



# Corporate Social Responsibility



## ■ Corporate Social Responsibility

### ■ VISION

Fugro seeks to achieve strong but controlled growth in revenue and net result. These objectives can be attained by creating added value for clients through a carefully structured combination of technology and high-quality services. The Group's strategy also focuses on optimising

synergy between its operating companies and diversifying its portfolio of activities, both geographically and in the range of services provided.

Fugro understands that the local nature of its activities on the one hand and the international character of its services on the other hand place great demands on its

<b>Focus areas</b>	
<b>People</b>	<b>Vision</b>
<b>Healthy and safe working environment</b>	Focusing on employees' health and safety is an integral part of our operational management. Fugro firmly believes that accidents can be prevented. Senior and line management are responsible for creating safe working conditions and have an obvious and important role in developing a positive HSE culture by the example they set and the action they take. Employees influence health and safety through their own actions and are often in the best position to understand and control common workplace hazards and associated risks.
<b>Local involvement</b>	Maximum local involvement has a positive effect on operational activities and also on local employment and staff education levels.
<b>Employees' personal development</b>	Effective internal career policy for employees ensures Fugro can meet demands for high standards of service, both now and in the future. Through this we create opportunities for all employees, both those demonstrating management potential and those who can develop into in-house experts.
<b>Environment</b>	<b>Vision</b>
<b>Entering the renewables and sustainable infrastructure and construction projects market</b>	The growing demand for energy is increasingly being met by renewables. In addition, new major infrastructure and building projects more often also take environmental issues into account. Fugro's technology, and its employees' expertise and knowledge enable it to play an important role in this respect. These developments are creating new opportunities in new markets.
<b>Awareness of energy consumption and use of sustainable materials</b>	Efforts to reduce polluting activities primarily relate to energy consumption in offices and by our vessel and aircraft fleets. Lower energy consumption produces major cost savings.
<b>Society</b>	<b>Vision</b>
<b>Profiling the CSR policy</b>	Supporting various social initiatives to boost the profile of Fugro's CSR policy and encourage employees to become consciously and actively involved in CSR.

staff. We are aware of our role in society, especially in an international and multicultural environment, and understand the importance of paying continual and increased attention to Corporate Social Responsibility (CSR). Fugro seeks to meet the expectations of all its stakeholders by balancing awareness of the

environment, health and safety, the local community and its financial results.

#### Key drivers

- Launching the iPower™ campaign, primarily to promote a sense of individual responsibility
- Developing an HSE portal to improve the dissemination of information and increase employee involvement
- Developing internal, IOSH-certified ‘Managing safely’ training course for management and HSE professionals

- Taking account of local conditions
- Recruiting as many local staff as possible for technical, support and management positions
- Organising training courses at a local level

- Deploying staff on a flexible and project basis
- HR Programme: Partnership for Growth, developing modules to support HR policy
- Setting up short and long-term exchange programmes;
- Fugro Academy: developing and offering classroom and e-learning training courses
- Maintaining contacts with universities to promote our own employees’ development and recruit new, young talent

#### Achieved in 2012 (initiatives)

- 30% reduction in number of accidents and lost man days
- LITF of oil and gas-related activities below 0.5
- Recognition by external organisations, resulting in various awards for long-term HSE performance

- Airborne Surveys training programme in South Africa
- Launch of a talent-development programme in Brazil

- Partnership for Growth: development and implementation of new ‘Recruitment and Selection’ module
- Increase in Fugro Academy’s training programmes
- Fugro Academy: development and implementation of ‘Preventing Bribery and Corruption’ e-learning module
- Close cooperation with universities, including Plymouth University’s distance learning courses in hydrography

#### Key drivers

- Availability of technology
- Employees’ expertise and knowledge

- All our major operating companies with operational activities to have a certified environmental management system in place;
- Implementing environmental planning systems onboard vessels;
  - Fuel-saving scheme for Fugro vessels
  - Ballast-water treatment onboard vessels
  - Reducing the amount of waste and sorting waste onboard vessels
  - Reducing the use of chemicals
- Anticipating environmental management systems in the design of new vessels

#### Achieved in 2012 (initiatives)

- Application of the FLI-MAP® system for mapping and land-reform projects
- Acquisition of EMU Limited has increased marine environmental expertise

- 90% of all Fugro’s operating companies are certified or close to certification (ISO 14001 or equivalent)
- ISO 14001 certification for internal fleet manager
- Ship Energy Efficiency Management Plan (SEEMP)
- Launch of fuel-saving scheme for vessel fleet

#### Key drivers

- Initiating activities by local organisations
- Representation and participation at sector level

#### Achieved in 2012 (initiatives)

- Provision of financial support for cultural heritage
- Sponsorship of sports activities
- Support for local environmental initiatives
- Sponsorship of projects for underprivileged people
- Sponsorship of search for submarine HMS O13

## ■ CSR POLICY AND AMBITIONS

Fugro's CSR policy is embedded in all its business processes and should therefore be regarded as an integral part of the Group's business operations. This section reports on Fugro's CSR policy, while CSR aspects of the Group's financial management are discussed in Financial Statements, elsewhere in this Annual Report.

