**BUILDING** on its unique position, Yara is dedicated to green growth

# Creating added value, making impact

**BASED** on its extensive knowledge, Yara is engaged in global challenges



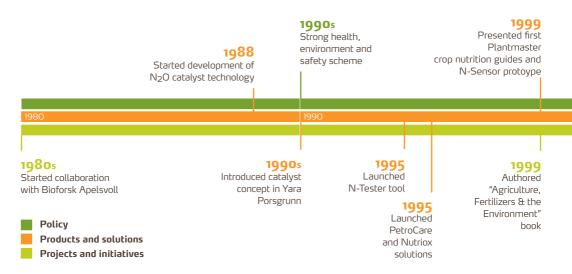
Scan code to see video animation presenting our Creating Impact approach



YARA IS POSITIONED TO CREATE IMPACT: In a world market influenced by global megatrends / PAGE 8 /, we seek solutions. Yara employs its core business, industrial experience and agronomic expertise to engage in policy processes and industry developments in the global arena. Inviting partnerships and launching initiatives / PAGE 7 /, Yara aims at unlocking business opportunities / FINANCIAL REPORT /, benefitting the company as well as society; CREATING VALUE.

YARA IS SET TO CREATE VALUE: In a society impacted by global challenges / PAGE 2 /, we deliver on our mission: better yield. Engaging throughout the value chain / PAGE 6 /, we create value. Delivering crop nutrition concepts, we improve productivity / PAGE 14 /; developing environmental solutions, we help reduce emissions, safeguarding the environment / PAGE 20 /; CREATING IMPACT.

**CREATING IMPACT STORY:** Yara International ASA was established by a demerger from Norsk Hydro in 2004, carrying forward strong traditions in industrial health, safety and environmental protection. Recognizing its role in global agriculture, Yara has since increasingly engaged in improving agricultural productivity, reducing emissions from the food chain and developing environmental solutions. This timeline depicts the evolution of Yara's novel strategic framework, Creating Impact.



# Who we are

YARA DELIVERS solutions for sustainable agriculture and the environment. Our fertilizers and crop nutrition programs help produce the food required for the growing world population. Our industrial products and solutions reduce emissions, improve air quality and support safe and efficient operations. Founded in Norway in 1905, Yara has a worldwide presence with sales to 150 countries. Safety is always our top priority.

#### What we do

**UPSTREAM** is the backbone of Yara's manufacturing system. It includes mass production of ammonia, urea, nitrates and other nitrogen-based products as well as phosphoric acid.

**DOWNSTREAM** offers a complete fertilizer portfolio to growers worldwide. It provides knowledge and tools to secure the right nutrients and optimize application and yield with minimal environmental impact.

INDUSTRIAL is a reliable partner in chemical products. It enables innovative solutions based on ammonia production and knowledge, and helps customers reach compliance with environmental legislation.

#### **SUPPLY AND TRADE**

is a global function responsible for optimization of energy and raw material purchases, ammonia trade and shipping, maritime logistics, third-party sourcing, and feed phosphates.

#### What we offer

PRODUCTS: We offer a complete portfolio of fertilizers covering all necessary nutrients for anv crop.



INDUSTRIAL PRODUCTS: We offer a wide range of nitrogen and specialty chemicals in addition to CO<sub>2</sub>, dry ice and civil explosives solutions.



**ENVIRONMENTAL SOLUTIONS**: We offer complete solutions for NO<sub>X</sub> abatement, odor control, water treatment and corrosion nrevention

Established the Africa Program



2004 Developed platform for sustainable agriculture 2004 2003 Launched Committed to the **NOxCare** EFMA Product solution Stewardship program

2005 Awarded first Yara Prize

Authored scientific paper on LCA method tailored to crop production

2004

Unveiled N<sub>2</sub>O catalyst technology

2005 Launched Airl brand for AdBlue/DEF

**2005** Established sponsorship of Millennium Villages

Products and solutions

Projects and initiatives



#### Where we are

GLOBAL PLAYER: As the industry s only global player, we have production on six continents, operations in 51 countries – and sales to about 150 countries.





#### 2006

Committed to the UN Global Compact initiative

#### 2006

Entered strategic cooperation with Bellona

Adopted corporate citizenship approach

#### 2008

2008 Entered

in the

WarmCO2

Netherlands

Launched Crop Nutrition concept

#### 2009

Joined the World Economic Forum as Industrial Partner

2009 Co hosted international seminar for a cleaner Baltic Sea

**2009** Participated in UN World Summit on Food Security

Extended NO<sub>x</sub> abatement Hosted first African Green solutions to Revolution conference maritime segment

**2007**Published first stand alone corporate citizenship report

Launched concept of Agricultural Growth Corridors

**2009** Presented TraP solution to prevent phosphorus leakage from fields

# **Review** contents



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Scan code to see the CEO's video presentation of the annual report





YARA REPORTING: This Impact Review,  $together\ with\ supplementary\ information$ online and the separate Financial Report, constitutes Yara's annual report 2011. The Impact Review and Financial Report are both available in print and on Yara's website: www.yara.com





2011

Participated in

COP17 in Durban

#### 2010 Adopted new HR strategy 2010 2011 Started Environment Launched Creating and Climate Compatible 2011 Impact concept 2010 Established Agriculture (ECCAg) Launched Innovation partnership with company-wide platforms Syngenta Launched Pure Nutrients campaign Ethics Program documenting benefits of nitrates 2011 2010 Co-chaired African Joined PepsiCo's project to reduce carbon footprint Union's "Grow Africa 2011 Task Force" of Tropicana orange juice Participated in development of the

WEF New Vision for

Launched Carbon Footprint

Guarantee for fertilizers

Agriculture

#### 2012

Yara continues to engage in global challenges. The company presents its case for green growth at the 2012 World Economic Forum in Davos, launches a partnership to develop a Sahara Forest Project test site and prepares for the Rio +20 conference. At the same time, Yara implements and operationalizes its Creating Impact approach.

# **2011** in brief *Impacts on the ground*



**IMPACT ON COMPANY** Global megatrends, policy issues and market conditions influence the business environment in which Yara operates – impacting on the company.

The impact is mainly within three key areas, linking global challenges and business opportunities:

#### RESOURCE MANAGEMENT

Scarcity of natural resources vital for agriculture, such as land and water, and limited reserves of energy, featured prominently in the global dialogue, for example at the G20 summit.

#### FOOD SECURITY

Global food price increases, with demand for food driven by population growth and resource scarcity, combined with climate concern, led to calls for green growth by the OECD and others.

#### **ENVIRONMENTAL ISSUES**

Climate change remained a key policy issue, with calls for a low-carbon, resource-efficient green economy encompassing agriculture made at the COP17 conference, and others.



**IMPACT ON SOCIETY** Strategic decisions, public interventions and corporate activities, influence Yara's business environment – impacting on society.

The impact is mainly through three core areas, offering business solutions to global challenges:

#### AGRICULTURAL PRODUCTIVITY

Yara continued involvement in improving resource management, launched innovation platforms on water scarcity and resource efficiency, and carried out field trials for, among other things, improving plant nutrient uptake.

#### FOOD PRODUCTION

Yara engaged in increasing yields, for example, by initiating value chain partnerships, promoting green growth, contributing to the WEF's New Vision for Agriculture, and supplying tailored crop nutrition solutions.

