

**CORPORATE SOCIAL  
RESPONSIBILITY REPORT**

# **CSR REPORT 2012**





# CSR REPORT 2012

This is an English translation of the CSR Report in the Dutch language. In the event of discrepancies between the two, the Dutch version shall prevail.

Printed copies of this CSR Report can be requested via [csr@boskalis.com](mailto:csr@boskalis.com).

The CSR Report can be found on [www.boskalis.com](http://www.boskalis.com).





Construction of a residential island off the coast of the Punta Pacifica residential area in Panama City.

# TABLE OF CONTENTS

---

**4**      **STATEMENT FROM THE CEO**

---

**7**      **WHO WE ARE**

---

**27**     **OUR SOCIAL PERFORMANCE**

---

**41**     **OUR SOCIETAL PERFORMANCE**

---

**51**     **OUR ENVIRONMENTAL  
PERFORMANCE**

---

**67**     **OUR ECONOMIC  
PERFORMANCE**

---

**69**     **APPENDIX**

# STATEMENT FROM THE CEO

Dear reader,

Boskalis is a world-leading expert in dredging and maritime services and we focus on markets that display long-term structural growth. Despite the temporary stagnation caused by the economic uncertainty, we are seeing growing demand for integrated solutions for complete maritime infrastructures, with attention to sustainable solutions increasingly moving up the agenda. Because we also want to lead our industry in terms of this development, our company's strategy is closely associated with sustainability. It helps us to deepen relationships with our clients and partners throughout the chain and to attract and retain talent. It also drives innovation and is good for our reputation, both within the sector and beyond.

Since 2009, we – alone in our industry – have published an annual CSR Report in which we give our stakeholders an account of our sustainability performance. We are proud to have once again made progress in various areas this year and in particular to be reporting at GRI application level B for the first time.

## CHAIN RESPONSIBILITY

Chain responsibility is a topic we are increasingly addressing, together with our suppliers and clients. By pooling resources in the chain we can use sustainable solutions to generate value in the chain. Following on from the Meet the Buyer sessions held in 2011 we have developed further initiatives such as the introduction of a Supplier Code of Conduct incorporating sustainability criteria. In the past year we conducted implementation scans at various suppliers in order to establish where we need to adjust the code and with which suppliers we need to step up the dialogue in order to improve their CSR performance. The Meet the Buyer sessions, the Supplier Code of Conduct, the monitoring of compliance through dialogue and the reporting on this all constitute a progressive step for the maritime industry.

## OUR SOCIAL PERFORMANCE

Our safety program *NINA* (No Injuries No Accidents) is always brought to our clients' attention and this is received well. Within Boskalis itself *NINA* has become a household name. The philosophy is completely accepted and is applied with great enthusiasm as standard practice. We are currently developing new training courses and methods aimed at embedding *NINA* even deeper into our thoughts and actions. In 2012, the Dredging Lost Time Injury Frequency (LITF) figure showed a further decline, from 0.3 in 2011 to 0.2 per 200,000 hours worked in 2012. Our objective remains No Injuries No Accidents.



In close consultation with the Works Council the integration with SMIT was completed in 2012 and preparations were made for the integration of MNO Vervat. Our people see opportunities in the market and act in concert. In 2012, much attention was focused on aligning HR conditions at SMIT with those at Boskalis. In 2012 we made an additional voluntary commitment to the Boskalis pension fund in order to increase its funding ratio and prevent pension benefits from being cut.

## OUR ENVIRONMENTAL PERFORMANCE

Focus on the environment remains crucial for our company and we have established two taskforces to deal with topics relevant to us. The main objective of the Eco-Engineering Taskforce is to position Boskalis as the leading player in hydraulic engineering projects in accordance with the Building with Nature innovation program. We have successfully put the initial designs into practice; the Sand Motor created off the Dutch coast, which is now in operation, is an excellent example. Certainly in those cases where we are able to position ourselves as a partner in the high-end market segment we can use our environmental expertise to provide the greatest added value and contribute towards the sustainable management and development of vulnerable river, delta and coastal regions around the world.

The Energy Management Task Force instigates emissions reduction initiatives by means of innovations in equipment and techniques and brings together knowledge and best practices. In order to stay ahead in our industry we work with our suppliers to pilot new applications in the area of cleaner engines and fuels, energy saving and recycling. Raising awareness among our staff was another topic that was increasingly addressed to in 2012. In addition, we made progress at sector level in working towards an industry standard for expressing carbon dioxide emissions on dredging works. In 2012, we took part in the CDP (Carbon Disclosure Project) for the first time.

## OUR SOCIETAL PERFORMANCE

Our primary activities have a positive impact on the safety and economy of the regions where we operate. But we do more. We devote ample attention to environment management on our projects, and actively involve local residents, officials and NGOs in our plans and their implementation. Where possible we source goods and services from local suppliers. On long-term projects or in regions where we have a virtually permanent presence, we make targeted investments in training local workers so that they meet our quality requirements and can be employed on our works. We provide generous support to initiatives aimed at supporting the local community, such as the socio-economic development program and malaria prevention program in Africa.

## AMBITION

As we announced last year, this report includes the activities of SMIT and MNO Vervat. In addition to this broadening of the scope, the CSR Steering Group and Group Reporting department have devoted a great deal of attention to optimizing the internal reporting and systems. Moreover, we report on a larger number of KPIs. Providing an increasingly complete picture of our CSR performance as a result, this report meets the requirements of GRI application level B.

We see the implementation scans of the code of conduct at our suppliers as an important step towards implementing our chain responsibility. We intend to keep expanding the number of suppliers that conform to our Supplier Code of Conduct.

We hope that this report gives you good insight into the CSR developments within our company. We certainly appreciate any suggestions you may have for improving our CSR policy and reporting, and will be happy to engage in dialogue with you on this subject.

On behalf of the Board of Management



Peter Berdowski





The CSD Cyrus II breaks through the surf zone for the access channel to the new Superporto do Açú port in Brazil. This part of the project was accomplished before the start of the turtle breeding season.





# WHO WE ARE

---

**8**      **PROFILE AND SERVICES**

---

**10**      **STRATEGY, POLICY AND OBJECTIVES**

---

**12**      **CORPORATE GOVERNANCE**

---

**14**      **OUR STAKEHOLDERS**

---

**18**      **OUR VALUE CHAIN**

# PROFILE AND SERVICES

Royal Boskalis Westminster N.V. (Boskalis) is a world-leading expert in the field of dredging and maritime services.



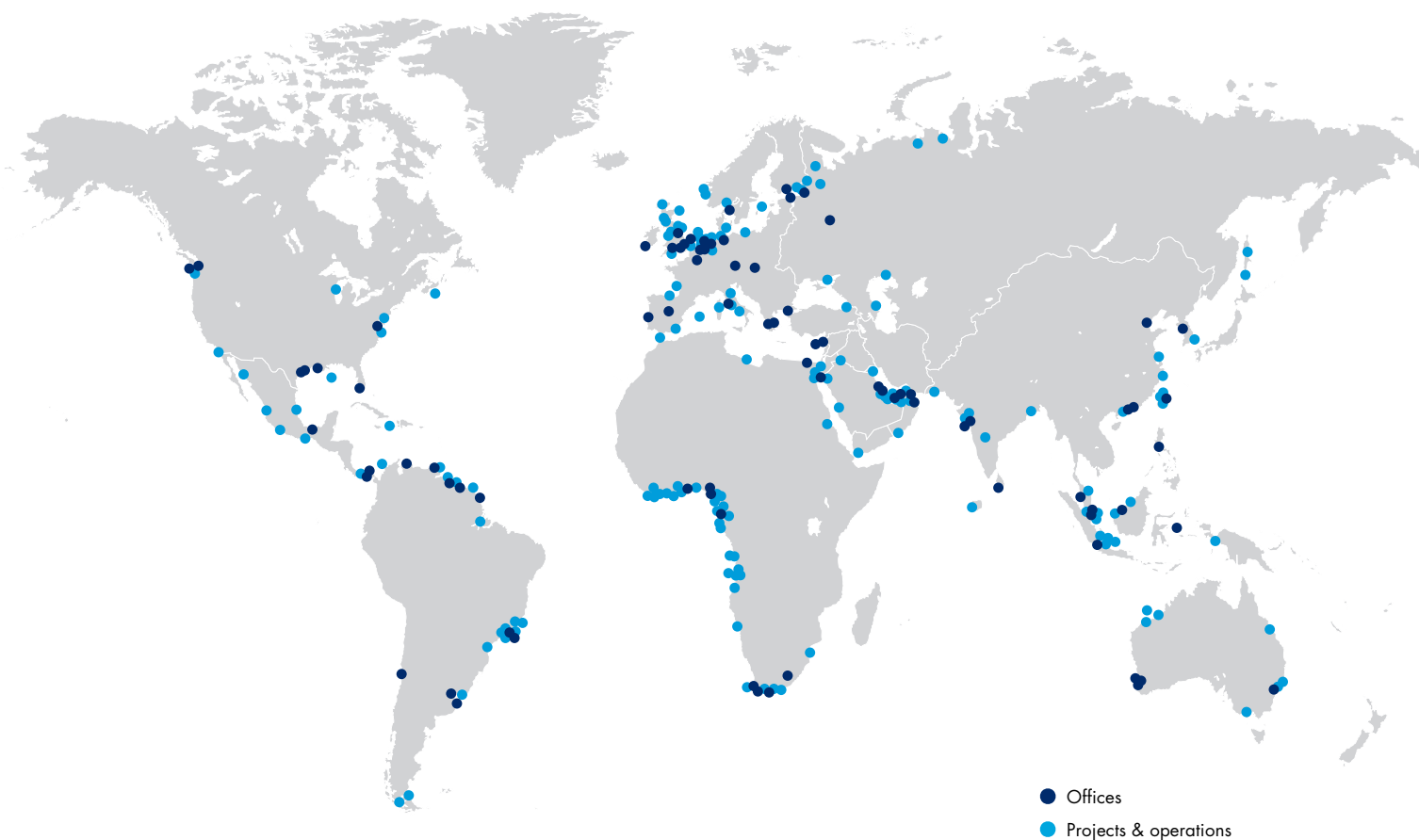
In addition to our dredging activities, we offer a broad range of maritime services, such as harbour towage, emergency response and salvage-related services, heavy transport and lifting as well as services for the offshore energy sector.

As a partner we are able to realize complex infrastructural works for our clients within the chain of design, project management and execution, on time and within budget, even at vulnerable or remote locations around the world. We strive for sustainable design and realization of our solutions.

Demand for our services is driven by growing energy consumption, growth in global trade, growth in world population and climate change. Boskalis operates worldwide but concentrates on six geographic regions which have the highest growth expectations for the energy and ports markets. This spread gives us both a solid foundation and the flexibility to be able to secure a wide range of projects, as well as providing excellent prospects for balanced and sustained growth. Our main clients are oil, gas and power companies, port operators, governments, shipping companies, international project developers, insurance companies and mining companies.

Boskalis has around 15,600 employees, including our share in associate companies. The safety of our own employees and those of our subcontractors is paramount. Boskalis operates a progressive global safety program which is held in high regard in the industry and by our clients.

We operate on behalf of our clients in over 75 countries across six continents. Our versatile fleet consists of over 1,100 vessels and equipment. Our head office is based in the Dutch city of Papendrecht. Royal Boskalis Westminster N.V. shares have been listed on NYSE Euronext Amsterdam since 1971.



### DREDGING

- Design, construction and maintenance of ports and waterways
- Land reclamation
- Coastal defense and riverbank protection
- Extraction of raw materials



### OFFSHORE ENERGY

- Development, construction, maintenance and decommissioning of oil and LNG import/export facilities, offshore platforms, pipelines and cables and offshore wind turbine farms.



### INLAND INFRA

- Dry earthmoving, concrete construction work, land remediation and soil improvement
- Design and construction of roads and railroads, bridges, dams, viaducts and tunnels
- Design and construction of quay walls, jetties, breakwaters and maritime-related installations such as water purification and sewer systems



### TOWAGE

- Harbour towage
- Terminal services



### SALVAGE

- Wreck removal
- Salvage
- Emergency response



# STRATEGY, POLICY AND OBJECTIVES

Our strategy is aimed at sustainable design and execution of our solutions around the globe.

Our CSR policy seeks to achieve a healthy balance between economic value creation for our clients and our business on the one hand, and care for the environment and societal and social responsibility on the other.

To ensure we exercise our social, societal and environmental responsibilities as effectively as possible our CSR policy focuses on the key areas which are of material importance to ourselves and our stakeholders and which we are able to influence. Our corporate strategy, the outcome of the dialogues with our stakeholders and the benchmark monitoring results have resulted in the following policy objectives and key areas:

- Our social performance relates to our employees and promoting their safety, personal development opportunities and well-being.
- Our environmental performance is concerned with the preservation of biodiversity and eco-systems through the further expansion of our environmental expertise and ongoing investment in and use of environmentally friendly equipment.
- Our societal performance relates to contributions to (local) communities and investment in education and research, as well as social sponsorship and donations.
- Our economic performance is aimed at creating value for our stakeholders through the continuity of our leading position in our industry.

We will take a closer look at our performance in these areas further on in this report.

We report in accordance with the international guidelines set out in the Global Reporting Initiative (version G3.1), application level B. The GRI table on pages 72-73 shows which KPIs we report on.

For a detailed description of our corporate strategy, please refer to pages 10-15 of our Annual Report 2012.



<b>CSR PERFORMANCE KEY FIGURES</b>	<b>2012</b>	<b>2011</b>
<b>SOCIAL PERFORMANCE</b>		
Workforce training/development hours	<b>174,870</b>	165,446
Number of staff with <i>NINA</i> safety training (excl. <i>NINA</i> start-up meetings on every project)	<b>230</b>	518
Dredging LTIF	<b>0.2</b>	0.3
<b>SOCIETAL PERFORMANCE</b>		
Number of interns, graduates and doctorate students supervised	<b>95</b>	64
<b>ENVIRONMENTAL PERFORMANCE</b>		
CO <sub>2</sub> -emissions in metric tonnes (see page 63 for explanation)	<b>1,051</b>	1,015
Investment in Building with Nature (in EUR)	<b>500,000</b>	500,000
<b>ECONOMIC PERFORMANCE (IN MILLIONS OF EUR)</b>		
Revenue (work done)	<b>3,081</b>	2,801
Order book (work to be done)	<b>4,106</b>	3,489
Operating profit	<b>337</b>	354
EBITDA	<b>568</b>	591
Net profit	<b>250</b>	254
<b>RESULTS PER SHARE (IN EUR)</b>		
Profit	<b>2.37</b>	2.48
Dividend	<b>1.24</b>	1.24
Cash flow	<b>4.59</b>	4.86

# CORPORATE GOVERNANCE

## GOVERNANCE AND REPORTING

Boskalis operates a two-tier board model, which means that management and supervision are segregated. The Board of Management is responsible for the day-to-day management of the business, and for setting out and realizing the company's long-term strategy along with the associated risks, the result and entrepreneurial aspects relevant to the business. The Board of Management is responsible for establishing the company's objectives, implementing its business policies and for the resulting performance. The Board of Management is accountable to the Supervisory Board and the General Meeting of Shareholders. In performing its tasks, the Board of Management is guided by the interests of the company and its activities, and takes into account any relevant interests of stakeholders involved with the company.

The Supervisory Board is responsible for supervising management performance and advising the Board of Management. At Boskalis, close collaboration exists between the Supervisory Board and its committees, the Board of Management and the stakeholders. The Board of Management and the Supervisory Board are jointly responsible for looking after the interests of our stakeholders.

In 2012 Boskalis once again contributed to the malaria prevention program in Nigeria.





The Board of Management is responsible for the company's CSR policy. This is also expressed in the remuneration policy under which the safety policy and staff development components of CRS form part of the remuneration of the members of the Board of Management. For more information, please refer to the Remuneration Report on our corporate website: [www.boskalis.com/corporate-governance/board-of-management](http://www.boskalis.com/corporate-governance/board-of-management).

The corporate strategy and the outcome of both the dialogues with our stakeholders and the benchmark monitoring are included in the annual review of the CSR policy, the outcome of which determines our strategic priorities and objectives. The outcome also determines which topics are of material importance and which performance indicators are relevant for inclusion in our CSR Report.

The Board of Management also seeks advice and information from the CSR Steering Group and the following taskforces and officers.

Two taskforces advise the Board of Management with regard to the environmental performance: the Energy Management Taskforce (formerly the Emissions Taskforce) and the Eco-Engineering Taskforce. In addition, the matter of safety is given absolute priority within our organization. The Board of Management is closely involved in this topic, on which it seeks advice and information from the SHE-Q department. With regard to the HR and society-related objectives, the Board of Management seeks advice from the HR director and the director of IR & Corporate Communications, respectively. On chain-related matters the Board of Management seeks advice from the heads of the business units and relevant staff departments.

The CSR reporting is produced in accordance with the guidelines set out in the CSR Reporting Manual and has a layered structure in accordance with the internal allocation of management responsibilities. At Boskalis, consolidation takes place at successive levels, starting with the projects and local office organizations, moving on through the relevant business units and staff departments and ending with the consolidated group reports. The business units and relevant staff departments report on a quarterly basis to the CSR Steering Group, which also comprises a member of the Board of Management. Reporting is monitored and validated by the Group Reporting department.

## GENERAL BUSINESS PRINCIPLES

We have a Statement of General Business Principles governing our social, societal, environmental and economic responsibilities. Boskalis accepts responsibility for matters which lie within its sphere of influence. In the countries where Boskalis operates, national legislation and regulations apply. Boskalis refrains from cultural judgements and conducts itself as a good citizen or a guest. Boskalis does not do business in countries which are subject to international and relevant national embargoes.

We respect human rights as set out in the United Nations Universal Declaration of Human Rights. We do not accept, pay or request bribes or other favors for the purpose of acquiring or bestowing any improper business, financial or personal advantage.

Furthermore, we respect intellectual property rights and abide by the principles of fair competition by complying with relevant competition laws.

Anyone who approaches us regarding compliance with our General Business Principles can expect an open response. All genuine requests, suggestions and complaints will be taken seriously.

