SUSTAINABILITY ELEMENTS

# ENVIRONMENT



## ENVIRONMENTAL CAPITAL

7 PERCENT DECREASE IN SCOPE 1 EMISSIONS
174 228 METRIC TONS OF CARBON DIOXIDE SEQUESTERED IN 2017/18
425 136 MWH ELECTRICITY GENERATED BY TONGAAT HULETT SUGAR MILLS
FEATURED ON 2017 CDP WATER A-LIST

#### **KEY ELEMENTS**

Reduced total emissions by 4 percent 9th consecutive years of participating in CDP Carbon, 5 years in CDP Water Improvement in Water Resources Management

#### **KEY PRIORITIES GOING FORWARD**

Improving soil health and promoting sustainable agriculture Energy efficiency Emissions reduction Smart irrigation solutions As a major user of land, biodiversity and water, Tongaat Hulett's agri-processing and land development operations are significantly impacted by natural systems and, in turn, impact the environment and local communities. As a responsible corporate citizen, Tongaat Hulett seeks to demonstrate its commitment to sound environmental stewardship, within a context of sustainable and ethical practice. Compliance with legal requirements is a minimum requirement, with operations striving to establish and comply with local and international best practices. In line with this approach, the company aims to retain certification to ISO 14001 Environmental Management System standard across all its operations.

With the increasing demand to grow more food, the responsibility lies with agriculture and agri-processing businesses to look after the soil in areas in which they operate. Since healthy soil forms the foundation of food production in successful agriculture, unproductive soil can be rehabilitated through the adoption and implementation of more environmentally friendly approaches. This is promoted by the three main interlinked principles of Conservation Agriculture: minimal soil disturbance, permanent soil mulch cover and crop diversification.

## CLIMATE CHANGE

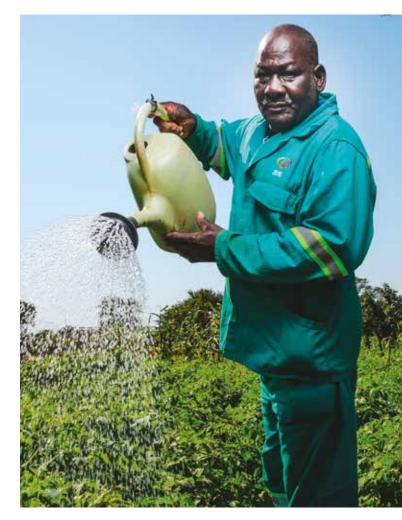
According to the United Nations Food and Agriculture Organisation, there is no doubt that climate change impacts food security. Overhauling farming and food systems will be complex due to the vast number of stakeholders involved, the multiplicity of farming and food processing systems and differences in ecosystems. The effects of climate change on agricultural production and livelihoods will vary across countries and regions. Tongaat Hulett recognises the need to adapt to the physical impacts of climate change, which may affect operations, particularly through the availability of water and the occurrence of extreme weather events. The company continues to engage with experts on several innovative initiatives, including programmes to improve irrigation efficiency and more drought-resistant crop varieties.

Sub-Saharan Africa will experience the largest increase in the number of poor people, partly because its population is more reliant on agriculture. Therefore, success in transforming food and agricultural systems will largely depend on supporting smallholders in adapting to climate change. Tongaat Hulett relies on agricultural products produced in varying agro-ecological and socio-economic conditions. Solutions are tailored to these conditions, but overall, significant improvements in food security, as well as resilience to climate change is achieved by introducing sustainable agricultural practices.

Tongaat Hulett's approach to dealing with the impacts of climate change includes increasing resource-use efficiency, reducing fossil fuel usage and avoiding direct environmental degradation, enhancing productivity sustainably and reducing dependence on external inputs. Improved crop production and fertiliser management offer the greatest potential to reduce nitrous oxide emissions, while also reducing input costs. Increasing stocks of soil organic carbon improve crop yields and build resilience to drought and flooding, but also sequester carbon. The company participates in public environment forums and, during the past year, this included Business Unity of South Africa (BUSA), the Industry Task Team on Climate Change (ITTCC), parliamentary discussions and the Department of Environmental Affairs (DEA) on Carbon Budget and Carbon Tax alignment.