#### CARBON FOOTPRINT

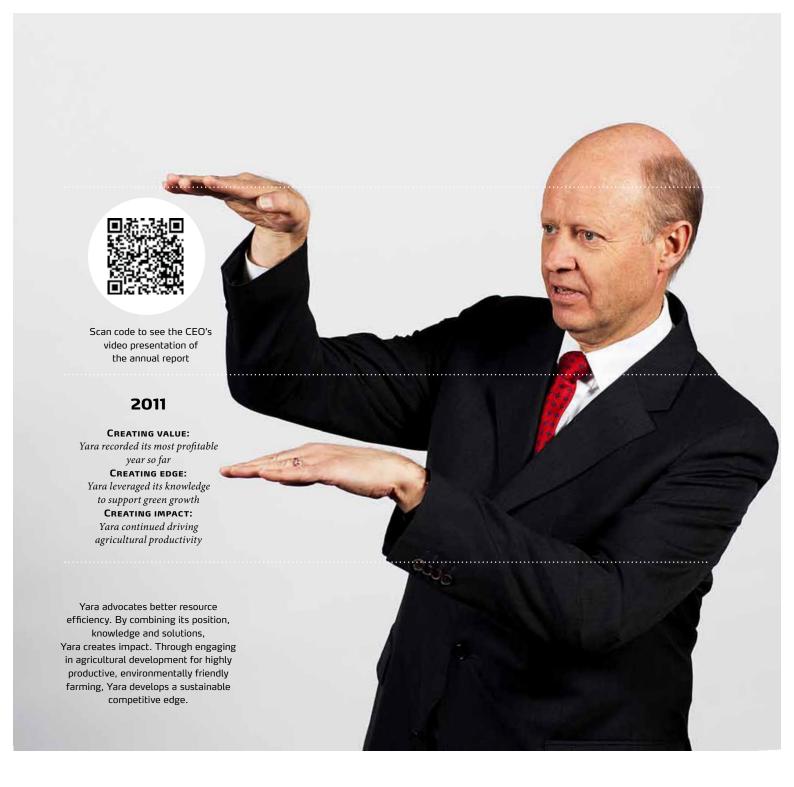
Yara concerned itself with global processes aimed at reducing climate change effects, offering solutions to reduce harmful emissions and easing the carbon footprint of agriculture.

## Key figures

		2011	2010	2009	2008	2007
Financial performance						
Revenue and other income	NOK million	80,352	65,374	61,418	88,775	57,486
Net income after non-controlling interests	NOK million	12,066	8,729	3,782	8,228	6,037
Earnings per share 1)	NOK	41.99	30.24	13.08	28.27	20.60
Health and safety						
Employees	Number at year-end	7,627	7,348	7,629	7,971	8,173
TRI rate <sup>2)</sup>	Per million hours worked	4.0	3.8	2.7	3.5	3.3
Environmental performance						
GHG emissions 3)	Million ton CO2 eq.	11.2	13.1	12.5	16.0	16.4
Energy use	Petajoule	219	223	208	207	191

#### Notes

- <sup>1)</sup> Yara currently has no share-based compensation program that results in a dilutive effect on earnings per share.
- <sup>2)</sup> TRI: Number of total recordable injuries per million hours worked. 2007–2009 figures are for Yara employees only; 2010–2011 also include contractors.
- 3) GHG emissions adjusted for new plants.



# **Sustainable profit** *Green growth in agricultural markets*

In 2011, agriculture was an emerging topic at the COP17 climate negotiations. YARA'S PRESIDENT AND CEO, JØRGEN OLE HASLESTAD, believes global policies will increase pressure for more sustainable and efficient farming – providing business opportunities for the company.

#### → CEO Jørgen Ole Haslestad

**Q:** How can stricter environmental policies become business opportunities for Yara?

A: Yara is uniquely positioned with our knowledge, high-quality product portfolio and global presence. No company can match Yara's solutions for improved productivity and green growth in the agricultural sector.

Q: Yara's solutions for green growth – what are they?

A: We have expert knowledge on crop nutrition, which enables us to provide advice on how to maximize yields while minimizing environmental impact and losses. We have a full range of crop nutrients – with a low carbon footprint from production as well as from use in the field. Adding in our local market knowledge and agronomic tools, we are a complete solutions provider.

**Q:** How can a product portfolio drive green growth in an entire sector?

A: Yara is engaged beyond delivery of products. We participate in partnerships and forums at the global level, where we consistently advocate solutions for green growth. By leveraging our position and knowledge, we create impact.

Q: Can you describe how you engage at the global level?

A: For example, French President Sarkozy put food security high on the agenda for the G20 Summit in 2011. Yara was part of the private sector task force which provided input. We addressed how food security can be ensured while also improving agriculture's impact on global warming. At the global level, we also keep our commitment to the UN Global Compact initiative, implementing and living up to its principles throughout our operations.

**Q:** More food with less impact on climate change – how can Yara make that happen?

A: It is a task beyond a single company, but we know that deforestation due to expansion of farmland is the main source of greenhouse

gas (GHG) emissions from agriculture. Improving farm productivity will reduce pressure on existing forests.

In Africa, our engagement in the Agricultural Growth Corridors is set to increase yield levels, improving food supply. In Tanzania we conduct research in collaboration with Syngenta and two universities, to define how modern farm practices impact on the environment, climate change and the economy.

Q: What progress do you see in the growth corridors?

A: I am not fully content – there is an urgent need to step up the pace. We do see concrete investments being made in Mozambique. And both the construction of Yara's fertilizer terminal and on-the-ground management of the growth corridor are on track in Tanzania

President Kikwete of Tanzania displays impressive leadership on agricultural development. Through his championship the African Union's "Grow Africa Task Force" has been established, where Yara is honored to have a co-chair position. This task force is designed to develop investment plans and engage private investors in order to achieve the goals set out in country level plans for sustainable agricultural development.

**Q:** Apart from the external engagements – what is the key progress of Yara as a company, in terms of sustainability?

A: We are ahead of schedule and still improving on greenhouse gas emissions. But a key point is that having zero emissions would not have any impact – unless we are also winners in the market place. Our new approach, Creating Impact, is a framework for identifying areas where Yara is positioned to create value – for shareholders, employees, stakeholders and society at large. This in turn will translate into a competitive edge for Yara – allowing us to expand our impact.

At the global level we leverage Yara's position to drive our initiatives and establish partnerships, engaging along the value chain to improve performance. We will create sustainable profits – also through driving green growth.





President of Tanzania, Dr. Jakaya Mrisho Kikwete, and Yara CEO Jørgen Haslestad at the launch ceremony for the fertilizer terminal in Dar es Salaam.

# Strategic ambition: Creating Impact

Yara has chosen Creating Impact as its strategic ambition and approach, aiming at improving its competitive edge through creating value both for shareholders, stakeholders and society at large.

Creating Impact is a strategic framework for identifying how business solutions and societal interests intersect. It defines three focal areas in which Yara has a unique position, enabling it to develop business strategies beneficial to both the company and society.

Yara consistently implements a strategy of profitable and sustainable growth; a roadmap for industry shaper performance and long-term value creation. The strategy is based on the company's unique business model, extensive knowledge base and unrivalled global position.

The scope of Creating Impact is to create value for shareholders, customers, employees and society at large. This translates into sustainable competitive

advantages for Yara, enabling it to further strengthen its impact. Yara leverages its knowledge, global presence and business model

CREATING IMPACT

CREATING COMPENTATION

CREATING COMPENTATION

ARRIVATION

CREATING COMPENTATION

ARRIVATION

ARRIVATION

CREATING COMPENTATION

ARRIVATION

CREATING COMPENTATION

ARRIVATION

CREATING COMPENTATION

CREATING COMPE

**IMPACT LOGIC:** By creating value for shareholders and society alike, Yara develops sustainable competitive advantages – improving its position, strengthening Yara's ability to create impact and value.

Creating Impact is a business approach building on Yara's unique business model and three interlinked dimensions, mutually reinforcing each other in a virtuous cycle: Creating competitive advantages – creating value – creating impact.

at the World Economic Forum, the G20 summits and other highlevel forums. Here, Yara utilizes its position to drive initiatives and business partnerships, supported by the Creating Impact framework.

Yara's potentially substantial impact in society is primarily related to the three focal areas; resources, food, and the environment (see page 7). In particular, Yara engages to identify business solutions addressing food security and climate change simultaneously.

As a global company, Yara can launch initiatives and invite partnerships, engage in both global dialogues and local value chains. Yara's crop nutrition solutions help improve agricultural productivity and the company's

industrial solutions minimize harmful emissions. Employing its core business and expertise, Yara creates value – creating impact.





#### **Competitive** edge

Yara has a strong global position.



Yara intends to retain and reinforce this position, in the value chain and in the global market, by building sustainable competitive advantages. With its agronomic and industrial expertise, Yara is positioned to set standards for industry performance and to create advantages in all parts of the value chain.

**CREATING EDGE** supports Yara's ability for creating value – throughout the entire value chain.

Yara's business model is unique in the industry, extending from extraction and sourcing of raw materials all the way to marketing and customer education activities. With operations worldwide and an extensive knowledge base, Yara is well-equipped to maneuver in a changing global environment. Backed by a strong brand and financial solidity, Yara uses its knowledge and first-hand experience in the market to provide solutions to some of the major challenges facing agriculture and industries today – adding to the company's edge.