At the beginning of the year under review our Statement of General Business Principles was revised, partly to reflect the UK Bribery Act coming into force. The full text of our Statement of General Business Principles can be downloaded from our corporate website: [www.boskalis.com/csr](http://www.boskalis.com/csr).

For a detailed description of our risk management policy, corporate governance policy, legal structure and our organization, please refer to pages 47-51, 54-55, 107-110 and 124-127 of our Annual Report 2012 and our corporate website [www.boskalis.com/corporate-governance](http://www.boskalis.com/corporate-governance) and [www.boskalis.com/corporate-governance/board-of-management](http://www.boskalis.com/corporate-governance/board-of-management).

## CERTIFICATION

Certification shows that we comply with internationally recognized management, environmental and safety standards. Virtually all Boskalis business units are certified according to ISM, ISO 9001, ISO 14001 and OHSAS 18001 or VCA for our Dutch companies. For a list of the various certificates we hold, please refer to the appendix of this report.

# OUR STAKEHOLDERS

Entering into dialogue with our stakeholders allows us to gain a good picture of their information requirements and interests, and fosters mutual awareness and understanding.

To identify our stakeholders we analyzed which organizations and individuals:

- are significantly impacted by our business activities or;
- develop activities which can be expected to impact our company's ability to successfully implement its corporate strategy and achieve its organizational objectives.

This resulted in our selection of stakeholders as set out in the chart in this section.



## DIALOGUE AND IMPACT

We engage in both formal and informal dialogue with our stakeholders. The frequency also varies, from once a year (for example customer satisfaction surveys) to dozens of times a year (such as contacts with our suppliers in the course of ongoing questions and contracts).

In addition to these dialogues Boskalis takes parts in various benchmark surveys to monitor our sustainability performance. These include the Transparency Benchmark (for Dutch clients and NGOs), the CDP (Carbon Disclosure Project) (organized on the investor side) and the CO<sub>2</sub> Performance Ladder (an initiative of the Dutch government in its role as principal commissioning authority).

The outcome of both the dialogues with our stakeholders and the benchmarks are taken into account in our annual review of our CSR policy and CSR reporting.

The main topics of discussion for each category or group of stakeholders and the results of the dialogue are set out in more detail in the Our value chain, Our social performance, Our environmental performance, Our societal performance and Our economic performance sections of this report.

## STAKEHOLDER DIALOGUE CHART

STAKEHOLDER	DIALOGUE IN 2012 THROUGH
Employees	<ul style="list-style-type: none"> <li>• NINA safety program</li> <li>• Consultation meetings with works councils</li> <li>• Staff magazines and meetings</li> <li>• Visits by (senior) management to projects, sites and vessels</li> <li>• Confidential counselor</li> </ul> See also pages 28-35 of this report
Clients	Contacts in the course of ongoing questions and contracts. See also pages 20, 48 and 64-65 of this report
Investors and shareholders	See also page 67 of this report as well as the Shareholder Information section on pages 16-17 of our Annual Report 2012
Suppliers	<ul style="list-style-type: none"> <li>• Contacts in the course of ongoing questions and contracts</li> <li>• Joint sustainability initiatives</li> <li>• Implementation scans/visits to 20 suppliers.</li> </ul> See pages 16-17, 20-21, 38-39, 52, 58-61 and 64-65 of this report
Educational and knowledge institutes	See pages 28, 33, 38-39 and 45 of this report
Local communities	See pages 43-44 of this report
Industry and society associations	Main ones are: Industry: Dutch Association of Hydraulic Engineers, EuDA, IADC NGOs: North Sea foundation, Ecoshape foundation and ProSea foundation See pages 24-25, 28, 46, 52-56 and 60 of this report
Interested parties	Interested parties can use the special contact option on our website to give us their comments on CSR matters.



# RECYCLING IN THE CHAIN

Shortage of raw materials is a growing problem. Boskalis aims to make a modest but targeted contribution to address this by means of its recycling program. Five years ago Boskalis introduced a scrap procedure for worn-out pump casings and impellers to prevent valuable raw materials from being wasted. We are now able to apply a similar procedure to the dozens of floating pipelines that we replace each year, a possibility which was raised in last year's Meet the Buyer sessions. In late 2012 Boskalis reached an agreement with recycling firm Beelen and pilots for the dismantling of floating pipelines are now underway.

Our ships work on projects all around the world and are hardly ever in the yard at Papendrecht. Wear and tear on parts mainly affects the dredging vessels due to the nature of their work. Pump casings, impellers and floating pipelines need to be replaced, the frequency at which this takes place being dependent on the type of subsoil: sandy soil causes less wear and tear than rock. When parts become worn out, new ones are delivered over sea and the worn-out parts are disassembled and shipped back to the Netherlands in the same container. The proceeds from the waste material more than compensate for the associated transportation costs. Apart from this the sustainable quality of the recycling process is a major consideration in not having this done on the other side of the world; Boskalis makes the explicit choice to use Dutch, Belgian and sometimes Turkish foundries and waste processing companies because these companies apply controlled and sustainable recycling methods.

## CREATING VALUE WITH CAST IRON WEARING PARTS

Van Voorden Castings has been a supplier of wearing parts for dredging ships for over 30 years. "Over the past few years we, together with Boskalis, increasingly came to the realization that we were destroying value by treating worn-out parts as scrap metal. Once you remove the worn parts, what is left of things like pump casings and impellers is completely reusable. Together we have developed a process for this. All the old parts come back to the Netherlands. We have invested in a portable spectrometer that we use at the Boskalis yard to analyze the alloys in the residual material as well as their value and usefulness. The old parts are cut down into small pieces and then melted down in our factory and turned into new products," explained Jac Meeuwissen, director of Van Voorden in Zaltbommel. "Currently an average of 200 tonnes of cast iron and cast steel is reused every year. Together we have made a huge leap forwards in this." With his manufacturer's hat on, Meeuwissen also finds the development interesting bearing in mind the expected shortages of raw materials in the years ahead. "It's a win-win situation. Boskalis' wear-proof parts are made of 100% reusable high-grade alloys; to us as a manufacturer those are valuable materials. Which is why this chain initiative is a great example of sustainable



Floating pipeline with the THSD Shoreway in the background.

business that adds economic value and at the same time combats waste.”

### NEW LEASE OF LIFE FOR OLD FLOATING PIPELINES

The challenge that recycling company Beelen faces is how to give old materials a new lease of life, a prospect now also in store for Boskalis’ old floating pipelines. Beelen takes them in and dismantles them in as sustainably as possible according to the Lansink ladder (see inset), with priority given to the most environmentally friendly processing method. Rubber is used for new useful applications; steel is melted down in the blast furnaces; other residual materials, such as insulation, are used for power generation. “We guarantee that the residual material does not end up in the incinerator or in a landfill site,” said Peter Jongmans, director of Beelen Rotterdam.

Boskalis wants to be able to track the product flows as closely as possible and will use random checks to determine whether dismantling took place in accordance with the agreements. Every floating pipeline has a unique number and Beelen compiles a report for each floating pipeline showing what method was used to process or recycle the materials, including photographic documentation. According to Jongmans this is a unique approach: “It costs Boskalis more money to bring the floating pipelines to the Netherlands than to dismantle them in situ elsewhere in the world, but this is a conscious choice by the company. Boskalis wants to make sure that the recycling process is genuinely sustainable. They are really leading the field in this.”

In late 2012, Beelen became the first company in the recycling sector to obtain certification for level 5 of the CO<sub>2</sub> performance ladder in the Netherlands. In this context Beelen also works

actively towards making the chain more sustainable. “We also monitor whether the parties to whom we sell the residual materials comply with the license requirements and environmental standards, and whether they process the material in accordance with our requirements.”

Lansink’s Ladder is a standard in the field of waste management. The aim is to have as much waste as possible ‘climb’ Lansink’s Ladder towards the most environmentally friendly method of processing.

quantitative prevention: preventing or restricting the creation of waste

qualitative prevention: using ingredients and materials in the manufacture of substances, preparations and other products which cause no or minimal adverse effects to the environment

useful purpose through reuse of products: once used, substances, preparations and other products are reused in the same way

useful purpose through reuse of materials: the component substances and materials of a product are reused after use of the product

useful purpose as fuel: waste materials are used principally for fuel or some other means of power generation

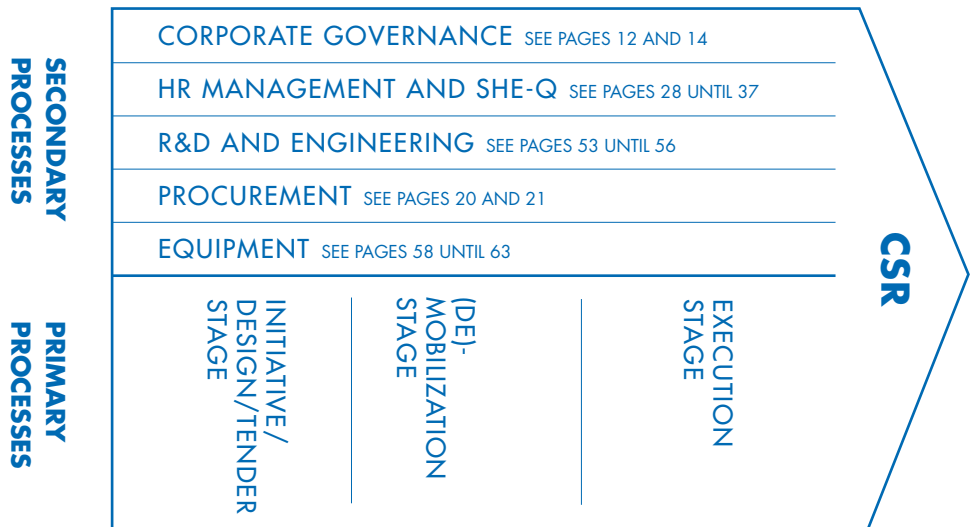
disposal through incineration: waste materials are disposed of through incineration

disposal: waste materials are disposed of on a landfill site

# OUR VALUE CHAIN

Pooling resources with partners in the chain enables us to use sustainable solutions to generate value in the chain.

We use Porter's value chain to indicate which activities in the chain we have financial or operational control over and the impact this has on our chain. In our primary processes we distinguish between our clients downstream and our suppliers upstream. As is shown, the secondary processes are described elsewhere in this report. In the primary processes we identify three stages which apply to all our services: the initiative/design/tender stage; the execution stage; and the mobilization/demobilization stage. Our impact on people, the environment and society at each of these stages is set out below.



## IMPACT IN THE CHAIN

### INITIATIVE/DESIGN/TENDER STAGE

At this stage we are able to influence our impact on people, the environment and society in general through our Dredging, Offshore Energy, Inland Infra, Towage and Salvage activities. Involving us at an early stage enables us to work with clients to create a design of maximum sustainability and select working methods that are best suited to the environmental requirements.

In Dredging, Offshore Energy and Inland Infra we also draw our clients' attention to the best practices under the Building with Nature program (see pages 55-56 of this report). We devote a great deal of attention to environment management and emphasize the importance of safe working conditions. In addition we seek to minimize inconvenience to both the shipping and fishing industry.



## **EXECUTION STAGE**

The physical impact on people, the environment and society is greatest during the execution of all our activities.

The safety and wellbeing of our own staff and that of the people working with us are always our top priority.

We seek to make a positive contribution to the local community through our activities wherever we can, by creating jobs and purchasing local products and services. In addition, we devote a great deal of attention to environment management. (For more information please refer to the 'Our social performance' section in this report.)

By using environmentally friendly working methods, advanced monitoring techniques and environmentally friendly equipment we seek to minimize or mitigate the negative impact of our activities on the environment. Our wreck removal and salvage work contributes towards safety and a cleaner environment. Our main priority in salvage operations is to save the cargo and the ship and to avert environmental damage by preventing fuel

or hazardous cargoes from contaminating the environment. (For more information please refer to the 'Our environmental performance' section in this report.)

## **MOBILIZATION/DEMobilIZATION STAGE**

Our impact on the environment is of particular relevance in this stage and is greatest on projects. Projects involve the deployment of equipment that sometimes has to be mobilized over great distances (for example from Europe to South America). After completion of the project this equipment has to be demobilized again.

Our logistical operation is aimed at deploying floating equipment with extreme efficiency. This allows us to reduce fuel consumption and the associated burden on the environment, enhance safety and at the same time reduce costs.

For terminal and towage services, which tend to be of a local and ongoing nature, mobilization of equipment applies only at the start of a contract; after that our staff and the equipment stay on location for relatively long periods of time.



## OUR CLIENTS

Our main clients are oil, gas and electricity companies, port operators, governments, shipping companies, international project developers, insurance companies and mining companies. Boskalis concentrates on clients in three market segments which demonstrate structural long-term growth: Energy, Ports and Infra. Within these three market segments we concentrate on six geographic regions: Northwest Europe, South and West Africa, Central and South America, the Middle East, Southeast Asia and Australia.

For an update on the latest market developments, please refer to the 'Report of the Board of Management' section on page 32 of our Annual Report 2012.

### DIALOGUE AND COOPERATION IN THE CHAIN

It has emerged from our global market review (please refer to page 10 of our Annual Report 2012) and from talks with dozens of clients that a growing group of clients find it increasingly important that we are able to act as contract partner from the (pre-)design stage right through to completion. This type of cooperation allows us to use our engineering and environmental expertise to the full. In addition, we always raise the matter of our NINA safety program, which in most cases is embraced by our clients. For more information, please refer to pages 29-31 of this report.

## OUR SUPPLIERS

Our main suppliers are to be found in the purchasing groups machinery and hydraulics, electrical and survey, spare parts and construction parts, facilities (including goods and services for the office organizations) and general consumer goods (including fuel

and lubricants). Boskalis maintains relationships with around 1,200 suppliers, around 200 of whom account for 90% of the Central Procurement department's purchasing volume. These are our strategic suppliers. Some 55% of the total supplier population are Dutch companies, 15% are European companies and 30% are non-European companies.

### DIALOGUE AND COOPERATION IN THE CHAIN

We aim for long-term, stable relationships with our suppliers. Boskalis wants to do business with parties who conduct themselves with responsibility and integrity. In addition to quality, delivery reliability and price, we also take sustainability criteria into account in selecting our suppliers.

This is the responsibility of the Procurement & Logistics manager, who reports to a member of the Board of Management.

We exchange ideas and pool innovations with suppliers with the aim of creating and building on a sustainable value chain.

Following the Meet the Buyer sessions held in 2011 (see pages 22-23 of our 2011 CSR Report), we have elaborated several ideas together with our suppliers and put them into practice.

One such initiative involves using GTL to fuel our dry earth-moving equipment in densely populated and urban areas. GTL produces lower fine dust and NO<sub>x</sub> emissions. Another initiative involves recycling worn-out pump casings, impellers and floating pipelines. Read more about these two projects on pages 16-17 and 64-65.

### SUPPLIER CODE OF CONDUCT

In 2011 we became the first company in our sector to introduce a Supplier Code of Conduct and made sure all our procurement staff were ready for this. Boskalis sets the same requirements for its suppliers of products and services as it does for itself and



because of this the Supplier Code of Conduct has been adapted from Boskalis' own Statement of General Business Principles. It was drafted in consultation with selected suppliers, for example during a few of the Meet the Buyer sessions in 2011. The Supplier Code of Conduct sets out our requirements with regard to sustainable procurement, prevention of bribery and corruption, human rights, working conditions and safety. If a supplier fails to meet the requirements as stated in the code of conduct we intensify the dialogue in order to work towards a solution.

If their compliance fails to improve, we will sever the relationship. In 2012 we declared our Supplier Code of Conduct to be applicable to the majority (68% of purchasing volume) of our strategic suppliers.

The Supplier Code of Conduct and our General Purchasing Terms and Conditions can be downloaded from our website at [www.boskalis.com/stakeholders](http://www.boskalis.com/stakeholders).

## CODE OF CONDUCT IMPLEMENTATION SCAN

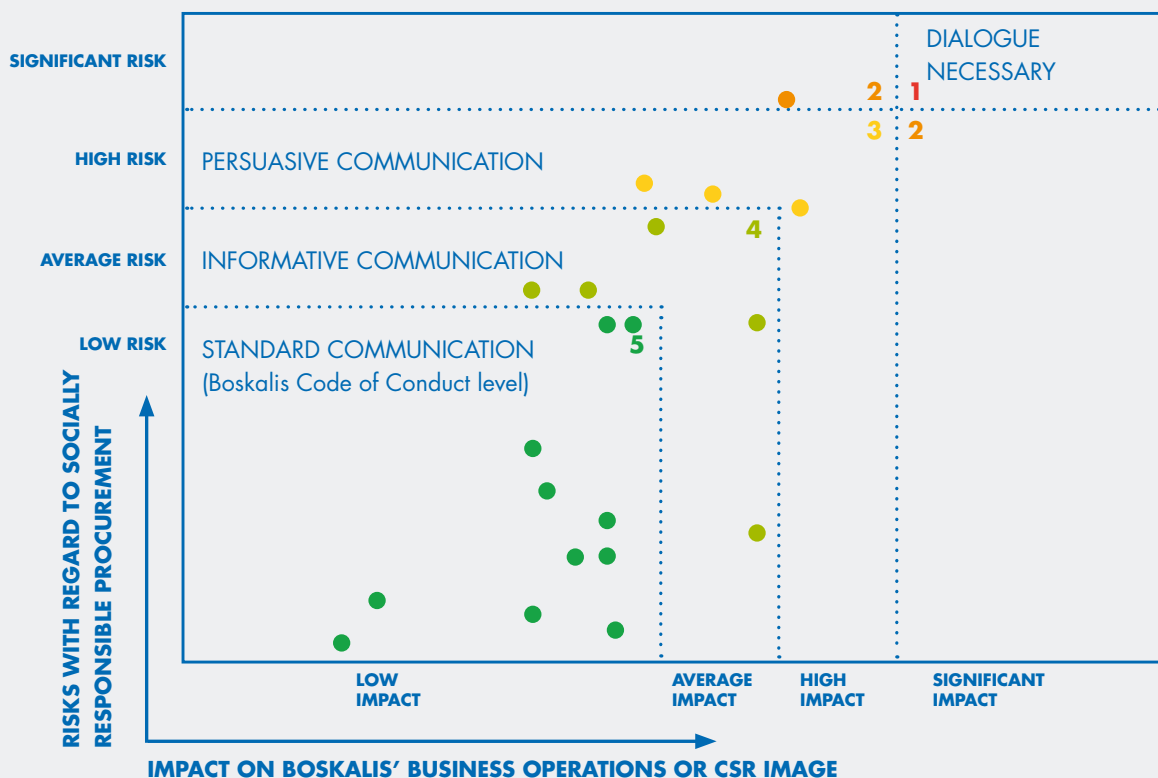
In late 2012 we performed a code of conduct implementation scan at 20 Dutch and Belgian suppliers. Some of these companies (around 35%) attended the Meet the Buyer sessions in 2011, while others represent a cross section of our supplier base. These implementation scans were prepared and carried out by an independent consultant. Together with the consultant we compiled a questionnaire for the sessions, with questions spread across the following categories: Society (including human rights), Environment, Employees, Quality, Clients and Suppliers. Based on the agreed meeting reports, the consultant assigned scores based on the Socially Responsible Procurement method of the Chartered Institute of Procurement and Supply. Next, a risk matrix was used to demonstrate the 'level' of the various suppliers in terms of CSR and to what extent this might have a negative impact on Boskalis' business operations or image.