Fugro pursues growth, both organically and through acquisitions. Geographic expansion is a component of the Group's ability to continue capitalising on increasing global prosperity. Fugro's policy is to maximise the number of employees at a local level; in this way, organisational growth boosts local employment and raises employees' overall levels of education.

Fugro adds value to the data it collects by optimally combining equipment, technology and expertise. Clients appreciate the value we add to the interpretation and supply of data as clients frequently take important decisions on the basis of the information provided by Fugro. People, being the real enablers of this added value, are at the heart of this process. Constant availability of competent, well-trained and dedicated staff is therefore essential if we are to achieve the organisation's strategic objectives. A solid HR policy, aimed at optimising these factors and creating the right conditions, contributes to Fugro's sustainable growth.

Another important aspect of Fugro's CSR policy is its respect for the environment, including the awareness of the environment reflected in its operations and in the way it devises solutions and recommendations for third parties. Various social developments in this field are creating new opportunities. The demand for energy is increasingly being met by renewables such as solar, wind, biomass and tidal energy. As mentioned before, respect for the environment is also an essential part of Fugro's operations. Our activities require vehicles, ships and aircraft, and the fuel consumption and carbon emissions of these means of transport are the areas we have to focus on in this respect.

### Focus areas

Summing up, the areas that Fugro specifically focuses on, in addition to its CSR policy, are its HR policy and respect for the environment.

Our well-trained and highly motivated staff combined with our technological expertise, comprise the primary value that Fugro adds for its clients, both now and in the future. Fugro has therefore chosen to focus on:

- providing a safe, secure and healthy working environment;
- maximising local involvement;
- ensuring ongoing personal development of our employees.

Respect for the environment is the second important aspect of Fugro's CSR policy. Here, too, Fugro has chosen to focus on three areas:

- entering the renewables and sustainable infrastructure and construction markets;
- being aware of environmental aspects of housing and use of equipment;
- implementing an environmental management system.

Fugro has already initiated several action plans in these focus areas and, wherever possible, will formulate clearly quantifiable Key Performance Indicators (KPIs) to reinforce its CSR policy in the near future. We will report periodically on the progress and results of this policy.

### CSR organisation

As intrinsic part of day-to-day operations, the Corporate Social Responsibility policy is set by the Board of Management as intrinsic part of day-to-day operations. In 2012 a CSR coordinator was appointed, reporting directly to the Chairman of the Board of Management, to promote and coordinate this policy. The individual operating companies are responsible for local



implementation of the CSR policy within the policy framework set by the Board of Management.

### **CSR policy assurance**

CSR policy is an integral part of Fugro's operations. However, this CSR policy has to comply with certain guidelines. The main guidelines are:

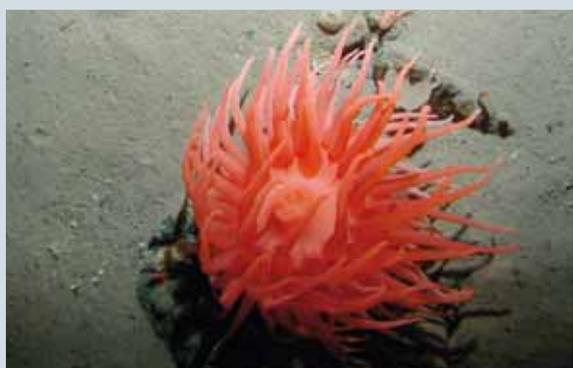
- Fugro's General Business Principles (GBP). These Business Principles provide fundamental ethical guidelines as the base for business decisions. Through these Business Principles, every employee, and thus every operating company, supports the organisation's social values of integrity, transparency, teamwork and respect for a healthy and safe workplace and the environment.
- Business Partner Code (BPC). In 2009, Fugro adopted the Business Partner Code, which requires suppliers and sub-contractors to comply with the GBP. Fugro recognises that the way it deals with its clients, partners and the environment affects its operational productivity and success. The General Business Principles and the Business Partner Code are both available on Fugro's website.
- ISO 26000: the international guideline for Corporate Social Responsibility, which Fugro used to introduce its CSR policy.
- The Global Reporting Initiative (GRI), which constitutes guidelines for transparent CSR reporting.
- OHSAS 18001. All our operating companies have to be certified in accordance with these guidelines for implementing occupational health and safety management systems, or obtain equivalent certification.
- ISO 14001. All our major operating companies have to be certified in accordance with these guidelines for implementing environmental management systems, or obtain equivalent certification.