Creating competitive advantages reinforces Yara's optimization of operations along the value chain. On this basis Yara is positioned to drive improvements in the industry's overall performance, and to contribute solutions to major global challenges, impacting on society and delivering on the company mission. Creating noticeable, positive impacts adds to the company's competitive edge in a strategic perspective, spurring further growth and value creation.

#### Added value

Yara is positioned to create value.



Yara is determined to retain and strengthen its value creation by executing its strategy for sustainable, profitable growth. Building on its strong global platform, Yara creates added value for key stakeholders.

**CREATING VALUE,** Yara strengthens its ability to create impact – within the industry and in society.

Yara's competitive edge includes products and solutions with a strong position in world markets; crop nutrition solutions helping to improve agricultural productivity; industrial solutions reducing emissions. In the face of global challenges, Yara looks to enhance the value of its broad portfolio. For agriculture, this involves ways to mitigate and adapt to climate change and make the most of scarce resources, contributing to food security. For industries and transportation, Yara offers technologies to reduce negative environmental impacts and improve efficiency.

By engaging in global challenges, developing solutions, Yara is creating value – driving its competitive edge. These challenges also offer opportunities, increasing demand for Yara's products, and underpin future value creation.

#### YARA'S VALUE CHAIN PRESENCE

#### YARA



#### **Global** impact

Yara is positioned to create impact.



With its unrivalled global presence, its history of R&D supporting a drive for innovation, and its strategic approach, Yara is creating impact, edge and value.

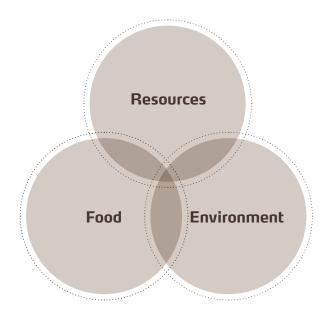
**CREATING IMPACT,** Yara reinforces its competitive advantages – strengthening its global position.

Yara's global position allows for policy dialogue participation, and serves as a platform for forging partnerships and presenting initiatives – such as developing the WEF roadmap 'New Vision for Agriculture', and launching the agricultural growth corridor concept. Through global engagement, developing technologies and knowledge sharing, Yara impacts on policy frameworks, industry processes and management practices, contributing to green growth.

By linking key issues related to the company's core business, in particular connecting food security and climate change, and by offering solutions to help improve agricultural productivity, Yara adds to its competitive advantages and value creation, strengthening its global position. Playing an active role in key arenas, Yara leverages this global position from several vantage points – to create impact.

VALUE CHAIN: Building on its unique business model and unrivalled global presence, Yara creates impact throughout the entire value chain.

Creating Impact pertains to all steps of the value chain, including the sphere beyond Yara's direct control: Products and solutions impact through customers' use – guided by the company's sharing of knowledge.



YARA IMPACT AREAS: Yara is uniquely positioned to make a substantial impact correlated to major global challenges within the three interconnected areas; resources, food and environment.

#### **RESOURCES**

**Challenge:** To sustain global growth and increased demands for products dependent on the use of limited natural resources, including critical inputs for food production, especially land and water, as well as key raw materials. RESOURCE SCARCITY.

**Contribution:** Yara offers agronomic solutions enhancing resource use efficiency considerably, improving agricultural productivity and raising yields, including solutions for increased water use efficiency and phosphate uptake. Increasing resource efficiency.

#### FOOD

**Challenge:** To meet the demand for fiber, fodder and fuel from agriculture, at the same time as producing enough food, with balanced nutritional value. Food security and obesity must be addressed to meet the demands of a growing world population – with increased consumption arising from improved prosperity. FOOD PRODUCTION.

**Contribution:** Yara offers crop nutrition solutions supporting sustainable agriculture through a value chain approach, lifting food production and enhancing food quality, contributing to food security. IMPROVING AGRICULTURAL PRODUCTIVITY.

#### **ENVIRONMENT**

**Challenge:** To sustain further growth in ways that minimize detrimental impacts on the environment, especially the emission of greenhouse gases which drive global warming, causing climate change, which is already impacting on society. CLIMATE CHANGE.

**Contribution:** Yara offers crop nutrition solutions tailor-made to increase yields sustainably, which is imperative to reduce land use change and GHG emissions. Providing tools for increased precision improves resource efficiency and reduces nitrogen leakage. Yara is also a leading global provider of industrial solutions minimizing harmful emissions. REDUCING CARBON FOOTPRINT.

#### Global trends

Yara is influenced by major global trends playing a crucial role in developments pertaining to food security and climate change.



These trends tie company and society together. They impact on global market conditions and drive demand for Yara's mineral fertilizer andindustrial products, while affecting

living conditions in all parts of the world:

- Population growth increases the demand for food, directly influencing Yara's business. In 2050, world population is set to reach about 9.1 billion.
- Economic growth stimulates changes in diet, i.e. increased consumption of especially meat, which raises the demand for grain and fertilizers.
- World urbanization affects diet, food systems and creates environmental challenges, strengthening the market for Yara's environmental solutions.



7 BILLION: World population tipped another threshold in late 2011, adding another billion since 1999.

By 2050, the UN projects the number will peak at about 9 billion. The largest relative increase will occur in Sub-Saharan Africa, set to more than double its population from today's one billion plus. India is expected to catch up with China by 2025; each with about 1.4 billion people

#### Global environment

In 2011, the critical connections between food production, resource management and environmental stress, under pressure from world population growth, were further emphasized in the global arena, demanding concerted action.

Combined challenges call for crosscutting approaches. Green growth requires all sectors of society to sustainably balance future demand and supply. Improving productivity and enhancing resource use efficiency are key issues.

Global agriculture has increasingly been seen as a key sector in meeting the interconnected food security and climate change issues, and furthermore: in creating growth and alleviating poverty in developing parts of the world.



In its 2011 report with recommendations, the independent Global Commission on Sustainable Agriculture and Climate Change urgently called for investments and innovation to support a climate-resilient agricultural production with efficient resource use – and for simultaneous actions by public and private sectors alike.

Business is identified as a key player in solving the most pressing global challenges; helping to increase productivity in a sustainable manner, increasing resource use efficiency throughout the supply chain, reduc-

ing carbon intensity towards a low-emission, climate-compatible agriculture. Calls for green growth argue that there need not be a conflict between growth and the environment if government policies provide the appropriate frameworks, aligning economic, environmental and social goals.



#### Vital RESOURCES:

Land Water

Raw materials

#### THE R FACTOR:

Economic growth extends the extraction of finite resources and use of non-renewable energy. This implies a need to create as much value as possible out of every input used



Resources

#### MAJOR GLOBAL CHALLENGE:

Support growth and increase production, employing relatively less input

#### MAIN INTERVENTION:

Increase resource efficiency

#### MAIN YARA CONTRIBUTION:

Solutions maximizing efficiency

#### VALUE - IMPACT

Green growth requires improved agricultural productivity, yielding more crop per acre, drop of water and unit of energy – creating value

Innovative technologies increase resource use efficiency and limit emissions – creating impact



# Resource management

Yara is involved in improving resource management, enhancing efficiency in the use of natural resources critical in agriculture, especially land and water, as well as key raw materials.

IN 2011, global attention on resource management was prominent. The close connection between food security and climate change

has been firmly established, and related to the vital issue of land use – and land use change. The water, energy and food security nexus, a crucial interconnection climbing the global agenda in 2011, also came to attention, including at the Bonn2011 Nexus Conference and the G20 Cannes summit.

#### THE SITUATION

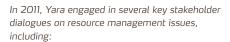
The combined global challenge remains: How to double total agricultural output, delivering, food, fiber and fuel to a growing world population, achieving food security (see page 14), with limited natural resources.

The Bonn2011 Nexus Conference on water, energy and food security, seeking solutions for the green economy, portrayed a tipping point scenario: the megatrends of population growth, economic growth and urbanization cause a 40 percent gap between demand and availability of fresh water resources by 2030. In the same two decades from 2010, there will be a 40 percent increase in global energy demand, and an increase in food demand of 30 to 50 percent.

Production increases have to be achieved with limited, and relatively less, resource inputs: with virtually the same amount of farmland, and less freshwater. New land area for agriculture is theoretically available, but changing the use of land will exacerbate climate change.