The matrix below shows the result of the scans.

Based on the potential negative impact on Boskalis' business operations and image the suppliers were divided into categories in combination with a recommended dialogue. We stepped up the dialogue with suppliers in categories 1, 2 and 3 with the aim of increasing the frequency of monitoring so as to ensure that they improve their CSR performance.

We see this as an important step towards implementing our chain responsibility. We intend to keep expanding the number of suppliers that conform to our Supplier Code of Conduct.

The Meet the Buyer sessions, the Supplier Code of Conduct, the use of dialogue to monitor compliance and reporting on this all constitute a progressive step for the maritime industry.





## RISKS AND OPPORTUNITIES IN THE CHAIN

Effective management of both risks and opportunities is essential to the successful implementation of our company's strategy and plans. We see to it that risks and opportunities are identified, quantified and monitored, particularly in relation to the preparation and execution of projects. For a rundown of the principal strategic and operational risks and risks with regard to financial reporting, please refer to pages 47-51 of our Annual Report 2012.

Below we list the risks and opportunities of the social and environmental aspects of our chain and indicate how these are managed.

### SOCIAL ASPECTS OF OUR CHAIN

- *Safety* The safety of our own employees and those employed by our subcontractors is one of our company's core values and is given top priority. Our central safety objective is 'No Injuries No Accidents' (NINA). In the 'Safety' section on pages 29-31 of this report we explain about the practical application and implementation of this objective in our day-to-day operations. We do so by referring to our NINA safety program.
- *Qualified staff* The high-tech nature of our industry means that we need highly qualified and experienced professionals. Their commitment is essential to maintaining our leading market position. In the 'Our social performance' section we explain the measures we take to recruit and retain them and what opportunities for self-development are available.
- *Impact on the local community* Our activities affect the local communities in which we operate. We seek to build support for the work that we execute. We devote ample attention to environment management and actively involve local residents and other stakeholders in the planning and implementation of our projects. Where possible we hire local subcontractors and source goods and services from local suppliers. On long-term projects or in regions where we have a virtually permanent presence we invest in training to enable local workers to meet our quality requirements and be employed on our works.
- *Bribery and corruption* We do not accept, pay or request bribes or other favors for the purpose of acquiring or bestowing any improper business, financial or personal advantage. We provide our staff with targeted information regarding the risks associated with bribery and corruption, also taking into account regulations and legislation such as stipulated in the UK Bribery Act. Our Supplier Code of Conduct also devotes attention to this topic.
- *Human rights and child labor* It is our belief that our activities offer opportunities for improving the living conditions and well-being of the communities in which we operate. We respect the fundamental human rights as set out in the United Nations Universal Declaration of Human Rights. Our Supplier Code of Conduct also devotes attention to this topic.

For further information on these and other social aspects, please refer to the 'Our social performance' section of this report.

## ENVIRONMENTAL ASPECTS OF OUR CHAIN

- *Preservation of biodiversity and ecosystems* We are renowned in the market for our environmental expertise. Once our clients have taken the decision to construct maritime infrastructure, we are able to make an active contribution towards realizing it as sustainably as possible. In doing so we increase the chances of their complex projects succeeding in sensitive environments.
- *Recycling in the chain* Where possible we engage in recycling in our chain, for example recycling worn-out pump casings,

impellers, cutter teeth and floating pipelines. Another example is the initiative in conjunction with the North Sea foundation aimed at making the dismantling of our ships even more sustainable. You can read more about these projects on pages 16-17 and 24-25.

For further information on these and other environmental aspects, please refer to the 'Our environmental performance' section of this report.



Boskalis cleans up the heavily contaminated Fox River in Wisconsin, United States. The plant will process around 3 million cubic meters of contaminated dredging spoils, as much as possible of which will be reused.

# BOSKALIS IS COMMITTED TO THE SAFE AND RESPONSIBLE DISMANTLING OF ITS SHIPS

Boskalis pursues a policy aimed at the safe and socially responsible dismantling of vessels that are taken out of service. The North Sea Foundation, co-founder of the NGO Shipbreaking Platform, challenged Boskalis to take another critical look at its policy and aim for all ship dismantling activities to be conducted off the beach.

The North Sea Foundation wants to encourage companies, including shipowners, to treat the sea in a sustainable manner. As a member of the NGO Shipbreaking Platform the foundation engages with shipowners who send their ships for dismantling on the beaches of India and Bangladesh. In early 2011 the NGO Shipbreaking Platform published a list of shipowners whose ships were sent to India and Bangladesh for dismantling purposes. "To our surprise the list also included Boskalis: we rated Boskalis' sustainability policy pretty highly. The publication prompted us to engage with one another, with Boskalis taking the initiative for this," recalls Merijn Hougee, project leader of the North Sea Foundation. "Our aim is not to put a company in a negative light, but rather to arrive at a solution that is supported by both parties."

## SUSTAINABLE DISMANTLING IS STANDARD POLICY

"We explained how our policy is structured," responded Martijn Schuttevâer, director of Corporate Communications and Investor Relations at Boskalis. "Boskalis is ahead of existing legislation and regulations. In our 2011 CSR Report, we gave an open and transparent account of the controlled manner in which we have vessels dismantled. We operate all over the world and when we decide that the time has come to say goodbye to a ship, we look for suitable alternatives in the region where the ship happens to be. The yards where the dismantling takes place must comply with international legislation and regulations, be ISO 14000 certified and meet our own strict safety standards. Sometimes this means that we still have to sail a ship halfway around the world, for example to Europe, for dismantling, but in 2011 we had selected a yard in India that met these requirements. The yard had been certified by classification society Germanischer Lloyd, in addition to which we had our own audit





In 2012 preparations started for the sustainable dismantling of the cutter suction dredger Para.

team flown in to conduct an inspection of its own. However, the Indian yard conducts its dismantling activities on the beach, on soft subsoil, and this was the North Sea Foundation's fundamental point of criticism."

### **DISMANTLE SHIPS ONLY ON HARD SUBSOIL**

Hougee: "Our point of view is that ships should not be dismantled on the beach because this poses a high risk of pollution and damage to the environment – something a Western company should not want to be associated with. We applaud the fact that Boskalis has further tightened its policy in this respect."

Schuttevâer: "We want to stand out in a positive way when it comes to the socially responsible dismantling of vessels and so the decision to implement this tightening was quickly taken. We have now added to our policy that the dismantling of ships must take place on hard subsoil or in dry dock facilities only. It goes without saying that we will continue to monitor compliance with procedures aimed at protecting people and the environment."

### **ALTERNATIVES TO INDIA**

Boskalis and the North Sea Foundation also discussed alternatives to the Indian shipyard. The NGO Shipbreaking Platform would prefer to see all ships owned by European companies return to

Europe for dismantling, in accordance with international agreements.

For Boskalis it is not always an option to sail ships from all over the world to Europe, with carbon emissions and a safe passage way as well as economic considerations to be taken into account. Schuttevâer: "Towing a non self-propelled ship from the Middle East to Europe would mean having to coordinate a slow-moving transport through the Gulf of Aden with all the risks of piracy. We consider this undesirable from a safety point of view, and so we look for and invest in alternatives." Hougee supports Boskalis' position: "Shipyards that work in accordance with the OECD standards and which can provide an off-the-beach dismantling facility also present a good alternative, provided the ship owner sees to it that the dismantling process and the waste management is properly monitored."

"For the South American region we recently made contact with a yard in Mexico," said Schuttevâer. "Boskalis is investing in this yard, also in terms of knowledge, in a bid to raise the level so that this yard complies with our standards and those of the international classification societies."

Both the North Sea Foundation and Boskalis are satisfied with the progress, the constructive dialogue and the positive outcome. Hougee: "We consider the way in which Boskalis addressed this matter to be a good example for other ship owners of how things can be done differently and better."



# OUR SOCIAL PERFORMANCE

---

**28**      **POLICY AND OBJECTIVES**

---

**29**      **SAFETY**

---

**32**      **PERSONAL DEVELOPMENT**

---

**34**      **WELL-BEING**

---

**36**      **ORGANIZATION AND PROFILE**

# POLICY AND OBJECTIVES

Our social performance relates to our employees. As a globally operating company we employ around 15,600 people of nearly 80 different nationalities. Their commitment is essential to us maintaining our leading market position.

Our social policy is aimed at making the best possible use of each individual's capabilities and encouraging their personal development. Safety is a top priority within our organization. Creating a climate of motivation, pleasure in work and involvement is important for attracting and retaining motivated staff. It goes without saying for us that we offer good and competitive HR conditions.

Our principal social objectives relate to the promotion of the safety, personal development and well-being of our staff.

## DIALOGUE AND COOPERATION IN THE CHAIN

### EMPLOYEES

Boskalis engages in proper and structural consultation with the works councils regarding topical subjects relevant to our employees, in accordance with the legislation applicable in the countries where we are based. In the Netherlands works councils have the right of consent in matters including the amendment, abolition or introduction of pension insurance, dismissal policy, employment regulations and remuneration and job evaluation systems. Works councils have the right to be consulted on matters including the acquisition of another company and the termination of the operations of the company itself or one of its major units.

Since the beginning of 2012 both Boskalis and SMIT have been broadly represented in the Works Council of Boskalis in the Netherlands. The Works Council Harbours (SMIT) remains a separate works council.

In the course of implementing its strategy, Boskalis also acquires other companies. In order to be able to realize the anticipated results, it is very important to us that such acquisitions are integrated with care. Creating value for our employees and retaining key personnel are important elements in this process.

### TRADE UNIONS

It is important to Boskalis to maintain an open and constructive dialogue with the relevant trade unions around the world. We offer good HR conditions globally that exceed the standards of the International Transport Workers' Federation, which also represents the international maritime trade unions. In addition we take joint initiatives aimed at enhancing the health and vitality of our employees (please refer to pages 34-35).

### AGENCIES

We maintain long-lasting and good relationships with hiring organizations/agencies that represent Boskalis on the international labor markets. We see these agencies as extensions of our own organization and in 2012 we once again held regular consultations with them. They monitor the quality of our workforce on the fleet on our behalf and keep a check on the working conditions and whether people are able to work in compliance with our safety standards.

### INDUSTRY ASSOCIATIONS

HR topics are discussed at sector level both locally and internationally, for example in the Dutch Association of Hydraulic Engineers and the EuDA.

### EDUCATIONAL AND KNOWLEDGE INSTITUTES

We maintain close ties with the educational institutes that provide our specialized and management courses. We maintain good relationships with Dutch maritime training institutes in order to interest potential employees in our fields of work, give guest lectures and offer internships. We make our knowledge available in order to develop specific courses in collaboration with technical universities and higher vocational training institutes. As a member of the Dutch Association of Hydraulic Engineers, we are cooperating on the PhD course in coastal and hydraulic works. In 2012, we once again maintained regular contact with international maritime colleges, including those in the Baltic states, Russia and the Philippines.



# SAFETY

The safety of our own employees and those employed by our subcontractors is a core value within our organization and is given top priority.

Our central safety objective is 'No Injuries No Accidents' (*NINA*). This is also the name of our progressive safety program, which is attracting a great deal of positive attention within the industry and amongst our clients. Since the program was introduced in 2010 there has been a steady and spectacular decline in the Dredging LTIF figure from 0.67 in 2010 to 0.2 in 2012. The appendix includes a detailed summary.

## PROACTIVE SAFETY CULTURE

What makes *NINA* special is that it has brought about a culture change. Whereas the traditional approach to safety tends to focus mainly on following procedures, *NINA* requires commitment from within and instills ownership. Or, put simply, *NINA* is not about 'we have to' but about 'we want to'. To achieve this, the program holds each employee personally responsible for their own contribution to safety and ensures that safety can be discussed openly by all employees, regardless of their position. Five short and sharply formulated values with five supporting rules provide the framework aimed at preventing incidents. In just two years we have achieved a clear and very positive development in the safety

experience. Everyone in a management position has received training and dozens of *NINA* workshops have been given to employees on board our ships, on projects and in staff departments. *NINA* has been embraced and has become a household name both within our organization and beyond. Further embedding the program within the organization will be a matter of constant attention in the coming years.

The challenge lies in putting the *NINA* values and rules into practice. In the course of doing so we encounter dilemmas, for example how to incorporate our joint venture partners or subcontractors in this philosophy, but also how to deal with temporary and local employees on projects who have less safety awareness. And what to do when locally available equipment fails to meet our technical standards. Our objective is for clients and subcontractors to adopt the *NINA* approach to safety. We are deeply affected by the fact that two employees and an employee of a joint venture partner were fatally injured as a result of an accident in 2012. Our objective under all circumstances remains 'No Injuries, No Accidents'.



## PREVENTIVE REPORTING

Prevention is an important part of safety awareness. 2011 saw the wider introduction of so-called 'Safety Hazard Observation Cards' (SHOCs), which employees can use to report dangerous situations. The number of SHOC reports in 2012 amounted to 3,800 (2011: 4,900). In addition the number of 'near misses' amounted to 210. We consider SHOC and 'near misses' reports as a measure of the proactive safety experience within the organization. *NINA* encourages reporting on such situations to allow proactive adjustments to be made.

## WIDER ROLL-OUT OF *NINA*

The integration of SMIT was completed in 2012. The organizational structure is now clear and cooperation is developing in all areas. For a successful introduction of *NINA* the conditions must allow for sufficient calm and focus. The new Offshore Energy division, which combines various Boskalis and SMIT business units, is the first integrated business unit to have reached a point at which it is logical to implement *NINA* for former SMIT activities. The management systems are being harmonized and we have started conducting internal audits. In consultation with the business units we are making preparations for the introduction of *NINA* and adopting it as the shared approach to safety.

It is an advantage that Boskalis units within the Offshore Energy division already have two years' experience with the approach and the program; experience which we can put to good use.

## EMPLOYEE INVOLVEMENT AND TRAINING

We offer a wide range of opportunities to involve management and employees in our organization's safety thinking. All management team meetings devote extensive attention to the progress and challenges surrounding *NINA*. The Works Council has a Safety, Health, Wellbeing and Environment committee for whom *NINA* is a fixed agenda item.

Interactive *NINA* training courses and workshops provide employees with an opportunity to give their feedback on the program and share their experiences. *NINA* is a standard element of all Boskalis leadership training courses. We use a wide range of 'Lessons Learned' sessions, training courses and communication channels to keep attention focused on improving safety. Our employees can use [boskalis.com/nina](http://boskalis.com/nina) and the monthly '*NINA* at work' bulletins as a platform for sharing how they experience and apply *NINA* in practice and making suggestions for improvement.

All managers have now followed a *NINA* course, mainly focusing on the role of the manager in the context of *NINA* and how they can substantiate this. As a follow-up to this we are currently developing *NINA* 'The Experience', a training course for teams which provides an extra boost to a team's existing *NINA* approach. This involves bringing in external trainers and authors who engage in role play around a topic on which the team needs some support (for example communication, leadership, working together). The purpose of these exercises is to strengthen the team and review the shared objectives. In addition to the



regular *NINA* training courses, in 2012 a separate *NINA* facilitator's course was organized for 60 SHE-Q staff, during which they were able to share their experiences of the program.

Ongoing safety communication is also conducted by means of regular internal safety bulletins such as Safety Matters and Safety Newsflash as well as the various staff magazines.

### RISK ASSESSMENTS AND AUDITS

Our projects always kick off with a *NINA* start-up meeting. This involves setting a project-specific safety target together with the project team and discussing potential safety risks, how we intend to deal with these and how to keep *NINA* on the agenda. Attention is also focused on the project environment and how we can guarantee the safety of local residents. These meetings are attended not only by our own employees but in many cases also by the client's representatives and subcontractors.

In 2012 in Dredging we conducted 16 external and 25 internal SHE-Q audits of project and office organizations and 11 external and 30 internal ISM vessel audits of which *NINA* is a standard element. In addition, clients perform office and project audits within the business units.

### AWARDS

In 2012 Boskalis received various safety awards. The Angola LNG project received an award for 20 million manhours worked without an incident resulting in absence from work. Boskalis Westminster and SMIT UK received the 'RoSPA Gold Award' from the Royal Society for the Prevention of Accidents, in recognition of its high health and safety standards. An overview of our awards can be found in the appendix.

### CERTIFICATION

Certification is proof of our compliance with recognized safety standards. Almost all Boskalis business units are certified according to ISM, ISO 9001, ISO 14001 and OHSAS 18001 or VCA for our Dutch companies. For a list of the various certificates we hold, please refer to the appendix.

### AMBITION

Our ambition for 2013 is to introduce *NINA* at the Offshore Energy division as well as embedding it more deeply in the rest of the organization in a further push towards our ultimate objective of 'No Injuries No Accidents'.





# PERSONAL DEVELOPMENT

OUR SOCIAL PERFORMANCE

CSR 2012 – BOSKALIS



Trainees on Boskalis' Swinoujście project in Poland.



The broadening of our range of services brings with it new challenges in terms of innovation, project management, professional techniques, safety, commercial skills, contractual knowledge and cooperation. That is why investing in developing our employees' skills is one of the key objectives of our corporate strategy. Boskalis has an extensive program of instruction and training courses to help employees master or further develop new skills or competences (see inset in this section). The full program is included in a training guide, which is available globally. This enables our employees to grow with the company as it develops.

