrolysis stage, 8 hours less than previously used, the site was able to increase the current efficiency, meaning that more zinc can be produced with the same amount of energy;
- Reducing the temperature of oxide washing at Overpelt. The oxide washing process treats materials recovered from the steel recycling industry so that they can be reused as feed materials in our Nyrstar European zinc smelters. By changing the oxide washing process to operate at lower temperatures, significant energy savings have been realised;
- Transporting zinc metal product by barge. Zinc metal is usually transported from the Overpelt casting plant to European customers by road. In 2011 Nyrstar Belgium investigated using the canal system as an alternative to delivering zinc metal to a customer storage site in Vlissingen, The Netherlands. The first two vessels, each with a capacity exceeding 500 tonnes, replaced an equivalent

of forty truck loads, which has significant fuel reduction benefits as well as reducing local traffic volumes. The first shipment of 25,000 tonnes of zinc was completed without incident and barge transport is now part of routine transport operations to this particular destination. The site is now investigating other opportunities to ship products by canal rather than road, including connections between Nyrstar's Balen, Overpelt and Auby operations; and

- Installation of solar panels on historical landfills at Overpelt. In 2006 the site completed closure works on its historical zinc smelter solid waste landfills. These areas require ongoing management but have limited other beneficial potential as they cannot be reused for purposes which could compromise the integrity of the landfill. Then in 2009, discussions began with Solar Central Limburg, to develop the largest solar panel park within the Benelux region on one of the landfills. The 20M€ solar park project, which commenced operation in 2010, involved installation of 40,000 solar panels on the 13 Ha area and with a peak generation capacity of 8MW. Electricity generated at the solar park is used in the Nyrstar Overpelt plant. This innovative project not only helps to increase renewable energy generation in the region, but also ensures that Nyrstar Overpelt has a sustainable and productive use for this remediated landfill area.

The Balen and Overpelt sites have had ongoing energy efficiency action plans since 2003 when the operations participated in an industry specific energy benchmarking process. Projects have been implemented on a cost effectiveness basis over this period of time, with current annual savings compared to the 2002 baseline being CO<sub>2</sub> emissions of around 12000 tonnes and the equivalent energy use of around 12,000 households. Fred Hornung, Nyrstar's General Manager for Balen and Overpelt adds "energy efficiency means everything to us as electro-intensive company. Firstly we want to impact on the environment, but we also need to do this to bring costs down. We suffer because of Belgium's high taxes on energy."

## Optimising power use and generation to reduce carbon footprint - Myra Falls

Nyrstar Myra Falls' mine is located within Strathcona-Westmin Class "B" Park, encapsulated within the larger Strathcona Provincial Park, British Columbia's oldest provincial park. Since 2008 the Myra Falls mine has been proactively engaging with BC (British Columbia) Parks and the Strathcona Park Public Advisory Committee (SPPAC) to determine ways to minimize its carbon footprint from electricity generation.

There are two hydroelectric power stations currently installed to provide electricity for the mine. Power is a major cost component for the operation and when the local dam reservoir levels drop, hydro power must be augmented with diesel-generated power. As well as reducing the carbon footprint, any reduction in this diesel dependency brings the added benefits of a reduction in noise and traffic volume, a benefit to all park users.

Since 2006, Myra Falls has seen year on year reductions in its carbon footprint which is mainly attributable to energy efficiency initiatives in the mine and water conservation initiatives at the Jim Mitchell reservoir. After a site wide campaign to increase the awareness of the cost saving and environmental benefits of energy efficiency in 2008, the mine adopted a site-wide energy protocol in which the mill control operators, who provide continuous coverage for the operation, play an integral role. These operators are charged with co-ordinating the major power consuming activities on site, balancing the needs of the mine, the mill and the surface departments. This has resulted in the CO<sub>2</sub> intensity reducing by around 70% from just over 2.8 to around 0.8 tonnes of CO<sub>2</sub> per tonne of concentrate produced, a very significant improvement of which the site is justifiably proud. Nyrstar Myra Falls will continue to work with BC Parks and SPPAC in 2012, to determine and implement an energy management framework to evaluate future projects and further reduce its carbon footprint.



# Environment: Groundwater Remediation

Many of Nyrstar's sites have a long operating history, some over 100 years. In some cases this has left a legacy of soil and groundwater impacts which Nyrstar has proactively been addressing through a number of on-site and off-site initiatives.

## Overpelt - Groundwater Remediation Project

As part of an agreement with regulatory authorities to address soil and groundwater contamination in the Flanders region from historical industrial activities, Nyrstar Overpelt has already undertaken a number of actions to remediate soil and groundwater impacted from over 120 years of past smelting activities. One of the most significant has been a groundwater interception and recovery project that was completed in the middle of the year.

The project included installation of a network of 116 groundwater extraction wells and associated pumps and piping which can recover up to 230 cubic meters of historically contaminated groundwater every hour. The collected groundwater is treated in a wastewater treatment plant before the clean water is recycled or discharged to the Eindergatloop, a natural stream which runs through the plant.

Since the new groundwater recovery system became operational, over 55 Tonnes of metals have already been recovered and we expect the system to continue to prevent around 100 Tonnes of metals per year from entering the Eindergatloop stream or migrating away from the site in deeper groundwater. In addition, as the site reuses 50% of the recovered treated groundwater in its production process, Overpelt's requirement for clean groundwater supplies has been reduced by around 1 million m<sup>3</sup> per year.

Ann Vos, Nyrstar's Environmental Coordinator stated "Nyrstar is committed to meeting its obligations and improving its environmental performance over time. At Overpelt we have made substantial investments in recent years to significantly reduce the environmental impact from both historical and current production activities."

## Hobart - Continuously improving our Groundwater Strategy

Nyrstar Hobart has had an ongoing groundwater interception and recovery program for over ten years to help mitigate the impacts caused by 95 years of past smelting activities at the site. A network of over eighty monitoring bores is used to measure the impact of past and current activities and identify areas requiring remediation. Three major groundwater interception systems including an artificial aquifer, horizontal bores and a number of vertical extraction wells are currently in use around the site. All extracted groundwater is treated and metals are recovered prior to the discharge of treated water into the Derwent Estuary.

A new extraction bore was commissioned in 2011 to target groundwater from the 'Quarry' area which has historically been used to store contaminated wastes. Additionally, six new vertical bores have been constructed on the northern foreshore, two of which could potentially be developed into extraction bores pending the outcomes of further hydrogeological and hydrogeochemical investigations in 2012.

During 2011, Nyrstar Hobart recovered a record quantity of contaminated groundwater, resulting in the interception and removal of approximately 122 tonnes of zinc from groundwater that would have otherwise reported to the adjacent Derwent Estuary. This makes a positive contribution to improving the health of the Derwent Estuary, which Nyrstar continues to take an active interest in as part of the Derwent Estuary Program [www.derwentestuaryprogram.gov.au](http://www.derwentestuaryprogram.gov.au)

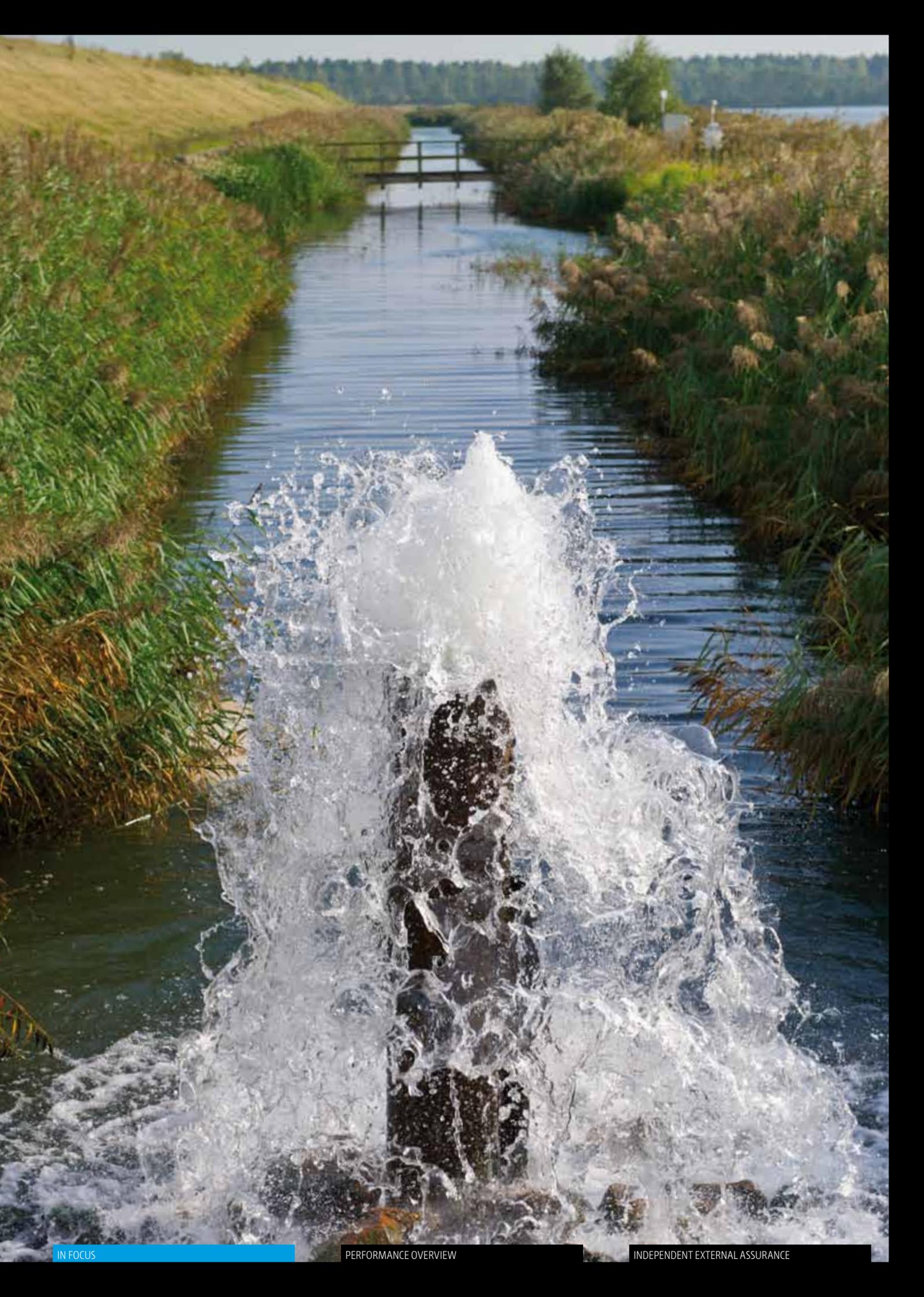
## Budel - Groundwater Containment System

As part of our commitment to continuous environmental improvement, Nyrstar Budel continued to operate the Groundwater Containment System (GCS) during 2011.

The GCS was installed in 1992 to treat groundwater that contained high sulfate and heavy metal concentrations as a result of over 120 years of past smelting activities. Encompassing a network of 12 water extraction wells, the system extracts 220 m<sup>3</sup> of historically contaminated groundwater every hour.

Not only has the GCS isolated and reduced the contaminated water present beneath the site, it has also helped us to unlock untapped value by reprocessing the recovered zinc through the smelter and recycling some of the extracted water for use in the production process, reducing clean water requirements. A special water purification plant was designed to treat the extracted water utilizing two biological processes to remove sulfate and metal. In 2000, the water purification plant was expanded with a Biological Desulphurization Process (BDS) to also treat the process water from the plant. The wastewater treatment plant at Budel meets world class environmental standards and is unique in the zinc industry as it allows recovered metals to be recycled back to the roaster feed stream.

Since 1992, over 500 tons of zinc has been extracted through this system and reprocessed in the smelter.



In focus



# Safety

At Nyrstar we put 'Safety First'. Engaging our people on safety is critical in preventing harm to everyone that works on our sites and in improving our safety performance.