## Global dialogue



**NSS:** Participating in the industry's first Nutrient Stewardship Summit, organized by The Fertilizer Institute.

**IFIEC:** Chairing the International Federation of Industrial Energy Consumers: Steinar Solheim, Head of Yara energy sourcing.

#### THE SOLUTION

The main contribution is to increase input use efficiency along the food value chain, improving agricultural productivity. The agricultural ministers of the G20 group in 2011 pointed at the need for improvements in land and water management, in order to achieve a much needed increase in agricultural production and productivity on a sustainable basis.

WATER SCARCITY: In 2011, the issue of water scarcity remained a major concern, as a limiting factor in reaching future food production goals. Climate change will have major impacts on water availability in several farming regions. The 2011 World Water Week in Stockholm raised ways to address the global water, energy and food security challenges, pointing to water as the bloodstream of a climate resilient green economy. The statement called on all stakeholders to, among other things, commit to a 20 percent increase in water efficiency in agriculture. The Bonn2011 Nexus Conference, organized by the German government, aimed to influence the water-energy-food security perspective as an important dimension within the Rio process.

#### PRODUCTIVITY ADDING CITRUS YIELDS

WHAT: R&D Where: Brazil

**IMPACT:** Support higher yields of oranges

Using Yara Liva Calcinit over several years has had a proven effect, increasing citrus yields by an average of 16 tons per hectare over the past three years when compared to straight AN fertilizers. Sustainably



increasing yield levels is a key development to reduce pressure for land use change.

#### RELIABILITY BACK TO BASICS

WHAT: Plant reliability WHERE: Yara plants worldwide

**IMPACT:** *Improves productivity and efficiency* 

Plant reliability ticks a number of boxes: It is decisive for productivity as well as for improving energy efficiency and operational safety. Creating value and impact, reliability will be a main priority

for Yara's plants in coming years.

Yara has engaged in increasing water use efficiency (see case presentation page 10), aiming to help alleviate the growing

pressure on fresh water resources. The company's main contribution is through sharing knowledge about crop nutrition application. Trials in 2011 showed that increased rates of nitrogen fertilizer improved water use efficiency by strengthening the size and activity of the root system. Yara's fertigation solutions represent another contribution: Distributing crop nutrition with water through drip irrigation systems increases plant uptake of nutrients and minimizes water use. In 2011, Yara launched an innovation platform on water, aiming to further develop solutions enhancing water use efficiency. The fundamental relationship between crop nutrition, yields and water use efficiency is a strong motivation for the innovation platform.

RESOURCE EFFICIENCY: In 2011, the issue of resource availability remained a major concern. Climate-smart agriculture was highlighted at the COP17 in Durban. In a paper presented at the conference, the FAO promoted an energy-smart approach to agriculture which can take better advantage of the dual relationship between energy and food, noting that, at every stage of the food



#### Yara impact

Yara employs its core business in the quest for food security, creating impact through:

Processes optimizing the use of natural gas as feedstock and energy source in the production of mineral fertilizer.

Product and knowledge development, supporting optimal use and uptake of plant nutrients.



supply chain, current practices can be adapted to become less energy intensive. Over the past decade, Yara has succeeded in improving its energy efficiency, reducing GHG emissions.

Again in 2011, world reserves of phosphate rock, a key ingredient in crop nutrition, were a topic. Together with the industry, Yara publicly argued that there are ample supplies in the foreseeable future. At the same time, Yara launched a resource efficiency innovation platform, exploring opportunities to increase phosphate use efficiency, including phosphate uptake by plants.

#### **KEY ISSUES**

LAND USE CHANGE should be avoided by increasing agricultural productivity, in order not to reinforce greenhouse gas emissions that drive global warming.

RESOURCE USE EFFICIENCY should be enhanced in order to maximize output while minimizing input, supporting sustainable agriculture and green growth.



# Key **DIMENSIONS:**Food production Food quality

#### THE F FACTOR:

Food production implies tapping resources and taxing the environment. Increased production has to be balanced against resource scarcity and environmental concerns



Food

#### MAJOR GLOBAL CHALLENGE:

Increase food production to feed a future population with higher consumption

#### MAIN INTERVENTION:

Improve agricultural productivity

#### MAIN YARA CONTRIBUTION:

Solutions improving productivity

#### VALUE - IMPACT

Global growth drives the demand for crop nutrition solutions and agronomic knowledge – creating value

Improved agricultural management practices increase production and save resources – creating impact

# **Food** security

Yara is engaged in the global pursuit of food security, leveraging its global position and agronomic knowledge to initiate value chain partnerships and improve agricultural productivity.

IN 2011, global attention on issues related to food security remained high: Another price hike for basic food items, putting the 2008

food crisis in mind, brought price volatility to the forefront of the international debate. Leading up to the 2012 United Nations Conference on Sustainable Development (UNCSD) in Brazil ('Rio+20'), the concept of green growth gained foothold, arguing the case for climate-smart agricultural production. Again, calls were made for increased investments in agriculture in general, and in R&D and innovation in particular – as a prerequisite for improving agricultural productivity, considered the only path to achieving food security.

#### THE SITUATION

The overarching global challenge remains: How to feed 9 billion people in 2050, increasing food production by 70 percent and nearly doubling total agricultural output of food, fiber and fuel, using basically the same, or less, basic resources – especially farmland and fresh water (see page 11).

In 2011, world staple food prices continued their 2010 climb, pointing to a phenomenon expected to remain a feature in the years to come: food price volatility. Hitting the poor hardest, volatility is considered a major threat to food security, and the issue attracted considerable political attention during 2011.

The yield gap is a cause for concern. According to the Global Harvest Initiative, the annual growth rate averaged about 1.45

percent between 2000 and 2008. Yet, doubling agricultural output sustainably by 2050 will require an annual growth rate of at least 1.75 percent. In its 2011, 'State of Food Insecurity in the World', the FAO argued that a food security strategy that relies on a combination of increased agricultural productivity, greater policy predictability and general openness to trade will be more effective than other strategies, and that investment in agriculture remains critical to sustainable long-term food security.



## Global dialogue



In 2011, Yara engaged in several key stakeholder dialogues on food security issues, including:

**WEF:** Board position in the New Vision for Agriculture initiative, co-chairing sessions of agricultural growth at the World Economic Forum.

**CFS:** Participating at the annual session of the United Nations stakeholder platform, the Committee on World Food Security.

**G20:** Engaging in the CEO Working Group, providing input to the G2O process leading up to the Cannes summit.

#### THE SOLUTION

Although there are no simple solutions to food insecurity, one crucial element is to improve agricultural productivity: Harvesting a higher yield per input unit. Increasing food production has to be done by promoting and practicing sustainable agriculture (see box on page 17), creating value throughout the agricultural value chain, contributing to green growth.

GREEN GROWTH: In 2011, the OECD was among the international organizations arguing the need for growth to tackle the financial crisis and fight poverty. In its report on a green growth strategy for food and agriculture, the organization argued that

#### **GROWTH CORRIDORS UNLOCKING GROWTH POTENTIAL**

**WHAT:** Southern Agricultural Growth

Corridor of Tanzania (SAGCOT)

WHERE: Tanzania

**INITIATIVE:** After launching the concept of Agricultural Growth Corridors in 2008, Yara now plays a catalyst role in the two corridors under development. In 2011, Yara launched an investment of USD 20 million into a fertilizer terminal supporting the SAGCOT.

**OPPORTUNITY:** Yara looks to build on its strong position in Africa, where agriculture is lagging from insufficient infrastructure, inefficient markets, and low access to fertilizer and other farm inputs. Yara's support of agricultural development is rooted in a long-term interest in Africa and the opportunities associated with a healthier agricultural sector.

**PRIME PARTNERSHIPS** Praised as a prime example of public-private partnerships, the corridor concept aims to inspire investments in infrastructure and improve farmers' access to technology, farm inputs and markets.

EXEMPLAR In 2011, the SAGCOT case was featured in the WEF New Vision for Agriculture and presented at the COP17 in Durban.



CLIMATE COMPATIBLE 2011 saw the initial results from the Environment and Climate Compatible Agriculture (ECCAG) initiative, a Syngenta-Yara partnership project to investigate impacts of agriculture on the environment and climate change.

**TANZANIA TRIALS** ECCAG trials showed yield improvements of 82 percent for maize and 122 percent for rice, without increases in GHG emissions or water use.

