STATEMENT AND REPORT ON ENVIRONMENT

Water catchment in Minat Teguh estate

STATEMENT ON ENVIRONMENT

The Group's sustainability pillar relating to the environment involves our stewardship to 'Care for Environment'. It relates to specific and relevant best management practices and initiatives which promote environmental protection, conservation, biodiversity enhancement and other practices that strive to deliver positive environmental footprints. Effectiveness of sustainable resource management relating to soil, water, air and waste is a vital component leading to the production of sustainable palm products. The Group's sustained commitment in the "Hundred-Acre Wood" project depicts a centre of excellence geared towards our continued green endeavours. The Group values it's affirming engagement with relevant stakeholders and aspires that effective engagement will lead to greater understanding on the subject of sustainability.

Statement and Report on Corporate Responsibility and Sustainability
(cont'd)

ANNUAL REPORT ON ENVIRONMENT

LAND USE AND CONSERVATION STEWARDSHIP

The commitment towards the protection of the environment has been embedded in the Group's business model. One of the adopted strategies to manage and minimise the impacts of our agricultural activities towards the environment is through the protection of high conservation value ("HCV") areas such as the riparian reserves, marginal soils, steep areas and also water bodies. HCV assessments have been conducted internally for all plantations and by external expertise especially for our plantations in Indonesia. Management plans are developed for the HCV sites and appropriate buffer zones are conserved. The Group continues to provide awareness through training of our people on the protection of these important conservation sites and ensure that all our agricultural activities adhered to the industry's best management practices. The operating units have identified and demarcated the riparian and forest buffer zones in accordance to the legal requirements. There are strictly no chemical applications and with minimal intervention at these sites it allow for natural re-vegetation. Some of our staff in Malaysia were trained by the Sabah Wildlife Department to manage biodiversity and have volunteered as wildlife wardens.

There are more than 6,146 acres or 8% of the Group's total land bank in Sabah which has been set aside for conservation related purposes. The mature areas have been reduced to 78.8% (2014: 80.3%) whilst the immature areas were increased to 7.5% of the total land bank in Sabah due to the on-going replanting activities in the Sandakan region. The Group's in-situ tree rehabilitation project including the planting of suitable forest tree saplings are on-going at selected conservation sites. This includes the planting of bongkul (*Neonauclea subdita*), jelutong (*Dyera costulata*) and mahogany (*Swietenia spp.*) In the reporting year, Rakanan Jaya South Estate has planted 6,514 bongkul tree saplings over 8 hectares in one of its flood prone areas. Villagers from the surrounding community were employed for the project. The management is closely monitoring the rehabilitation progress and continues to identify additional areas to be rehabilitated. The Group's conservation site coined as 'Hundred-Acre Wood' continues to serve as the centre of excellence for conservation, education, recreational and training for our people and visiting stakeholders. In the reporting year, a crocodile relocation initiative was carried out at Minat Teguh estate with the assistance of Wildlife Rescue Team from the Sabah Wildlife Department. The Group continued to promote avian biodiversity and fauna conservation awareness in partnership with a NGO, Borneo Bird Club at the 2014 Borneo Bird Festival targeting especially on the schoolchildren. In the reporting year, the Group also collaborated with MPOC focusing on the discussions pertaining to the sustainability of the Malaysian palm oil industry and with the Sabah Forestry department in an Environmental Education Forum.

Rehabilitation works with suitable forest tree saplings

RESOURCE STEWARDSHIP

The Group is committed to utilise and protect our available resources in a responsible and sustainable manner. With constant changes in the weather pattern, the Group has adopted a comprehensive environmental management system to manage our resources in our supply chain. This system comprises best management practices, standard operating procedures, adherence to relevant policies and regulatory requirements and periodic monitoring and review of our performance.

SOIL MANAGEMENT

The Group adopts industry's BMP in managing soils that help to reduce soil erosion. This include proper frond stacking, planting of legume cover crops, implementing no blanket spraying and adopting an agronomic-based fertiliser recommendation programme. Vertiver (*Chrysopogon zizaniodes*) grass was also planted at various slopes to reduce erosion. The Group's fertiliser programme is recommended by an in-house qualified agronomist based on a thorough analysis of leaf nutrient contents, yield-gap profiling and field observations. Practices such as systematic frond stacking, application of empty fruit bunches, biocompost and dried decanter cakes have been implemented to improve soil fertility in selected estate blocks.

The Group continues to embrace and implement integrated pest management practices (IPM). It involves a combination of different pest management techniques including an effective pest census and surveillance system to maintain the pest population below the acceptable thresholds while minimising the pesticide usage. In the reporting year, a total of 1,841 predator bugs bred by the in-house insectariums were released in the fields. Planting of beneficial plants such as *Antigonon leptopus*, *Turnera subulata* and *Cassia cobanensis* are encouraged for the proliferation of natural predatory bugs. In the reporting year, the Group has planted more than 3,500 polybags of beneficial plant in the operating units. Pheromone traps were used to control *Oryctes rhinoceros* beetles. The Group has also initiated a preliminary project to pursue breeding barn owls in Sabah to help in the control of rats.