- Corporate and Work Environment HSE standards. These comprise guidelines for a Group-wide approach to and implementation of HSE (Health, Safety and Environment) regulations, with which all our operating companies have to comply.
- Stakeholder involvement. Fugro actively seeks the opinions and ideas of its stakeholders through regular consultations at various moments and in many different ways. Fugro uses customer satisfaction surveys, peer reviews, internal and external audits, shareholders' meetings, meetings with works councils and so on to maintain an open dialogue on the path that the Group has chosen to pursue.
- Corporate Governance Policy: see section on Corporate Governance (page 91).
- Whistleblowers' policy: see section on Risk Management (page 89).
- Agreements with government authorities. As stated in the Business Principles (GBP), Fugro complies with all legal regulations in the countries in which it operates. We sometimes also enter into more far-reaching agreements with local and national authorities.
- Agreements within the sector: many Fugro operating companies belong to professional trade organisations and adhere to the CSR guidelines that the profession has set for itself.

### **PEOPLE**

#### **Healthy and safe working environment**

Focusing on employee health and safety is an integral part of operational management as every employee is entitled to a safe place of work. Fugro firmly believes that accidents can be prevented and has therefore implemented a security and HSE management system at all levels of the organisation. We are implementing project-specific safety plans for activities involving particularly high degrees of risk.



Setting a good example is important, and that means it is essential to involve senior management in creating an optimal safety culture. Fugro consequently sets out to promote visible leadership and a sense of responsibility throughout its organisation, also with respect to safety.

Management at all levels is therefore expected to focus on actual safety issues, and visibly and actively motivate, influence and guide employees' individual and collective behaviour.

In late 2011, Fugro drew up a mid-term (2012-2015) strategy, aimed at achieving a consistent, Group-wide approach to HSE. Activities undertaken in this respect in 2012 included:

- launching the iPower™ campaign; the main aim of this was to promote peoples' individual responsibility for their own health and safety, as well as that of their colleagues (see box);
- building an HSE portal to improve the dissemination of information and increase employee involvement in HSE-related issues;
- developing an internal, IOSH-certified 'managing safely' training course to provide customised training for management and HSE professionals.

The 2012 statistics show that the policy pursued in the past few years has been effective, with a further significant improvement in performance being recorded during the year under review. The numbers of recordable incidents and lost man days (per one million man hours worked) were 30% lower in 2012 than in 2011, with a decrease of over 60% in the past five years.

Fugro seeks to achieve safety indicators in line with the standards appropriate for the sectors in which it operates, with the aim to achieve an LTIF (Lost Time

Injury Frequency) of less than 0.5 per million man hours worked (benchmark set by the International Association of Oil and Gas Producers). In 2012, the LTIF for Fugro services relating to this market segment was once again below 0.5.

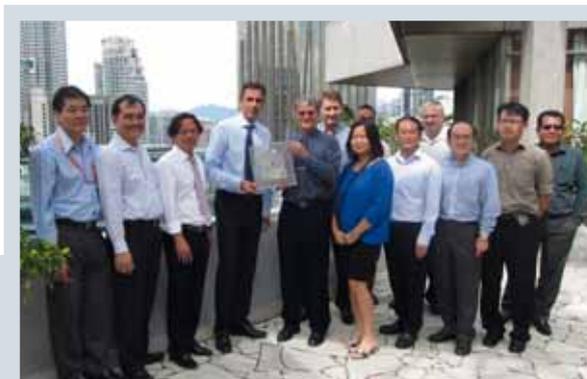
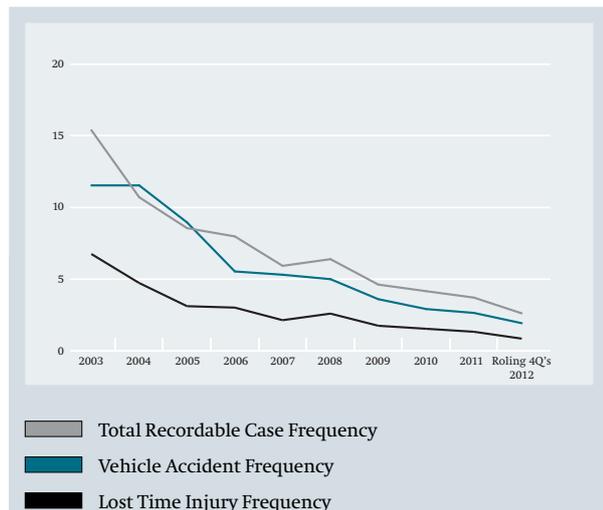
Three fatal accidents occurred in 2012. Fugro regards the death of an employee as not only tragic, but also unacceptable and will consequently do everything in its power to prevent these types of accidents in future. Senior management reviewed these serious incidents in 2012 to determine their direct and underlying causes and took the appropriate actions. In accordance with existing procedures, their findings and recommendations have been communicated, both internally and externally, in order to learn lessons for the future.