REMEDY FOR

**POVERTY** Investments of USD 3.4 billion over 20 years in the SAGCOT can create on-farm revenues of USD 1.2 billion and lift two million people out of poverty in Tanzania.



**ADDING CAPACITY** 

The new fertilizer terminal in Dar es Salaam, Tanzania, will have a storage capacity of 45,000 tons of fertilizer when completed in 2013.



#### **COFFEE PARNTERSHIP LIFTING COFFEE YIELDS**

**WHAT:** WEF coffee task force

WHERE: Vietnam

INITIATIVE: Vietnam is the #2 global coffee exporter. Nevertheless, the country's coffee production suffers from inappropriate fertilization and an aging coffee-tree population. Together with Nestlé Vietnam, Yara has engaged in a WEF task force to improve agricultural practices.

**OPPORTUNITY:** With extensive knowledge in crop nutrition, Yara can optimize fertilizer programs for crops destined for food companies like Nestlé, addressing issues such as quality, environmental impact and security of supply. At the same time, food companies represent an attractive route to reach more farmers and raise awareness of the benefits of Yara's Crop Nutrition concept.

ROBUSTA REFERENCE Yara is the only crop nutrition company active in the WEF task force aiming to make Vietnam the recognized reference of Robusta coffee. The task force is co-chaired by the Vietnam Ministry of Agriculture and Rural Development (MARD) and Nestlé Vietnam.

#### MORE FROM LESS N

Conclusion of trials from the coffee project: Farmers can achieve higher yields from less, but better-balanced, fertilizer.



**WIN-WIN-WIN** Farmers enjoy improved profitability, Nestlé Vietnam gets more secure supplies, and Yara, increased sales.



**CARBON FOOTPRINT** Analyses from 2011 show that the carbon footprint of coffee crops can be more than halved by the use of Yara's fertilizer programs.

**SCALING UP** Yara, Nestlé, Syngenta and MARD are organizing training of 40 local ambassadors, who will train other farmers on best coffee farming practices.

**EXPORTING THE CONCEPT** Yara is starting trials in Guatemala with Nespresso, focusing on the quality and carbon footprint of local coffee crops.

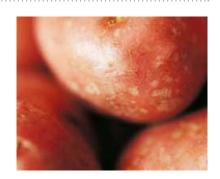
# POTATO PARTNERSHIP HIGH CARB, LOW-CARBON POTATOES

WHAT: Reduced GHG emissions

Where: UK

**IMPACT:** In partnership with 350 British farmers, PepsiCo aims to reduce the climate and water impact of their core crops by 50 percent over five years. Trials started

in 2010 and have, among other technologies and innovations, evaluated Yara's low-carbon fertilizers – nitrate fertilizers from low-emission plants. Analyses show that Yara's fertilizers reduced the carbon footprint of potatoes by 28 percent, bringing the "50 in 5" target closer.



such growth is not only desirable and achievable, it is essential if the food and nutrition requirements of future generations are to be met. Green growth was identified as one of the priorities by OECD agriculture ministers in 2010, and the organization pointed at the need for a comprehensive and coherent strategy, including increased resource use efficiency throughout the supply chain – necessitating higher priority to research, development, innovation, education and informa-

tion within the sector.

Yara pursues a strategy of profitable, sustainable growth. The company is positioned to contribute solutions to sustainable increase of agricultural output. Yara has taken a prominent role in developing green growth solutions, including enhanced resource efficiency and reduced greenhouse gas emissions. Yara sees agriculture as an engine in achieving green growth, and launched the concept of agricultural growth corridors in 2008. Acting as a catalyst, Yara has contributed to the establishment of the public-private partnership behind the corridor in Tanzania (see case presentation, page 15). Yara has invested into this value chain, constructing a new fertilizer terminal in Dar es Salaam. Yara presented the case in several international forums in 2010-2011, and the Tanzania corridor featured both at the World Economic Forum (WEF) in Dayos, and the COP17 conference in Durban. At the 2012 WEF meeting, Yara cochaired a key session on 'Agriculture

as a Driver for Green Growth'. Here, Yara's President and CEO, Jørgen Ole Haslestad, pointed to the need to integrate the food, climate, water and energy agendas – if green growth is to be achieved.

AGRICULTURAL PRODUCTIVITY: In 2011, the G20 group of countries pursued food security as a policy priority, with its

#### Sustainable agriculture

Yara advocates the idea and practice of sustainable agriculture, with its three dimensions:

#### PROFITABLE PRODUCTION

The economical dimension: Agriculture must provide sufficient financial reward to farmers, enabling them to make a decent living, encouraging production and re-investment into farms.

#### PROTECTED ENVIRONMENT

**The environmental dimension:** Agriculture shall maximize resource use efficiency throughout the value chain, reducing the pressure on natural resources and preventing erosion of biodiversity.

#### PROSPEROUS COMMUNITIES

The societal dimension: Agriculture shall contribute to thriving and viable local communities, to economic and social development, including the provision of healthy food.

agricultural ministers recognizing "the importance of a significant increase in agricultural production and productivity". They committed themselves to agricultural growth and promoting an enabling environment to encourage and increase investment in agriculture. In particular, the ministers stressed the need to support public-private partnerships, based on a value chain approach. The heads of state followed suit at the November Cannes summit, stating the vital importance of increasing agricultural production and productivity. Global business was involved in the process leading up to the summit. Yara took part in the CEO Working Group, providing private-sector input to the overall G20 process.

The key position championed by Yara for several years is that the main contribution towards green growth within food production lies in improving agricultural productivity – and through forging partnerships. At the 2011 WEF meeting, Yara was among a group of international companies presenting the 'New Vision for Agriculture' roadmap,

#### **CROP CLINICS**

#### CLINICAL CROP TREATMENTS

WHAT: Farmer education
WHERE: Ghana and several other countries

Inspired by colleagues in Indonesia, Yara Ghana successfully hosted 45 Yara Crop Clinics across the country in 2011. The clinics

**IMPACT:** Brings knowledge to the farm gate

provide a meeting point for Yara and farmers to discuss strategies for improving farm productivity and efficiency. One on one consultancy brings knowledge into the fields and raises awareness of Yara's solutions

– a win-win situation for farmers and Yara.



with directions towards improved agricultural productivity and increased food security. The Vision has a value chain approach, aimed at building transformational partnerships through new models of collaboration - using the Southern Agricultural Growth Corridor in Tanzania (SAGCOT) as a prime example. Another visionary initiative, of which Yara is a partner, is a public-private task force for sustainable economic growth in Vietnam. Here, an innovative approach to improve food security and agricultural sustainability is taken on, including value chain projects within the country's coffee sector (see case presentation, page 16). Yara is also involved in a value chain crop partnership in Mexico, demonstrating the added value of its crop nutrient expertise. In 2011, Yara was represented on the project board and working group of the New Vision initiative.

The calls for increased investments remain persistent. In their 'Agricultural Outlook 2011–2020', the OECD and FAO pointed at a slowdown in global agricultural production growth, and argued that "substantial further investments in productivity enhancement are needed to ensure the sector can meet the rising demands of the future".



# Yara impact



Yara employs its core business in the pursuit of food security, creating impact through:

Products and solutions contributing to improved agricultural productivity in a sustainable way.

Knowledge of production methods and crop nutrition application, maximizing resource efficiency.

Initiatives connecting key stakeholders and creating partnership projects promoting sustainable agriculture.

AGRICULTURAL KNOWLEDGE: In 2011, several leading international organizations, as an input to the G20 summit, recommended improving productivity and increasing investments – not least in innovation and knowledge. Sharing of knowledge is paramount for promoting sustainable agriculture, to secure higher yields and increased profitability for the farmer. Small-scale farmers will play a critical role in meeting future food demand.

With its global presence and agronomic expertise, Yara is positioned to contribute knowledge to support agricultural sustainability and productivity. The 37th session of the Committee on World Food Security in 2011, in which Yara participated, highlighted a significant expansion of agricultural R&D as one of the action points to enhance food security.

#### KEY ISSUES

IMPROVED PRODUCTIVITY is critical to meet future demand for food, fuel and fiber; to feed a planet of 9 billion people.

NUTRIENT EFFICIENCY is critical in sustainable agriculture; increasing yields by applying the right amount of crop nutrition.