## Making 'Safety First' for everyone at Contonga

Safety culture and taking individual responsibility for your own safety and that of your workmates is a key element of Nyrstar's Safety programs. For some of our mines, the Nyrstar approach was significantly different to what they had previously been used to and significant commitment was needed to deliver a change in safety culture. The Contonga Mine was acquired in July 2010 and the primary modules of the Nyrstar Group Safety training program 'Safety First' and 'Safety for Leaders' were rolled out later that year. The site's commitment to 'Safety first - if it isn't safe, don't do it' has been effectively reinforced by integrating it into daily site activities. By leading the changes in safety management based on the Nyrstar Way, the developments in the Contonga Mine safety culture have already delivered significant improvements in safety performance. During 2011 the site recorded a 24% reduction in recordable injury frequency rate (RIR) and a 77% reduction in lost time injury frequency rate (LTR) compared to 2010. The number of days lost due to injuries decreased by an impressive 86% from 6904 days lost in 2010 to 919 in 2011. There is still a way to go to achieve the Nyrstar goal of world class safety performance within 5 years of acquisition, but everyone at Contonga Mine is justifiably pleased with the progress that has been made in 2011.



## Creative and Innovative solutions from those who know best

To promote creative and innovative thinking and support a culture of excellence in everything we do, we launched the Nyrstar Excellence Awards in late 2010. A number of award entries in the 'Prevent Harm' category submitted for both last year's and this year's awards highlighted simple and effective solutions to manual handling issues that had been generated by the people who knew the problem best - those that dealt with it on a daily basis. The innovative solutions to what in some cases had been long-standing problems, included:

- Redesign of the No.2 Casting Machine unloading system at Hobart. By thinking laterally about the problems with the system, a design change was proposed which not only permanently eliminated the source of 4 manual handling injuries per year, but also significantly improved product quality and throughput in the process. Some of the design aspects have also been useful to making improvements at other Nyrstar smelters;
- Modifications to the zinc slab stacker in the casting area at Clarksville. The maintenance personnel designed and manufactured a low-cost addition to the stacking table that not only eliminated the manual intervention of operators but also stabilized the table. There have been 11 hand injuries recorded relating directly to manual intervention on the slab stacker since 2008. After modifications were implemented in October 2011, there have been no injuries reported from this cause;
- Eliminating manual removal of manganese mud from the electrolysis cells at Hobart, which was the cause of 42 injury reports in 2011 alone. This task had been the focus of various automation attempts over the past 20 years, but without success until the past year when electrolysis operators focused on 'getting rid of the shovel' and finally successfully trialled a simple and effective solution. When implemented in the coming year, the air driven suction system will eliminate a significant cause of injuries as well as making significant cost savings;
- Modification to cathode racks in the electrolysis section at Auby. The previous design involved operators working at height when removing cathodes from the electrolysis cells to the cathode racks. The modified rack design improves the ergonomics of the task as well as providing an integrated rail guard to reduce the risk of falling from height; and
- Changing the type of connection used on turbine pumps at El Mochito Mine. Water management is critical at El Mochito and by implementing a program to replace all the threaded couplings with flanged versions, the turbine pump team has seen significant reductions in manual handling and safety risks as well as reducing the downtime and man-hours required to change out a pump by more than 60%.

## 'Five to Stay Alive' at Tennessee Mines

Most of the Tennessee Mines 817 employees are new to the operations since Nyrstar acquired the businesses in 2009 and restarted operations in 2010. This means that the workforce had a diverse range of backgrounds and experience, and all were new to Nyrstar's safety systems and standards. In order to ensure everyone was aligned and focused on the same critical risks and risk controls, the site rolled out the 'Five to Stay Alive' program. Tennessee Mines had identified nine Critical Risk Control Standards (CRCS), which were put into practice through 'Five to Stay Alive'. The objective of 'Five to Stay Alive' is to clearly set out the five key actions and behaviours for each CRCS that are expected of all employees and contractors at Tennessee Mines. By clearly focusing on and communicating these critical risk controls, the site is reinforcing its commitment to making sure that all personnel walk off site at the end of shift the same way they walked on - safely and without harm.



# Performance Summary

*As in previous years, our targets for 2011 related to further development and implementation of company-wide systems and processes, continual improvement on our performance and establishment of baseline performance for new assets.*

2011 Goal	2011 Performance	2012 Target
<b>Safety</b>		
No fatalities	N Two fatalities recorded at Coricancha Mine	No fatalities
12.5% reduction in the recordable safety incident rate compared to the 2010 result. Establish a verified baseline for new mine assets.	P 12.5% reduction in smelter recordable injury frequency rate down from 10.3 in 2010 to 9.0 in 2011. Mine recordable injury frequency rate increased slightly from 16.3 in 2010 to 16.7 in 2011, which included newly acquired mines.	Achieve a 12.5% reduction in the recordable safety incident rate from the 2011 result when compared to the same asset base. Establish a verified baseline for any new mine assets.
Continue rollout of safety training modules 'Working Safely 1' and 'Working Safely 2'; develop 'Working Safely 3' module.	A Continued rollout of Working Safely 1 and 2 at smelters; translation commenced for roll-out at the mines. Working Safely 3 module developed with European smelters.	Rollout of Working Safely 3 module at smelters and initiatives at mines focused on leadership, cultural change, and critical risk management.
<b>Health</b>		
Complete implementation of the Group wide medical database. Implement the Group Standards for health surveillance and exposure monitoring.	P Group wide medical database fully implemented at European smelters and rolled out to Australian and US smelters. Finalised the Nyrstar Health Surveillance and Exposure monitoring Standard.	Rollout of the Nyrstar Health Surveillance and Exposure monitoring Standard at all operating sites.
<b>Environment</b>		
15% reduction in recordable environmental incidents from 2010 result.	A Overall 19% reduction in recordable environmental incidents from 2010 asset base, down from 27 in 2010 to 21 in 2011. Baseline established at Peru mines.	Achieve a 12.5% reduction in recordable environmental incidents from 2011 result when compared to the same asset base. Establish a verified baseline for mines acquired in 2011.
No environmental incidents with significant off-site impact.	A None of the reportable spill or emission incidents in 2011 resulted in a significant off-site impact or in regulatory action.	No environmental incidents with significant off-site impact.
All Mine sites to have a Closure Plan at least at a Framework level.	A All mine sites have a closure plan or framework.	Develop Nyrstar Group Standard for Mine Closure Planning.
<b>People</b>		
Complete the development of indicators for organizational health.	A Organisational Health Index (OHI) process established, with baseline and first followup surveys completed.	Continue to develop employee engagement and improve our Organisational Health Index (OHI) score.
<b>Community</b>		
Continue to develop the Nyrstar Corporate Social Responsibility Program under the framework of the Nyrstar Foundation.	A Nyrstar Foundation launched. Formal stakeholder engagement plans developed for all sites owned by Nyrstar prior to 2011.	Continue to develop the Nyrstar Corporate Social Responsibility Program under the framework of the Nyrstar Foundation. Develop community feedback mechanisms as part of stakeholder engagement plans.
<b>Governance</b>		
Review the Nyrstar Code of Business Conduct in light of the Nyrstar Way and continue to develop modules in the Code of Business Conduct Development Program.	A Nyrstar Code of Business Conduct updated to reflect the Nyrstar Way and rolled out to all new Nyrstar employees. Ongoing training in Competition Law, Market Disclosure & Communication Policy and other modules.	Continue to develop new modules in the Code of Business Conduct Development Program, in particular the Anti-Corruption Module.
Conduct Enterprise Risk training workshops for newly acquired sites. Validate enterprise risks and controls in Group database.	P High level enterprise risk and controls register completed at Group level. Risk workshops scheduled at newly acquired sites for the first half of 2012.	Conduct Enterprise Risk training workshops for newly acquired sites. Validate site level enterprise risks and controls in Group database.
<b>Management Systems</b>		
All sites to develop a workplan for integrated Quality, Environment and Safety Management Systems certification.	N All smelters maintained current ISO certifications in the period. No new certifications achieved.	All mines to develop an ISO14001 certification workplan. All smelter sites to develop a workplan for integrated Quality, Environment and Safety Management Systems certification.
Establish a partnership with external safety & health service providers to assist with future delivery of the Group Safety & Health assurance program.	P Launched global underground mine safety audits. Smelter program conducted as in previous years with a continuing improvement in ratings achieved.	Review the ongoing Group Safety & Health assurance program to reflect the needs of the Nyrstar strategy.

A = Achieved    P = Progressed    N = Not achieved / Not progressed



The first element of the Nyrstar Way is to 'Prevent Harm'. We commit to always putting safety first and to proactively managing risks relating to our people.

### Key Safety Risks and Opportunities

The most significant safety risks at our mine sites relate to ground control, underground evacuation, fire, inundation, use of explosives and hoisting activities, and exposure to dust and diesel particulates. At our smelter sites, the most significant safety risks relate to: working at height; electricity; materials handling; moving machinery and vehicles; exposure to the hazards inherent in our operations such as molten materials, dusts, metal fumes; acidic gases and liquids; and the manual nature of many of our tasks. Due to the regions in which we operate, personnel safety and security can also be a risk at some sites.

In terms of good safety practices, our mines in particular are at different stages of maturity. This reflects the varying states of maturity of the mines we have bought, the time they have been in our care and their different ownership histories. Added to that are the different cultural attitudes to safety which also impact the speed at which we can move our sites to the desired world class safety levels.

Our key strategies for reducing the potential for workplace injury, and therefore the key areas where we have opportunities to further improve are:

- systematic identification of hazards, risks and appropriate controls;
- standard best practice management systems, practices and procedures;
- a safe work culture where all individuals take responsibility for their own actions and also ensure that their colleagues are working safely; and
- strong and consistent safety leadership at frontline supervisor level.

**Lost Time Injury Rate (LTR) decreased 7% and Recordable Injury Rate (RIR) increased by 6% during significant expansion of mining segment operations**

**Record low RIR of 9.0 in Smelter operations segment**

**Tragically, two employees were fatally injured in separate incidents at the Coricancha mine**

**Global underground mine safety audit launched**

## Safety Management Systems

Nyrstar has core policies and procedures to support a consistent approach to safety and a culture of looking after each other and keeping each other safe. Our Nyrstar Safety and Health Policy is underpinned by a set of Management Standards that cover all aspects of safety and health. For each Management Standard, a set of expectations and requirements has been specified. The requirements under each expectation define the level of safety management we would anticipate to deliver above average industry performance. Ongoing implementation of the requirements specified in the standards is planned to deliver Nyrstar's goal of world class safety performance. During 2011, the company maintained its focus on the ongoing implementation of the requirements specified in the management standards and the accompanying audit guide. We also finalised and communicated the company's set of 10 critical safety standards and a corresponding audit tool; as well as completing a full update of the company's existing safety standards and translation into French and Spanish for implementation at our new mining assets.

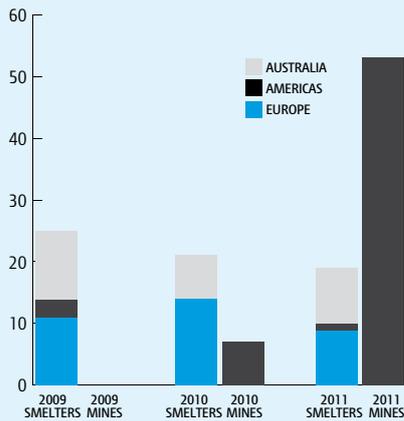
Some of our mine sites are located in areas of increased personal security risk. We have undertaken a security risk review during the year and strengthened our internal processes in relevant areas, in line with our objective to ensure the safety and security of employees and visitors at all our sites.

## Safety Assurance Program

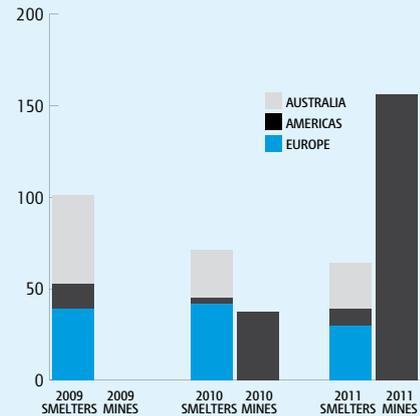
The annual Corporate audit program was completed at all smelter sites, which includes an evaluation of site compliance with Nyrstar requirements as defined in the Management Standards and with legislation. A rating of current site management systems and performance was given against a standard scale, with all smelter sites maintaining or improving their rating in 2011 and all have now achieved a minimum rating of 'all of the company's basic safety & health requirements being implemented and fully effective'.