The cycle of career development and performance reviews enables us to keep a close eye on the developmental potential of our entire staff population as well as the development of individual staff members. Interviews are held with each member of staff at least once every two years, with management responsible for ensuring these are conducted when due.

### **KNOWLEDGE SHARING**

In addition to training and education we consider mutual knowledge sharing as an important development path. We use ICT support systems to foster knowledge sharing through participation in international internal networks.

In developing and sharing knowledge we make active use of the expertise in our company. A series of courses are given by members of our own staff, including 'Dredging for non-dredgers' and 'Finance for non-financials'. Similar courses are being set up for the activities newly added to the organization. In addition, we ask our own people to talk to new employees about our company during induction days. The induction course is also available in an e-learning format.

### **MANAGEMENT DEVELOPMENT**

Boskalis leads the sector in terms of targeted management development programs. Most of those taking part in these programs are coached by an experienced manager within the Boskalis organization. These programs feature master classes on specific practical subjects, given by our own professionals.

We also focus on the management of the fleet. In 2012 a group of captains and master mechanics followed the final module of the Boskalis Maritime Development Program. A group of talented first officers once again followed the Boskalis Maritime Leadership Course, which is given in English to an international group of participants.

### **EXPANDING THE TRAINING MATRIX TO OFFSHORE ENERGY**

We are working on the expansion of the training program for our offshore energy activities, a sector which imposes specific demands in terms of expertise and safety. The training matrix has been adapted to reflect this. The number of safety training courses trebled in 2012 compared to 2011. Surveyors working for the Offshore Energy division are taking part in a development program to brush up their expertise. In 2013 we are taking on a group of university and vocational graduates with three to five years' work experience. These candidates will complete a condensed training program to enable their rapid and broad deployment on operational duties in the Offshore Energy segment.

### **NEW PROFESSIONAL TRAINING COURSES**

In order to be able to keep meeting the needs of the business, we have developed a special two-year training course in Cost Engineering in cooperation with the Dutch-based HAN University of Applied Sciences. On this course a group of eight prospective cost engineers will learn how to budget large-scale works for all our disciplines. In two years' time these employees will be ready to work on our various projects. The Financial Development Course we developed for the financial discipline was used in 2012 to train 14 controllers on aspects relating to our wider package of services.

### **TRAINEE PROGRAM**

We also dip into our own talent pool to actively promote internal advancement. Boskalis offers places to trainees who are trained within the company under the guidance of a mentor. All kinds of relevant aspects are dealt with; the trainees are introduced to a wide range of our business activities as well as following training modules aimed at enriching their knowledge and developing their personal skills. In 2012 a total of 58 trainees followed this program, including project workers, project controllers and surveyors.

## HR CONDITIONS

We offer competitive conditions globally which exceed the standards set by the International Transport Workers' Federation. Over half of our employees are covered by a CLA, including most of our maritime and project workers. Corporate and operational staff are covered by separate agreements prepared in consultation with the Works Council.

In 2012 much attention was focused on aligning HR conditions at SMIT with those at Boskalis. We cover this in greater detail on pages 43 of our Annual Report 2012.

Our staff can rely on a good retirement provision. We operate various pension plans, detailed information on which can be found in the list of 'Defined benefit pension schemes' on pages 94-97 of our Annual Report 2012.

In 2012 we made an additional voluntary commitment of EUR 25 million to the Boskalis pension fund in order to increase its funding ratio and prevent pension benefits from being cut.

## HEALTH AND VITALITY

Boskalis is certified under the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW). New rules regarding working conditions, safety and training of maritime staff were established in 2010. Boskalis conforms to these rules and is audited for them annually. In the interests of the safety and wellbeing of our crews, Boskalis previously applied a shift pattern of eight hours on, eight hours off. The new STCW rules prescribe a rota of 12 hours on, 12 hours off and we have adapted our shift patterns accordingly.



Fatigue is a key point of focus, particularly following the revision of guidelines by the STCW. Fatigue is always a feature of the risk analyses of our works and we make sure that shifts include enough variety to allow people to keep feeling fit and energetic enough to perform their duties.

Boskalis developed a malaria prevention policy in 2011 and operates an AIDS prevention program (please refer to page 33 of our 2011 CSR Report).

The rise in the pension age is cause to pay more attention to employees in physically demanding jobs. In 2012 we launched a project with the trade unions to look at how we can protect the health and vitality of this group on their way to retirement. In collaboration with the unions and with the Havenziekenhuis hospital in the Netherlands, we also want to work on promoting a healthy lifestyle for our employees on board of ships. In 2013 we shall conduct pilots with the Energetic Working course.

## INTEGRITY

Boskalis applies certain standards and values, set out in our Statement of General Business Principles, which everyone must abide by. We provide our staff with targeted information

regarding the risks associated with bribery and corruption, also taking into account regulations and legislation such as those stipulated in the UK Bribery Act.

Boskalis has appointed a confidential counselor, to whom employees can report any alleged irregularities of a general, operational or financial nature within the company, without jeopardizing their legal position. Staff may consult the confidential counselor with regard to inappropriate conduct in areas including theft, fraud, vandalism, corruption, discrimination, bullying, (sexual) harassment, unsafe working situations and environmental damage.

The confidential counselor is bound by a duty of confidentiality and operates independently within the organization. In a confidential session the counselor and the employee involved will together decide whether action needs to be taken and, if so, what course of action is necessary or desirable. The confidential counselor is able to launch an investigation aimed at clarifying the report and preventing inappropriate conduct in the future. The confidential counselor was consulted three times during 2012.





# ORGANIZATION AND PROFILE

Human Resources (HR) is directly accountable to the chairman of the Board of Management, who delegates policy-based and operational duties to the HR Director.

## EMPLOYEE BASE

At the end of 2012 the total number of people employed by the group was 15,653 (2011: 13,935), including our share in associate companies.

As a minority holding the share of Archirodon has not been taken into consideration in the further analysis.

Although the total number of employees is relatively stable, larger fluctuations are visible at country level. These differences are mainly caused by the fact that project activities in countries wax and wane from year to year.

## CONTRACT TYPE

Of our employees 68% have a permanent appointment. This provides Boskalis with a strong basis for the continuity of its activities and ensures that knowledge and experience are solidly embedded within the organization.

Temporary and project contracts enable Boskalis to move with the dynamics of the various markets and the size of projects around the world.

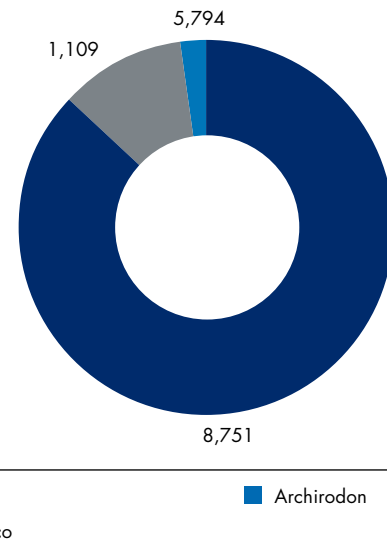
Particularly in countries where we are engaged in a lot of projects, such as Australia and Brazil, the number of temporary contracts is relatively high (81% and 91% respectively at Dredging in 2012).

## DIVERSITY

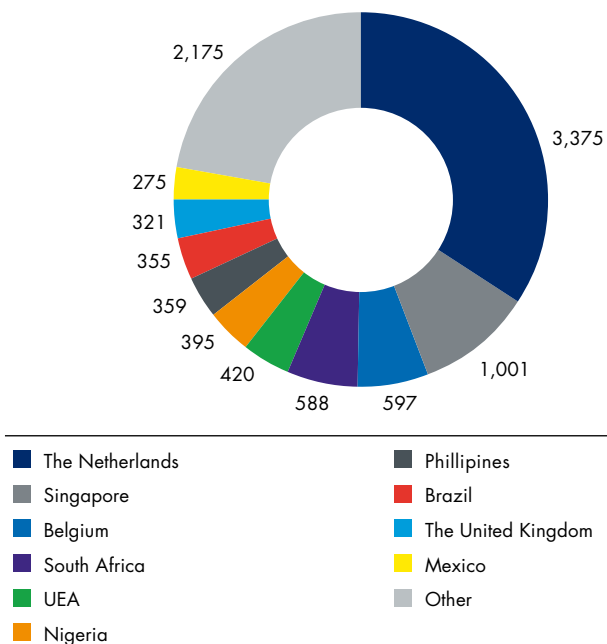
The international character of Boskalis is reflected in things such as the many different nationalities of our employees. We employ people from 80 countries, with concentrations in Europe, South Africa and Singapore.

We employ a relatively large number of men and relatively few part-time staff. The ratios of men to women and of full-time to part-time staff at Boskalis reflect the nature of our work. We are to a large extent a project organization that sends trained technical, financial and maritime staff all over the world for longer periods of time to projects which tend to be in remote locations. Deployment to projects has proved to be a less attractive option for part-time staff and women, who are more inclined to choose a job which is office-based over one on the fleet or on a project. In addition, the number of women who complete a technical or maritime course each year remains small. The percentages of men and women in 2012 were 92% and 8% respectively, this is in line with 2011. In 2012 the ratio of men to women was 72%-28% for management and office staff working at the Boskalis head office. The percentage of part-time workers in 2012 was 22%.

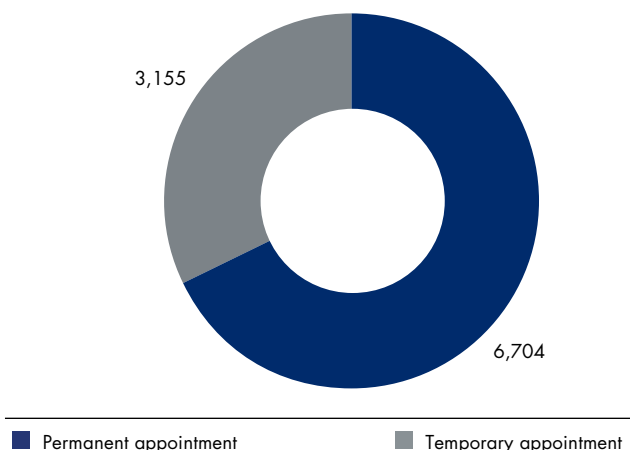
## WORKFORCE INCLUDING OUR SHARE IN ASSOCIATE COMPANIES



## NUMBER OF EMPLOYEES BY COUNTRY



## TYPE OF EMPLOYMENT CONTRACT





**AGE PROFILE**

Boskalis has a balanced age profile. Almost three-quarters of our employees are under 50, with over half (55%) being in the 30-50 age category. This age distribution provides a good level of staffing for positions at junior, medior and senior level, as well as resulting in a manageable outflow of staff due to retirement.

**JOB CATEGORIES**

As in previous years the ratio of operational staff (fleet, yards and projects) to management and office support staff remained stable at 79%-21%. This ratio is in line with the character of the company and the nature of the activities and equipment deployed. Proportionately the most managers and support staff work at head office in the Netherlands.

**STAFF TURNOVER**

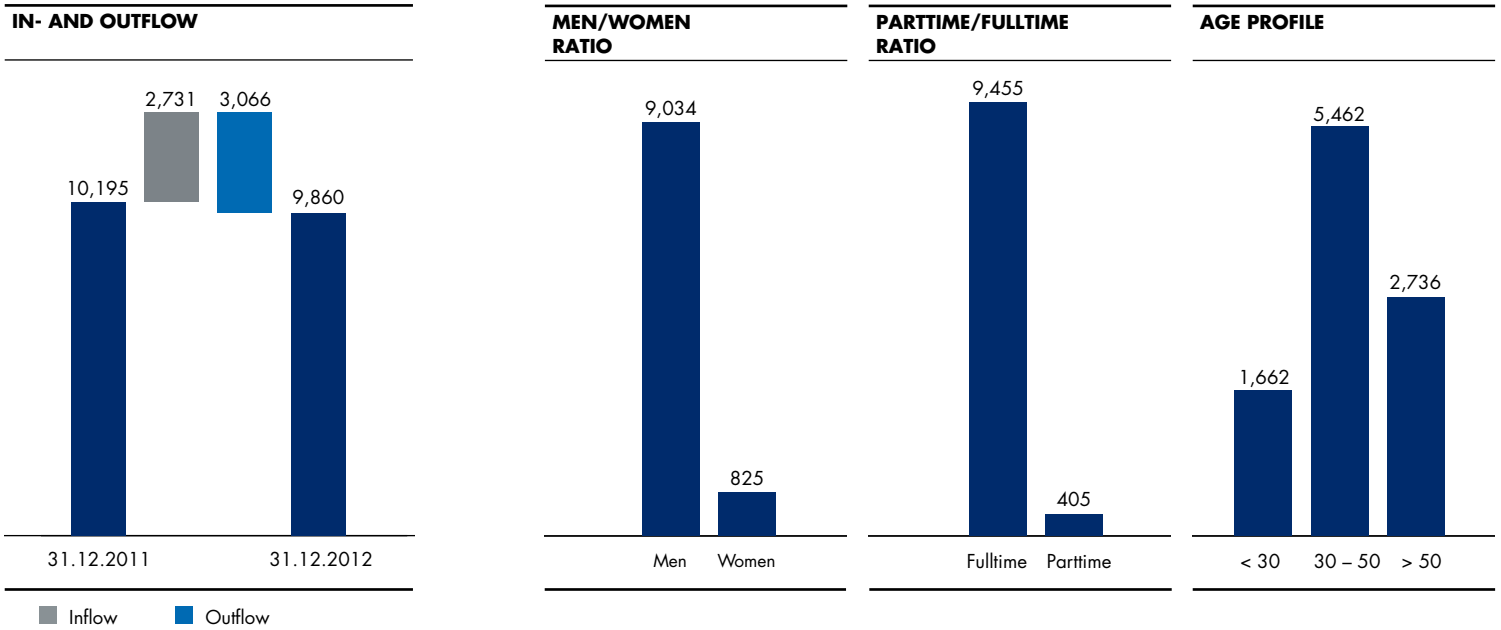
We were able to welcome 2,731 new employees in 2012, while 3,066 employees left Boskalis. This apparently high rate of staff turnover is largely accounted for by the sale of the SMIT Terminals activities to Lamnalco; this led to 371 employees leaving the

company and joining Smit Lamnalco (50% interest). The project-based nature of our activities, which sometimes involves several contracts being signed with the same person in the same year, also gives the impression of high staff turnover, whilst in actual fact it is at a very manageable level. Staff turnover figures are significantly lower for activities of a structural and long-term nature.

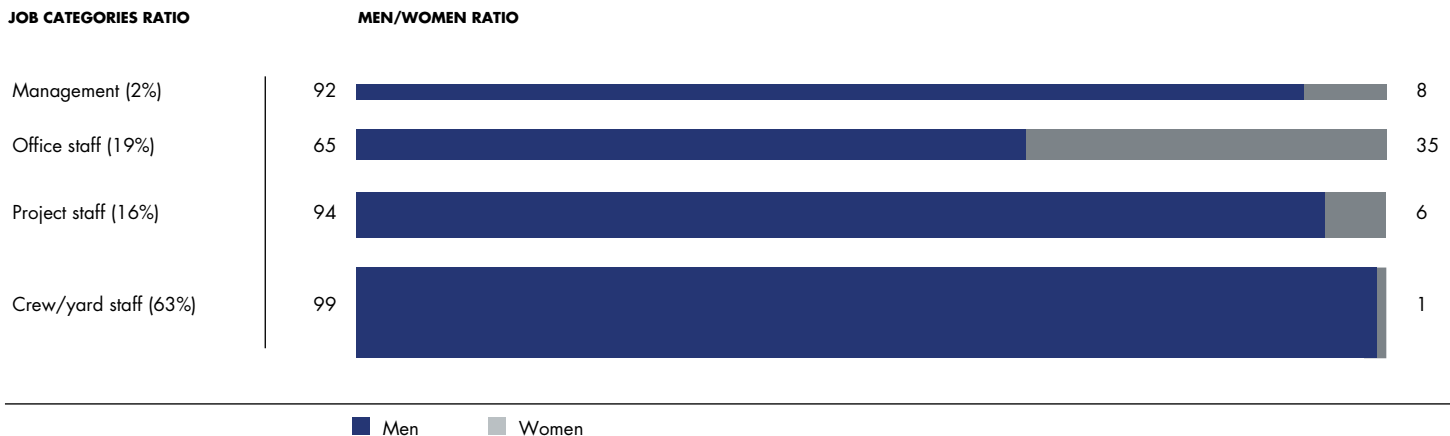
**RECRUITMENT**

To ensure we will still be able to access sufficient talented and qualified staff in the future we maintain good relationships with various knowledge institutes. In addition to attending the relevant recruitment fairs we are also increasingly broadening our presence online and via social media. A good CSR reputation has a positive effect on our ability to attract qualified staff. All the information about working for Boskalis can be found on our corporate website [www.boskalis.com/careers](http://www.boskalis.com/careers).

A detailed overview of figures and percentages can be found in the HR tables in the appendix.



**JOB CATEGORIES MEN/WOMAN RATIO IN 2012 (IN %)**



# KNOWLEDGE SHARING IN THE CHAIN: UNIQUE RESEARCH INTO PHYSICAL BEHAVIOR OF PEAT

Boskalis encourages employees in their personal development, not just through our extensive training program but also in extraordinary situations, as Hydronic engineer François Mathijssen has been finding out. At Boskalis' request he is conducting a unique doctoral research project into the behavior of organic soil and peat in particular. The knowledge gained through this research will be shared with our chain partners involved.

Boskalis has built its name on working with soil. Knowledge of soil behavior is essential to making more accurate assessments of opportunities and risks, both for conventional projects but certainly also for the growing number of Design, Construct & Maintenance projects. This is of particular importance in regions with very soft organic subsoil conditions, such as in the Western part of the Netherlands and other deltaic regions in the world. Hydronic, Boskalis' own engineering consultancy, gained a vast amount of experience and conducts a lot of research into the behavior of sand and clay soils and has developed models for this. Unfortunately, to date no appropriate material model for the prediction of the behavior of organic soil and peat in particular exists. Through this research this is about to change.