# Environment

## Major ISSUES: Climate change

Emissions Biodiversity

#### THE E FACTOR:

Human activities impinge on the environment, challenging sustainability. Global growth has to be made green, reducing carbon footprint to avoid driving global warming



#### MAJOR GLOBAL CHALLENGE:

Sustain global growth while reducing harmful emissions to air and water

#### MAIN INTERVENTION:

Reduce global warming

#### MAIN YARA CONTRIBUTION:

Solutions minimizing emissions

#### VALUE - IMPACT

Market demand for solutions that support green growth is rising rapidly – creating value

Innovative crop nutrition and environmental solution reduce emissions and safeguard the environment – creating impact

# **Environmental** issues

Yara is concerned about the environmental impact of agriculture and other human activities, and develops solutions that help offset negative effects such as harmful emissions to air and water.

IN 2011, global attention on environmental issues remained high. Concern over climate change continued, with international agreements at stake during the COP17 in Durban. Focus on sustainable development was reinforced, with green growth

being a key topic on the agenda at the G20 meeting in Cannes, France. The role of agriculture, and the sector's greenhouse gas (GHG) emissions, were again emphasized.

#### THE SITUATION

The combined global challenge remains: How to increase food production in the face of climate change, with global warming affecting growers in virtually all parts of the world. An environmental challenge resulting from fertilizer use in agriculture is leakage of nutrients to waterways, which has the potential to cause nutrient overloads.

In 2011, the issue of climate change was revisited at the COP17. In the stakeholder process leading up to the conference, a study indicated that an investment of two percent of global GDP across ten sectors – including agriculture – is necessary to prompt a shift to a low-carbon, resource-efficient and socially inclusive green economy.

Legislation aimed at reducing  $NO_X$  emissions from the use of fossil fuels in transportation, power generation and industrial production continued

to be reinforced in 2011. A new wave is expected to take place in 2012–2016, with stricter regulations being implemented in existing markets and new legislation coming into force in Brazil, China and Russia.



#### Global dialogue



In 2011, Yara engaged in key stakeholder dialogues on environmental issues, including:

**COP17:** Participating at the Business for Environment dialogue at the UN climate change conference in Durban.

**EU:** Advocating improved resource use efficiency in the EU's Common Agricultural Policy process.

**AdBlue:** Joining largest European producers for a common quality initiative, supported by truck manufacturers.

#### THE SOLUTION

The main contribution to prevent global warming reaching critical levels, is to reduce emissions of greenhouse gases. With agriculture responsible for about 26 percent of emissions, the sector has a major role to play. Improving agricultural productivity, to limit land use change causing large emissions of carbon dioxide (CO<sub>2</sub>), is crucial, as is the improvement of management practices.

CLIMATE: In 2011, the issue of climate change connected to farming highlighted the need to develop climatesmart agriculture, particularly in Africa. This was a key issue at the COP17. In a policy brief, the World Bank (WB) noted that ensuring food security under a changing climate is one of the major challenges facing Africa. Yara was the private sector's onstage representative at the WB venue, addressing the need to step up efforts to make agriculture the engine for green growth.

Yara is a strong proponent of combining the closely interlinked issues of food, climate, resource scarcity and rural poverty. Encouraging environmentand climate-compatible agricultural growth, Yara has entered a partnership

#### **ENVIRONMENTAL SOLUTIONS GROWTH IN NOx REDUCTION**

**WHAT:**  $NO_X$  abatement solutions

WHERE: Worldwide

**CONTRIBUTION:** NO<sub>X</sub> abatement solutions based on SCR or SNCR technologies use ammonia as a reagent to convert harmful NO<sub>X</sub> into harmless nitrogen and water. Yara is a leading provider of the reagent and has been a pioneer in several applications for NO<sub>X</sub> abatement.

**Business case:** Yara's  $NO_X$  abatement solutions have seen rapid growth since the market first opened in 2005. Stricter legislation will continue to drive demand, with the biggest markets in North America, Europe and Brazil. Yara aims to be a technology leader and total solutions provider in the market for  $NO_X$  abatement.

MARKET EXPANSIONS Yara is a leading supplier of the AdBlue reagent in Europe, expanded its activities in North America in 2011, and looks for further growth opportunities in NO<sub>X</sub> abatement in Latin America, the Middle East and Turkey.

 ${f N}$  **AND NO NO**<sub>X</sub> Yara is more than N fertilizers: We can help farmers cut NO<sub>X</sub> emissions from farming machinery to meet new European emission regulations.

AIR1 APP ON AIR July 2011 saw the launch of a filling station locator mobile app for Air1.



4

HEALTHY
RESULTS About
721,500 tons of NO<sub>X</sub>
emissions were cut
in 2011 by Yara's
deliveries of abatement solutions.



721,500 tons Emission reductions from Yara's solutions (2011) 185,900 tons
Total NO<sub>X</sub> emissions
in Norway (2010)

#### INNOVATION PLATFORM

Launched in 2011, Yara's innovation platform on emissions to air aims to unlock growth opportunities in the market for abatement technologies, and to establish a lead position in product stewardship and safety.



COMPLETE OFFERING After acquiring Petro Miljö in 2011, Yara's NOxCare offerings for industrial plants will cover the entire value chain, from building reduction systems to supplying the reagent and promoting safe storage and handling.

#### SAHARA FOREST PROJECT DESERT GOES GREEN

WHAT: Innovative green technologies

WHERE: Qatar

**IMPACT:** Production of food, water and energy

A one-hectare site outside Doha, Qatar, will soon host the Sahara Forest Project pilot plant. When fully operational in 2012, the plant will utilize sunlight, deserts and seawater to produce food, fresh water



and energy through a combination of innovative technologies. Yara, together with Qatari fertilizer producer Qafco, will provide the estimated USD 5.3 million cost of the pilot plant.

#### THERMO KING COOL CO2

WHAT: CO<sub>2</sub> in cooling systems
WHERE: The Netherlands

**IMPACT:** Reduces emissions and noise

Thermo King's cryogenic cooling system is powered by recycled CO<sub>2</sub> from Yara, supplied through a network of filling stations. The CO<sub>2</sub> replaces diesel compressors and halogenated refrigerants, reducing emissions.

with Syngenta in Tanzania, to develop a clear understanding of the impacts of agriculture on the environment and climate change. Here, Yara tests how increased agricultural productivity can be compatible with environmental sustainability and climate change.

Initial results from trials in 2011 indicate strong yield increases without increasing GHG emissions.

Yara continues to explore smart links to other industries and to develop viable business from by-products. 2011 saw the opening of a gas line between Yara's feed phosphate plant in Kokkola, Finland, and Woikoski, a gas company and producer of medical and technical gases and equipment. Recovered CO2 from Yara's plant has become a valuable raw material for Woikoski, turning emissions into product supply. Yara is engaged in several similar links: Yara Sluiskil supplies CO2 and excess heat to adjacent greenhouses in the WarmCO<sub>2</sub> project in Sluiskil, the Netherlands, and a number of other plants feed excess heat into district heating systems. In 2011, these deliveries amounted to 762 GWh. Furthermore, Yara captures and markets CO2 for use in industrial applications and has engaged with leading companies in the cooling chain to support more environmentally-friendly cooling systems (see case above).

EMISSIONS: In 2011, the demand for  $NO_X$  abatement solutions (see case presentation, page 21) increased, contributing

to a reduction of emissions, especially from heavy-duty trucks and power plants. Yara is a major supplier of AdBlue in Europe and North America, introducing its solution to the Brazilian and other markets in 2011. During the year, Yara participated in several Integer AdBlue

diesel emission forums in Europe, China, USA and Brazil.

# Yara impact



Yara employs its core business in approaching environmental issues, creating impact through:

**N2O catalyst technology:** Yara's catalyst technology reduces nitrous oxide (N2O) from nitric acid plants by up to 9O percent.

**Low-carbon fertilizers:** Yara offers a range of nitrate-based, low-carbon fertilizers, a result of the N<sub>2</sub>O catalyst technology and other efforts to reduce GHG emissions.

**Carbon Footprint Guarantee:** Launched in Scandinavia in 2010, Yara's Carbon Footprint Guarantee for fertilizers is the world's first of its kind.

Yara is engaged in developing solutions to reduce harmful emissions from the use of mineral fertilizer, including runoffs into waterways. A case in point is the multinational collaboration around the Baltic Sea, in which Yara has taken an active part. Based on its TraP research project, Yara has presented novel solutions using gypsum to trap phosphorus in fields, preventing leakage. Results from trials featured as an example of progress at the 2011 Commitment follow-up in Helsinki. A subset of commitments aims to tackle the problem of agricultural nutrient loading by recycling nutrients. A related issue being addressed is to recycle nutrients captured in municipal wastewater treatment plants for use in agriculture.