WATER CONSERVATION

Oil palms and the operations are water-dependent and as such the water resources available have to be well managed to ensure minimum wastages. In the nursery management, the Group continues to expand and utilise the drip irrigation technology at the main nursery stage. This irrigation system is a precision irrigation method which can minimise wastages arising from spillages and soil surface evaporation. Protection of riparian reserves is one of the vital elements in the protection of the water sources. The Group protects and rehabilitates riparian reserves in compliance with the "Garispanduan JPS Bil.1 Tahun 2000" as well as "Seksyen 40 – Enakmen Sumber Air Negeri Sabah 1998". In order to ensure better water security, all operating units have at least one water reservoir that doubles up as a water reserve as part of the risk management during prolonged drought seasons. Besides, all houses in the plantations are equipped with water storage tanks to harvest rain water for domestic consumption. Water is being treated before being channeled for domestic consumption. The water quality is closely monitored for conformance to the World Health Organisation (WHO) drinking water standard. The Group is prudent in managing the palm oil mill effluent (POME) generated from the palm oil milling process. POME is being treated before being channeled to the selected fields approved by DOE for land irrigation. The Group continuously monitors the performance of the effluent treatment systems and reduces the Biological Oxygen Demand (BOD) level through the latest effluent treatment technology. A membrane technology for tertiary effluent treatment is being used at Desa Talisai Palm Oil Mill. In the reporting year, Sabang Palm Oil Mill-2 was given a certificate of recognition by Department of Environment ("DOE") for its consistency to maintain the treated effluent quality at low ppm.

Statement and Report on Corporate Responsibility and Sustainability
(cont'd)

AIR QUALITY MANAGEMENT

'Zero-burning' policy is strictly adhered by the operations, both at the housing area and all land clearing sites such as at the replanting programmes at Sandakan region. The zero-burning policy has been incorporated into land clearing contracts involving external contractors. The management is vigilant on any fire hazards in the operations. Watch-towers are in place and employees are constantly briefed to be on fire-alert especially during the drought season. The air pollutant level from the palm oil processing plants is closely monitored through the Continuous Emission Monitoring System (CEMS) which is directly linked to the DOE. In order to ensure dust levels are minimal especially at the housing areas, various speed humps have been constructed at strategic places.

Notice on burning policy in operating units

WASTE AND BY-PRODUCTS MANAGEMENT

The Group ensures that all waste generated such as biomass waste, scheduled waste, domestic waste, sewage and palm oil milling by-products and effluents are handled with care and in accordance to regulatory requirements. Types of wastes which are classified as scheduled waste are securely stored, labelled, recorded and disposed in accordance to the Environmental Quality Act 1974 (Scheduled Waste) Regulations, 2005. Domestic waste generated from the housing quarters are collected on a routine basis and disposed at the designated landfill sites which were carefully selected based on site topography and soil suitability to avoid water source contamination. The Group practices zero by-products discharge policy in the processing plants where palm oil milling by-products such as empty fruit bunches (EFB) and treated POME are recycled back to the field for mulching and irrigation purposes. EFB and POME also used to produce biocompost. Other by-products such as mesocarp fibres and fruit shells are fully utilised as boiler fuel to generate power and steam to minimise the usage of non-renewable fossil fuel. The Group continues to promote recycling activity. Recycling bins are provided at strategic places to encourage employees to embrace 3Rs of Reduce, Reuse and Recycle. Since 2010, quarterly recycling campaigns at our Sandakan head office coined "Greening Saturday" have been organized. To date, a total of 5.7 metric tonnes of recyclable items have been sent for recycling purposes. The funds collected were used for welfare activities for our employees.

Recycling in the operating units


Biogas capture plant

CLIMATE CHANGE AND ENERGY MANAGEMENT

The Group has been proactively managing the greenhouse gas emissions ("GHG") through an integrated approach which incorporates industry's best practices while exploring new innovations to maximise the use of renewable energy. The generated biomass through the palm oil milling process is fully utilised as fuel in the generation of electricity and steam. The use of both renewable and non-renewable energy are closely monitored on a monthly basis and recorded under the energy monitoring plan. The Group continues to monitor and manage GHG at all operating units in Sabah benchmarked against available baseline information. Our palm oil mill in Indonesia is installed with a biogas capture plant while our mills in Malaysia are carrying out feasibility studies to match the gas produced and their successful utilisation.

Oil palm trees are known to possess high rates of net primary productivity and biomass growth which contribute to carbon sequestration from the estates. We have been monitoring the quantity of carbon sequestered by our operations since year 2006 using the methodology developed by MPOB. The total carbon sequestrated in the reporting year has reached more than 800,000 metric tonnes or 3% higher compared to the previous year with an average of 33 metric tonnes per planted hectare in the Malaysian operations. In our Indonesian operations, as the trees mature, a total of 447,803 metric tonnes of carbon were sequestered, a 48% increment from the previous year. The total carbon sequestered in both the Malaysian and Indonesian operations is tabulated and shown in the figure below.

Total Carbon Sequestered from the Malaysian and Indonesian Operations (FY 2006 to FY 2015)