We commenced an underground mine safety audit program covering all Nyrstar mines in November 2011 with a team of experienced external and internal auditors. The global underground mining review was completed in January 2012 and the scope included: compliance to relevant applicable legislation; compliance to Nyrstar safety standards and agreed common audit standards; crisis management and emergency response planning; critical risk identification and controls; safety leadership; safety management systems; stakeholder engagement and communications on safety. These audits will be used to develop a risk-based prioritised safety improvement program for each site, with the objective of determining the sites' journey to world class safety, a goal to be achieved within 5 years of acquisition.

### WORKFORCE LOST TIME INJURIES BY ASSET TYPE AND REGION



### WORKFORCE RECORDABLE INJURIES BY ASSET TYPE AND REGION



#### LOST TIME INJURIES

Site	2011	2010
Auby	3	6
Balen / Overpelt	4	8
Budel	2	0
Clarksville	1	0
Tennessee Mines	14	7
Campo Morado	7	-
El Mochito	1	-
El Toqui	2	-
Langlois	0	-
Myra Falls	2	-
Peru Mines	27	-
Hobart	8	3
Port Pirie	1	4
<b>TOTAL</b>	<b>72</b>	<b>28</b>

#### RECORDABLE INJURIES

Site	2011	2010
Auby	12	16
Balen / Overpelt	11	19
Budel	7	7
Clarksville	9	3
Tennessee Mines	41	37
Campo Morado	29	-
El Mochito	7	-
El Toqui	2	-
Langlois	5	-
Myra Falls	11	-
Peru Mines	61	-
Hobart	16	12
Port Pirie	9	14
<b>TOTAL</b>	<b>220</b>	<b>108</b>

## Safety Leadership

Safety leadership and safe work behaviours are critical in ensuring that our people are not harmed in the workplace. The key elements of our safety leadership and behavioural safety programs are: the 'Safety First' standard, outlining the company's expectations regarding safety leadership and accountability; the 'Safety for Leaders' program; and the 'Working Safely 1' and 'Working Safely 2' behavioural safety courses which are rolled out to all employees. These programs cover the full range of safety leadership topics, including a basic knowledge of behavioural safety theory, communication skills applied to safety, organizational cultures, practical tools for the frontline leader; and practical skills for all employees such as behaviour observation and feedback, hazard recognition, safety awareness and the causes of unintentional at-risk behaviour.

Based on the external benchmarking conducted in 2010, maturity based concepts have been developed and included in our safety training and audit programs. A first formal assessment of safety culture maturity was performed as part of the company wide mine safety audit.

In the past year we focused on initiatives to improve safety awareness and our reporting culture with a strong focus on visible leadership. The 'Safety for Leaders' program was fully integrated into Nyrstar's overall leadership development program and a 'hearts and minds' program was developed which will be rolled out in 2012 as 'Working Safely 3'.

## Workplace Health & Safety Committees

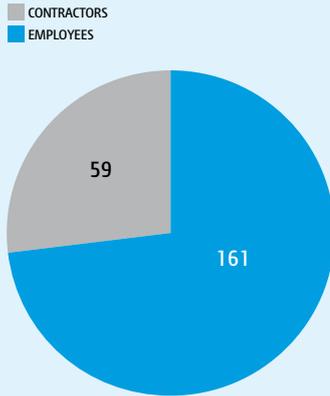
Formal Site Health and Safety Committees which represent the entire site workforce are in place at all our smelters. In addition, various programs exist at our mining operations to ensure the involvement and active participation of our employees in the development and improvement of the company's safety programs. The Committees help monitor our health and safety performance and provide advice on improvement initiatives.

## Catastrophic Risk Management

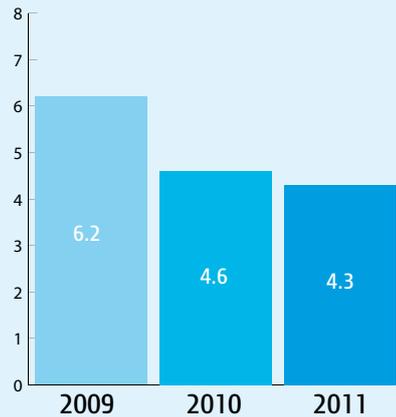
Most of our smelter sites are subject to additional regulations applying to industrial facilities with the potential for 'catastrophic risks', which are defined as risks which could result in multiple fatalities or serious off-site impacts. In Europe our smelters implement requirements under the 'Seveso II' directive and in Australia our smelters implement Major Hazard Facility management activities as required in State legislation.

In addition to legal requirements, various new programs have been piloted aimed at improving critical risk controls. These include critical risk based 'activity audits', improved auditing tools such as critical risk control checklists, and the continued development and implementation of the company's critical safety standards. A cross-functional smelters team has identified best practices for roaster operation across the company, and its recommendations for critical risk control are currently being implemented.

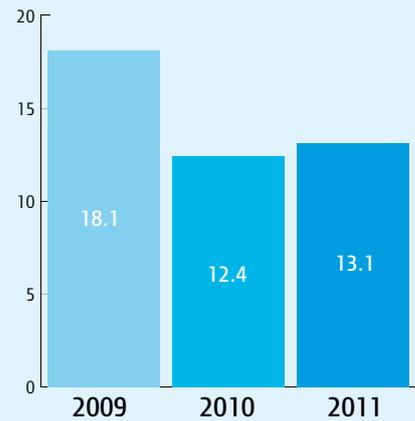
## RECORDABLE INJURIES BY EMPLOYMENT TYPE



## LOST TIME INJURY FREQUENCY RATE (LTR)



## RECORDABLE INJURY FREQUENCY RATE (RIR)



## Workplace Injuries

Nyrstar's Lost Time Injury Frequency Rate (LTR) per million hours worked decreased by 7% from 4.6 in 2010 to 4.3 in 2011, however the Recordable Injury Frequency Rate (RIR) per million hours worked increased by 6% from 12.4 in 2010 to 13.1 in 2011. This was predominantly due to the acquisition of mines in 2011, which currently generally have a higher injury frequency rate than the smelter segment. The proportion of hours worked in Nyrstar's operations attributable to the mining segment also increased significantly during the year. At the end of 2011, 66% of hours worked were in the mining segment, compared to just 39% at the end of 2010.

In terms of segment results, at our smelters we saw a continued improvement in both LTR and RIR. The RIR decreased by 12.5% from 10.3 in 2010 to 9.0 in 2011, which met our target improvement for the smelting segment. The LTR decreased by 10% from 3.0 in 2010 to 2.7 in 2011. At our mines, the RIR increased marginally from 16.3 in 2010 to 16.7 in 2011. The LTR remained flat at 5.9.

Another important measure of the company's safety performance is the number of 'critical incidents', that is, incidents that did result, or could reasonably have resulted in a fatality or permanent serious disability. By setting clear expectations and encouraging sites to report this type of incident, we aim to increase awareness of critical risks to our people and to our business. During the year 42 critical incidents were reported, an apparent increase on the previous year's number of 17, however this was mostly due to the inclusion of our newly acquired mines. Both the reporting and prevention of such incidents will remain one of our main priorities going forward.

As well as continuing to track recordable injuries and critical incidents, in line with our goal of preventing harm, we have also identified a set of proactive safety performance indicators. Baseline data have been collected in 2011 and these indicators will be monitored at both our smelting and our mining operations during the coming year.

## Looking forward

Our key safety actions and initiatives planned for the coming year include:

- Roll-out of mining action plan based on the outcome of the global underground mine safety audit;
- Continued roll-out of corporate programs for risk management, incident investigation and critical risk controls to ensure all mines achieve a minimum standard in these areas by year end;
- Continued 'jump start' initiatives at mines focused on leadership, cultural change and critical risk management;
- Roll-out of the smelter safety strategy to realise the next step change in improved performance with a focus on visual management, proactive measures and critical risk control programs; and
- Roll-out of the new 'Working Safely 3' program and behavioural safety initiatives at the smelter operations.

Further performance indicator definitions, specifications and any data restatements are included in the GRI content index on the Nyrstar website at [www.Nyrstar.com](http://www.Nyrstar.com)

Lost time and recordable injuries includes all people on site: employees, contractors, casuals and visitors. The following sites are included:

2009 results: all smelters and TN Mines (all sites included in external data assurance processes)

2010 results: all smelters, TN Mines and Peruvian operations (all smelter sites and TN Mines included in external data assurance processes)

2011 results: all smelters and all mines owned by Nyrstar at the end of 2011. (all smelter sites and TN, Coricancha and Campo Morado mines included in external data assurance processes.

However recordable injuries by employment type is not within scope of the assurance)



# Health

'Prevent Harm' is also the key element of the Nyrstar Way relating to protecting the health of our people and proactively managing workplace health risks.

**Completed the Nyrstar Health Surveillance and Exposure monitoring Standard**

**Initiated a Nyrstar smelter physicians forum**

## Key Health Risks and Opportunities

The most significant health risks arising from our operations relate to exposure to the physical and chemical hazards inherent in our work environment, including: metals such as lead, cadmium, mercury and arsenic; diesel particulates; noise; heat; acidic solutions; acid mist; and toxic gases such as sulphur dioxide, hydrogen sulphide and chlorine. Working at altitude is also a risk at our Peruvian mining operations (Contonga, Coricancha and Pucarrajo) which include operations over 3000 m above sea level.

There are also a number of common health risks for our employees and contractors that are not related to hazards in the workplace, but to the demographics of our workforce. These include health issues relating to an aging workforce and to lifestyle choices such as smoking, diet and exercise.

Our key strategies for supporting a healthy workforce include:

- systematic identification of workplace exposures, monitoring of exposure levels and application of systems or practices which minimize exposure to acceptable levels;
- monitoring of workforce bio-markers and health indicators; and
- supporting our workforce in general health awareness issues and wellness programs, encouraging individuals to make healthier lifestyle choices.

## Management Systems

The Nyrstar approach to health management and underpinning requirements are outlined in our Safety, Health, Environment and Community Management Standards. We have established a global smelter Health and Hygiene network to ensure a common group wide approach to health management and the sharing of best practise within the company. This will also be an aspect of our global Mine Safety Network which will be established in 2012.



## Workplace Exposure Standards and Monitoring

A group-wide exposure monitoring standard has been developed to set minimum company requirements for the evaluation of workplace exposure monitoring. This standard specifies requirements for exposure monitoring of substances including lead, cadmium, mercury and arsenic. The standard has been finalized and will be rolled out to all sites in 2012.

## Sharing of Best Practice

During the year a forum was organized to exchange information between the company physicians from Europe and Australia. Topics discussed included: medical treatments typically related to smelting activities; follow-up of sulphuric acid exposure; the new Health Surveillance standard; healthy lifestyle promotion initiatives; and fatigue management. This forum will be expanded in the coming year to include health and hygiene professionals from the mining operations.

## Routine Medical Assessment

Nyrstar has a group-wide health surveillance standard covering the requirement for pre-employment medicals, annual health assessments, end of employment medicals and any relevant follow-up processes. The scope of these medical assessments focuses on ensuring physical capability of people in the workplace and includes physical examinations, blood/urine analysis, spirometry, audiometry, functional capacity testing, and where appropriate, suitability for alternate duties.

The rollout of a Group wide medical information database to facilitate the reporting and analysis of confidential medical data, initially piloted at the European sites during 2010, continued during the year.

## Fitness for Work

Programs exist to minimise the potential for drug and alcohol impacts in the workplace, including systematic testing where this is permitted by law. These programs are still to be standardized across all Nyrstar sites.

## Healthy Lifestyle Choices

Wellness programs are an integral part of Nyrstar's safety and health programs and initiatives have been developed at most Nyrstar sites. During the past year we have continued to support various initiatives, including: awareness programs; general health assessments and screening for high blood pressure, skin cancer, fatigue management and sleep-disorders related to shiftwork, diabetes and other diseases with lifestyle risk factors; influenza vaccinations; and participation in stop smoking, fitness and weight loss programs.

## Looking forward

Our key workforce occupational health actions and initiatives planned for 2012 include:

- Complete implementation of the medical database software at smelter operations and commence implementation at mining operations;
- Expand the Health and Hygiene network to include the physician and industrial hygienists from all operations; and
- Complete implementation of the company's health surveillance and exposure monitoring standards, particularly at the newly acquired mines



# Environment

The first element of the Nyrstar Way, 'Prevent Harm' means we commit not only to minimising the environmental impact from current activities, but also to recognizing the environmental impact from past operations and addressing legacy issues.