## PIONEERING

The research being conducted by François Mathijssen is pioneering work given that the market considered the measurement and prediction of peat soil behaviour to be an



Working with soil is what Boskalis built its name on. The extension of the A1/A6 motorway between Schiphol-Amsterdam-Almere is an example of this. Execution of this sizeable Design/Build/Finance/Maintenance project will start in 2013.

impossible task. This was mainly because no one had succeeded in developing the right measuring equipment. François was able to achieve this breakthrough thanks to the excellent collaboration he managed to build up with research partners both at home and abroad. "This particular research topic opened doors in the international geotechnical network, while the complexity of the subject generated almost immediate positive interest", the doctoral student explained. The collaboration with GDS Instruments Ltd and Cambridge Insitu on the development of a unique piece of equipment (axial shear apparatus) is particularly special. "This particular device is multifunctional and enables us for instance to measure the directional dependence of the strength and deformation of organic soil. This aspect is extremely important since these measurements allow us to describe how this soil behaves", François explained. "The fact that we were able to develop such a novel piece of equipment is a fantastic success." Things have moved on from just measuring and testing, with Boskalis already making active use of the knowledge gained from this research, François explained. "Precisely because of the fundamental and broad nature of the subject, the additional possibilities for application are much greater than initially foreseen. Both Boskalis and I personally are investing in this research and we are both benefitting from it."

## BROAD SUPPORT

The research was not always plain sailing. "Whilst it has been a process of trial and error, the fundamental importance of the research definitely ensures that you keep looking tirelessly for solutions whenever you are faced with another obstacle on the road," said François. "It was important that I felt that I had broad backing right from the start, both from Boskalis and from my international partners. The backing of my promotor, Prof. Dr. Frans Molenkamp, is particularly significant. Having such a heavyweight as a promotor means you have to push hard to keep up, but the personal connection between us makes me feel extremely

privileged and I think we make a good team." He finds the strong involvement of many people in a range of positions at Boskalis hugely stimulating and touching. "What apparently appeals is that we are moving boundaries in a specific and above all recognizable and challenging area, whilst sharing the passion for our profession – building on and with soil."

## BOSKALIS AS MAIN SPONSOR

François launched the study with financial support from Boskalis, Delft University of Technology and a subsidy from Dutch government agency SenterNovem. Boskalis also supports the research in other ways. A sample storage room and a climate room with special protection against power fluctuations have been installed at the head office in Papendrecht, and various departments provide tailor-made support. François is also given the time he needs for conducting his research. "I am doing this research alongside my normal work at Boskalis. I put in long working weeks, spending an average of two to three days on commercial projects and the rest on research. It's quite a challenge."

## SHARING KNOWLEDGE AND KNOWING WHAT TO DO WITH IT

François hopes to defend his public thesis on the 'directional dependence of strength and deformation of organic soil' in 2013. "Boskalis is regarded with amazement and admiration, particularly from abroad, for supporting my research in this way. One question that crops up frequently is whether Boskalis does not object to the research results being made public. We thought about this carefully when we started and reached the unanimous conclusion that you can't apply something new without supplying the proof to go with it. Knowledge can and should never be a hindrance or a threat, it's all about what you do with it."



François Mathijssen next to the axial shear apparatus.

## WORKING TOGETHER AND SHARING KNOWLEDGE IN THE CHAIN

Over the years the list of partners in this research has grown enormously. These partners variously made equipment available free of charge, provided on-site training and supported field research.

Universities Delft University of Technology, Université Laval (Canada), University College Dublin (Ireland), University of Loughborough (UK), ETH – Zurich (Switzerland), Glasgow University/ Strathclyde University (UK), Utrecht University (Netherlands)

Knowledge institutes Deltares, NGI

Government services Chemical laboratory OMEGAM, Rotterdam public works department

Business sector GDS Instruments ltd, Cambridge Insitu, Fugro, Lankelma UK

Consortia N11 and A2 HoMa





We distributed 2,000 mosquito nets in Nigeria together with the NGO Family Care Association, our partner on the malaria prevention program.



# OUR SOCIETAL PERFORMANCE

---

**42**      **POLICY AND OBJECTIVES**

---

**43**      **SUPPORTING LOCAL  
COMMUNITIES**

---

**45**      **INVESTING IN EDUCATION  
AND KNOWLEDGE TRANSFER**

---

**46**      **SOCIETAL SPONSORSHIP  
AND DONATIONS**

# POLICY AND OBJECTIVES

With our primary activities we seek to bring sustainable solutions to the maritime coastal and delta regions of the world and contribute towards a region's economic development and safety. In addition where possible we support local communities, engage in social sponsorship and donations, and invest in education and knowledge transfer.

Boskalis accepts responsibility for matters which lie within its sphere of influence. In the countries where Boskalis operates, national legislation and regulations apply. Boskalis refrains from cultural judgements and conducts itself as a good citizen or a guest.

Our Statement of General Business Principles declares that we do not do business in countries which are subject to international and relevant national embargoes. We do not accept, pay or request bribes or other favors for the purpose of acquiring or bestowing any improper business, financial or personal advantage. As an international employer and provider of services we respect the provisions on human rights as set out in the United Nations Universal Declaration of Human Rights. For the full version of our Statement of General Business Principles – and our Supplier Code of Conduct which is derived from it – please refer to our corporate website [www.boskalis.com/csr](http://www.boskalis.com/csr).



# SUPPORTING LOCAL COMMUNITIES

Our activities affect the local communities in which we operate and we seek to build support for the work that we execute. We devote ample attention to environment management, and actively involve local residents, officials and NGOs in the planning and implementation of our projects. Our approach is exemplified by the Nederrijn project in the Netherlands, which is featured on pages 48-49.

Our industry is capital and knowledge intensive and in light of this we impose strict quality requirements on all our employees and suppliers. Where possible we source equipment locally and hire local workers, investing in training to enable them to meet our quality requirements. This applies mainly to long-term projects or in regions where we have a virtually permanent presence.

Our people at our offices and on our projects develop initiatives that we support wholeheartedly and which are encouraged by the Board of Management. These include donating safety bonuses to local good causes and contributions to healthcare, education and infrastructure. Examples of such contributions to local communities in 2012 include the malaria prevention project with the NGO Family Care Association and the Socio-Economic Development (SED) program in Africa.



Distribution of mosquito nets in Ondo, Nigeria.



**MALARIA PREVENTION PROGRAM WITH NGO FAMILY CARE ASSOCIATION**

In 2011 our Nigerian subsidiary Nigeria Westminster Dredging and Marine Limited, in collaboration with the NGO Family Care Association (FCA), executed a Malaria Control and Prevention Project under the umbrella of the Nigeria Malaria Control and Prevention Programme. The program, which took place in Ilaje LGA, Ondo state, was managed by a team of FCA medical professionals, volunteers and project coordinators and reached out to the riverine communities of Igbokoda, Ugbonlo, Aiyetoro and Ilowo. These communities face malaria on a daily basis. The main purpose of the program was to reduce the malaria burden within the target communities by providing information and raising malaria awareness through campaigns, seminars and lectures. Two hundred community health workers, nurses, pharmacists and medical personnel from within the LGA received training and certification in malaria prevention and control, with over 3,000 community agents also being trained. Another key aspect of the program was the distribution of 2,000 LLINs (Long-Lasting Insecticidal Nets), preventive malaria medication, free Rapid Diagnostic Tests for malaria and free ACT medication for those who tested positive for malaria, with emphasis on pregnant women and children under five.

To ascertain the effectiveness of the program, FCA conducted extensive monitoring and evaluation of the program and prevalence of malaria in the communities prior to and after each malaria intervention campaign. This entailed house-to-house visitation: with appropriate permission the FCA-trained volunteers

entered the various rooms of the focus group’s houses to check if the LLINs (mosquito bed-nets) were mounted and were actually in use. If the LLIN was not in use, possible reasons for not using the net were also obtained. In some cases, the FCA volunteers assisted in mounting the nets.

During the follow-up visits in 2012, nearly 75% of households in Rivers State and over 87% in Ondo state that received nets were found to be using them correctly and consistently.

A comparison between individual’s using LLINs in an appropriate manner and members in the same community that are not using LLINs showed the malaria prevalence rate was reduced by nearly half among those using the nets. This significant reduction in the malaria prevalence has a major positive effect on the health and economic wellbeing of the communities.

**SOCIO-ECONOMIC DEVELOPMENT PROGRAM OF SMIT AMANDLA MARINE**

In 2012 SMIT Amandla Marine’s Socio-Economic Development (SED) focus remained on programs in South Africa that provide access to the economy for previously disadvantaged black\* South Africans. SMIT has entered into multi-year partnerships with a number of accredited educational and community-based organizations in South Africa to provide educational support and also to promote the maritime industry, which is key to creating a talent pipeline for the industry.

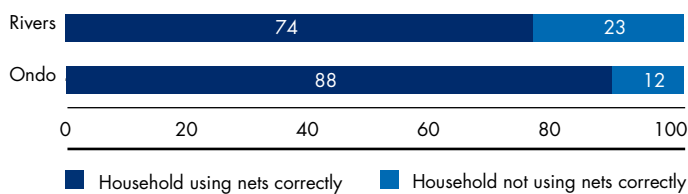
Some of the results achieved in 2012 included:

- 31 scholarships for primary, secondary and tertiary education awarded to children of lower-income employees;
- 10 black\* South Africans received sponsored training for access to the formal maritime sector in Mossel Bay with a >25t Skippers training course and all ancillary training;
- more than 150 black\* South African subsistence fishermen active on the West Coast of South Africa received training that enables them to legally operate their fishing boats during the fishing season;
- 2 black\* South Africans in their first year of maritime studies and maritime engineering at South African Universities of Technology received full scholarships for tertiary education;
- bursaries for learners at Lawhill Maritime Centre were awarded through a donation to Simon’s Town High School in Cape Town;

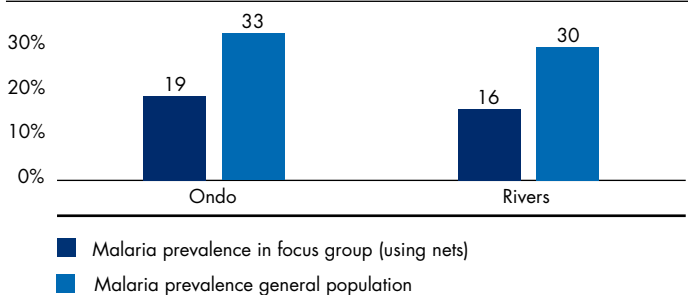
All of the SED activities are carried out under the requirements of the Broad-Based Black Economic Empowerment Act and are subject to an annual B-BBEE verification audit.

\* The term ‘black’ refers to African, Coloured and Indian South Africans who were previously disadvantaged under the Apartheid regime in South Africa.

**HOUSEHOLDS USING MOSQUITO NETS CORRECTLY (percentage value)**



**MALARIA PREVALENCE CHART (percentage value)**



# INVESTING IN EDUCATION AND KNOWLEDGE TRANSFER

Boskalis has a long tradition of supporting scientific research relevant to our sector. We engage both individually and at sector level in (fundamental) research in conjunction with knowledge institutes and universities, as well as sharing knowledge through lectures and presentations.

This also applies to the knowledge gained from the Building with Nature program, in which 19 doctoral students are involved. We communicate this information to universities and higher vocational training institutes through various readerships, guest lecturer positions and courses. In addition, Boskalis supports a number of doctorate research projects at Delft University of Technology, for example our employee François Mathijssen's research into the mechanical behavior of peat soil. You can read more about this on pages 38-39.

Boskalis also supervises interns, final-year students and doctorate students (95 in 2012). In addition we co-fund a Chair of Dredging Technology at Delft University of Technology, as well as supplying a scientific officer.

2011 saw the establishment of a dual lecturership between Delft University of Technology and Wageningen University, aimed at giving more structure to the innovation and broadening of the discipline. Both universities embrace this innovation initiated by Boskalis.



Information session on malaria prevention for local health workers in Ilafe, Nigeria.

# SOCIAL SPONSORSHIP AND DONATIONS



We found a great destination for the remnants of the RBW1910 clothing line in Nigeria and Suriname.

Social sponsorship and donations form an inextricable component of our CSR policy, with our selection of causes focusing on those which are most clearly associated with our core activities. The central theme is water.

For many years we have had an association with the Royal Netherlands Sea Rescue Institution (KNRM - [www.knrm.nl](http://www.knrm.nl)). As well as supporting the KNRM financially we introduce our employees and their families to the important task it performs. We organized two such 'Family Days' in 2012.

Team Boskalis ([www.teamboskalis.com](http://www.teamboskalis.com)) is our way of giving young competitive sailors the opportunity to join the best in the world by providing them with active coaching by experienced sailors and supporting them with resources. In 2012 Team Boskalis once again achieved various successes in international competitions.

Designed in 2007 to reflect Boskalis' maritime links, the RBW1910 clothing line, available from our website, was in need of updating. We found a great destination for the remnants of the stock in 2012 by donating it to schoolchildren and the residents of various care homes and orphanages in Suriname and Nigeria. In Suriname the necessary contacts were made by employees working on our Project Lelydorp 1, while in Nigeria we called on the NGO Family Care Association to help.

In the cultural field we support the 'Waterwerken' (Waterworks) project of sculptor Ruud Kuijer ([www.ruudkuijer.nl](http://www.ruudkuijer.nl)) whose concrete sculptures are linked to water, sand, transport and industry. In late 2012 Kuijer finished his Waterwerk VII sculpture, the last of the seven large sculptures that together make up the 'Waterwerken' project installed along the Amsterdam-Rhine Canal in the Netherlands. The sculpture, positioned at the crossroads of the international water and rail link connecting Amsterdam and Basle, was unveiled in March 2013.

For a detailed description of our sponsorship policy and a summary of our donation and sponsorship results in 2012, please refer to the corporate website [www.boskalis.com/sponsorship](http://www.boskalis.com/sponsorship).





010  
5010

Dredging & Marine Experts

**Boskalis**

F18

NAERVA  
FIB

**Boskalis**



# ALL INTERESTS ALIGNED ALONG THE LOWER RHINE

Building support at an early stage is crucial to the smooth progress of infrastructure projects. This certainly applies to the case for the large-scale Room for the River program. The Dutch government has set a hard deadline of 2015 for the Dutch river region to comply with safety standards again. Intensive contact with all stakeholders is needed to get their backing for the plans so that these can be realized without delays.

| CASE



| CSR 2012 – BOSKALIS

Boskalis is involved in another Room for the River project in Deventer, the Netherlands.

The Dutch Department of Public Works has put Boskalis in charge of integrated project management, including environment management, for the Lower Rhine project, part of the Room for the River program. The project involves adapting four flood plains along the Lower Rhine. The integration of the planning study, design and execution in a single contract is a first for the aquatic hydraulic engineering sector. Boskalis is able to demonstrate its added value and expertise at all these stages, taking a large amount of work out of the Department's hands.

### **BUILDING AND RETAINING SUPPORT**

"Boskalis came through the selection process with flying colors. They were easily the best party in terms of quality as well as offering the lowest price," confirmed Marita Cals, environment manager at the Department of Public Works. "They also managed to convince us that they would be able to build and retain sufficient support in the area. We had already built up many contacts and relationships with stakeholders here in order to arrive at a preferred design. We didn't want to just throw these relationships overboard when we handed over control."

### **NO DELAYS**

The Department of Public Works will consider the project a success if it is realized within the agreed timescale and budget and with the consent of all relevant parties involved. While time and money can be judged objectively, support is more complicated. One measurable benchmark for support is the number of opinions submitted and especially whether people lodge objections and appeals with the Council of State. These have a direct impact on the time schedule. "The tensest time is the period in the run-up to execution," explained Cals. "In the flood plains you have to allow both for high water periods and the nesting season in the spring. We can't work during these periods. If we are unable to get started before the high water, we lose almost a year. This puts the pressure on. Which is why it is very important to get the permits arranged in good time and avoid appeals."

### **INTENSIVE CONSULTATION WITH STAKEHOLDERS**

The project was awarded to Boskalis in May 2011. The Department of Public Works and the Boskalis team used the summer period for the handover of duties. This was followed by a period of intensive consultation with all the stakeholders. "Boskalis has continued the dialogue with groups of government officials, administrators and local residents," said Cals. "The Room for the River program also includes regeneration of the natural environment. If you want to establish a bird reserve this could be at odds with recreational access to the area. To ensure these interests were properly aligned Boskalis also consulted with representatives of these target groups."

### **CLEAR AND TRANSPARENT**

"Boskalis spoke with all the parties and explained how they want to approach the project. Very hands-on and involving a great deal of personal contact. What was important was that they indicated clearly where there was room for change or improvement, and provided arguments where that room did not exist. The clarity that they conveyed right from the start has been greatly appreciated by everyone involved. Boskalis has shown that it has a clear understanding of the practical concerns and acknowledges the various interests. In consultation with the stakeholders the final design was realized pretty quickly. Boskalis took this up with great alacrity." Cals is very satisfied with the cooperation. "Hats off and compliments for the clarity, transparency and efficiency shown towards the stakeholders. And for the feedback provided to us. We know what to expect from each other."

### **CLOSE CONSULTATION AVOIDS PROCEEDINGS**

The Tollewaard is one of the flood plains undergoing redevelopment as part of the Lower Rhine project. The flood plain includes two mounds which have large businesses built on top. The need to do something about the high water level is apparent, given that heavy goods vehicles can barely reach these businesses when the water is high. However, the provisional design provided for just one high-water bridge to the eastern mound: a solution that worked fine for animal feed processor Van Tuijl, but much less so for his next-door neighbor, a large contracting firm with its premises on the western mound. In the course of several sessions Boskalis exchanged ideas and wishes with representatives of all the local residents. Van Tuijl: "This consultation produced a plan that everyone is happy with. There is going to be one, longer high-water bridge to the western mound, while the access road to the eastern mound will be leveled and rebuilt at a slightly different location. This will allow both companies to remain accessible. The design of the road has also been adapted to limit nuisance from our trucks for residents living along the dike."

Boskalis successfully defended this more expensive option to the Department of Public Works. The consideration that the plan enjoyed broad support among all parties involved and so would not give rise to proceedings was the deciding factor, with the Department judging this to be worth the extra cost. Van Tuijl is also satisfied. "The interaction between Boskalis, the contacts and the information providers all went smoothly."