#### **KEY ISSUES**

CLIMATE-SMART AGRICULTURE, reducing the carbon footprint of global agriculture, is a key contribution to stem global warming.

EMISSIONS ABATEMENT, reducing the amount of nitrogen oxide ( $NO_X$ ) emitted to the air, is provided by AdBlue solutions.



# Sustainability performance

YARA'S CREATING IMPACT approach covers the company's entire value chain, including measures to reduce any negative environmental impacts of the production system and to safeguard worker health and safety. Building on its century-long experience in industrial production, Yara is today among the world's most energy-efficient producers of mineral fertilizer, with a strong health and safety track record.

Yara's R&D capabilities are instrumental in increasing the efficiency and improving the environmental impact of the company's production platform. Among other things, investments in R&D have resulted in Yara N<sub>2</sub>O catalyst technology for reducing GHG emission, which has positioned Yara as a leading provider of

low-carbon fertilizer: Environmental improvements that create impact on society, support cost efficiency and provide competitive advantages.

Following the launch of the Creating Impact approach in mid-2011, Yara will continue to operationalize the concept throughout the company, in 2012 and beyond. This will be reflected in future reports. While this section provides a summary disclosure of the company's sustainability performance in 2011, Yara also continues to report according to the Global Reporting Initiative G3 guidelines and framework.

» For Yara's complete GRI index, visit www.yara.com/gri

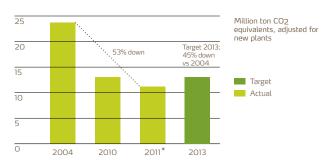
#### **ENVIRONMENTAL PERFORMANCE**

**IN 2011**, Yara continued to make environmental and productivity improvements in its production platform. Yara succeeded in reducing energy use and emissions per ton of finished product.

Thanks largely to its  $N_2O$  catalyst technology, Yara has reduced its GHG emissions significantly in recent years. With the  $N_2O$  catalyst or similar technology installed in all nitric acid plants,

and energy use steadily approaching the theoretical minimum for fertilizer production, similar quantum leap improvements will be hard found. Yara will nevertheless continue investing in its ammonia plants, pursuing higher efficiency, cost reduction and lower emissions. All of Yara's nitric acid plants will meet the new requirements for such plants under the EU Emissions Trading System coming into force in 2013.

#### GHG EMISSIONS VS TARGET

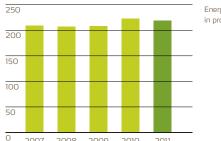


Yara reduced GHG emissions from its plants by 45 percent between 2004 and 2010, reaching its 2013 reduction target well ahead of time. This emission level was improved in 2011 by better plant performances and improved efficiency of Yara's  $N_2O$  catalyst technology. The shutdown of the joint venture plant in Libya explains roughly 0.7 million tons of the reduction in 2011.

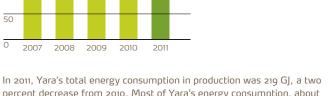


#### **ENERGY CONSUMPTION**

material for the ammonia.



Energy consumption in production (PJ)



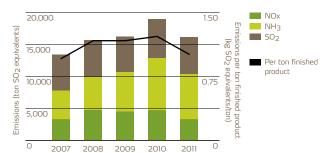
90 percent, is related to ammonia production. Only 20–30 percent of

this share, mostly natural gas, is combusted. The rest is used as raw

Energy consumption per ton of finished product decreased by 5 percent from 2010 to 2011, from 14.6 to 13.8 GJ per ton.

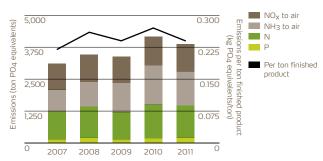
In 2011, Yara's plants delivered roughly 762 GWh of surplus heat to local district heating systems and industries.

#### **EMISSIONS TO AIR CONTRIBUTING TO ACIDIFICATION**



In terms of impact per ton of finished product, Yara reduced the acidification potential of its emissions to air by 18 percent in 2011. The switch of boiler fuel from oil to natural gas in one plant was a large contribution to this result.

#### **EMISSIONS CONTRIBUTING TO EUTROPHICATION**



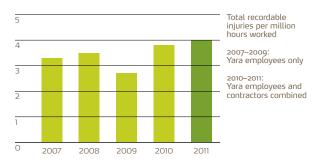
Yara reduced its emissions of substances with eutrophication potential in 2011. This resulted in a 10 percent decrease in emissions per ton of finished product.

#### **HEALTH AND SAFETY**

IN 2011, Yara continued its strong track record with respect to worker health and safety. The company has implemented a stringent internal safety program, founded on the belief that every accident is preventable. During 2011, Yara paid particular attention to the safety of contractors, who have historically been more prone to undesired incidents than Yara employees. Strengthening existing initiatives, Yara continued to develop its BBS (Behavior-Based Safety) program, proceeded with its Process Safety program in the Upstream segment, and continued to raise safety awareness and improve reporting and hazard identification in the Downstream and Industrial segments.

Regrettably, Yara experienced three serious accidents in 2011, of which one had a fatal outcome: An electrician in Brazil received an electric shock during work on a panel that had not been de-energized and locked out according to procedures. Yara recognizes the severity of such incidents and that they should not occur. All accidents are thoroughly investigated and preventive actions implemented.

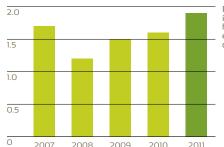
#### TOTAL RECORDABLE INJURY (TRI) RATE



In 2011, Yara achieved a TRI rate of 4.0 for employees and contractors combined, an increase from 2011 and below Yara's target of 3.5. Recovering from an unsatisfying start, Yara saw improvements in the TRI rate in the second half of 2011.

TRI: Total recordable injuries per million hours worked, including lost-time injuries, restricted work cases where employees and contractors are allowed to carry out work different from their normal duties, and medical treatment cases.

#### LOST-TIME INJURY (LTI) RATE



Number of lost-time injuries per million hours worked. Yara employees and contractors combined

In 2011, Yara recorded an LTI rate of 1.9 for employees and contractors combined, a slight increase from 2010. The LTI rate for employees only was less than half of the rate for contractors, spurring an upgrade and strengthening of the technical and operational procedures for contractors.

LTI: Lost-time injuries per million hours worked; incidents where injuries to workers or contractors lead to absence from work



European fertilizer producers.

Yara's accident rate is half of the average for

0/1000

Yara Trinidad was awarded the 2011 Yara Safety Award for its outstanding safety performance: avoiding lost-time injuries for more than 1,000 consecutive work days. 3.6

Absence due to illness at Yara's production plants ended at 3.6 percent in 2011, slightly up from 2010, but below the average for the period 2006–2010.

#### WORKFORCE

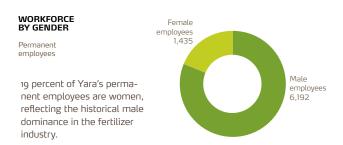
YARA'S SUCCESS DEPENDS on the skills and expertise of its diverse workforce. The company aims to give all employees the opportunity to achieve their full potential and to offer long-term prospects for personal and career development. While managers are responsible for identifying, developing and building the talent of their immediate staff, Yara also expects employees to take the initiative in identifying and acting on their development needs, in the interest of personal development, as well as contributing to Yara's success.

In 2011, Yara followed up on its human resources (HR) strategy, which was launched in 2010 and based on three priorities: performance and development, recruitment, and retention. To this end, Yara implemented a Human Resources Information System, tried out a new Talent Development process, improved its Workforce Planning process, launched a High Potentials program, initiated a new 360-degree feedback tool and rolled out a Performance Management process.

	Africa	Asia	Europe	Latin America	Brazil	North America	Total
Permanent employees	191	291	5,026	415	1,112	525	7,627
Non-permanent contracts	2	10	1,167	40	323	94	1,667
Total	193	301	6,193	455	1,435	619	9,294

Yara had 7,627 permanent employees at year-end 2011, compared to 7,348 in 2010. The increase reflects both organic growth and acquisitions, and came mainly in Latin America and Asia. Yara also had 1,667 contrac-

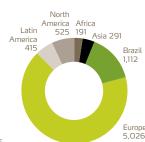
tors, consultants and other non-permanent employees working for the company in 2011, a slight reduction from the 1,707 the year before.