**11% reduction in recordable environmental incidents compared to 2010**

**No environmental incidents with significant off-site impact**

**Developed the environmental stream of the Nyrstar Group SHEC Management Standards**

## Key Environmental Risks and Opportunities

Although Nyrstar's individual mine and smelter sites may have differing site specific risks due to differences in site history, location and local geology; the key environmental risks and opportunities at all sites relate to:

- continually improving the performance of our production facilities and minimizing emissions, particularly to water and air;
- meeting legal obligations and the requirements of our voluntary agreements which become more complex and stringent over time;
- addressing legacy issues, particularly historical disturbance, soil and groundwater contamination and accumulated by-products and wastes; and
- providing material stewardship through: efficient and responsible use of resources, including water and energy; minimizing waste; and expanding recycling options.

## Environmental Management Systems

Our Nyrstar Environment Policy is underpinned by the Nyrstar Safety, Health, Environment and Community (SHEC) Management Standards and a number of core Group wide environmental standards and processes covering areas such as legal and other requirements, risk management, performance measurement and

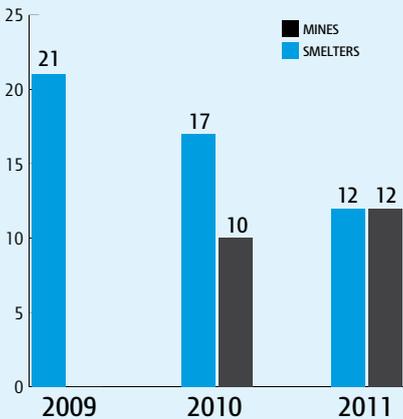
incident reporting. During the year we established the environment stream of what was previously the Nyrstar Safety and Health Management Standards, to give a more integrated approach to communicating Nyrstar expectations in this area. All of the core Group Environment standards were also translated into Spanish to assist in new mines integration.

We have a Corporate objective of having all Nyrstar operating sites certified to ISO 14001. This ensures that all sites have identified their significant environmental risks and aspects and have established processes in place to minimize their emissions and continually improve their performance. Our smelters are all currently certified to ISO 14001. All mines owned by Nyrstar at the end of 2011 have a goal of achieving ISO14001 certification by the end of 2014 and will develop an implementation plan to achieve this in the coming year.

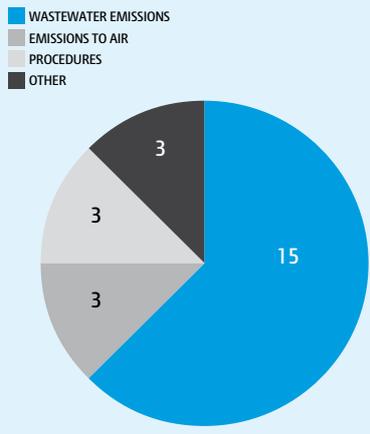
## Environmental Assurance Program

Compliance with our Group environmental standards and reporting processes is assessed as part of the environmental assurance program; elements of which were undertaken at all sites in 2011 except for El Mochito and Contonga. A baseline environmental audit for these two sites will be completed in the first half of 2012. Action plans arising from environmental audits are tracked in our Group Risk Information Management System.

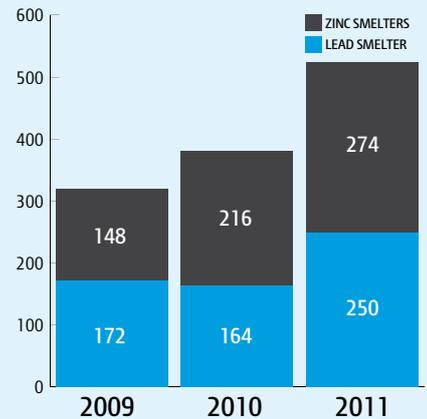
### RECORDABLE ENVIRONMENTAL INCIDENTS



### RECORDABLE ENVIRONMENTAL ISSUES BY TYPE



### EMISSIONS TO AIR - NO<sub>x</sub> (T)



## Environmental Awareness

Environmental awareness training for employees is undertaken at an operating site level. Building upon the same approach used for Safety Leadership, the intent of the training is to ensure that the workforce is aware of the significant environmental impacts relating to the site, compliance requirements, and what they could do personally to improve the environmental performance of the site. To support a more consistent approach to communicating Nyrstar's expectations, a mine site specific environmental awareness training program is to be developed in the coming year.

## Environment Improvement Projects

Our environmental improvement programs are generally site specific, as the most significant risks at each site differ, depending on the site history and location, physical and regulatory environment, and the level of past investment in environmental protection measures. We have continued to progress a number of key site projects over the past year, including:

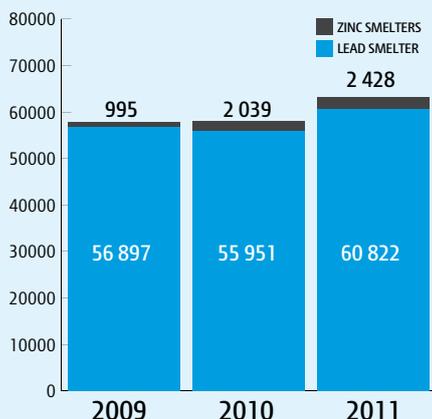
- implementing plans to eliminate non-compliances with mine wastewater discharges for zinc at Tennessee and Contonga Mines; and for flow at Langlois Mine;
- continuing seismic upgrade works at the Myra Falls tailings storage facility (TSF) and development of an approved final closure plan for the TSF, both of which will be completed in 2012;
- continuing works to install the final capping on closed landfills at Auby, which will be completed in 2012;
- completing preparatory work for the final Phase 2 remediation works in the community areas close to the Balen and Overpelt sites;
- commencing operation of the expanded contaminated groundwater interception and recovery system at Overpelt;

- submission of the final Aftercare Plan for the historical landfill area at Budel to the Province of Noord Brabant, which will see the staged handover of this area to the Province commencing in 2013;
- continuing projects to seal the basement beneath the Cell House at Hobart to mitigate future groundwater contamination in this area and to treat historical mercury waste for approved disposal; and
- continuing on-site fugitive lead emission reduction measures and the 'ten for them' program to reduce community lead exposure at Port Pirie. At the end of 2011, the specified ambient lead in air rolling annual average target levels were met at all three of the EPA community monitoring sites, an improvement on the previous year.

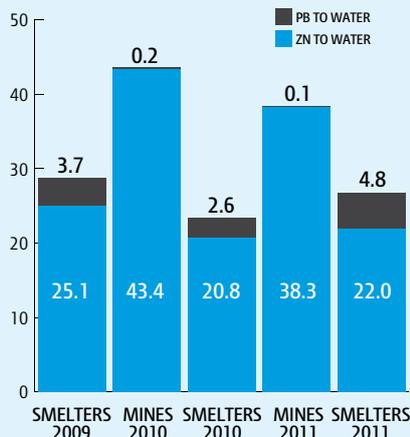
## Compliance with Licence Conditions<sup>(1)</sup>

Our key compliance measure is recordable environmental incidents, defined as environmental incidents or events requiring notification to the relevant Regulatory Authority which are a non-compliance with consent conditions. The total number of recordable incidents in 2011 for all sites excluding the newly acquired mines was 24, an 11% reduction from the previous year total of 27. Of the 24 incidents in 2011, 12 related to the smelters and 12 to the Tennessee and Peru Mines. Our 15% improvement objective was achieved by the smelter segment which recorded a 29% improvement on the 2010 result; however the overall mine segment result did not improve due to the inclusion of more mining assets in the result. The most frequent incident type was non-compliance with wastewater discharge limits. (67%) All of the recordable environmental incidents were of a minor nature and none of the incidents resulted in significant off-site environmental impact or in significant regulatory action.

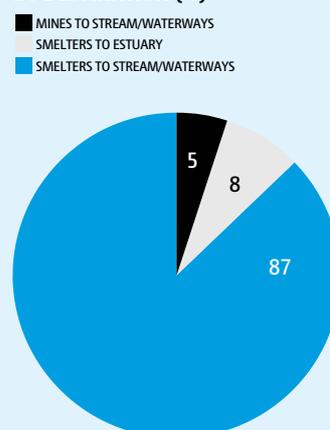
### EMISSIONS TO AIR - SO<sub>x</sub> (T)



### EMISSIONS OF METALS TO WATER (G/T METAL PRODUCED)



### EMISSIONS OF METALS TO WATER BY DESTINATION (%)



## Emissions to Air & Water<sup>(3)</sup>

We measure emissions of key pollutants discharged at licensed air and water emission points. Our overall target is to reduce emissions on a per tonne of product basis.

Group emissions to air from licensed point sources for nitrogen (as NO<sub>x</sub>) increased by 38% from the 2010 result mainly due to variations in the concentrates processed by both the zinc smelters and the Port Pirie lead smelter. Total Group emissions of sulphur (as SO<sub>x</sub>) also increased by 9%, with 96% of these emissions relating to Port Pirie where the production process has limited sulphur capture. SO<sub>x</sub> emission increased at Port Pirie mainly due to variations in concentrates processed and at the zinc smelters due to acid plant performance issues. The emissions profiles from zinc smelters and the Port Pirie lead smelter differ due to the different processes used at Port Pirie to produce a variety of metal products. Point source emissions of SO<sub>x</sub> and NO<sub>x</sub> from the mining operations are negligible compared to smelter emissions.

Wastewater discharges of key metals from licensed point sources are measured by receiving water type and did not change significantly to the previous year. Metals discharged in treated wastewater per tonne of production showed an overall slight increase at smelters, mainly due to increases at Port Pirie; and reduced at mines due to measures taken to reduce metals in wastewater while dewatering and ramp up at TN Mines. In terms of total mass of metals in wastewater discharges, the 2011 total of 32.3 tonnes of zinc and 6.3 tonnes of lead were both an increase over the 2010 totals of 29.0 and 3.3, respectively.

## Energy & Greenhouse Gases<sup>(2)</sup>

Our position statement on climate change and energy is available on the Nyrstar website [www.nyrstar.com](http://www.nyrstar.com). Zinc and lead metal production at smelters are energy intensive, predominantly due to the use of electricity in the electrolysis step of the zinc production process. We measure our Scope 1 (fuel consumption and direct emissions) and Scope 2 (electricity consumption and indirect emissions) energy use and greenhouse gas emissions. Our carbon footprint is mainly due to indirect (electricity generation related) emissions rather than direct site emissions and is therefore highly dependent on the electricity source in the regions that we operate. Our overall target is to increase energy use efficiency and reduce greenhouse gas emission intensity.

Total Group energy use increased 3% to 22.2 Petajoules (PJ) in 2011 from 21.6 PJ in 2010 as a result of increases in production at both mines and smelters; however energy use efficiency improved 7% from 16.4 to 15.3 Gigajoules per Tonne of metal product. Similarly, total greenhouse gas emissions increased to 2.35 from 2.14 million Tonnes of carbon dioxide equivalents (mT CO<sub>2</sub>-e); while emissions intensity remained unchanged from the previous year at 1.6 Tonnes CO<sub>2</sub>-e per Tonne of metal production. At our zinc smelters in 2011, an average of 93% of energy use was indirect energy (electricity), most of which is used in the electrolysis step of the process. At our mines, an average of 65% of energy use was indirect energy. Similarly, indirect carbon dioxide emissions averaged 92% of the Group's zinc smelter CO<sub>2</sub> emission profile, 84% of mines and 80% of the total Group's CO<sub>2</sub> profile in 2011. Direct energy use and carbon dioxide emissions are greater than indirects at the Port Pirie smelter which uses different processes to produce a variety of metal products.

(T) Tonnes; (G/T) Grams per Tonne; (PJ) Petajoules

<sup>(1)</sup> 2010 Data includes all smelters and Tennessee Mines; 2011 Data includes all smelters and Tennessee, Peru and Campo Morado Mines.

<sup>(2)</sup> 2010 Data includes all smelters and Tennessee Mines; 2011 Data includes all smelters and Tennessee and Campo Morado Mines.