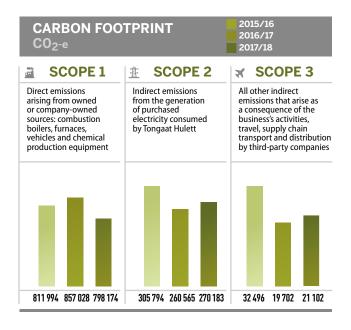
#### **CARBON MANAGEMENT**

As part of its broader response to climate change, Tongaat Hulett participated in the CDP (formerly Carbon Disclosure Project) for the ninth consecutive year. The CDP is an independent initiative that encourages transparency on climate change-related issues, with an emphasis on emissions disclosure. The company's carbon footprint analysis was conducted per the Greenhouse Gas (GHG) Protocol, published by the World Business Council for Sustainable



Development (WBCSD) and the World Resources Institute and has reported Scope 1 and 2 GHG data in compliance with ISO14064:3. Terra Firma Solutions has provided limited assurance on Scope 1 and 2 GHG data in accordance with ISO14064:3. Details of the company's current actions are provided in the public response to the CDP, available at www.cdp.net. Tongaat Hulett tracks and monitors its GHG emissions, seeking through ongoing efforts to improve the accuracy and reporting of its carbon footprint.

During the year, business operations emitted 798 174 metric tons of CO2 equivalent (CO2-e) Scope 1 emissions (2016/17: 857 028). The company purchased electricity that emitted 270 183 metric tons of CO2-e (2016/17: 260 565). The total Scope 3 emissions were 21 102 metric tons CO2-e covering business travel, comprehensive supply chain transport and distribution by third-party companies (2016/17: 19 702). In the 2017/18 reporting period, employees booked 2 970 business trips, flying more than 4 137 823 million kilometres, resulting in 763 metric tons CO2-e being emitted from business travel. The total Scope 1, Scope 2 and Scope 3 carbon emissions for the period under review was 1 089 459 metric tons CO2-e and the turnover was R16,982 billion, which equates to 64 grams of CO2 emitted per Rand generated. The GHG emissions have been verified by a third-party service provider.



Overall, compared to 2017, Scope 1 emissions decreased by 58 854 tons CO<sub>2</sub>-e (7 percent). Scope 2 emissions increased by 9 618 tons CO<sub>2</sub>-e and compared to 2017 (4 percent), compared to 2017, Scope 3 emissions increased by 1 400 tons CO<sub>2</sub>-e (7 percent).

Total emissions from South African operations, calculated at 673 714 metric tons CO<sub>2</sub>-e, includes emissions of 344 983 metric tons CO<sub>2</sub>-e emanating from the South African sugar operations. Tongaat Hulett completed a study with the assistance of global carbon experts, which found that the company's sugar farms sequester carbon at a rate of 12 tons per hectare per annum from sugarcane produced. Using this rate, Tongaat Hulett's

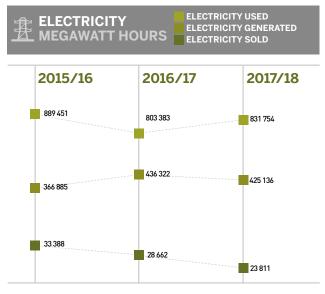


14 519 hectares (grown from company-owned and leased land) equates to 174 228 metric tons CO<sub>2</sub>-e sequestered in this financial year. The South African sugar operations could benefit from the carbon capture and storage of CO<sub>2</sub> in the growing of sugarcane if the National Treasury allows for sequestered emissions to be deducted from the company's carbon footprint. Therefore, 499 486 metric tons would have been subject to carbon tax in this financial year.

#### **ENERGY**

Energy efficiency is one of the region's challenges compounded by the need for an affordable, sustainable energy supply. The most practical and immediate route to success is not the building of new power-generating plants, but the use of less energy from the national grid. The introduction of a suitable regulatory framework for the provision of privately-produced alternative electricity to the national grid in South Africa could potentially result in Tongaat Hulett expanding the business's ability to generate electricity from bagasse, a renewable resource produced as a coproduct of the sugar production process. In the short to medium term, this would involve infrastructure development projects across the company's sugar mills to significantly increase electricity generation from bagasse.

For the year ended 31 March 2018, Tongaat Hulett used a total of 831 754 MWh (2016/17: 803 383 MWh) of electricity across all its operations and offices. It generated 425 136 MWh (2016/17: 436 322 MWh) from its sugar mills, predominantly from bagasse, and sold 23 811 MWh (2016/17: 28 662 MWh) to the national grid. Other sources of fuel that are used include coal, 275 206 tons (2016/17: 300 268 tons), diesel, 13,3 million litres (2016/17: 10,9 million litres), petrol, 0,906 million litres (2016/17: 0,857 million litres), gas, 463 247 GJ (2016/17: 472 349 GJ) and wood, 3 050 tons (2016/17: 23 199 tons).