# OUR ENVIRONMENTAL PERFORMANCE

---

**52**      **POLICY AND OBJECTIVES**

---

**53**      **ENVIRONMENTAL EXPERTISE**

---

**58**      **ENVIRONMENTALLY  
FRIENDLY EQUIPMENT**

---

**62**      **FUEL AND ENERGY  
CONSUMPTION**

# POLICY AND OBJECTIVES

We always seek to achieve the optimum balance between economic and ecological values in our projects and contracts. Our environmental policy has been translated into clear and practical guidelines so that it is easy to implement in our everyday work. We strive to continually improve our environmental performance, as is evidenced by our ISO 14001 certification, the international standard for environmental management.

Our objectives are targeted at the aspects where we can add the most value: the further expansion of our environmental expertise, the provision of eco-dynamic designs and the ongoing investment in and deployment of environmentally friendly equipment.

## DIALOGUE AND COOPERATION IN THE CHAIN

### • NATIONAL AND INTERNATIONAL INDUSTRY ASSOCIATIONS

The International Maritime Organization (IMO) sets rules aimed at further reducing emissions from shipping, while the EU Marine Strategy Framework Directive also imposes various measures for the reduction of maritime emissions. At the same time several large ports around the world have introduced the Environmental Ship Index. These ports reward cleaner ships with discounts on the port dues.

We consult with the authorities on these matters via national and international industry associations, such as the European Dredging Association (EuDA) and the Dutch Association of Hydraulic Engineers, as well as contributing our technical knowledge towards making emissions measurable. In 2012 we continued to work at EuDA level on the development of an industry-specific model for calculating carbon dioxide emissions. In doing so we seek to work towards realistic regulations for our industry that are broadly supported.

### • SUPPLIERS

We exchange ideas with various suppliers, pooling innovations in order to realize joint cost reductions and make the chain more

sustainable. Examples in 2012 include the use of GTL to fuel our dry earth-moving equipment in densely populated and urban areas, and the recycling of worn-out pump casings, impellers and floating pipelines.

### • KNOWLEDGE INSTITUTES

In order to maintain our leading role we invest in fundamental and applied research on an ongoing basis. One example of this is research initiated at Dutch research institute MARIN into adapting the trim on trailing suction hopper dredgers. The objective is to reduce emissions by minimizing resistance when sailing empty. SMIT and Smit Lamnalco participate in, and frequently also initiate, partnerships aimed specifically at conducting research into reducing the environmental impact of tugboat operations. Such Joint Industry Projects (JIPs) include representation from partners in the maritime industry as well as research institutes.

### • NGOs

Where possible we collaborate with NGOs to make our chain more sustainable. An example in 2012 was the initiative we are developing in consultation with Dutch NGO the North Sea foundation aimed at an even more sustainable way of dismantling of our ships.

### • EMPLOYEES

Raising awareness amongst our people is an important success factor. In light of this we have for example installed an energy management program on our ships and are developing a training program along with the NGO Pro Sea to raise awareness of the value of nature and the sea amongst our crew members. We have established two taskforces to make our expertise more accessible to our people and to better enable us to pool knowledge and best practices.



# ENVIRONMENTAL EXPERTISE

We are renowned in the market for our environmental expertise, which is supported by over 100 experts in our R&D and other departments as well as the engineers and ecologists from our own engineering consultancy Hydronic. In order to maintain our leading role, we invest in fundamental and applied research on an ongoing basis. The innovative Building with Nature program allows us to demonstrate that it is possible to develop hydraulic engineering infrastructure and at the same time create opportunities for nature and the environment.



Our research focuses on reducing emissions and mitigating turbidity during dredging projects. Turbidity is caused by the seabed being churned up during dredging activities, which results in a temporary reduction in the incidence of light in the water; this can be harmful to underwater animal and plant life. Innovations in equipment and working methods and the development of advanced projection models and monitoring programs enable us to limit turbidity so that the work can be carried out according to specification and in compliance with the relevant environmental requirements.

SMIT Salvage has been instrumental in developing new solutions for the safe, pollution-free removal of liquid cargo and bunkers from ship wrecks. Hot-tap technology enables the spill-free extraction of fluids from vessels which have run aground or sunk at depths of up to some 250 meters. The technology has been successfully applied on vessels including the cruiseliner Costa Concordia, which ran aground off the coast of Italy in 2012. The POLREC system is used for the environmentally safe removal of oil and chemicals from vessels which have sunk at depths of up to 500 meters. The system uses a ROLS unit (Remote-operated



The Sand Motor in 2012

Offloading System), obviating the need for divers. A new version is under development which will allow the system to work at even greater depths of around 1,000 meters in the future.

Remediation of contaminated land and waterbeds is the area of expertise of Boskalis Environmental ([boskalis.com/environmental](http://boskalis.com/environmental)). The company uses in-house developed techniques and soil washing plants to execute noteworthy remediation projects around the world, whereby it seeks to re-use as much material as possible after processing.

## **ECO-ENGINEERING: PRESERVATION/REINFORCEMENT OF ECOSYSTEMS AND BIODIVERSITY**

Deltas and coastal regions around the world are increasingly rapidly becoming the focus of urbanization and economic development, and expectations are that in 2050 around half of the global population will be living in these areas. The ecosystems of these areas are extremely important from both an economic and an ecological point of view and are crucial to our food supply. Climate change and more extreme weather mean that the sustainable socio-economic development of deltas and coastal regions is a challenge. How do we cope with rising sea levels, subsidence, hurricanes and higher water levels in our rivers?

## **BUILDING WITH NATURE**

New challenges call for an innovative approach. Boskalis is one of the initiators of the Building with Nature innovation program, phase 1 of which was executed in 2008-2012 by the EcoShape consortium and involved a total investment of EUR 30 million.

The consortium consists of private-sector partners, equipment suppliers, engineering consultancies, the public sector, (applied) research institutes and universities.

The purpose of the program is to demonstrate that it can be done: developing hydraulic engineering infrastructure and at the same time creating opportunities for nature and the environment.

We do so by basing our design on the dynamics of the natural environment. We call this Building with Nature.

## **Knowledge development and knowledge sharing**

Phase 1 of the Building with Nature program was all about knowledge development and its objectives were as follows:

- Gathering and developing knowledge of ecosystems to enable the Building with Nature philosophy to be put into practice. Focus is on the dynamic interaction between biotic and abiotic\* components in ecosystems and the (their) response to human activity.
- Developing scientifically founded and location-specific design rules and environmental standards.
- Developing expertise in applying the Building with Nature concept.
- Demonstrating that Building with Nature solutions work, using practical examples by building a portfolio of Building with Nature solutions to serve as a source of inspiration for future designs.
- Investigating how the social decision-making process and the interaction with all the stakeholders regarding the acceptance of the Building with Nature concept can be positively influenced.

## **Noteworthy results**

In our home market of the Netherlands the program has already produced various noteworthy results, such as the environmentally friendly extraction of sand on the Maasvlakte 2 project and the Sand Motor, an innovative way of protecting the Dutch coastline which delivers added value for nature and recreation. You can read more about this in our CSR reports of 2010 (pages 76-79) and 2011 (page 49). The pilots produced research material for 19 doctoral students.

## **International closing conference and next stage**

The initial phase concluded with a major international conference in late 2012. Over 300 participants from all over the world were able to examine the research results to date which demonstrate that such solutions are effective and, depending on the situation in situ, also cheaper than a traditional approach.

The Building with Nature philosophy is evocatively described in a new book which is available for downloading from [www.ecoshape.nl](http://www.ecoshape.nl). The purpose of the book, which was launched during the conference, is to bring the opportunities offered by

\* Biotic component of an ecosystem: An ecosystem comprises various organisms, such as prey, predators, congeners, etc. What is certain is that each organism has an impact on, and interacts with, others and is in direct or indirect contact with all species.

Abiotic component of an ecosystem: An external environmental factor in an ecosystem of non-biological origin. Examples are precipitation, temperature, soil type, salinity levels, water depth, turbidity and wave height.



the concept to a broad audience and thus lead to its large-scale practical application.

All the Building with Nature partners as well as several new partners are working together on a follow-up to the program. This will focus on the actual implementation of the concept. The full integration of the program into the Dutch government's Topsector policy is a major accolade. The ambition is to realize several more Building with Nature applications elsewhere in the world and to set up the monitoring, knowledge and innovation programs needed to achieve this.

### ECO-ENGINEERING TASKFORCE

In 2012 the Energy Management Taskforce, under the chairmanship of a member of the Board of Management, decided to split its activities between two taskforces, given the broad range of topics. And so the Energy Management Taskforce was joined

by the newly established Eco-Engineering Taskforce in 2012. To ensure that a clear link is maintained with the situation in the field both our own engineering consultancy Hydronamic and our business units are represented on the Taskforce. The new taskforce has the important objective of promoting Boskalis as the leading player in eco-engineering. We see opportunities for this in our dredging activities, our activities in dry and maritime infrastructure and in our offshore energy services. Another objective is to provide a platform to see to it that our broad environmental expertise is more accessible and made available more readily to the business units. Boskalis has extensive in-house knowledge on the potential ecological and environmental impact of our activities. Supplementing our knowledge is another key focal point. We want to achieve this by expanding our network with knowledge institutes, universities and engineering consultancies around the globe and to step up the contacts with our existing extensive knowledge network with which we have already maintained excellent relations for many years.









# ENVIRONMENTALLY FRIENDLY EQUIPMENT

We take targeted measures to invest in equipment that will enable our operations to be as environmentally friendly as possible. Both individually and in conjunction with suppliers, sector organizations, knowledge institutes and NGOs we conduct research into the use of cleaner and more efficient propulsion systems, cleaner fuel and recycling initiatives. In addition and where possible we see to the separate collection and disposal of our waste and the efficient use of water and energy. We encourage environmental awareness and motivation in our own employees and those employed on behalf of Boskalis.

## ENERGY MANAGEMENT TASKFORCE

The Energy Management Taskforce (formerly the Emissions Taskforce), established by the Board of Management in 2008 and led by one of the Board members, is composed of a broad range of specialists and professionals from across the organization. The Taskforce keeps a close eye on the development of national and international legislation and regulations on emissions and instigates emission-reduction initiatives through innovations in equipment and working methods. In addition, the Taskforce pools knowledge and best practices and takes action to raise awareness across the organization. At sector level the Taskforce is working on developing an industry standard to enable the measurement of CO<sub>2</sub> emissions per production unit.

## CLEAN AND EFFICIENT ENGINES

Our new equipment meets the highest standards in terms of energy consumption. Also for commercial reasons we seek to enhance the sustainability of our existing equipment. We conduct ongoing research into cleaner and more efficient engines.





These may be engines, like the diesel-electric engines which power our new fallpipe vessel and our hybrid bulldozer, or the diesel-electric propulsion system on the floating sheerlegs Taklift 4.

### ALTERNATIVE AND CLEANER FUELS

The use of LNG as fuel brings a considerable improvement in terms of CO<sub>2</sub> emissions, with research showing that LNG produces particularly good results in stationary situations. This presents an immediate dilemma for Boskalis. Most of our equipment is not used for stationary processes; irregular fluctuations in load and substantial peak loads are inherent to the work that we do. In conjunction with the sector and suppliers we are looking into good solutions for using LNG, a process in which we also want to learn from other branches of industry and adopt best practices. The existence of local infrastructure for the bunkering of such fuels is also essential. In 2012 we and our supplier PON looked at whether LNG could be used to fuel Caterpillar excavators. Besides the challenge presented by the non-stationary process the main stumbling block turned out to be adapting the motor electronics, and further liaison is needed with the manufacturer in the United States. We will continue our research and remain open to new initiatives in this area.

The International Maritime Organization (IMO) has set rules aimed at the further reduction of SO<sub>x</sub> emissions by imposing

progressively lower limits on the sulphur content of bunker fuel. Strict rules for SO<sub>x</sub> emissions have been in force in areas including the North Sea, the English Channel and the Baltic Sea since 2007. These are the so-called Sulphur Emission Control Areas (SECAs), where a sulphur limit of 1.0% has been set for bunker fuel. The regulations also allow for the cleaning of emissions so that fuel with a higher sulphur content can be used. From 2015 an even lower limit of 0.1% will apply. The IMO, which is including the SECA zones in its regulations, plans to extend these strict rules to other densely populated coastal regions, with areas of the eastern and western seaboard of North America having been added in 2012. Boskalis meets the SO<sub>x</sub> requirements by purchasing low-sulphur fuels in SECA zones.

As an alternative we are also looking into the use of scrubbers which clean exhaust fumes in order to meet the regulations this way. Along with our supplier Aalborg Industries we conducted a feasibility study and the results were such that we have launched a follow-up study with our engine supplier Wärtsilä. Some SECA zones are also going to see more stringent regulations for NO<sub>x</sub> emissions, with the limit on emissions eventually set to be lowered to one quarter of current levels. Our newbuild vessels will comply with this directive from 2016.

In 2012 we also launched a pilot involving the use of GTL for our dry earth-moving equipment. GTL produces lower fine dust emissions and can be particularly appropriate for use in densely



The new fallpipe vessel Rockpiper.

populated urban areas. We look at this in more detail on pages 64-65 of this report.

### CREW AWARENESS

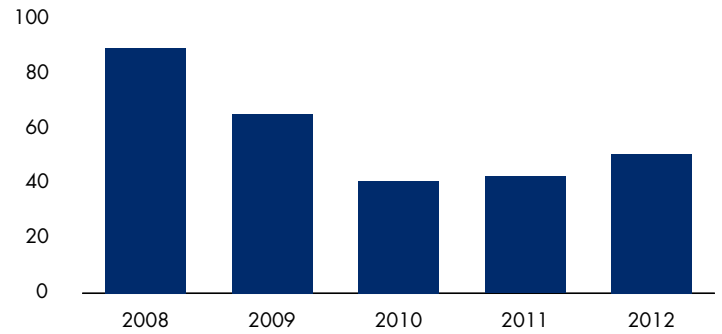
Raising crew awareness is a key factor in our environment policy. The main purpose of the Ship Energy Efficiency Management Plan (SEEMP) on board our dredgers is to raise crew awareness of on-board energy consumption. We also want to give crew members an insight into the real-time fuel consumption of their ship. In order to do so we have developed a meter for incorporation in the engine room. The implementation of the SEEMP manual on an initial 50 ships started at the end of 2012. To raise environmental awareness among maritime staff the NGO ProSea has developed a program of courses on Marine Environmental Awareness. Two Boskalis captains who followed several modules on a trial basis were enthusiastic about the course. We reached an agreement with ProSea in 2012 to introduce the course as a pilot for our fleet personnel once the content has been adapted more to our fleet.

### ENERGY-EFFICIENT MOBILIZATION AND TRANSPORT

The mobilization of dredging vessels is part of our primary process. The larger vessels adopted a weather routing program in 2012 in order to make sailing safer and more energy efficient. Our transport division handles the provisioning of our ships around the world. In the past few years we have moved towards shipping more goods by sea instead of by air. This shift from air to sea transport has produced a weight saving of around 40% since 2008 and lowers annual CO<sub>2</sub> emissions. Another measure that

contributes towards energy saving is that instead of provisioning on demand we now combine the cargoes, which has reduced the number of rush shipments.

AIRFREIGHT (WEIGHT IN HUNDRED THOUSAND KG)



The recent increase is linked to a large project in Brazil and a number of short-term projects which have seen us having to resort to airfreight.

### RESPONSIBLE MANAGEMENT

Water is used efficiently aboard our fleet. Ballast water is needed for stabilizing a ship. As far back as 2004 the IMO announced legislation setting quality standards for ballast water for discharge. Unfortunately it still remains unclear how the legislation is to be enforced and what standards will be set. In anticipation of this we are drafting a ballast water management plan. This is also a consideration in shipbuilding with new tugboats being designed in such a way that ballast water tanks are no longer needed.





Marine waste is subject to strict national and international laws and regulations and it goes without saying that we comply with these. Our waste policy, including waste separation procedures, is part of our management system which also includes standard audits and inspections. In addition, we are subject to external audits by Bureau Veritas, flag state inspections and inspections by the port authorities.

Prior to any project we conduct a risk assessment as part of our management system to establish what the risks are and what measures need to be taken to prevent oil spills. We apply a structured system of preventative maintenance and conduct annual inspections on board our ships. We also hold regular drills for

fighting oil spills. In addition, we are subject to external audits by Bureau Veritas, flag state inspections and inspections by the port authorities.

## RECYCLING

We are committed to recycling in our chain, for example recycling worn-out pump casings, impellers, cutter teeth and floating pipelines. You can read more about these projects on pages 16-17.

We strongly believe that the ships we are decommissioning should be dismantled in a safe and environmentally friendly manner. Ships for dismantling are inspected for the presence of hazardous materials and issued with an Inventory of Hazardous Materials. This is documented in a report which is submitted to a certified independent bureau, such as the internationally recognized classification society Bureau Veritas. This report acts as a manual for the recycling company that handles the removal and responsible disposal of these materials under our auspices. In 2012 we completed the sustainable dismantling of the trailer suction hopper dredgers Cornelia and Puerto Mexico at certified shipbreaking yards and started preparations for the dismantling of the cutter suction dredgers Para, Amstel and Mercurius.

In 2012 Boskalis further tightened its policy regarding the dismantling of ships. In addition to the Inventory of Hazardous Materials and certification requirements imposed by Boskalis, shipbreaking yards must also be located on hard subsoil (see case text on pages 24-25).

## SUSTAINABLE HEAD OFFICE

In 2012 the Dutch head office in Papendrecht was extended with the completion of a new building. The new office building was constructed in accordance with the Dutch 'GreenCalc+ A label' standard. It is fitted with various sustainable energy solutions, such as the use of water sources at a depth of 90 meters below the surface for heating and cooling; this will reduce energy consumption – and therefore carbon emissions. We also conducted an energy saving survey at the existing premises in Papendrecht.

In 2012 a contract was signed for the supply of green electricity to all of Boskalis' offices in the Netherlands in 2013.





# FUEL AND ENERGY CONSUMPTION

Boskalis measures and reports on the fleet's total CO<sub>2</sub> emissions based on fuel consumption. The absence of a clear measuring standard precludes the meaningful expression of relative emissions per production unit, making the annual consumption reports difficult to compare. A complex set of factors comes into play here.