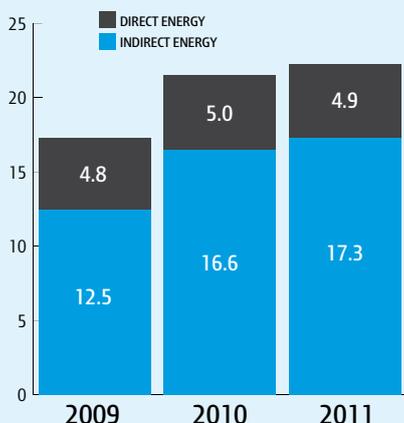
<sup>(3)</sup> 2010 Data includes all smelters and Tennessee Mines; 2011 Data includes all smelters and Tennessee Mines only.

Further performance indicator definitions, specifications and any data restatements are included in the GRI content index on the Nyrstar website at [www.Nyrstar.com](http://www.Nyrstar.com)

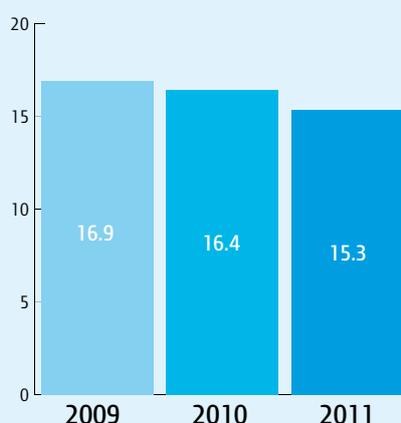
The indicator "Tonnes metal produced" was not included in the scope of the independent external assurance conducted by ERM.

As a consequence ERM is not providing assurance over efficiency and intensity indicators (ratios "per tonne metal produced").

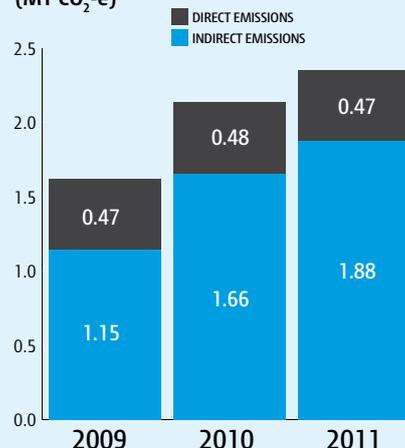
### ENERGY USE (PJ)



### ENERGY USE EFFICIENCY (GJ/T METAL PRODUCED)



### GREENHOUSE GAS EMISSIONS (MT CO<sub>2</sub>-e)



## Raw Material Use

We extract metals and other valuable by-products not only from natural raw materials, but also from secondary recycled sources such as zinc oxides. Our overall goal is to increase the volume of zinc metal production in our smelters from secondary materials. During 2011 the volume of zinc derived from secondary raw materials increased to 252,000 tonnes from 247,000; however the proportion remained unchanged from the previous year at 21%.

## Water Use<sup>(2)</sup>

We measure fresh water used on site for process purposes, as supplied by local utility companies or from local surface or groundwater resources. Recovered stormwater or contaminated groundwater is also used at some sites to replace fresh water. Our overall target is to increase water use efficiency, particularly for fresh water supplies. Fresh water use increased by 5% across the Group, mainly due to the ramp up of TN Mines; however overall water use efficiency improved by 4% to 8.7 kilolitres per tonne of product in 2011, from 9.1 in 2010. A number of water recycling projects were progressed at our smelters during the year, including construction of a smelter wastewater recycling plant at Port Pirie and increased recovery of contaminated groundwater at Overpelt. These projects will result in a reduction in site fresh water use as a portion of current supplies is replaced by recycled water.

## Waste<sup>(3)</sup>

We measure both process and non-process wastes arising from our operating sites, with our overall objective being to reduce waste to landfill and to reduce volumes of wastes stockpiled on site over time. The arisings of non-process waste per tonne of metal production decreased by 3% over the past year, with an overall decrease in waste to landfill or energy recovery; the amount of waste to recycling and the recycled waste ratio increased. In terms of non-process waste volumes, the total to disposal in 2011 of 3396 tonnes was slightly below the 3488 tonnes in 2010. The total non-process waste sent to recycling in 2011 was 1942 tonnes, an increase over the 1688 tonnes in 2010. We currently have limited non-process waste volume measurement at mines other than TN Mines, but waste volumes are generally low from these operations.

## Land Management and Rehabilitation

We have an overall objective of reducing our environmental footprint. For smelters this generally involves taking the opportunity to remediate old process plant areas after decommissioning, while for mines this includes progressive remediation activities taken in parallel with the ongoing mine plan.

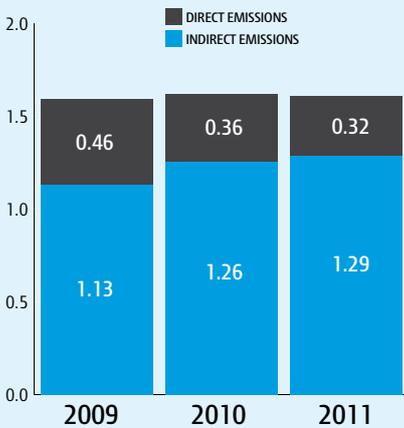
We continued with our rehabilitation plan in the pit area at Port Pirie with a further 1.3 hectares that had previously been used for material storage cleared and re-vegetated. At Tennessee mines, we progressed planning related to the removal of former processing plant infrastructure and other redundant equipment still remaining from previous ownership at the Elmwood Mine facility; and at Myra Falls we progressed with development of a formal closure plan for the tailings storage facility (TSF) which has recently reached capacity.

In the coming year we will be developing a formal environmental indicator relating to land use across the Group.

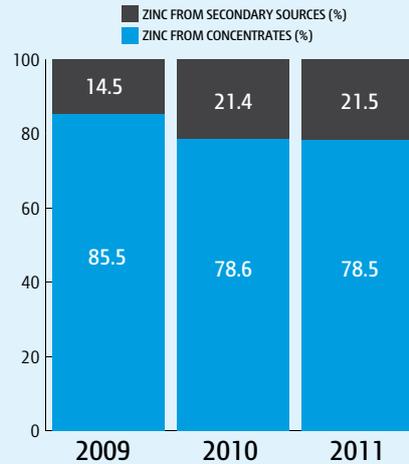
<sup>(2)</sup> 2010 Data includes all smelters and Tennessee Mines; 2011 Data includes all smelters and Tennessee and Campo Morado Mines.

<sup>(3)</sup> 2010 Data includes all smelters and Tennessee Mines; 2011 Data includes all smelters and Tennessee Mines only.

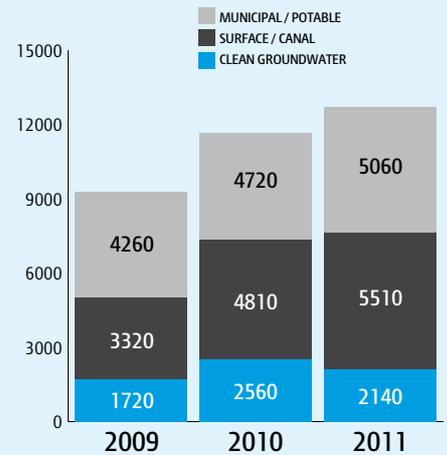
**CO<sub>2</sub> EMISSIONS INTENSITY  
(T CO<sub>2</sub>-e / T METAL PRODUCED)**



**ZINC BY RAW MATERIAL TYPE (%)**



**FRESH WATER USE BY SOURCE (ML)**

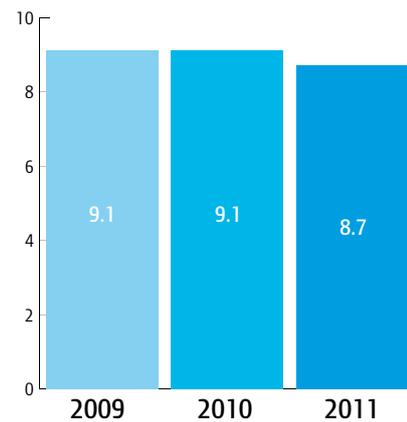


**Looking forward**

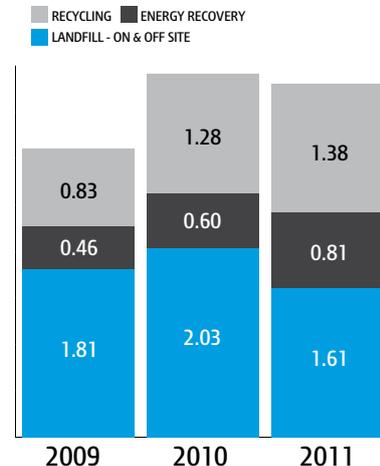
During the coming year we plan to continue our existing initiatives to reduce our environmental risks and to improve our environmental performance; and also to ensure that our environmental systems and standards are reviewed and expanded to reflect the growth in mining activities. Key actions and initiatives for 2011 include:

- Establish the Mine Environment Network including environment professionals from all mine sites;
- Define a priority list for the development of new Group Environmental Standards specific to the mining area of the business;
- Continue the establishment of programs at Nyrstar mining sites to ensure that these sites meet Group Environmental Standards and processes;
- Develop an ISO 14001 implementation plan at all mines;
- Achieve a 12.5% reduction in recordable environmental incidents from the 2010 results for comparable assets. Establish compliance baselines for new mines acquired in 2011.
- Resolve the Balen groundwater remediation project with the Regulatory Authorities; and complete works for the final phase of community soil remediation activities close to the Balen and Overpelt plants;
- Continue Port Pirie fugitive lead emission reduction projects and the 'Ten for Them' project to ensure ongoing and sustainable improvements in community blood lead levels; and
- Continue cell house basement sealing and complete historical mercury waste treatment and approved disposal at Hobart.

**FRESH WATER USE EFFICIENCY  
(KL / T METAL PRODUCED)**



**NON-PROCESS WASTE  
(KG/T METAL PRODUCED)**



(T) Tonnes; (KG) Kilograms; (G/T) Grams per Tonne; (PJ) Petajoules; (GJ/T) Gigajoules per Tonne; (ML) Million Litres  
 Basis for efficiency indicator of 'per tonne of metal production' includes tonnes of zinc, lead, copper, silver and gold, as relevant to the operating site.  
 Further performance indicator definitions, specifications and any data restatements are included in the GRI content index on the Nyrstar website at [www.Nyrstar.com](http://www.Nyrstar.com)  
 The indicator "Tonnes metal produced" was not included in the scope of the independent external assurance conducted by ERM.  
 As a consequence ERM is not providing assurance over efficiency and intensity indicators (ratios "per tonne metal produced").



# People

At Nyrstar, we believe that people are the foundation for our success. We believe that a productive and engaged workforce aligned with the Nyrstar Way will enable us to achieve excellence in everything we do and deliver on the Nyrstar strategy.

**Rolled out the Nyrstar Way to all employees**

**Embedded the Nyrstar Way in our performance and reward process**

**Conducted a baseline survey and a first update survey of our Organisational Health Index**

## Key People Risks and Opportunities

Delivering on the Nyrstar strategy has resulted in significant growth in the company. During 2011 our workforce increased by 45% to 7042; mainly due to the acquisition of the Campo Morado, El Mochito, El Toqui, Langlois and Myra Falls Mines. Our key sustainability challenges relating to our people are: ensuring that all our employees understand and are aligned with the Nyrstar Way and Nyrstar 2020 Vision; and that the requisite internal skills and talent exist to support the Nyrstar strategy and create a competitive advantage.

## Living the Nyrstar Way

In 2010 we developed our Nyrstar 2020 vision and strategic framework and launched the Nyrstar Way, which includes 7 elements that define the way we work at Nyrstar. During 2011 we developed an underpinning strategy for the next 5 years and defined strategic priorities and projects to deliver our transformation in line with the Nyrstar 2020 vision.

Over the past year we rolled out the Nyrstar 2020 Vision at all sites and the Nyrstar Way to all our employees, including to all new employees that joined Nyrstar as a result of our mine acquisitions during the year. Living the Nyrstar Way is directly linked to our individual performance management and reward process. An assessment of demonstrated behaviours in line with The Nyrstar Way is a component of our Annual Incentive Plan for employees, with a 360 degree feedback process used for those at management level. Through the Nyrstar Way we are committed to open and honest relationships with our employees, and we aim to be consistent, fair and transparent in our practices and processes. We believe that the Nyrstar Way and the behaviours associated with it will not only support delivery of our key strategies, but also create a culture that attracts and retains talented employees.