#### AIR QUALITY

The deliberate strategy of burning bagasse ahead of coal as a fuel by sugar mills significantly improves the quality of emissions in terms of particulate matter, noxious gases, and carbon and sulphur oxide. Wet scrubbing technology continues to be used by most operations to remove fly-ash from the flue gas to ensure that emissions meet acceptable air quality standards. Tightening regulatory constraints and changing societal expectations in



relation to air emissions present challenges and opportunities for the business. While some emissions will always be inevitable because of the very nature of manufacturing operations, the company realises the need to improve performance. A highlevel working group has been established to review emissions improvement options in preparation for further stringent emission standards which are expected to come into effect in 2020.

The primary use of coal as a fuel to fire boilers at the refinery in South Africa presents challenges in improving the quality of emissions. To address this, the company has developed an improved process technology solution which could be applied at that operation. In 2017, the company approved R90 million capital for the implementation of phase 1 of this technology solution. Implementation of phase 1 of this technology solution. Implementation of phase 1 is due for completion by June 2018 and it is expected to deliver a significant reduction in emissions. This technology implementation is aligned with the refining operation's commitment towards reducing emissions and achieving its compliance objectives as agreed with the authorities.

#### **BIODIVERSITY AND LAND MANAGEMENT**

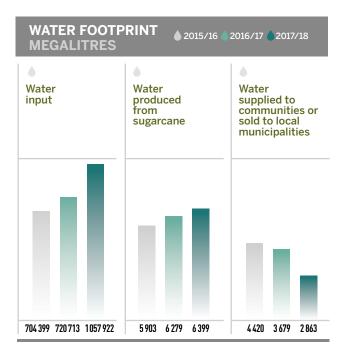
Soil health plays a critical role in maintaining biodiversity. Experts warn that 33 percent of world soil is already moderately to highly degraded due to erosion, nutrient depletion, acidification, urbanisation, and chemical pollution, putting future supplies of food, water and energy at risk. Tongaat Hulett continues to rehabilitate currently unproductive land to agriculture, while also securing additional sugarcane supply to its mills. A total of 7 612 developable hectares of land in KwaZulu-Natal has been identified for conversion, at the appropriate time, in support of growth and development of the region. This conversion is carefully

managed and coordinated in line with broader government objectives and spatial policies. A major element of this conversion includes the rehabilitation of the affected ecological systems through a range of biodiversity improvement practices. The business works to avoid and minimise biodiversity loss and land disturbance, while improving its biodiversity management practices. This approach, which has been well established over many years, focuses on implementing the mitigation hierarchy of avoidance, minimisation, restoration, and offsets where appropriate.

#### WATER RESOURCE MANAGEMENT

As an agriculture and agri-processing business, water is a vital part of Tongaat Hulett's daily operations. Climate change, with its consequent impacts on water availability and water quality, continues to impact on several regions in which Tongaat Hulett and its suppliers operate. Water pollution has the potential to increase operational costs and compromise the quality of products. It is therefore in Tongaat Hulett's interest to ensure sustainable management of shared water resources in the regions where it operates and procures.

Water is an essential input in the business, all operations are affected by uncertainties and challenges associated with water consumption. According to the 2030 Water Resources Group projections, without improvements in the way water is managed and used, the world could face a 40 percent supply gap by 2030. To this end Tongaat Hulett is partnering with other stakeholders in the uMhlathuze Water Stewardship Programme. The uMhlathuze region of the Pongola-Umzimkhulu Catchment Management Area is facing significant water stress. This is impacting economic activity



and livelihoods, particularly within the Richards Bay industrial complex and is also affecting agricultural and forestry activities in the middle and upper reaches of the catchment. In the context of the critical drought situation in South Africa, uMhlathuze is one of the most affected areas.

Input water sources include water abstracted from rivers, water available in sugarcane and water purchased from municipal sources. Most sugar mills operate in remote locations and therefore assist in the provision of potable water to local communities. For the reporting year ended 31 March 2018, the total water input was 1 057 922 megalitres (2016/17: 720 713) of which 6 399 megalitres (2016/17: 6 279) was produced from sugarcane and 2 863 megalitres (2015/16: 3 679) was supplied to communities or sold to local municipalities.

