

Global sustainability challenges and opportunities

Energy and climate change

Global population growth, combined with improving living standards, has created substantial increases in energy demand, which in turn has lifted CO₂ levels in the atmosphere to record unacceptable highs.

Omnia's response

- Utilise best-in-class technology to reduce carbon emissions from our plants. Two EnviNOx™ plants have been installed at our nitric acid plants that have significantly reduced emission of nitrogen oxide – a greenhouse gas (GHG) – to far below legislative requirements:
 - 3,1 million CER credits have been generated in the last five years, making the Group the leading performer in South Africa
 - 600 000 CER credits are expected to be generated next year.
- Continually seek ways to reduce energy consumption and optimise the efficiency of existing and future energy consumption processes:
 - The new nitric acid plant has built-in co-generation capacity that has substantially reduced energy consumption at the Sasolburg complex. When operating at full capacity, the co-generation capacity saves up to 50% of the entire Sasolburg factory complex's usual electricity consumption from Eskom
 - Protea Chemicals has aligned itself with a global leader to provide materials for bio-based chemicals and packaging
 - The Group has an ongoing initiative to improve the energy efficiency at the various Group production facilities. Several such projects were completed in the year
 - The Group's absolute energy consumption per ton manufactured in FY2014 reduced from 0,19 gigajoules (GJ) to 0,18 GJ. This decrease is ascribed to the collective contribution of the numerous energy optimisation projects implemented in the wider Group.

- Actively support the drive to develop sources of alternative and renewable energy, including biofuels:
 - The Mining division is playing a key role by supplying explosives and mining chemicals to uranium mines across the African continent. Uranium is used to fuel nuclear power stations
 - The Mining division is at the forefront of efforts to recycle used oil to replace new oil in its formulations and implements this recycling process in several countries where it has emulsion plants. Continuous research over many years has enabled the development of formulations that have further reduced the volume of clean (virgin/new) oil used in its production process
 - The Mining division actively seeks out opportunities to minimise environmental impacts where possible. Its explosives are oxygen balanced to minimise toxic fumes and its BlastMap™ blasting software and the use of AXXIS™ electronic delay detonators reduces vibration, noise and dust.

Food security and the interests of farmers in Africa

There is increasing concern around food security as food production fails to meet escalating demand caused by global population growth, changing dietary habits in developing economies, increasing urbanisation and the declining availability of arable land and water.

The FAO (Food and Agriculture Organisation of the UN) states that by 2050, world food production will have to rise by 70%. Approximately 80% of this increase is projected to result from increases in yield and cropping intensity in developing countries.

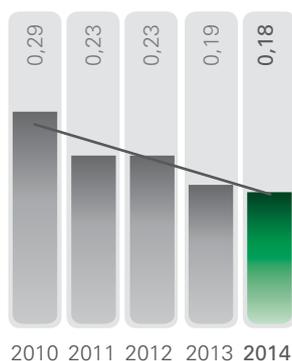
South Africa has been a net importer of food since 2000, and innovative approaches are required to remedy the shortfall in food production. South Africa's agricultural capacity is under strain as it tries to meet its transformation objectives. Effective ways are needed to assist subsistence farmers to become small-scale entrepreneurs.

Omnia's response

The Agriculture division, through its Omnia Nutriology® model, has a full plan to support the pillars of modern, sustainable agriculture. This entails the use of a large team of agronomic specialists supported by competent technological services. This division also:

- Continually invests in programmes that enhance nutrient and water use efficiency, as well as the more effective utilisation of available organic matter. The division is also developing biostimulants and elicitors that can integrate plant nutrition with plant immune response

ENERGY CONSUMPTION PER TON OF PRODUCT MANUFACTURED (Gigajoules)



Global sustainability challenges and opportunities

continued

- Develops and deploys new agronomic techniques and fertilizer products that help increase crop yields
- Undertakes extensive R&D aimed at developing and deploying new fertilizer products and agronomic techniques that increase crop yields and improve the quality of crops grown
- Advises on good farming practices to conserve water and prevent soil erosion
- Has a dedicated unit focused on the entire business of the emerging farmer by helping equip them to take up their roles in the South African agricultural sector as commercially viable and sustainable businesses.

In Africa, farmers only apply 10% of the global average application rate of fertilizer per hectare. Omnia's agronomic expertise is extensive and supports optimal fertilization, while our knowledge of Africa's agricultural environment enables us to provide practical and sustainable solutions for food security issues.

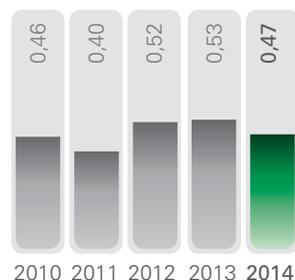
Water quality and availability

Water is becoming scarcer and unsustainable water use is rising as a result of expanding populations, increasing standards of living and inefficient agricultural practices.

Omnia's response

- Continually look for further opportunities through which to improve and promote the efficient use of water resources by investing in businesses that do so, and through optimising own water use
- The Group has made some progress in recent years in reducing its water use, as reflected in the following graph:

WATER CONSUMPTION PER TON OF PRODUCT MANUFACTURED (Kilolitres per ton)



- The business of treatment of water resources is one of the Group's strategies. Zetachem specialises in potable water treatment
- The R91 million chlorine packaging plant commissioned in September 2013, which supplies product for the treatment of potable water, further demonstrates the Group's commitment to assist South Africa to optimise its water resources
- The Agriculture division, through its proven Nutriology® offering, provides agronomic advice to customers on the conservation and efficient use of water on the farm. R&D undertaken shows that the scientific application of fertilizers reduces water use and increases drought resistance
- Water management changes have been implemented at numerous Group plants and sites to optimise water reuse and decrease municipal water use:
 - The Omnia Fertilizer sites in Sasolburg and Rustenburg are among the very few sites in South Africa that have obtained an Integrated Water Use Licence (IWUL) from the Department of Water Affairs (DWA)
 - The granulation plant at Sasolburg is now reusing contaminated stormwater in the process, reducing the municipal water required and minimising the potential for any unauthorised discharges
 - Water management optimisation projects have been completed at Omnia Fertilizer's sites at Viljoenskroon, Daniëlsrus and Hectorspruit, while a project was initiated at the Dryden site. These projects are aimed at reducing the potential impact of contaminated stormwater and effluent on soil and surface and groundwater. They focus on isolating sources of potential pollution, optimising the reuse of contaminated water as close as possible to the source, and optimising operational processes.
- Concerted efforts have been made at the Protea Chemicals site in Killarney, Cape Town, to improve water quality and effluent management. This has resulted in improved compliance with the local by-laws.