#### Examples of projects promoting a healthy working environment

The success of Fugro's safety policy is also recognised by external organisations, as evidenced by the various awards we won in 2012. Fugro Survey Ltd in Aberdeen, for instance, was awarded the 2012 Order of Distinction by the Royal Society for the Prevention of Accidents (RoSPA). This award is presented to organisations that have won fifteen consecutive RoSPA Gold Awards, and so can be considered the most prestigious award for continuous improvement in HSE.

Earlier this year, Fugro also received recognition for continuous safe operations. For the past twenty years Fugro has been providing geophysical, positioning and offshore services to Shell Malaysia (SMEP), both in shallow and deep water, deploying vessels, equipment and staff. These activities, totalling over 1.5 million man hours over the 20-year period, have been carried out without a single incident (LTI).

Safety Performance Indicators 2003 – 2012



Fugro itself also awards prizes to operating companies that have distinguished themselves in this field. Fugro Seacore Ltd. in Falmouth (UK) and Fugro MAPS in Sharjah (UAE) were awarded the 2012 Golden SAM (Safety Always Matters) for their general and consistent HSE performance.

A number of activities in this field were launched during the year in recognition of our belief that awareness improves individual employee health, welfare and safety.

### **Local involvement**

Fugro's decentralised organisational structure facilitates a strong regional market presence and, therefore, use of local staff and suppliers. This diversity has a positive effect on our operational activities as we benefit from local knowledge of local business procedures, legislation and traditions.

The advantage of working with people from diverse cultural backgrounds is that it creates an environment in which people learn to open up to each other and to respect and appreciate each other's qualities. The resulting professional cooperation leads to innovative solutions for Fugro clients throughout the world.

Local operating companies are responsible for local staff policies, and that means local situations and customs can easily be taken into account within the framework of general guidelines set by Fugro. This applies specifically in respect, for example, of remuneration, pensions, health and safety, and general business principles. Wherever possible, we recruit local staff and give them opportunities to attend training courses at a local level.



### **Fugro's iPower™ campaign**

Fugro realises that having a high-quality technology and HSE management system in place is not in itself sufficient to achieve our objective of 'zero incidents'. A corporate culture in which attitude and behaviour are fully geared to safety is the only way to foster the right attitude to workplace safety. That is why, in 2012, Fugro launched its dedicated iPower™ campaign. The objective of this campaign is to encourage employees to take responsibility for their own safety and that of their colleagues. In addition, iPower™ gives management a tool for entering into an open discussion with employees about behaviour and attitudes in the workplace.

The iPower™ campaign is designed to make employees in the various areas aware of how to recognise and deal with the various safety risks in the workplace.

The main areas focused on are:

- *Planning and Awareness*
- *Transportation and Driving*
- *Installations, Equipment, Tools and Materials*
- *Workplace Behaviour*
- *High Risk Activities, such as working at height, lifting operations, diving operations and so on.*

Each campaign message is presented personally by senior management and is supported by campaign material such as t-shirts, posters, stickers and so on.



### Examples of projects on local involvement

- For the past six years, Fugro Airborne Surveys Johannesburg in South Africa has provided support to enable employees who had been unable to complete their school education to attend Adult Education and Training (AET) courses in communication. In 2012, an assistant in the Aircraft Engineering Section, successfully completed his AET training at Communication Level 4 (CL4), while three more employees are currently taking part in this programme.
- In Brazil, Fugro is also actively recruiting and training local talent through its involvement in an early development programme. This involves recruiting groups of 14 to 24-year-olds who are currently in education and have no degree or relevant skills, but who are eager to join the workforce and prepare for the future. This programme gives them the opportunity to gain exposure to, and training and senior-level coaching on, cross-functionality areas, as well as giving them an economic incentive to finish school and thus continue their development. Fugro is also actively involved in training ROV operators.

The training programme we provide lasts for over a year and covers theory, robotics, electronics, in-house practice at our new ROV simulator and one-to-one hands-on field training with our senior operators. Fugro Brazil's divers are also training with the Brazilian Navy at its training centre in Rio de Janeiro. In this way Fugro is contributing to local society, promoting corporate social responsibility and demonstrating its commitment to individual development at a local level, as well as preserving the environment in which we operate.