To measure our progress on the Nyrstar 2020 transformational journey, we introduced the Organisational Health Index (OHI) which



focuses on: alignment with Nyrstar strategy and culture; execution of activities in line with the Nyrstar strategy; and factors for successful organizational renewal. Our first OHI survey to establish a baseline for Nyrstar's organisational health and culture was completed in January 2011 and the insights from this survey were used as basis to drive company-wide and site specific performance and organizational health improvement targets. A second OHI survey completed later in 2011 showed that we had progressed in 7 of the 9 outcome areas, with the greatest improvements in the management areas of shared vision, meaningful values and bottom-up innovation. Although showing improvement over the year, 'external orientation' remains the key area identified for improvement. These results will be used to further inform and refine our people strategy and initiatives for 2012.

## Human Rights

Support for fundamental human rights is an integral part of how we operate. We believe companies can and should play a constructive role in upholding and promoting human rights. We are committed to respecting our employees' rights in line with the International Labour Organisation's Declaration of Fundamental Human Rights at Work.

## Workforce Composition and Terms of Engagement

The composition of our workforce changed significantly during 2011 due to the acquisition of mines in Mexico, Chile, Honduras and Canada. This resulted in a change in the demographics of our workforce, with the majority now located in the Americas. We also opened a new Nyrstar Group office in Vancouver, to specifically support our mining operations in the Americas, with key positions planned to be in place in the first quarter of 2012.

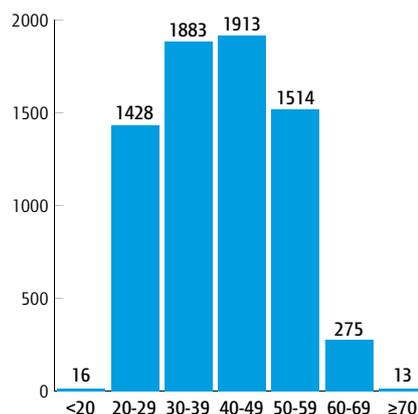
It is a Nyrstar policy to comply with relevant legislative employment frameworks wherever we operate. We recognize the right of freedom of association by our employees. We have a number of operations where we have a mix of collective and individually regulated

employment agreements, however this does not affect the rights of employees to choose to belong to trade unions.

In 2011, approximately two-thirds of our workforce was covered by Collective Agreements. Most of our employees are engaged on a full time basis, however the same standard terms and conditions of employment apply to both full and part time employees. There were two instances of union action during the year, one at Auby for 3 days which was subsequently resolved, and one at Balen where workers participated in a 1 day Belgian general strike.

Nyrstar believes in constructive and open dialogue with our employees. Our policy is to consult with employees on any major organizational changes, and to ensure that appropriate processes are in place at each of our operations to manage and resolve any issues as they arise. We have processes in place at all sites to effectively manage any discriminatory incidents. There were no claims or violations of rights made in 2011 other than the four reported to the Compliance Officer as stated in the Governance section of this report.

**EMPLOYEES BY AGE  
(NUMBER OF EMPLOYEES)**



People data is sourced from SAP for our 6 smelter sites, Tennessee Mines and Corporate offices. Data from other sites is drawn from local payroll systems. All data is as at 31 December 2011

## Training and Development

Having the right people with the right skills at the right time is critical to our success. We have formal processes in place to ensure that all of our employees receive regular performance reviews. To ensure that our people have the requisite skills, we have several development programs in place.

### Nyrstar College

Due to the growth of the business, a significant number of new professionals joined Nyrstar during the year. In order to give these people a more integrated understanding of the business, we conduct a one-day 'Nyrstar College', to give participants an overview of our business from the raw material sourcing to end product uses. There were two colleges held in Zurich during the year with a total of 45 participants. Further colleges will be run periodically in the future.

### Nyrstar Leadership Program

Our leadership program focuses on the development of core people management skills and a common leadership approach across the business. Specifically it gives individuals who formally lead or have to influence others an understanding of the role and expectations of a leader and to provide them with the core people management skills in order to effectively carry out their role. During 2011 we continued the rollout of the program at our Peru, Tennessee and El Mochito mines, Clarksville smelter and our Corporate Commercial Operations group. This program is conducted at sites in the relevant local language.

## Nyrstar Unlimited

The Nyrstar Unlimited program is part of our broader cultural transformation initiative, which builds on the critical people leadership skills covered in the Nyrstar Leadership Program and aims to deepen self-awareness and reinforce the desired attitudes and spirit necessary for success. This program was conducted at our Corporate Office and Budel smelter during 2011 and will be extended to our newly acquired mining sites in the future.

### Graduate Development Program

The Nyrstar Graduate Program is a key component of our overall talent attraction and development strategy and helps us to ensure that Nyrstar is an employer of choice for young professionals. The two-year Program is structured to provide a depth and breadth of technical experience and also to enhance interpersonal skills and personal development. The graduate program has been operating since 2008 and in the past year there were 5 graduates on the program employed at our smelter operations globally. A further 10 graduates are scheduled to start in the February 2012 intake, including placements at both mining and smelting operations.

## Looking forward

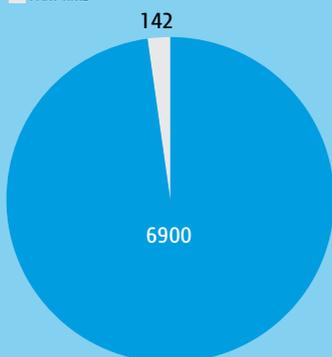
Our key people related activities and initiatives for 2012 include:

- Integrate newly acquired mines into Nyrstar people processes and procedures;
- Using the results of our Organisational Health Index to identify development needs and cultural shifts and implementing focused programs to improve in these areas;
- Continue to develop and implement core talent management practices; and
- Continue to grow our leadership capabilities through ongoing roll-out of our suite of Leadership Development Programs.



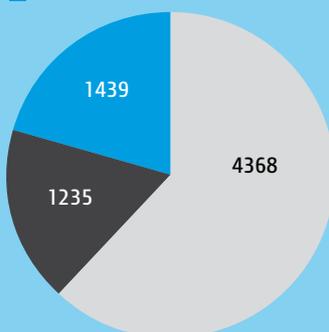
#### EMPLOYEES BY CONTRACT TYPE

■ FULL TIME  
■ PART TIME



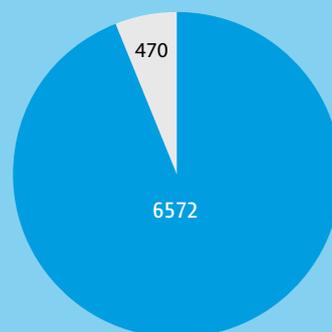
#### EMPLOYEES BY LOCATION

■ AMERICAS  
■ AUSTRALIA  
■ EUROPE



#### EMPLOYEES BY GENDER

■ MALE  
■ FEMALE



# Community, Customers and Society



**Launched the Nyrstar Foundation as part of our Corporate Social Responsibility (CSR) framework**

**Developed a formal communications plan to better inform and engage with our internal and external stakeholders**

**Completed stakeholder identification and engagement plans for all sites**

**Rolled out the customer feedback module of our group wide risk information management system**

**Developed a group wide supplier qualification standard and conducted Group Contracting Procedure training at all sites**

Living the Nyrstar Way defines and guides our approach to engaging with community, customers, regulators and suppliers; we commit to preventing harm, being open and honest, keeping our word and creating value.



## Key Stakeholder Risks and Opportunities

Our aim is to be a welcome and valued part of the communities in which we participate. We will do this by: engaging with our external stakeholders to understand and respond to their expectations; building goodwill and quality long term relationships that are important to our business; and respecting fundamental human rights and not participating in business activities that abuse human rights. Nyrstar's key risks and opportunities relating to external stakeholders include:

- Maintaining our social and regulatory licence to operate;
- Local community attitudes towards and support for mining and smelting activities;
- Developing, implementing and communicating our CSR framework to ensure Nyrstar makes, and is seen to be making, a positive contribution to the communities in which we operate;
- Maintaining the safety and security of our employees and visitors to our sites;
- Providing products that deliver superior value for our customers; and
- Managing the supply chain to minimise business risks.

As part of implementing the Nyrstar strategy and living the Nyrstar Way, we will be broadening our external stakeholder engagement and feedback mechanisms in the coming year. To date our feedback from community, regulators, customers and suppliers has been limited; by seeking more direct feedback we will be able to validate the key external stakeholder risks and opportunities.

## Corporate Social Responsibility

### The Nyrstar Foundation

In 2011 we continued to develop our Corporate Social Responsibility (CSR) program to deliver on our promises to minimise harm, maximise benefit and be accountable to our key stakeholders. We launched the Nyrstar Foundation as the primary focus for Corporate level CSR activity, providing an opportunity for Nyrstar to contribute to broader sustainability issues via an annual 'social idea' competition in Belgium. The first round of ideas will be assessed in early 2012, with the winner receiving a grant of 25,000€ as well as coaching support for 12 months to transform the idea in to a sound business plan.

### CSR Programs

There are a number of targeted programs in which Nyrstar participates as part of our CSR approach, including:

- the Port Pirie 'Ten for Them' program. Nyrstar is working together with the local community, local government, health and education professionals to reduce children's blood lead levels in the local community;
- the 'Right to Play' initiative, which Nyrstar supports in Peru. 'Right to Play' is a global initiative aimed at improving the lives of children by using sport and play for development, health and peace. The program focuses on early-childhood education programs, but also tackles the low literacy and numeracy levels observed in elementary and secondary schools; and

- 'Zinc Saves Kids', an International Zinc Association (IZA) initiative in support of UNICEF. Zinc Saves Kids ([www.zincsavekids.org](http://www.zincsavekids.org)) is an initiative to improve the survival, growth and development of undernourished children by funding UNICEF-supported zinc supplementation programs around the world.

### Local Communities

Nyrstar recognizes the importance of having healthy and sustainable communities around our operating sites. Each site has a program focused on strengthening community relations at a local level. We have a Nyrstar Group Standard that outlines our approach to external partnerships, sponsorships and donations and guides our actions in building goodwill with key stakeholders in a way that supports our business objectives. Our guidelines state that we will not support activities that do not reflect the Nyrstar Way and we will not support political parties or campaigns.

Local community support activities undertaken in 2011 reflect our CSR approach of improving conditions relating to health, education, social welfare and the environment. During 2011 these included financial and in-kind support for local community initiatives such as children's health, educational opportunities, cultural and sporting events. Nyrstar also facilitated site visits by community and school groups as part of overall minerals industry awareness and education. A total of over €1.5 million was contributed by Nyrstar as local community sponsorships and donations in 2011.

During the year we developed a more structured approach to community engagement at all our sites. A position has been established at all sites with responsibility for communications and stakeholder relations. A Nyrstar Communications and Stakeholder Relations Network was formed to implement the group communications plan and to promote sharing of good practice. All sites undertook a stakeholder mapping process and developed stakeholder engagement plans relevant to local situations and issues. Our consultation processes vary between sites and issues as appropriate, but include formal meetings and consultation committees, newsletters, site open days, issues based public meetings and mail outs, and individual contacts.

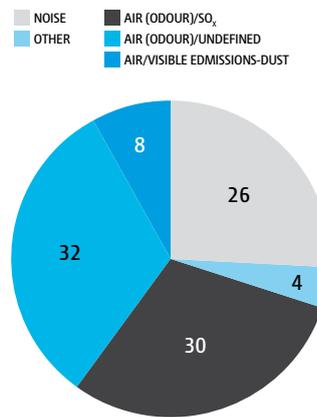
Issues raised in the past year include: progress on local CSR programs and activities planned as part of agreements with local communities; information relating to plant changes or developments proposed at the site; community feedback relating to amenity issues including visual impact, noise and traffic; and activities planned to involve the broader community such as open days, fundraising or family events.