#### WORKFORCE BY REGION

Permanent

Roughly two-thirds of Yara's permanent workforce is employed in Europe, making it by far the largest region with respect to number of employees.



#### PRODUCT STEWARDSHIP

YARA'S ACTIVITIES are all guided by the principles of product stewardship as set forth by Fertilizers Europe (FE) and the International Fertilizer Industry Association (IFA). Based on a clear commitment to promote sustainability and safe practices throughout the life cycle of fertilizers, they ensure that proper care is taken along the entire value chain, from product development and sourcing of raw materials, through production, storage and distribution, to sales, delivery and application.

In 2011, an independent audit confirmed that Yara's operations in Europe are in full compliance with the requirements of the FE Product Stewardship Program. Outside Europe, Yara is implementing the IFA Protect & Sustain product stewardship program, which was launched in early 2011. Yara has participated in the development of this initiative, and in May 2011 Yara Mexico was among the first companies to receive an IFA Protect & Sustain certificate. Other units will follow suit, as Yara aims to have all operations outside Europe certified to the program.

#### **CERTIFICATION**

Yara aims for all plants to be certified to the three widely recognized standards ISO 9001 Quality Management Systems, ISO 14001 Environmental Management Systems, and OHSAS 18001 Occupational Health and Safety Management Systems. This

process is nearing completion, 17 out of 20 plants having all these certificates in place. A number of units also have certifications to other standards in place, such as for energy management and, not least, food and feed safety systems.

#### REACH

Yara's fertilizers, chemicals and raw materials are covered by national or international fertilizer or chemical regulations. In 2011, Yara established a unit, Yara Central REACH, to ensure future compliance in Europe and with similar regulations that are being developed and implemented in other parts of the world. All of Yara's European products are in compliance with the EU Registration, Evaluation, Authorization and Restriction of Chemicals (REACH) regulation, and Yara will complete the implementation of the EU Regulation on Classification, Labelling and Packaging (CLP) during 2012.

Chemical regulations are also becoming increasingly stricter outside Europe. Yara continuously tracks changes in regulations and registers products according to national rules. In non-EU markets, Yara currently classifies and labels its products according to the CLP regulation or national requirements. The company will also introduce product classification and labeling based on the UN Globally Harmonised System (GHS).

#### ETHICS AND COMPLIANCE

IN FEBRUARY 2010, Yara launched a company-wide Ethics Program, based on the fundamental principles of its Code of Conduct, and structured around its core values of ambition, teamwork, trust and accountability. During the year, the program was rolled out throughout the organization and an array of ethics tools were provided to Yara employees, including a handbook, telephone hotline, video materials and web-based portal. The Ethics Handbook was translated into over 13 languages, and 9 Ethics Videos were created.

The program continued in 2011, following up on employee training and participation, as well as integration of the Ethics Program into different business processes, such as Employee Induction, Internal Audit and Procurement. In addition, 2011 was spent developing a new training program, as well as a new Ethics Video that will to be rolled out in the middle of 2012 to all employees.

#### CITIZENSHIP COMMITMENTS

**DURING 2011**, the Ethics and Compliance Department followed up on several actions related to Yara's corporate citizenship commitments. Yara has been a signatory to, and active supporter of, the UN Global Compact since 2006. In 2011, Yara participated in one UN GC Nordic Conference.

Yara continues to report according to the Global Reporting Initiative (GRI) and is committed to improving the application of this framework. In 2010, an internal process was carried out to improve the quality and completeness of the company's non-financial reporting. In 2011, Yara implemented an online tool which increased our GRI Reporting from 31 fully reported indicators to 56, and reduced not-reported indicators from 30 to 14 indicators points for our 2010 GRI report.

Yara did not identify non-compliance with laws or regulations regarding human rights, anti-competitive behavior, corruption, marketing, customer privacy or the provision and use of products, including their health and safety impacts, in 2011.

# **About** the report

The Impact Review 2011 is the fifth in a series of publications describing Yara's approach to connecting core business with global challenges, and documenting aspects of its sustainability performance.

The Impact Review 2011 is a continuation of Yara's stand-alone reports on citizenship activities and performance in the period 2007–2010. A revision of the citizenship approach and a broadening of the strategic scope resulted in the launch of the Creating Impact strategic framework in 2011 (see page 5). Consequently, Yara has chosen this as a platform for communicating its global engagement, at the intersection of company and society – through this Impact Review and on the corporate web site. The Review is outlined in accordance with the three key areas identified at the center of Creating Impact, closely linked with Yara's core business; resource management, food security, and environmental issues.

#### SUSTAINABILITY PERFORMANCE

The Creating Impact framework includes a clear ambition to strengthen and broaden the company's reporting of sustainability performance. This process was started in 2011 and will be reflected in future reports. While the Impact Review 2011 provides a summary disclosure of Yara sustainability performance, more in-depth reporting along with details in scope, boundaries and data collection can be found on Yara's website: www.yara.com

#### MORE ABOUT YARA

The corresponding Financial Report 2011 provides detailed information on Yara's financial and operational performance in 2011, along with a more comprehensive presentation of the company and its strategy going forward, as well as accounts on governance and risk. The Financial Report 2011 and supplementary information on the company are found on: www.yara.com

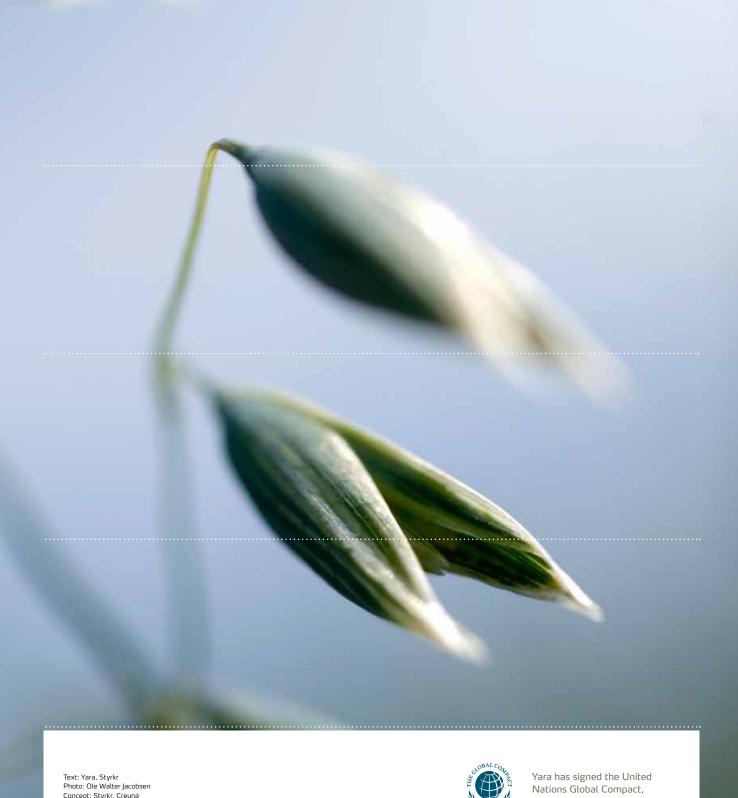


#### **GRI REPORTING**

Yara continues to report according to the Global Reporting Initiative (GRI) G3 guidelines and framework. The company's GRI reporting is organized in

accordance with the reporting framework and can be found online:

- » For Yara's Impact reporting: www.yara.com/impact
- » For Yara's GRI index: www.yara.com/gri



Text: Yara, Styrkr Photo: Ole Walter Jacobsen Concept: Styrkr, Creuna Design: Creuna Prepress: Creuna Print: Zoom-Grafisk



embracing its principles. The UN GC is a strategic policy initiative for businesses

committed to aligning their operations and strategies with ten universally accepted principles in the areas of human rights, labor, environment and anti-corruption.



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YARA PIONEERED mineral fertilizers a hundred years ago, creating impact within world agriculture – increasing yields, improving food security. Building on our agricultural expertise and leveraging our industrial experience, we have developed crop nutrition concepts and environmental solutions, creating value for our shareholders and stakeholders, and for society at large.

Connecting major challenges such as resource management, food security and environmental issues, we remain dedicated to contributing solutions and seizing opportunities – benefiting the future.

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