### Employees' continual personal development

Having an effective internal career policy, which also focuses on personal development opportunities for employees, helps ensure a high standard of service. In this way, Fugro is building a workforce that will also be able to meet clients' long-term requirements. The objective of its policies in this area is to create opportunities for all employees, both those demonstrating management potential and those who can develop into in-house experts. We devote special attention to deploying employees on a flexible and project basis.

Fugro has also put in place a policy aimed at standardisation of technical systems so that we can develop long and short-term staff exchange programmes to enable employees to gain valuable experience outside their home country. Fugro also maintains good contacts with universities all over the world so as to promote development of our own employees and ensure we can also recruit new, young talent.

### Examples of projects focusing on employees' personal development

- Partnership for Growth  
Virtually all our operating companies are involved in the global 'Partnership for Growth'. This HR initiative seeks to encourage employees' personal development, with the objective to match individual career ambitions to the organisation's ambitions and targets. After a successful launch of the 'Induction module' and 'Performance and Personal Development' process in 2011, the 'Recruitment and Selection' module was developed and rolled out during the year.
- Fugro Academy  
By October 2012, Fugro Academy has been operating for 6 years since its inception. In that time, the range and depth of courses available to staff in the organisation has continued to grow, with a continued mix of



classroom training and e-learning courses being offered to suit the subjects being taught.

The graphs below show how Fugro Academy’s user numbers and course completions have increased over the six years since it opened.

The up-turn in business activities in 2012 across the group was evident in the increased number of courses provided to support the induction and development of new recruits. Prior to initial field deployment, Fugro has to provide specific technical and HSE training to the graduates and technicians employed, and much of this comes through Fugro Academy. Ensuring that new staff are familiar with the working environment and Fugro systems and processes is key to their successful integration into field teams and operations.

Fugro Academy was conceived as a virtual training organisation and continues to operate successfully with this model. Experienced training staff deliver training at operating company facilities allowing the company to keep travel costs to a minimum but at the same time allowing consistent and standardised delivery of training across the group. In 2012, just over 150 survey courses were delivered, reaching the milestone of 1000 technical classroom courses for the Survey Division since 2006. In the same period, over 100 management development courses have also been delivered across the group. Initial efforts were on senior management development, but over the 6 years of operation, training has addressed the development needs of project managers, sales staff, field supervisors and general office management, as well as aiding knowledge transfer across the organisation by connecting staff conducting similar functions.

Fugro Academy continues to develop and provide e-learning courses to staff across the organisation, making access to training something that all staff can benefit from, irrespective of time and geography. Many of the classroom courses are supplemented, either before or after, by e-learning to reduce the time needed in the classroom. Most e-learning is created internally using a mix of dedicated e-learning professional authors and experienced technical staff. Specialised 2-D and 3-D modeling software allow interactive courses to be made for complex equipment and processes, allowing staff to be familiarised and trained in systems prior to encountering them in real life. A series of courses for offshore geotechnical equipment operation was developed in this manner over the past year

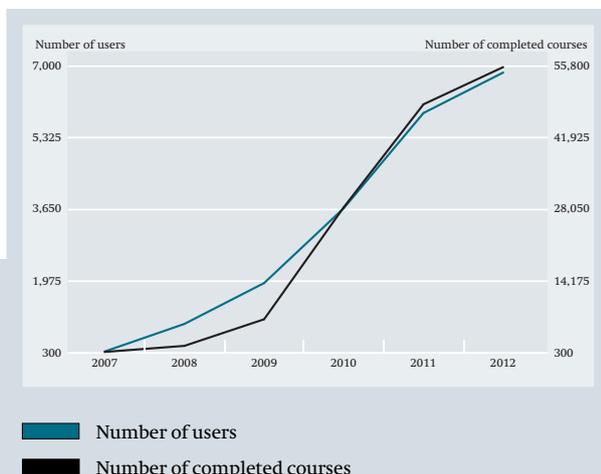
In 2012, we introduced a ‘Preventing Bribery and Corruption’ e-learning module. This course will be compulsory for most staff, depending on their position or the legal and national regulations under which they operate. This course has been developed to comply with Fugro’s own code of conduct and also to meet the expectations of our stakeholders: clients, investors, staff members, suppliers, shareholders and government authorities.

- Cooperation with universities

Our aim in cooperating with universities is to promote the inflow of talented staff. Cooperation usually involves our providing scholarships, funding research or making staff members available for committee or board positions.

Fugro has collaborative agreements with many universities around the world, including Newcastle University, Royal Holloway University in London, the Technical University of Catalonia, Memorial University in Canada, Delft University of Technology and the Wuhan University in China.