Our fleet consists of different types of vessels, whilst the deployment of older or, conversely, more modern vessels and the capacity utilization of the fleet also have a bearing on fuel consumption in a given year. In addition the nature of the projects can also provide a distorted picture; for example, a cutter suction dredger that has spent a year deployed on projects involving a lot of hard soil will have much lower energy consumption in another year when it is working in softer soil. This means that higher or lower fuel consumption in a given year is not an adequate reflection of the quality of our environmental performance. For this reason we do not consider it sensible to set a quantitative target for annual fuel consumption at this time.

In order to be able to present balanced reporting on our fuel consumption and carbon emissions, Boskalis is working with others in the dredging sector to reach agreement on an industry standard for CO<sub>2</sub> emissions per production unit.

## HIGHEST RUNG ON CO<sub>2</sub> PERFORMANCE LADDER

The CO<sub>2</sub> performance ladder is a tool used by government organizations and businesses in the Netherlands to encourage companies that take part in often complex tenders, along with their suppliers and subcontractors, to exercise carbon awareness in their business operations and in the execution of projects. Key points of focus are energy saving, efficient use of materials and the use of sustainable energy.

Boskalis obtained certification in the Netherlands for the requirements applying to level 5 of this standard, the highest level attainable. MNO Vervat obtained certification in 2012 and Boskalis B.V. in January 2013. Boskalis is the first aquatic contractor to achieve this level.

For more information on Boskalis' activities in relation to the CO<sub>2</sub> performance ladder please refer to our Dutch website ([www.boskalis.com/nederland](http://www.boskalis.com/nederland)).



The calculation model that needs to be developed for this was the subject of intensive discussions in 2012 in the CO<sub>2</sub> group within the EuDA. Taking the lead, the four largest Dutch and Belgian dredging companies completed a study into the model, the results of which will be discussed with the other European dredging companies. Given the complexity of the material we expect that introduction is still several years away. In the meantime we will continue to report on our fuel consumption, our research and targeted measures taken to reduce our emissions.

## CARBON DIOXIDE EMISSIONS IN 2012

Based on the results of a case study in 2010 (see page 61 of our 2010 CSR report) we have decided to limit our carbon dioxide reporting to the emissions produced by our fleet and our permanent offices. The decision not to extend reporting to, for example, our dry earthmoving equipment is based on the fact

that the vast majority (around 95%) of our carbon dioxide emissions are produced by our fleet and our offices. The tables show the fuel consumption of our fleet as well as the amount of energy consumed by our office organization.

In terms of both fleet and office organization associate companies are consolidated pro rata to the participating interest we hold.

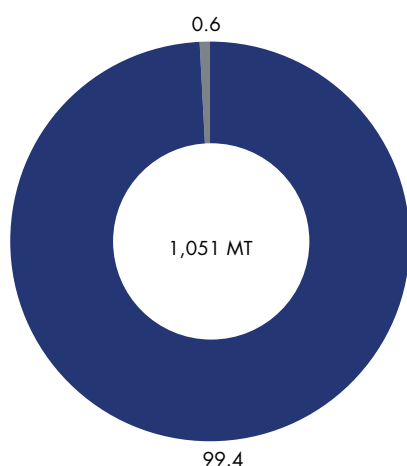
Total emissions produced by the group in 2012 amounted to 1,051 million tonnes of carbon dioxide (2011: 1,015 million tonnes). The rise of 3.9% is attributable to higher utilization levels of the fleet and an increase in the number of vessels.

*Boskalis.* Compared to 2011 carbon dioxide emissions increased by 6%. The increase was due to higher equipment utilization levels (hoppers from 39 to 41 weeks and cutters from 19 to 25 weeks). In addition the fallpipe vessel Rockpiper, which entered into service at the beginning of 2012, also contributed to the increase in fuel consumption.

*SMIT.* Carbon dioxide emissions by SMIT dropped by 9% in 2012. The decline was wholly attributable to the sale of SMIT Terminals to Lamnalco, as a result of which more than 60 ships are no longer part of the SMIT fleet. Adjusted for this fleet reduction, fuel consumption rose by 10% as a result of a busy year with a high level of activity.

*Smit Lamnalco.* Overall carbon dioxide emissions by Smit Lamnalco rose by around 34% compared to 2011. The number of vessels included in the reporting increased significantly in 2012 as a result of the acquisition of SMIT Terminals. On a like-for-like basis in terms of fleet composition, consumption in 2012 was unchanged compared to 2011.

CO<sub>2</sub> (Metric Tons '000)



■ Fleet (%)

■ Offices (%)

	FLEET		OFFICES		CO <sub>2</sub> MT ('000)
	FUEL HFO m <sup>3</sup> ('000)	FUEL MGO m <sup>3</sup> ('000)	ELECTRICITY KWh (million)	GAS Mj (million)	
Boskalis	102.7	92.2	5.3	12.3	<b>575</b>
SMIT	5.3	113.2	4.0	4.5	<b>325</b>
Smit Lamnalco	–	55.7	0.1	–	<b>151</b>
Total	108.0	261.1	9.4	16.8	<b>1,051</b>
<b>CO<sub>2</sub> MT ('000)</b>	<b>339</b>	<b>706</b>	<b>5.3</b>	<b>0.9</b>	

# FIRST GTL-FUELLED EARTH-MOVING MACHINE IN THE NETHERLANDS

One of the results to come out of the Meet the Buyer sessions that Boskalis organized with suppliers in 2011 was an initiative for testing the cleaner fuel GTL on earth-moving equipment.

Boskalis and a number of its chain partners have started a pilot on the A4 motorway project. "A wonderful spin-off from the multidisciplinary cooperation in the chain," said Procurement & Logistics manager Joost Rijnsdorp.

It is the first time that GTL has been used to power an earth-moving machine. GTL, which stands for gas-to-liquids, is a cleaner, liquid fuel made from natural gas converted into a synthetic diesel. Several chain partners are involved in the pilot: Pon Equipment is representing Caterpillar, which supplied the excavator, while Oliecentrale Nederland is supplying the GTL fuel produced by Shell. The client, the Dutch Department of Public Works, is eagerly awaiting the results of the trial.

## LESS NOISE AND POLLUTION IN URBAN AREAS

"Particularly in densely populated and urban areas air quality is a growing problem and this is where cleaner fuel can provide a solution. GTL produces far fewer nitrogen oxide, sulphur oxide, fine dust particle and black smoke emissions than regular diesel. It can be used immediately in any diesel vehicle without having to adapt the engine. The drivers on the project also benefit because the air they breathe is cleaner. An added advantage is that engines running on GTL are quieter thanks to the more efficient combustion," said Eltjo Tiddens, account manager at Oliecentrale Nederland, which supplies the GTL fuel produced by Shell.

Driek Nuijens, Technical Manager on the A4 project on behalf of the Department of Public Works, believes this is a great initiative given that the Department is committed to limiting noise pollution and reducing emissions. "One of the factors we consider in tenders is which party pays special attention to environmental hindrance. On this project we are talking about just one cleaner and quieter machine, so the impact on the total number of equipment working on the A4 project will be limited. Even so, we are eagerly awaiting the results of this trial. If they turn out to be positive, we can take them on board in awarding future tenders."



## A YEAR'S RESEARCH

Boskalis took a conscious decision to purchase a new excavator, which will run exclusively on GTL for the first year. This will give a good impression of how the engine responds to this type of fuel and allow a good comparison of its performance against that of similar excavators running on regular diesel.

“What is for sure is that we have been achieving the reduction in emissions from day one of using this excavator. However, not only does the machine have to be able to run on GTL without any problems, there is also the matter of cost. GTL is more expensive than diesel. These extra costs have to be recouped,” said John Prins, head of equipment management at Boskalis in the Netherlands and a member of the Energy Management Taskforce. “The use of GTL could play a positive part in winning tenders in the future. Additionally, less wear and tear on engines should lower maintenance costs” added Prins. “The engine of an excavator works very differently from, say, a car engine, which operates at the same number of revs for hours at a time.

Earthmoving places greatly varying demands on an engine. You scoop, you turn, you lift – these all require different combustion. It is this behavior that we are testing.”

## PRACTICAL AND SUSTAINABLE SOLUTION

Pon Equipment can monitor the excavator remotely and proactively provides Boskalis with information on the condition of the machine and how it is performing.

“Expectations are that GTL will be a suitable fuel to use in earthmoving, because it is a very practical fuel which can be used in the excavator without the need for any adaptations,” said Peter Sniijders, business developer at Pon. “It is useful to investigate whether the machine will indeed run on GTL without any problems. As such the project is consistent both with the Boskalis strategy to provide clients with the most practical, sustainable solutions and with our own sustainability strategy.”







# OUR ECONOMIC PERFORMANCE

## POLICY AND OBJECTIVES

We contribute towards the economy and employment of a region through our services and the infrastructural works we realize. Our policy is aimed at the continuity and preservation of our leading position in our industry. We aim for structural growth of the company and a healthy return on equity, at the same time taking account of the interests our stakeholders. Long-term profitability is a material condition for achieving our corporate goals and for the continued growth of our company. It is a measure of the company's efficiency and of the ultimate value that clients attach to the services we supply. Without profit and without a robust financial base it would not be possible to meet our responsibilities.

## DIALOGUE WITH STAKEHOLDERS

Transparent and regular communication with our stakeholders is something we value highly. We consider our financial stakeholders to include existing and potential shareholders, other investors and their brokers, and the media. It is important to us to provide them with clear and accessible information.

The Boskalis share is covered by the major Dutch brokers as well as a number of foreign brokers and their analysts, whom we also consider as belonging to our financial stakeholders. They want to provide their clients with good advice and information about our company, the dredging and maritime services markets and general developments in our markets. Questions from stakeholders are answered candidly; wherever possible we take the initiative when it comes to raising important issues. For example following an important announcement we proactively contact shareholders by phone, as we did in 2012 in connection with the proposed offer for Dockwise. We maintain regular contact with major investors and analysts, for example by organizing annual visits to project sites.

In 2012 we held approximately 300 meetings with investors from Western Europe, the United States, Australia and Canada, both during roadshows and conferences and in one-on-ones. Meetings with investors and analysts are held using publicly available presentations ([www.boskalis.com](http://www.boskalis.com)) with no stock price-sensitive information being discussed.

For further information please refer to the 'Shareholder information' section of our Annual Report 2012.

## KEY FIGURES AND RESULTS FOR 2012

For information on the key figures and results for 2012 please refer to the Report of the Board of Management (pages 31-57, Financial Statements (pages 61-118) as well as our ten-year overview (page 122).





# APPENDIX

---

**70 ABOUT THIS REPORT**

---

**72 GRI TABLE**

---

**74 HR DATA**

---

**77 SHE-Q DATA**

---

**80 GLOSSARY**

# ABOUT THIS REPORT

## PURPOSE OF THE REPORT

In this Corporate Social Responsibility (CSR) Report we give an account of the CSR policy we pursued in 2012 to all our stakeholders. The Board of Management is responsible for the preparation of our CSR Report, which is compiled by a multidisciplinary CSR team of representatives from across the organization.

## REPORTING STANDARD AND SELECTION PROCESS OF TOPICS AND PERFORMANCE INDICATORS

We report in accordance with the international guidelines set out by the Global Reporting Initiative (version G3.1), at application level B. The GRI table on pages 72-73 shows which indicators we report on.





Since 2009 we have published a CSR Report as well as an Annual Report. We give an account of non-financial aspects of our performance which arise from our strategy, which lie within our sphere of influence and which are of material importance to ourselves and our stakeholders.

The outcome of the dialogues with our stakeholders and the benchmarks (see the 'Our stakeholders' section) is included in the annual review of the CSR policy, the outcome of which determines our strategic priorities (see pages 10 and 13 of this report) and objectives. The outcome also determines which topics are of material importance and which performance indicators are relevant to ourselves and our stakeholders for inclusion in our CSR Report.

This culminated in us weighing the following considerations with regard to our environmental performance in the CSR Report:

- Based on the results of a case study in 2010 (see page 61 of our 2010 CSR report) we have decided to limit our carbon dioxide reporting to the emissions produced by our fleet and our permanent offices. The decision not to extend reporting to, for example, our dry earthmoving equipment is based on the fact that the vast majority (around 95%) of our carbon dioxide emissions are produced by our fleet and our offices.
- At present the CO<sub>2</sub> emissions of our fleet are based on absolute fuel consumption and not on relative emissions per production unit. We therefore do not consider it sensible to set a quantitative target for annual fuel consumption at this time. It is our aim to establish an industry standard and we are in talks with others in the sector to achieve this.

## REPORTING SCOPE

In 2009 we started reporting on our 100% subsidiaries. SMIT has been fully included in our CSR reporting from the 2011 CSR Report. MNO Vervat, which was acquired in December 2011, is included in this CSR Report for the first time.

In 2011 SMIT's terminal activities were sold to Lamnalco (in which Boskalis held and will continue to hold a 50% interest), but the

deconsolidation of SMIT Terminals from 100% to 50% was not reflected until the reporting over 2012. The activities of our 50%-owned associate company Smit Lamnalco are included in this CSR Report on a pro rata basis.

The activities of our minority interest Archirodon are not taken into consideration and are only included in our financial reporting. Archirodon falls outside the scope of the CSR Report owing to the size of our stake (minority shareholding of 40%) and the extent to which we are able to influence the company's CSR policy.

## REPORTING PROCESS

Our CSR Report is compiled under the auspices of the Board of Management. The CSR reporting within Boskalis has a layered structure in accordance with the internal allocation of management responsibilities and follows the guidelines set out in the CSR Reporting Manual. Consolidation takes place at successive levels, starting with the projects and local office organizations, moving on through the relevant business units and staff departments and ending with the consolidated group reports. The business units and relevant staff departments report on a quarterly basis to the CSR Steering Group, which also comprises a member of the Board of Management.

## RELIABILITY

Our sustainability reporting is monitored and validated by the Group Reporting department. Based on our experience from previous years we believe that the checks performed by this independent department sufficiently assure the quality of our CSR Report.

## PUBLICATION DATE

The 2012 CSR Report was published simultaneously with the Annual Report 2012 on 14 March 2013 on the corporate website at [www.boskalis.com](http://www.boskalis.com).

# GRI TABLE

This report follows the GRI guidelines (version G3.1). The table below lists the GRI indicators that we are reporting on along with references to the sections and page numbers where this information can be found.

GRI INDEX	SECTION	PAGE
<b>STRATEGY AND ANALYSIS</b>		
1.1	Statement from the CEO	4-5
1.2	Principal risks, opportunities and impact in the chain	22-23
<b>ORGANIZATION PROFILE</b>		
2.1	Name of the organization	8
2.2	Products and services	9
2.3	Operational structure	12-13
2.4	Location headquarters	8
2.5	Operating countries	9
2.6	Nature of ownership and legal form	12-13
2.7	Markets	20
2.8	Scale of reporting	67
2.9	Changes in organization	67
2.10	Awards	77
<b>REPORTING PARAMETERS</b>		
3.1	Reporting period	Appendix-About this report
3.2	Previous report	Appendix-About this report
3.3	Reporting cycle	Appendix-About this report
3.4	Contact point	Colophon
3.5	Process defining report content	Appendix-About this report
3.6	Boundary	Appendix-About this report
3.7	Limitations on scope or boundary	Appendix-About this report
3.8	Basis for reporting on joint ventures	Appendix-About this report
3.9	Techniques applied in composing indicators and other information in the report	Appendix-About this report
3.10	Re-statements	Appendix-About this report
3.11	Changes in reporting	Appendix-About this report
3.12	Standard disclosures	Appendix-About this report
3.13	Policy with regard to external verification	Appendix-About this report
<b>GOVERNANCE, OBLIGATIONS AND INVOLVEMENT</b>		
4.1	Governance structure	12-13
4.2	Chair of the highest governance body	12-13
4.3	Independence	12-13
4.4	Mechanisms for shareholders and employees	12-13
4.5	Relating remuneration of highest governance body to organizational performance	12-13
4.6	Processes applied by highest governance body to guard against conflict of interest	13
4.7	Process for determining qualifications and expertise of members of the highest governance body	13
4.8	Internally developed mission and codes of conduct	13
4.9	Procedures for assessing sustainability performance by the highest governance body and frequency thereof	13

<b>GRI INDEX</b>	<b>SECTION</b>	<b>PAGE</b>
4.10	Process for evaluating the performance of the highest governance body	Who we are 13
4.11	Notes on observance of precautionary principle	Who we are 13
4.12	Commitment to external charters	Who we are 13
4.13	Membership of associations or organizations	Who we are 15
4.14	List of stakeholder groups	Who we are 15
4.15	Identification and selection of stakeholders	Who we are, Appendix-About this report 14-15, 70-71
4.16	Details of stakeholder dialogue, including frequency	Who we are 15
4.17	Details of topics discussed with stakeholders	Our social performance, Our environmental performance, Our societal performance, Our economic performance 28, 43-46, 52, 67
<b>ECONOMIC PERFORMANCE INDICATORS</b>		
EC 1	Direct economic value	Who we are, Our economic performance 11, 67
EC 3	Coverage of organization's defined benefit plan obligations	Our social performance 34
EC 8	Investments in local infrastructure and services	Who we are, Our societal performance 10, 11, 22, 43-44
<b>NATURE &amp; ENVIRONMENTAL PERFORMANCE INDICATORS</b>		
EN 3	Direct energy consumption by primary energy source	Our environmental performance 62-63
EN 4	Indirect energy consumption by energy source	Our environmental performance 62-63
EN 12	Significant impacts on biodiversity	Our environmental performance 55-56
EN 13	Habitats protected or restored	Our environmental performance 55-56
EN 14	Strategies, current actions and future plans for managing impacts on biodiversity	Our environmental performance 55-56
EN 16	Greenhouse gas emissions	Our environmental performance 62-63
<b>SOCIAL PERFORMANCE INDICATORS</b>		
LA 1	Workforce profile	Appendix-HR data 74-76
LA 2	Employee turnover	Appendix-HR data 74-76
LA 4	Percentage of employees covered by collective bargaining agreements	Appendix-HR data 74-76
LA 7	Injuries, diseases and absenteeism	Appendix-SHE-Q data 77-78
LA 8	Education, prevention, risk-control programs regarding serious diseases	Our social and societal performance 35, 44
LA10	Average hours of training per year per employee by employee category	Appendix-HR data 76
LA 11	Programs for skills management and lifelong learning	Our social performance 32
LA 12	Employees receiving regular performance and career development reviews	Our social performance 32
LA 13	Gender composition of governance bodies	Who we are 13
SO 1	Programs assessing the impacts of operations on communities, including entering, operating and exiting	Our societal performance 43
<b>HUMAN RIGHTS</b>		
HR2	Percentage of suppliers assessed for human rights compliance	21
<b>PRODUCT RESPONSIBILITY INDICATORS</b>		
PR 5	Results surveys measuring customer satisfaction	Who we are 20



## NUMBER OF EMPLOYEES

NUMBER OF EMPLOYEES	2012	2011
Boskalis	<b>8,751*</b>	9,324*
Smit Lamnalco	<b>1,109</b>	871
Archirodon	<b>5,794</b>	3,740
<b>TOTAL</b>	<b>15,653</b>	13,935

\* Of whom 882 at MNO Vervat in 2012 and 956 in 2011. In the interest of comparison with 2011 MNO Vervat (M) is excluded from some of the detailed summaries.