The most significant issues where we have worked closely with our local communities and local regulators over the past year include:

- Nyrstar's commitment to responsible mining in order to develop a positive image for our mining assets with regulators, communities and potential employees;
- the Port Pirie 'Ten for Them' project to reduce the blood lead levels of children in the local community. At the end of 2011, 77.5 percent of children tested had a blood lead level below 10 micrograms per decilitre, compared to 49.6 percent in 2005 and 72.3 percent at the end of 2010\*. More information on this project is available on the Ten for Them website [www.tenforthem.com](http://www.tenforthem.com) and the Nyrstar website <http://www.nyrstar.com/sustainability/Pages/Sustainability-Programs.aspx>;
- the Seveso Directive hazard communication requirements for the Auby site;
- the second and final phase of community soil remediation works around the Balen and Overpelt sites;
- the significant smelter sustainability risks posed by increasing energy costs and energy taxes at Balen, Budel, Hobart and Port Pirie; and
- the development of an industrial park on land adjacent to the Budel site.

All sites have an established process for recording community feedback, whether positive or negative. Community complaints generally relate to amenity issues such as visible emissions, dust, odour and noise. During 2011 we recorded a total of 53 complaints. The complaints process includes a requirement to provide feedback to the complainant on the issue raised where possible.

COMMUNITY COMPLAINTS BY TYPE (%)



## Public Policy and Regulation

There are a number of issues on which Nyrstar has chosen to engage with public policy makers and regulators, either directly, or through industry associations to which we belong including the International Zinc Association, International Lead Association, Eurometaux and the Mining Association of Canada. The issues which Nyrstar has provided input on in the past year include:

- Greenhouse Gas emissions trading schemes in Europe and Australia. The European Union (EU) is implementing changes to its existing emissions trading scheme (ETS) to come into force post 2012 and the Australian government passed legislation that will put a price on Carbon, initially taking the form of a 23 AUD/T CO<sub>2</sub> carbon tax commencing July 2012. Nyrstar, together with other zinc smelting companies operating in the EU have provided comment on various EU ETS proposals, particularly where these impact on international industry competitiveness. Nyrstar's smelting businesses have previously qualified for recognition as energy intensive trade exposed industries in both the EU and Australia. Hobart and Port Pirie sites also continued activities and reporting under the Australian Energy Efficiency Opportunities Act, with public reports available on the Nyrstar website;
- The EU's Registration, Evaluation and Authorization of Chemicals (REACH) legislation which entered into force on 1 June 2007. Nyrstar participates in a number of industry consortia formed for the purposes of REACH compliance;
- The revised Directive on Industrial Emissions and associated non-ferrous metals best available techniques reference document (NFM BREF Notes) form the basis for environmental permit conditions for Nyrstar's European smelter sites. Nyrstar contributed both individual and zinc industry submissions to the revision process for the Directive and NFM BREF Notes;
- Developments in Belgian Corporate Governance Code. Nyrstar is a member of the Working Group to the Belgian Corporate Governance Committee, whose objective is to ensure that the Belgian Corporate Governance Code remains relevant to listed companies and is regularly updated in line with corporate governance practice, legislation and international standards;
- The Extractive Industries Transparency Initiative (EITI) of which the Peruvian Government is a signatory. Nyrstar's Peru Mines committed to providing information to the Peruvian Government to meet EITI requirements; and
- Developments in general EU environmental legislation through participation in the European group of the International Zinc Association (IZA-E), International Lead Association (ILA-E) and Eurometaux.

## Customers and Suppliers

Our customers and suppliers are crucial to our success. Nyrstar is both a purchaser and a supplier of zinc and lead concentrates. Our main products are special high grade (SHG) zinc, and zinc galvanizing and zinc die casting alloys at our zinc smelters and refined lead metal and copper cathode at our Port Pirie smelter. Our products are made to established industry specifications and our customers use our products in further manufacturing processes to make a wide variety

of components or products for construction, transportation or consumer products. Key customer concerns are product quality and conformance to specification, delivery reliability and performance and price.

An organisational health index (OHI) survey conducted during the year identified the need to strengthen our external focus. Although the OHI indicated that we improved over the year, external orientation will still be a key area of focus in 2012. We commenced a more formal process for seeking feedback from our customers in 2011 as part of our commercial excellence project, particularly looking at how we can deliver added value for our customers.

With the relaunch of the Nyrstar website, we took the opportunity to review information relevant to our customers and provided more comprehensive information on our production sites and our products, including expanding the number of Safety Data Sheets posted for Nyrstar products.

We implemented formal customer complaint and supplier non-conformance tracking in our Group risk information management system, to provide better oversight of complaints and close out status. Most of the customer complaints related to transport issues, material processing and casting quality issues, product specifications and incorrect documentation. Supplier issues related to delay on delivery, quality and quantity variations, and unsafe behaviour of contractors.

In terms of supplier risk management, the Nyrstar Group Contracting Procedure (GCP) was updated to reflect the current business structure and risks and the GCP requirements were rolled out to all sites. A supplier qualification process was developed during the year, including a questionnaire for assessing a supplier's ability to meet Nyrstar's safety, health and environment requirements. This is particularly important in respect to the safety, health and environmental performance of service providers who conduct activities on our operating sites. It is planned to conduct an annual risk-based service quality and supplier performance evaluation process starting in 2012, which will inform further priorities in supplier sustainability risk management processes.

## Recognition of Our Performance

Nyrstar sites received the following external recognition for our sustainability performance in 2011:

- Budel smelter was the winner in the Sustainable Enterprise category of the VNCI (Vereniging van de Nederlandse Chemische Industrie) awards and second place in the Dutch Responsible Care prize <http://www.vnci.nl/maatschappij/responsible-care/responsible-care-prijis-2012.aspx>; and
- El Mochito Mine received the FUNDAHRSE (Honduran National Association for Corporate Social Responsibility) award for Corporate Social Responsibility for the 3<sup>rd</sup> consecutive year. The prestigious award recognised the continued support and commitment of the mine to the local community of Las Vegas.

To encourage and recognise our employees living the Nyrstar Way and making outstanding contributions to the business, we established the Nyrstar Excellence Awards. The first award was made in early 2011 for performance in the 2010 year and the winners were selected in a number of categories representing elements of the Nyrstar Way.

## Looking forward

In the coming year, our key activities and initiatives relating to our external stakeholders will include:

- Continue to develop and implement our Corporate Social Responsibility framework and building this into stakeholder engagement plans;
- More actively seek external stakeholder feedback on Nyrstar, their expectations and our performance; and
- Continue to develop our supplier engagement and risk management processes.

The Nyrstar Excellence Awards were launched in 2010 to promote and reward a culture of excellence within our business.

Each year, Nyrstar presents awards to acknowledge exceptional performance and achievement of individuals or teams from each of our operating sites.

It is from the seven elements within the Nyrstar Way that the Excellence Awards takes its framework and recognition criterion.



**Nyrstar Excellence Awards Winner 2010**

**Congratulations**

**Be driven:** Awarded to Coricancha Nyrstar Peruvian Operations, Emergency Crisis Management team and Employees of Coricancha Nyrstar Peruvian Operations.

**Create value:** Awarded to Planning Fee Aubry, Niels Lambrechts - Balen, Arno Se Ivo La Pourtré - Zürich.

**Keep our word:** Awarded to Tennessee Mines Start-up Employees of Nyrstar Tennessee Mines.

**Innovative and crea**  
Mould Redesign-Hob

**Prevent harm:** Awarded to Invention and Development of BUMB for burns. The Medical Department of Nyrstar Balen / Overpelt and Bidel sites, Marc De Groof-Company Doctor, Nicole Curinckx-Company Nurse, Dirk Gielen-Company Nurse and Paul Mentens-Company Nurse.

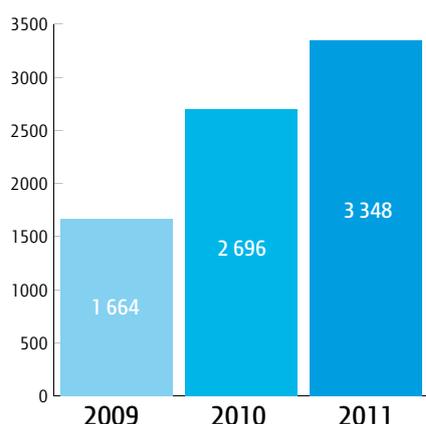
**Outstanding Achievement:** Awarded to Overpelt. Employees of Balen / Overpelt

# Economic Contribution

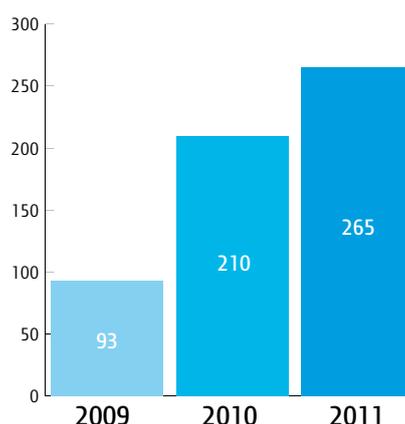
Nyrstar continued to deliver a strong financial performance in 2011, while also delivering on the strategy of creating a globally significant zinc mining business.



**REVENUE FROM EXTERNAL CUSTOMERS  
(€ MILLIONS)**



**UNDERLYING EBITDA  
(€ MILLIONS)**



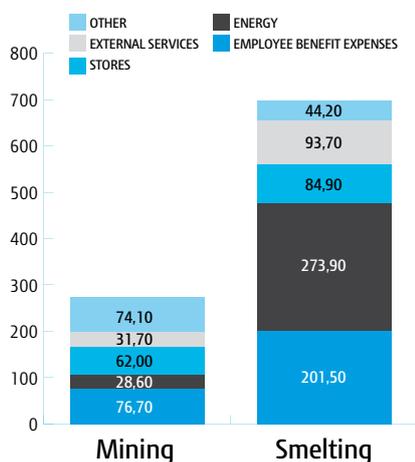
The underlying EBITDA of €265 million in 2011 was a 26% increase from the 2010 result, mainly due to the significantly greater contribution from mining assets and the expansion of our multi-metal footprint.

Zinc in concentrate production of 207kt in 2011 was 146% greater than the 84kt recorded in 2010, due to the continued ramp up production at existing mines and the addition of another 5 mines to our portfolio. These factors also resulted in a significant increase in mining segment production of other metals, in particular copper, gold, silver and lead. The smelting segment of the business achieved another year of record production with zinc metal production totalling 1.125 million tonnes in 2011, a 5 % increase over the previous production record of 1.076 million tonnes in 2010.

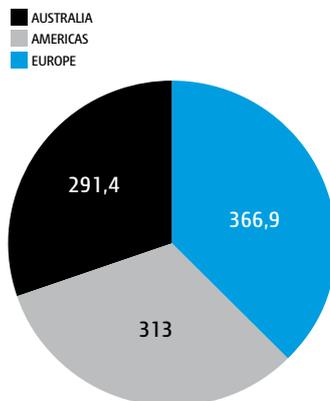
Despite increased production levels in 2011, prices for zinc, as well as for other metals in the Nyrstar's multi-metals footprint, remained volatile throughout the year. The sharp decline in metal prices in the last quarter of the year, which coincided with the significant increase in mine production, negatively impacted on 2011 EBITDA as did merger and acquisition related transaction and restructuring costs.

Nyrstar's mine and smelter sites have a wide geographic distribution, with 2011 acquisitions significantly increasing the presence in North and Latin America. Operating sites are generally located in regional areas, so they represent a significant employer in and contributor to the local economy. Our most significant site operating costs in the mining segment are for employee benefit expenses (28%) and stores (23%) and in the smelting segment are for energy (39%) and employee benefit expenses (29%). The 2011 total employee benefits expenses of 278.2 M€ represented a 30% increase over the previous year due to the significant increase in the number of employees via mine acquisitions during 2011. Capital expenditure increased 52% compared to the previous year with €103.5 million invested in mining and €111.7 million in smelting. From a regional perspective, direct economic benefits in terms of site operating costs were €367 million in western Europe, €313 million in the Americas and €291 million in Australia. In terms of capital and cyclical maintenance, spend increased to €59.9 million in Europe, €110.8 million in the Americas and €44.5 million in Australia. For both operating costs and capital spend, this represented an increase over the previous year in all regions and most significantly in the Americas, which reflects the implementation of Nyrstar's growth strategy in mining.