Number of users and completed courses 2007-2012



In March 2012, the Fugro Academy supported the launch of Plymouth University's distance learning courses in hydrography at Oceanology International in London. Fugro has been working with Plymouth for over three years on designing and developing this modular hydrographic surveying qualification. Over 40 Fugro staff, along with other people in the hydrographic and maritime industry, are now following the programme. As well as increasing the knowledge and qualifications of Fugro staff, this initiative is designed to increase the pool of qualified hydrographic surveyors available to the industry at a time when full-time academic courses are under pressure to supply the numbers required.

## ■ ENVIRONMENT

### ***Entering the renewables and sustainable infrastructure markets***

The growing demand for energy is increasingly being met by renewables such as solar, wind, biomass and tidal energy. New major infrastructure and building projects increasingly need to take environmental issues into account. Reduction of fossil fuel consumption and carbon emissions is therefore increasingly significant in determining the nature of the projects carried out around the world. With its technology and its employees' expertise and knowledge, Fugro has an important role to play in this respect. The demand for alternative energy supplies and sustainable infrastructure and construction projects create a range of new opportunities in new markets.

### **Projects relating to renewables and sustainable infrastructure**

- Landscape mapping in Scotland. In 2012, Fugro performed an airborne LiDAR survey for the construction of five wind farms in county Caithness in Scotland. The Fugro survey is part of a major archaeological landscape survey in Caithness, where

many ancient archaeological sites are located, and one of the most detailed landscape scans ever undertaken in Scotland. Airborne LiDAR surveys allow reliable 3-D images of sites to be produced very quickly and are therefore increasingly used for wind farm projects. An additional advantage of Fugro's FLI-MAP® system is that it can also measure the topographic relief underneath dense vegetation cover. The FLI-MAP® system effectively 'sees through' vegetation, however dense. It can scan ground surfaces, rocks, raised sites and traces that cannot be seen or mapped in any other way.

The Cnoc Freiceadain site is located close to one of the most important clusters of Neolithic cairns in Caithness, and the LiDAR survey clearly indicates the setting of these clusters of funerary monuments. Processing of the data also shows a large number of previously unknown findings, resulting in the addition of many new settlement traces to the known settlement sites in the area and a new perception of the extent of colonisation and agriculture in the Middle Ages and later. These data are invaluable for the scientific world and will also be made available to the general public on a special website.



- National Geodetics network in Cameroon  
In 2010 the Ministry of State Property and Land Tenure (MINDAF) in Cameroon requested Fugro set up a national geodetic network for a major land reform programme. The network is intended to serve as a basis for the country's cadastral surveys and maps. The programme was to include modernisation of its national cadastre.

A national geodetic network consists of a series of fixed geographic points covering an entire country. These are identified by a permanent marker, the XYZ coordinates of which are measured by GPS positioning with an accuracy of a few centimetres. Such a network serves as an objective reference base that can be used for various purposes, including measuring and delineating property parcels and building cadastral maps. This land property information is critical to a nation's legal and fiscal system, since property taxes are an important source of revenue.

Fugro worked with MINDAF representatives in the reconnaissance phase to identify suitable locations for the network's fixed points in each administrative region. Where possible, fixed points were selected in villages at accessible locations, such as school yards and police stations, with no overlying vegetation or other obstacles. During the next phase, the fixed points were defined by exact GPS observation and adjustment. Special processing software was subsequently used in combination with field data to calculate the exact coordinates and heights of the entire network. The final phase involved quality control and approval of the project results. This included additional training, as well as transferring



## Marine survey and environmental consultancy

With the acquisition of EMU Limited (UK) in March 2012 Fugro added marine survey and environmental consultancy expertise to the range of services that Fugro offers to the offshore sector. The new entity created in 2012 by clustering this new knowledge and expertise with what we already had in-house means we now have over 220 experts with extensive knowledge of the marine environment. This expertise is available to clients considering building wind farms and other sustainable forms of offshore energy, for the oil and gas industry, the mining industry, the fishing industry and government authorities wanting to commission climate and environment studies.

At the request of a major developer, Fugro EMU carried out an Environmental Impact Assessment (EIA) in summer 2012 for the construction of the Neart na Gaoithe wind farm in Scotland. The wind farm will be comprised of between 64 and 125 turbines and has the potential to produce enough green energy to power a city the size of Edinburgh. The entire impact assessment, including offshore environmental studies, in-depth desk studies, and studies into adaptations of the design and evaluating the potential effects, took three years to complete. Fugro EMU's marine consultants were responsible for supervising the entire process, including all the stakeholder consultations, completion of the impact assessment and the eventual Environmental Statement (ES).



the expertise and techniques that MINDAF staff will need in order to maintain the network themselves. Final delivery of the network took place in 2012. Over the next few years, MINDAF will add several thousand new fixed points to increase the density of the base network.