#### **EFFLUENT MANAGEMENT**

A philosophy of "target zero effluent" disposal is subscribed to across all operations. This entails a journey involving upgrading production processes and infrastructure and shifting operational culture, aiming to reduce effluent discharge as a priority before treating and reusing the minimal amount that must be discharged. The quality of effluent being discharged is subjected to ongoing internal and third-party monitoring processes to ensure it meets minimum specifications set by statutory authorities. Water that is produced as part of the sugar milling process is largely used for the irrigation of sugarcane on adjacent estates while effluent produced at the central sugar refinery is disposed of into the municipal sewer for treatment. The quantity and quality thereof is monitored to ensure compliance with the relevant specifications. The remaining mills are progressing with environmental management programmes to adopt best practices and ensure legal compliance as a minimum. The Maidstone mill, in South Africa, is currently developing a Request for Proposal for the building of an effluent treatment plant, to treat effluent to the standard required for discharge to watercourses.

#### WASTE MANAGEMENT

In line with the "ZERO HARM" principle, Tongaat Hulett manages waste from its operational processes with a "target zero hazardous waste" mindset. Efforts are directed towards reducing the amount

### CASE STUDY NEED FOR COLLECTIVE ACTION



The uMhlathuze Water Stewardship Partnership (UWASP) convenes key government, private sector and civil society stakeholders to actively collaborate on water security solutions for the uMhlathuze catchment in KwaZulu-Natal. Two people are employed full time (by the NBI and WWF-SA respectively), with further support and funding provided by GIZ's International Water Stewardship Programme and additional funding provided by Mondi and Tongaat Hulett. To date, UWASP has undertaken extensive stakeholder engagement with private and public partners to ensure that all can actively participate in the overall partnership and in specific projects of interest. A detailed partnership work plan and governance structure has been approved and implementation of five priority projects commenced in December 2017. The five priority projects address downstream water use efficiency opportunities; agricultural water stewardship practices; ecological infrastructure requirements (alien invasive plant clearing and wetlands); the development of local community environmental champions for pollution control; and enhanced management of the region's coastal lakes and surface water dam.

#### To read more go to www.tongaat.com/uwasp

of hazardous waste being generated. Waste management plans follow a hierarchy of control steps to reduce, re-use and recycle waste before earmarking for ultimate disposal. Operations based in South Africa, Mozambique, Botswana, Namibia and Swaziland make use of registered waste companies that collect non-valuable hazardous waste from operations and dispose of it at designated hazardous landfill sites. Zimbabwe-based operations have constructed hazardous disposal sites that are registered by the regulatory authority and are subject to annual statutory and thirdparty audits.

During the 2017/18 reporting period, 11 579 tons of general waste (2016/17: 10 211 tons), 5 616 tons of scrap metal (2016/17: 3 080 tons) and 539 tons of hazardous waste to landfill (2016/17: 413 tons) was generated and disposed of in accordance with applicable legislation.

#### **ENVIRONMENTAL INCIDENTS AND COMPLIANCE**

There was no level 3 incident recorded with significant impact on the physical/biological environment with extensive or longterm impairment of ecosystem function or surface/ground water resource (2016/17:0 Level 3 incident). There were no non-monetary sanctions for non-compliance with applicable environmental regulations registered in the year. Established community liaison forums between Tongaat Hulett and interested parties addressed environmentally-related complaints raised during the year.

A single level 2 incident, with moderate impact on the physical environment was recorded at one of the operations following a spillage of a chemical onto the ground (2016/17:0 Level 2 Incidents). Immediate corrective action was taken to contain spillage and clean up the contaminated area. The incident was reported to local environmental health inspectorate.

A total of 300 level 1 environmental incidents were recorded in the year resulting in minor impact on the physical environment but with no significant impairment of ecosystem function, surface or ground water resource (2016/17: 425). The majority of these incidents were related to product or substance spillage/leakage mainly at sugar and starch operations.

A total of 104 level 1 stakeholder complaints were recorded in the year (2016/17: 142). The majority of these complaints were related to odour emissions being caused by disruptive production processes. In most cases, these complaints were immediately responded to and addressed while in other cases action is continuously being taken to address underlying issues.

#### **INDEPENDENT THIRD-PARTY ASSURANCE**

Environmental Resources Management (ERM) has provided independent third-party assurance over selected sustainability content of the 2018 Integrated Annual Report. The assurance was conducted in line with the AccountAbility AA1000 Assurance Standard (Revised, 2008) (Type 2 Moderate level). The engagement was conducted using the AA1000 AccountAbility Principles Standard (2008) criteria and those of the GRI Standards. For the detailed assurance statement refer to: www.tongaat.com/2018/ermassurance.pdf