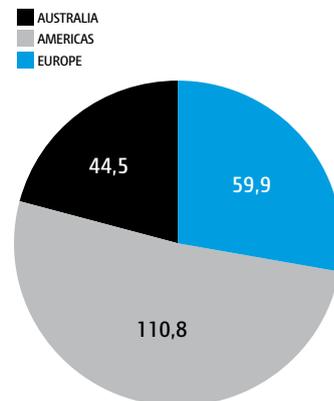
**SITE OPERATING COSTS  
(€ MILLIONS)**



**OPERATING COSTS BY REGION  
(€ MILLIONS)**



**CAPITAL SPEND BY REGION  
(€ MILLIONS)**





# Governance

## Governance structure

Responsibility for the Nyrstar strategy and for key sustainability areas are clearly allocated to members of the Nyrstar Management Committee (NMC). Sustainability related issues are also reported through to the Nyrstar Board and relevant Board Committees, including the Audit Committee regarding business risk management, the Nomination and Remuneration Committee regarding our people and the Safety, Health and Environment (SHE) Committee on SHE risks and performance. The Board Committees met at least three times in 2011, in line with the requirements of the Company's Corporate Governance Charter.

Information relating to Corporate Governance, including the Nyrstar Board, Board Committees, Management Committee and key policies and charters are available on the Nyrstar website at [www.nyrstar.com/about](http://www.nyrstar.com/about)



## Code of Business Conduct

Nyrstar commits to conducting business within the framework of applicable professional standards, laws, regulations and internal policies. We also recognize that further guidance is needed to ensure we act in line with the Nyrstar Way. This is provided in our Code of Business Conduct, which further defines the standards of integrity and business conduct expected of all employees in their dealings with our community, environment, customers, suppliers, competitors, shareholders and the assets of the company; and applies to all Nyrstar people and sites.

All employees are exposed to these expectations, typically during the induction process. The Code of Business Conduct includes an obligation on all Nyrstar's people to act and report where they believe activities are not being undertaken in line with the Nyrstar Way. An internal compliance officer with a specific email address is available for people to make a report, should issues not be resolved with their immediate supervisor or manager.

In 2011, the following four issues were raised with the Compliance Officer. Two related to human resources processes and one related to privacy issues; all of which were investigated and have been closed out. The fourth matter related to a potential health claim, which was investigated and found to be unsubstantiated.

The Code of Business Conduct is supported by the Code of Business Conduct Development Program that is aimed at increasing awareness in relevant key risk areas in our business. The Code of Business Conduct Development Program includes specially designed training modules for employees such as: directors duties; competition law; and market disclosure and communications.

As we implement the Nyrstar strategy and the nature and scale of the business changes, we will continue to develop our Code of Business Conduct Development Program in line with our business risk profile. In the coming year, as well as continuing training in current modules, we will be developing an Anti-Corruption module aligned with the requirements of the UK Bribery Act.

To support the growing mining segment of the business, we established a new corporate office in Vancouver, Canada and appointed a number of senior personnel experienced mining operations, safety, environment and human resources to specifically support our Americas mines.

## Investors

Nyrstar is a Belgium-based company listed on the Euronext Brussels stock exchange. As a Belgian listed company, Nyrstar is obliged to provide investors in its shares with all information necessary to ensure the transparency, integrity and good functioning of the market. Nyrstar has a Market Disclosure and Communications Policy which outlines our approach to ensuring that we meet the

requirements for disclosure of company information and for informing the investment community.

During 2011 we relaunched the Nyrstar website, through which we continued to communicate investor information on Nyrstar's strategy, business, assets and performance. We conducted an investor visit at our US operations in November, as well as presenting at a number of investment and industry forums. Copies of investor presentation materials and communications are made available on the Nyrstar website at:

[www.nyrstar.com/investors/en/Pages/reportspresentations.aspx](http://www.nyrstar.com/investors/en/Pages/reportspresentations.aspx)

We responded to a number of investor questionnaires, including several relating to our sustainability approach and performance. We also participated in the Carbon Disclosure Project for the first time. Key investor issues raised include: the Nyrstar strategy and its implementation; operating site production performance, particularly ramp up at the mines; and company financial performance.

## Legal Actions

Nyrstar is subject to a number of claims and legal proceedings incidental to the normal conduct of its business. Nyrstar does not believe that such claims and proceedings are likely, on aggregate, to have a material adverse effect on the financial condition of Nyrstar.

There were no legal actions taken against the company in 2011 regarding anti-trust or anti-competitive behaviour. There were no non-compliances reported with regulations or voluntary codes concerning any type of marketing communications, product information or labelling or breaches of customer privacy.

The Nyrstar legal team is one integrated global team with presence at five different sites or offices aiming to be a center of competence and excellence supporting the business in its growth by demonstrating challenging and supporting leadership.

## Looking forward

In the coming year, our key activities and initiatives relating to governance will include:

- continue validation of site level enterprise risks and controls in Group risk database; further development of the internal audit program to focus on key risk controls;
- conduct enterprise risk assessment training and workshops at all of the newly acquired mine sites; and
- continue training in, and development of new modules in the Code of Business Conduct Development Program, including the development of an Anti Corruption module.

# Independent Assurance Report to Nyrstar NV

**Nyrstar NV (“Nyrstar”) appointed ERM to provide independent assurance on selected information presented in its 2011 Sustainable Development Report (“the Report”).**

## Our brief

We were asked to provide independent assurance as to whether the following information is appropriately reported:

- A. **AA1000 AccountAbility Principles:** Nyrstar’s status of alignment against the AccountAbility 1000 Principles of Inclusivity, Materiality, and Responsiveness.
- B. **Key Performance Indicators (KPIs):** Selected Environment, and Health & Safety KPIs as follows:
- Workforce Lost Time Injuries by Asset Type and Regions (Number of) \*
  - Workforce Recordable Injuries by Asset Type and Regions (Number of) \*
  - Recordable Environmental Incidents by Asset Type (Number of)
  - Recordable Environmental Incidents by Type (Number of)
  - Emissions to Air – NOx and SOx (tonnes)
  - Emissions of metals to water (tonnes)
  - Emissions of metals to water by destination (%)
  - Energy use (PJ)
  - Greenhouse gas emissions (Mt CO<sub>2</sub>-e)
  - Fresh water use by source (ML)
  - Non-Process Waste (tonnes)

*\* For these KPIs, we were asked to give assurance only on a selected number of sites performance data rather than the total reported performance data for the Company. The sites were: Auby, Balen/Overpelt, Budel, Campo Morado, Clarksville, Coricancha, Hobart, Port Pirie, and Tennessee Mines.*

## Our approach

### Standards and criteria used

We delivered our work in accordance with the AccountAbility 1000 Assurance Standard 2008 Type 2 requirements. We used the following assessment criteria when undertaking our work: AA1000 APS and Nyrstar’s KPI definitions which are presented in more detail within the Report.

### Our work

A multi-disciplinary team of sustainability and assurance specialists with experience in Nyrstar’s industry sector performed work at corporate level and at a selection of wholly owned assets (Auby, Balen/Overpelt, Budel, Campo Morado, Clarksville, Coricancha, Hobart, Port Pirie, and Tennessee Mines). Our assurance activities included:

- Face-to-face interviews at Group level to understand and test the processes in place for managing and reporting on its sustainability performance, including the selected KPIs and their underlying data management systems. We engaged amongst others with the following corporate functions: Human Resources, Finance, Health & Safety, Environment and Community, Business Risk, Corporate Communications, Investors Relations, Commercial Operations, Business Integration, Legal, and Procurement;
- Site visits to nine Nyrstar sites across Europe, Australia and the Americas, which involved testing on a sample basis the measurement, collection, aggregation and reporting processes in place;
- Reporting our assurance findings to management as they arose to provide them with the opportunity to correct them prior to finalisation of our work; and
- Reviewing the presentation of information relevant to our scope of work in the Report to ensure consistency with our findings.

### Level of Assurance and the engagement limitations

We planned and performed our work to obtain all the information and explanations that we believe were necessary to provide a basis for our assurance conclusions as to whether the reported information set out in ‘Our brief’ was appropriately reported (moderate assurance as per AA1000 AS 2008).

If we had been asked to conclude on whether the reported information subject to assurance was robust (high assurance as per AA1000 AS 2008), we would have needed to conduct more work at Corporate and site levels and to gather further evidence to support our assurance opinion.

The reliability of the reported information and data is subject to inherent uncertainties, given the available methods for determining, calculating or estimating the underlying information. It is important to understand our assurance conclusions in this context.

## Respective responsibilities and ERM’s independence

Nyrstar is responsible for preparing the Report and for the information in it. ERM’s responsibility is to express our assurance conclusions to Nyrstar on the agreed brief.

During 2011, ERM has worked with Nyrstar on other consulting engagements. ERM operates strict conflict checks and we have confirmed our independence to Nyrstar for delivering our assurance engagement.

## Our assurance conclusions

Based on our work undertaken as described above, we conclude that in all material respects, the following information selected for this assurance engagement has been appropriately reported:

- A. Nyrstar's status of alignment against the AccountAbility 1000 Principles of Inclusivity, Materiality, and Responsiveness as presented in the Report and on the Nyrstar website [www.nyrstar.com/sustainability/Pages/sustainabilityreports.aspx](http://www.nyrstar.com/sustainability/Pages/sustainabilityreports.aspx); and
- B. The selected Environment and Health & Safety KPIs listed under Our Brief.

## Our key observations and recommendations

Based on our work set out above, and without affecting our conclusions, our key comments and recommendations for improvement are presented below.

- **In relation to the AA1000 Inclusivity Principle:**
  - ERM recommends that in future Sustainability Reports, Nyrstar provides further disclosures on the outcome of its stakeholder engagement activities.
- **In relation to the AA1000 Materiality Principle:**
  - Recognising that Nyrstar has recently reviewed and strengthened its approach to business risk management, ERM recommends that Nyrstar further integrates its Materiality process within such business risk management processes at Group and site levels.
  - We also recommend that Nyrstar undertakes a mid-to-long term climate change risk analysis of its operations, and develop as necessary climate change adaptation mitigation plans.
- **In relation to the AA1000 Responsiveness Principle and the selected KPIs we have reviewed:**
  - In relation to performance targets, whilst we recognise the challenges presented by Nyrstar's business, we nevertheless recommend that Nyrstar identifies appropriate quantitative performance improvement targets for the following areas: local communities, and the environment.
  - ERM recognises the challenges with integrating newly acquired mines into the company's data collection and reporting processes. In line with Nyrstar intentions, ERM recommends that Nyrstar continues to integrate these newly acquired mines to extend the coverage of

reporting on performance data to all sites for next year's report.

- Although disclosures have been included in relation to employee exposure monitoring activities in the 2011 report (i.e. measurement of employee exposure to substances including lead, cadmium, mercury, and arsenic), ERM recommends that Nyrstar reports its performance in this area in future Sustainability Reports.
- ERM recommends that Nyrstar discloses more fully in future Sustainability Reports on its sustainability practices and performance in relation to the following areas: local communities, suppliers, and customers.
- As well as reporting non-process waste, Nyrstar should consider also reporting process waste and demolition waste to reflect total waste disposal volumes for the business.



### Environmental Resources Management Limited (ERM)

London, UK, 18 April 2012

*ERM is an independent global provider of environmental, social and sustainability consulting and assurance services. Over the past 4 years we have worked with over half of the world's 500 largest companies, in addition to numerous governments, international organisations and NGOs.*

# Living The Nyrstar Way

With a productive and engaged workforce aligned with The Nyrstar Way we build a culture of excellence.

It embodies the way we work together throughout Nyrstar and the way we interact with all our stakeholders.



## Prevent harm

Proactively manage risks related to our people, the environment, our strategy, our financials, and our assets



## Use innovative and creative thinking

Find ways to improve existing processes or discover completely new ways of working



## Take bold decisions

Take calculated bold decisions in the face of uncertainty with confidence



## Keep our word

Deliver on our commitments therefore building trust and productivity



## Be open and honest

Share one's point of view creating a productive environment by ensuring ideas and concerns are aired



## Be driven

Exhibit a high level of drive and perseverance and deliver superior performance



## Create value

Search for ways to improve our profitability and identify growth opportunities