#### **Awareness of energy consumption and use of sustainable materials**

Fugro has set itself an objective of promoting energy savings in its activities and increasing the use of sustainable materials. As well as reducing the impact we have on the environment, this will also generate major cost-savings. The Fugro organisation does not own or operate any large-scale or polluting production facilities. The emphasis in this focus area, therefore, is on our energy consumption and use of materials at office locations, as well as by our fleet of vessels and aircraft.

In 2011, Fugro set the objective for all its major operating companies with operational activities to have a certified environmental management system (ISO 14001 or equivalent) in place. By the end of 2012, 90% of all these operating companies had received or were close to receiving certification.

#### **Examples of projects reducing consumption of energy and materials**

- Research has shown that the main impact that Fugro's vessel fleet has on the environment is attributable to its fuel consumption. The fleet comprises dozens of vessels. From an environmental perspective, therefore, our main target in the coming years will be to reduce fuel consumption.

Fugro's internal fleet manager (FMS) has been ISO 14001-certified since September 2012. This means that on the vessels a high-quality environmental management system has been implemented. Each vessel also has an energy savings system (the Ship Energy Efficiency Management Plan, or SEEMP) complying with international IMO regulations.

The first phase in the fuel-saving scheme for Fugro vessels, which started in October 2012, involved identifying and describing the required measures. This phase was completed in January 2013. All the measures needed to achieve energy savings will be implemented during 2013, while we will also be setting up a system for monitoring and evaluating these measures. The initial results will be available at the end of 2013.

Reducing the energy consumption of Fugro's fleet of vessels has several major benefits:

- Environmental impact: Each ton of fuel saved results in a reduction of approximately three tons in CO<sub>2</sub> emissions; to put these figures into perspective, our smallest ship uses approximately 50 tons of fuel a month, while the largest uses around 375 tons;
- Cost savings: Bunker fuel prices rose from USD 175 to USD 1050 per ton between 2002 and 2012, and are expected to continue rising in the coming years. Introducing a fuel savings programme will reduce the costs of bunker fuel by several percentage points;
- Meeting clients' sustainable procurement policy: the need to reduce CO<sub>2</sub> emissions is increasingly being stipulated as a purchasing condition by Fugro's clients. Our fuel-saving scheme plays a significant role in helping us to comply with this policy;
- Balance: Achieving a better balance between demand and consumption of bunker fuel;

In addition to fuel savings, we will be taking a number of other actions relating to ISO 14001 in the future. These actions, which will have a positive impact on the environment, relate primarily to ballast-water management and treatment in the vessels, but also include waste sorting and reducing the volumes of waste and chemicals used. These



aspects will also be included in the design of any new ships commissioned.

Fugro's Business Principles include striving to make a continuing contribution to sustainable development. This means we have to balance short and long-term interests, and integrate economic, environmental and social concerns into our business decision-making processes. In the present context, this means increasing the efficiency of our vessels and being aware of the environmental impact of our marine activities.

## ■ SOCIETY

### **Supporting social initiatives**

Providing support for various social initiatives is a way for us to increase the profile of Fugro's CSR policy and also to encourage employees to become consciously and actively involved in CSR. Most of the projects supported by Fugro were therefore initiated by our local organisations.

Fugro seeks to preserve and promote accessibility to valuable local heritage, and we therefore support many different initiatives around the world, particularly in the area of arts and culture. By sponsoring the Concertgebouw Amsterdam, Fugro contributes to the latter's mission to enable as many people as possible to experience world-class classical music. Fugro also provides financial support to the Hermitage art foundation, the Hoge Veluwe national park, the 'Holland' sea tugboat and MS150 (a cycle tour from Houston to Austin organised by the American Multiple Sclerosis Society). Fugro has also been supporting the Norwegian Barratt Due Institute of Music for several years. This institute was established in 1927 and has played a pivotal role in Norwegian music tuition for the past 80 years. In South Africa, Fugro has continued supporting The Homestead project, which helps street children.



## **013, 'Still on Patrol'**

During the Second World War, the Dutch Submarine Service was active in both the Far East and Europe. Seven Dutch submarines were lost during the war in various operations, with six of these disappearing without a trace. After the war, there was little interest in Dutch military history, and the Dutch government did not undertake any serious attempts to locate the submarine wrecks and discover the fate of their crews. Ten years ago, however, a group of surviving relatives got together to establish the Foundation for Surviving Relatives of Submariners 1940-1945, which seeks to locate the missing submarines and have these locations recognised as war graves. Since then, five of the missing submarines have been found, while the location of one is still unknown. That submarine (HMS O13), with its crew of 34, is still 'on patrol' and probably lying somewhere at the bottom of the North Sea. What exactly happened to HMS O13 remains a mystery.