In all further information only Archirodon is excluded, unless otherwise stated.

## COMPOSITION OF WORKFORCE

NUMBER OF EMPLOYEES BY COUNTRY	2012 BOSKALIS	2012 BOSKALIS-M	2011 BOSKALIS-M
The Netherlands	<b>3,375</b>	<b>2,579</b>	2,551
Singapore	<b>1,001</b>	<b>1,001</b>	781
Belgium	<b>597</b>	<b>597</b>	553
South Africa	<b>588</b>	<b>588</b>	679
UAE	<b>420</b>	<b>420</b>	164
Nigeria	<b>395</b>	<b>395</b>	537
Philippines	<b>359</b>	<b>359</b>	299
Brazil	<b>355</b>	<b>355</b>	267
UK	<b>321</b>	<b>321</b>	323
Mexico	<b>275</b>	<b>275</b>	480
Other	<b>2,175</b>	<b>2,089</b>	2,497
<b>TOTAL</b>	<b>9,860</b>	<b>8,978</b>	9,130

TYPE OF CONTRACT	2012 BOSKALIS	2012 BOSKALIS-M	2011 BOSKALIS-M
Fixed term/project based	<b>32%</b>	<b>34%</b>	30%
Permanent/indefinite	<b>68%</b>	<b>66%</b>	70%
<b>TOTAL</b>	<b>100%</b>	<b>100%</b>	100%

WOMEN/MEN RATIOS	2012 BOSKALIS	2012 BOSKALIS-M	2011 BOSKALIS-M
Female	<b>8%</b>	<b>8%</b>	8%
Male	<b>92%</b>	<b>92%</b>	92%
<b>TOTAL</b>	<b>100%</b>	<b>100%</b>	100%

PARTTIME/FULLTIME RATIOS	2012 BOSKALIS	2012 BOSKALIS-M	2011 BOSKALIS-M
Fulltime	<b>96%</b>	<b>96%</b>	96%
Parttime	<b>4%</b>	<b>4%</b>	4%
<b>TOTAL</b>	<b>100%</b>	<b>100%</b>	100%

AGE PROFILE	2012		2011
	BOSKALIS	BOSKALIS-M	BOSKALIS-M
Age <30	17%	17%	17%
Age 30 – 50	55%	55%	56%
Age >50	28%	28%	27%
<b>TOTAL</b>	<b>100%</b>	<b>100%</b>	100%

COLLECTIVE BARGAINING AGREEMENTS YES/NO	2012		2011
	BOSKALIS	BOSKALIS-M	BOSKALIS-M
No	57%	62%	58%
Yes	43%	38%	42%
<b>TOTAL</b>	<b>100%</b>	<b>100%</b>	100%

89% of MNO Vervat employees are covered by a CLA, above the average for Boskalis.

NATIONALITIES	2012		2011
	BOSKALIS	BOSKALIS-M	BOSKALIS-M
Number of different nationalities		<b>80</b>	85

## DEVELOPMENT

JOB CATEGORIES	2012		2011
	BOSKALIS	BOSKALIS-M	BOSKALIS-M
Management	2%	2%	2%
Office staff	19%	20%	20%
Project/Site Staff	16%	13%	14%
Workforce/Crew	63%	65%	64%
<b>TOTAL</b>	<b>100%</b>	<b>100%</b>	100%

SMIT has less project staff and more crew in accordance with the nature of its activities.

JOB CATEGORIES WOMEN/MEN RATIOS	2012		2012		2011	
	BOSKALIS		BOSKALIS-M		BOSKALIS-M	
	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE
Management	8%	92%	9%	91%	10%	90%
Office staff	35%	65%	34%	66%	35%	65%
Project staff	6%	94%	6%	94%	5%	95%
Crew/yard staff	1%	99%	1%	99%	1%	99%
<b>TOTAL</b>	<b>8%</b>	<b>92%</b>	<b>8%</b>	<b>92%</b>	8%	92%

JOB CATEGORIES BY AGE RATIOS	2012			2012			2011		
	BOSKALIS			BOSKALIS-M			BOSKALIS-M		
	AGE <30	AGE 30 TM 50	AGE > 50	AGE <30	AGE 30 TM 50	AGE > 50	AGE <30	AGE 30 TM 50	AGE > 50
Management	2%	48%	50%	3%	46%	51%	2%	52%	46%
Office staff	16%	57%	27%	16%	57%	27%	16%	58%	26%
Project staff	22%	56%	22%	22%	54%	24%	21%	56%	23%
Crew/yard staff	16%	55%	29%	16%	55%	29%	16%	55%	29%
<b>TOTAL</b>	<b>17%</b>	<b>55%</b>	<b>28%</b>	<b>17%</b>	<b>55%</b>	<b>28%</b>	17%	56%	27%

**TRAINING**

<b>TRAINING HOURS</b>	<b>2012</b> BOSKALIS	<b>2012</b> BOSKALIS-M	2011 BOSKALIS-M
Management	<b>2,646</b>	<b>2,322</b>	3,314
Office staff	<b>28,312</b>	<b>27,392</b>	29,498
Project staff	<b>27,155</b>	<b>22,564</b>	27,722
Crew/yard staff	<b>116,757</b>	<b>109,133</b>	104,912
<b>TOTAL</b>	<b>174,870</b>	<b>161,411</b>	165,446

**RECRUITMENT**

<b>INFLOW BY AGE</b>	<b>2012</b> BOSKALIS	<b>2012</b> BOSKALIS-M	2011 BOSKALIS-M
Age <30	<b>882</b>	<b>841</b>	636
Age 30 – 50	<b>1,470</b>	<b>1,415</b>	917
Age >50	<b>378</b>	<b>369</b>	333
<b>TOTAL</b>	<b>2,731</b>	<b>2,626</b>	1,886

<b>OUTFLOW BY REASON</b>	<b>2012</b> BOSKALIS	<b>2012</b> BOSKALIS-M	2011 BOSKALIS-M
Voluntary resignation	<b>38%</b>	<b>38%</b>	27%
End of project/contract	<b>47%</b>	<b>48%</b>	50%
Dismissal	<b>11%</b>	<b>11%</b>	16%
Retirement/death	<b>4%</b>	<b>4%</b>	7%
<b>TOTAL</b>	<b>100%</b>	<b>100%</b>	100%

SMIT has relatively less outflow due to the often long-term nature of its activities.

<b>OUTFLOW BY AGE</b>	<b>2012</b> BOSKALIS	<b>2012</b> BOSKALIS-M	2011 BOSKALIS-M
Age <30	<b>670</b>	<b>628</b>	457
Age 30 – 50	<b>1,715</b>	<b>1,618</b>	1,070
Age >50	<b>681</b>	<b>641</b>	718
<b>TOTAL</b>	<b>3,066</b>	<b>2,887</b>	2,245



## OVERVIEW OF CERTIFICATIONS BOSKALIS

	ISO 14001	OHSAS 18001 OR VCA*	ISO 9001
<b>DREDGING</b>			
<b>INTERNATIONAL PROJECTS</b>	✓	✓	✓
<b>HOME MARKETS</b>			
The Netherlands	–	✓	✓
United Kingdom	✓	✓	✓
Nordic	✓	✓	✓
Mexico	✓	✓	✓
Nigeria	–	–	✓
<b>OFFSHORE ENERGY</b>			
<b>SUBSEA CONTRACTING</b>	✓	✓	✓
<b>SUBSEA SERVICES, MARINE CONTRACTING &amp; SERVICES</b>	✓ (20%)	✓ (50%)	✓ (80%)
<b>SALVAGE</b>			
	–	–	✓
<b>HARBOUR TOWAGE</b>			
	✓ (11%)	✓ (11%)	✓ (44%)
<b>SMIT LAMNALCO</b>			
	✓	–	✓

VCA\* Only for projects and activities carried out in the Netherlands, instead of OHSAS 1800

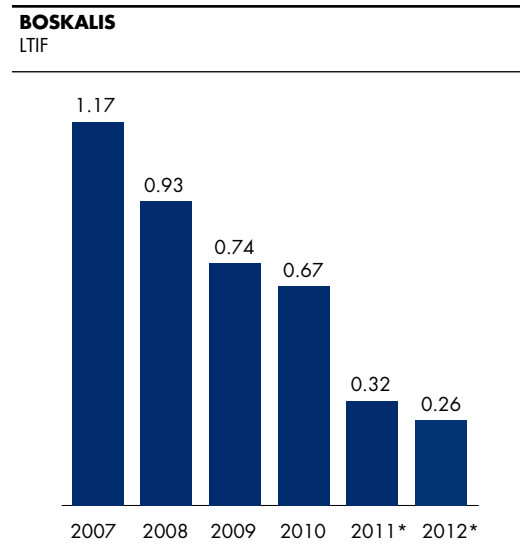
## OVERVIEW SAFETY AWARDS IN 2012

In 2012 Boskalis and Smit Lamnalco received various safety awards including:

- The Angola LNG project received the Recognition Award from the client for 20 million hours worked without an incident resulting in absence from work.
- The Gold 2012 RoSPA (The Royal Society for the Prevention of Accidents) Occupational Health & Safety Awards was awarded to Boskalis Westminster and SMIT UK in the United Kingdom.
- Pelfaco Limited awarded our Nigerian subsidiary, Nigeria Westminster Dredging and Marine, for successful operations on the Gebaran Ubie shore protection works.
- Inpex recognized the Baldur Backhoe Dredger Master and Crew for their high safety standards and continual pursuit of safety excellence at the completion of their work at Ichtys project.
- Exxon Neftegas awarded Smit Lamnalco “Contractor of the year 2012” on the Sakhalin project.
- Maersk Oil awarded Smit Lamnalco’s Maribou for working 3 years without an incident resulting in absence from work and Smit Lamnalco’s Manakin for working 2 years without an incident resulting in absence from work.
- Clients Maersk Oil recognized to the Lamnalco Manakin for working 2 years without an LTI.

**LOST TIME INJURY FREQUENCY (LTIF) BOSKALIS**

Number of incidents resulting in absence from work for every 200,000 hours worked.



\* Blended Group LTIF including all activity segments.  
Pre 2011 Dredging only

	2012			2011		
	LTIF	HOURS (MILLION)	LTI'S	LTIF	HOURS (MILLION)	LTI'S
<b>Dredging</b>						
Europe	0.41	5.30	11	0.70	5.06	18
East	–	1.40	0	–	5.16	0
Middle (incl. Nigeria)	0.18	3.26	3	0.20	2.97	3
West	0.09	4.63	2	0.54	2.95	8
Middle East	–	0.43	0	–	0.62	0
<b>Total</b>	<b>0.21</b>	<b>15.02</b>	<b>16</b>	<b>0.34</b>	<b>16.76</b>	<b>29</b>
<b>Offshore Energy</b>	<b>0.14</b>	<b>10.32</b>	<b>7</b>	<b>0.26</b>	<b>9.97</b>	<b>13</b>
<b>Salvage</b>	<b>1.06</b>	<b>0.75</b>	<b>4</b>	<b>1.39</b>	<b>0.72</b>	<b>5</b>
<b>Harbour towage</b>	<b>0.45</b>	<b>7.59</b>	<b>17</b>	<b>0.67</b>	<b>6.82</b>	<b>23</b>
<b>Smit Lamnalco</b>	<b>0.18</b>	<b>8.98</b>	<b>8</b>	<b>0.08</b>	<b>10.64</b>	<b>4</b>
<b>Office &amp; yards</b>	<b>0.59</b>	<b>2.69</b>	<b>8</b>	<b>0.08</b>	<b>2.51</b>	<b>1</b>
<b>BLENDED GROUP TOTAL</b>	<b>0.26</b>	<b>45.35</b>	<b>60</b>	<b>0.32</b>	<b>47.42</b>	<b>75</b>

# GLOSSARY

**Ballast water** Ballast water in ships is used to improve depth, stability and strength when the ship is not fully loaded.

**Building with Nature** Innovation program focused on the development of new design concepts for river, coastal and delta areas. The aim of the program is to investigate the best approach to strengthen the interaction between human activities and nature.

**Cashflow** Group net profit adjusted for depreciation, amortization and impairments.

**CO<sub>2</sub>** Carbon dioxide is an odorless and colorless gas and exists in the earth's atmosphere. Carbon dioxide is a greenhouse gas (source Wikipedia).

**Cutter suction dredger (CSD)** A vessel that dredges while being held into place using spuds and anchors. This technique combines powerful cutting with suction dredging. Cutter suction dredgers are mainly used where the bed is hard and compact. The dredged material is sometimes loaded into hoppers but is generally pumped to land through a pressure pipeline.

**EBITDA** Group earnings before the result of associated companies, interest, tax, depreciation, amortization and impairments.

**EuDA (European Dredging Association)** Non-profit industry association for European dredging companies and related organizations.

**Fallpipe vessel** Vessel that moves over the area to be covered, while dumping the stones on board through a fallpipe. The vessel is kept in place by a dynamic positioning system in which the propellers and rudders are controlled by an automatic system. The end of the pipe is located just a few meters above the level of the surface to be covered. The fallpipe is controlled using a precise positioning system. The fallpipe vessel Seahorse can also be equipped with an A-frame on the aftship and a grab controlled by an ROV (Remotely Operated Vehicle). This makes it possible to dredge down to depths of 1,000 meters.

**Fatigue** A state of reduced capacity to carry out tasks effectively and with concentration as a result of a relatively lengthy period of imbalance between pressure on the one hand and scope for rest on the other.

**GRI** Global Reporting Initiative. An international organization that develops global standards for annual social reporting. The aim of GRI is to make sustainability reporting as routine and comparable as financial reporting for all organizations – regardless of size, industry or location.

**GTL (Gas to Liquids)** A new, innovative synthetic fuel from Shell that helps to lower local emissions. GTL is colorless, almost odorless and virtually free of sulphur and aromatics. GTL has a high cetane number which means it burns much cleaner; this may help to reduce NO<sub>x</sub>, SO<sub>x</sub> and fine dust emissions compared to conventional diesel.

**HFO** Heavy Fuel Oil.

**IADC (International Association of Dredging Companies)** Global umbrella organization for private dredging contractors.

**IMO** The International Maritime Organization is a specialized agency of the United Nations. The IMO's primary purpose is to develop and maintain a comprehensive regulatory framework for safe and sustainable shipping.

**ISM Code** International Safety Management Code for the Safe Operations of Ships and for Pollution Prevention: an international standard for compliance with safety regulations and the prevention of pollution on sea-going vessels. The ISM-code requires ship managers to implement and maintain a safety management system.

**ISO standard** Standards of the International Organization for Standardization; the global federation of national normalization organizations that issues standard requirements for, amongst other things, quality management systems (ISO-9001) and environmental management systems (ISO-14001).

**LTI Lost Time Injury** Expresses the number of workplace accidents serious enough to result in absence from work.

**MDO/MGO** Marine Diesel Oil/Marine Gas Oil.

**NINA No Injuries No Accidents** In a bid to achieve an incident and accident-free working environment Boskalis applies the NINA safety program. NINA sets out Boskalis' vision on safety and describes the safety conduct the company expects from its staff and subcontractors. The program makes people aware of their own responsibility and encourages them to take action in situations which are unsafe.

**NO<sub>x</sub>** Nitrogen oxide is a generic term for mono-nitrogen oxides (NO and NO<sub>2</sub>). These oxides are produced during combustion, especially at high temperature. NO<sub>x</sub> is a component of smog and are greenhouse gasses (source Wikipedia).

**SO<sub>x</sub> Sulfur oxide (SO<sub>x</sub>)** is the combined name for sulfur dioxide (SO<sub>2</sub>) and sulfur trioxide (SO<sub>3</sub>). It is a combustion product consisting of sulfur and oxygen that is mainly emitted in the combustion of sulfur-containing fossil fuels including some types of crude oil, brown coal or hard coal. It is one of the key components of air pollution and smog (source Wikipedia).

**Trailing suction hopper dredger (TSHD)** A self-propelled unit that loads its well or hopper using centrifugal pumps and pipes that trail over the bed as the ship sails. Trailing suction hopper dredgers can operate independently of other equipment and can transport material over long distances. The dredged material is dumped through flaps or bottom doors, by rainbowing, or pumped onto land using a pipeline.

**VCA** Safety, Health and Environment Checklist for Contractors applicable to our Dutch operating companies.





# COLOPHON

## Contact

We greatly appreciate any suggestions you may have for improving our CSR policy and the way we report on it.

We are happy to engage with you on this subject, for which you are kindly requested to contact:

Martijn L.D. Schuttevâer

Director Investor Relations & Corporate Communications

Telephone: +31 78 6969822

E-mail: [csr@boskalis.com](mailto:csr@boskalis.com)

Website: [www.boskalis.com/csr](http://www.boskalis.com/csr)



**Royal Boskalis Westminster N.V.**

Rosmolenweg 20  
P.O. Box 43  
3350 AA Papendrecht  
The Netherlands

royal@boskalis.com  
T +31 78 6969000  
F +31 78 6969555

[www.boskalis.com](http://www.boskalis.com)