As Fugro had previously been involved in 2010 in searching for one of the other missing submarines (HMS K16) in the South China Sea, the Foundation asked us once again to assist by providing staff and equipment for this special purpose. Fugro was pleased to be able to help. The search was carried out using meta-data from other studies in combination with Fugro's positioning and navigation software and hardware, a high-resolution side-scan sonar and a high-resolution magnetometer.

Although an initial expedition in the Norwegian sector of the North Sea in autumn 2012 yielded a lot of useful information, it failed to find HMS O13. The data gathered, together with other interesting information, have since been processed, and plans for a new expedition in 2013 are being drawn up. Fugro will continue wholeheartedly to support this initiative.

**013**  
STILL ON PATROL



In addition to focusing on art and preserving cultural heritage, Fugro also supports various local and larger-scale sports events. We have been the main sponsor of the Western Australian rugby team Emirates Western Force since 2012, for instance. The team plays in the highest Super Rugby competition. Super Rugby tournaments involve a series of friendly matches between the leading teams in the domestic leagues of

Australia, New Zealand and South Africa. As well as promoting healthy activity, Fugro's support also boosts local tourism and, therefore, the local economy.

These are just a few examples of how Fugro is helping local communities through activities ranging from major projects to smaller-scale support.

## Sector representation/participation

### 1.0 Industry Committees/ Advisory bodies

### Fugro's contribution

International Standards Organization (ISO)	Member of working groups for developing new standards: <ul style="list-style-type: none"> <li>– Offshore structures for the petroleum and natural gas industries</li> <li>– Marine soils investigation</li> <li>– Marine geophysical investigations</li> </ul>
International Society for Soil Mechanics and Geotechnical Engineering (ISSMGE)	Secretary and membership of the Offshore Geotechnics Committee Membership of the In situ-testing Committee
Society for Underwater Technology (SUT)	Membership of: <ul style="list-style-type: none"> <li>– Offshore Site Investigation and Geotechnics Committee (OSIF)</li> <li>– Working Group on Developing Guidance Notes on Site Investigations for Offshore Renewable Energy Projects</li> <li>– Working Group on Guidance Notes for Reducing Risks of 'Top Hole Drilling'</li> <li>– Honorary Secretary of the Houston branch</li> </ul>
International Association of Oil and Gas Producers (OGP)	Membership of the Committee for Guidelines and Technical Memoranda assessing the risks of offshore drilling
International Marine Contractors Association (IMCA)	Membership of the Offshore Survey Management Committee Membership of the Sustainable Energy Working Group

### 2.0 Joint Industry Projects (JIP) and research

### Fugro's contribution

'Lateral Pile behaviour in Chalk (JIP)' <ul style="list-style-type: none"> <li>– Determining pile load/behaviour in marl and limestone soils for purposes of gathering information for the wind energy sector</li> </ul>	Active participation and financial contribution
SAFEBUCK (JIP) <ul style="list-style-type: none"> <li>– Designing underwater pipelines to prevent potential lateral buckling</li> </ul>	Active participation
Jack-up spud can foundations (JIP) <ul style="list-style-type: none"> <li>– Research into the effects of existing seafloor depressions on the stability of offshore platform foundations</li> </ul>	Active participation
MUMOLADE (JIP) <ul style="list-style-type: none"> <li>– Multiscale modelling of landslides and debris flows</li> </ul>	Associated partner

**Sector representation**

Fugro has representatives in a number of organisations that are actively seeking to improve guidelines, standards, agreements, cooperative ventures and so on, at a sector level. The main bodies on which we are represented are listed below.

3.0 Training/courses	Fugro's contribution
Society for Underwater Technology (SUT) Course on Introduction to Offshore Geophysics and Geotechnical Engineering	Organisation (support)
Fugro training course on understanding the challenges involved in Offshore Wind Energy with respect to gathering and interpreting geological, geotechnical and spatial data	Organisation

4.0 Cooperation with universities	Fugro's contribution
Georgia Institute of Technology, USA	Sponsoring
Delft University of Technology, Netherlands	Sponsoring
Heriot-Watt University, United Kingdom	Contribution to MSc programme
IHE UNESCO Delft, Netherlands	Guest lectures on Offshore Geotechnical Surveys for MSc students
Deltares, Delft, Netherlands	Guest lectures for the international course on 'Setting up a geotechnical investigation programme'
Imperial College London, United Kingdom	Funding of MSc scholarship in Soil Mechanics and Engineering Geology
Portsmouth University, United Kingdom	Funding of BEng scholarship in Engineering Geology and Geotechnics
École Nationale Supérieure de Techniques Avancées (ENSTA) in Brest, France	MSc-level guest lectures on subsea positioning



