

# 2018/19



S U S T A I N A B I L I T Y R E P O R T







# CONTENTS

<b>About this report</b>	<b>2</b>
<b>CEO's welcome</b>	<b>4</b>
<b>2018-2019 highlights</b>	<b>6</b>
<b>Targets and progress</b>	<b>7</b>
<b>About New Britain Palm Oil Ltd</b>	<b>8</b>
Overview	8
NBPOL at a glance	10
Leading research and development in Papua New Guinea	12
<hr/>	
<b>Our approach to sustainability</b>	<b>15</b>
Certification	16
Sustainability management	18
Stakeholder engagement	20
Grievances	24
<hr/>	
<b>Environmental protection and conservation</b>	<b>25</b>
Protecting forests and biodiversity	25
Fire monitoring and management	37
Reducing our carbon footprint	38
Chemical and pest management	42
Water management and protection	45
<hr/>	
<b>Partnership with people</b>	<b>49</b>
Tackling the threat of COVID-19	49
Aligning with community needs	52
Putting our employees first	60
<hr/>	
<b>Stakeholder engagement table</b>	<b>68</b>
<b>Base data</b>	<b>71</b>
<b>GRI Content Index</b>	<b>77</b>
<b>Glossary</b>	<b>86</b>
<b>Contact</b>	<b>IBC</b>



## About this report



### Report cycle and completeness

This is New Britain Palm Oil Ltd.'s (NBPOL) seventh biennial sustainability report covering the calendar years 2018 and 2019. Data is as of 31 December 2019, unless otherwise stated, and we have provided historical information where available. We have included key developments from 2020, where relevant, including COVID-19-related impacts and measures.

### Scope and boundaries

This report covers impacts within the organisational boundaries of our upstream operations and material aspects for our independent smallholders in Papua New Guinea (PNG) and Solomon Islands. This includes Markham Farming Company Limited (MFCL) that was acquired by NBPOL in 2018. In addition to our palm oil operations, the scope of this report contains our sugar and beef businesses, where relevant. All employee and health and safety data include the whole of NBPOL operations. Unless otherwise stated, all other data presented is of our palm oil operations.

Since our last report, NBPOL's Indonesia office closed, and our Singapore operations have moved under the operational control of our parent

company's downstream business, Sime Darby Oils. Ownership of our two previously-owned refineries has also been transferred to Sime Darby Oils, although we do provide operational services for the refinery in West New Britain. We no longer cover these operations within the scope of our reporting.

### Materiality, stakeholder inclusiveness and sustainability context

We have determined material aspects for this report through ongoing discussions with a wide range of stakeholders: from local site-level engagement to international engagement by way of multi-stakeholder initiatives and other partnerships. For this report, we also sought feedback from our customer base, a certification body, a country programme partner, local and international conservation experts, the government authority on conservation and environmental protection, and our COVID-19 consultant from the provincial health authority. We also benchmark our reporting against standards such as the Roundtable on Sustainable Palm Oil (RSPO) and the Rainforest Alliance Sustainable Agriculture Standard (SAS) and rankings such as the Zoological Society of London's Sustainable Palm Oil Transparency Toolkit (ZSL SPOTT) to ensure that we are responsive to critical themes and aspects.

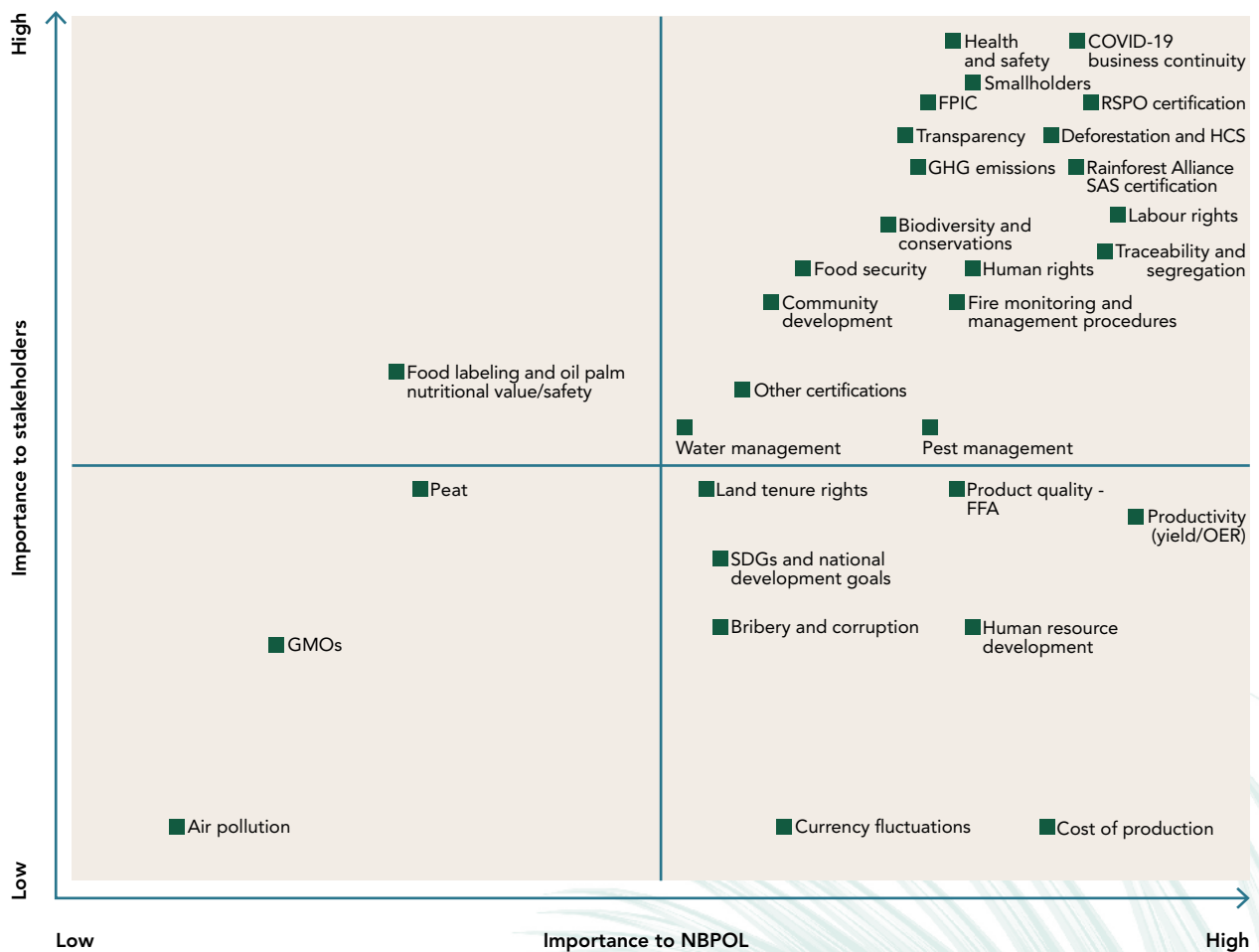


Throughout the report, we have contextualised our performance against the unique social and environmental landscapes in PNG and Solomon Islands.

Since our last report, we have introduced new indicators to our matrix: COVID-19 and business continuity, human resource development, product quality – FFA and Rainforest Alliance SAS certification. We have updated the labels of some topics to better capture current discussions that are specific to NBPOL and our operational environment. These updates apply

to biodiversity, fire, and land tenure rights issues. A few aspects have increased in importance to either NBPOL, external stakeholders, or both. These include health and safety, biodiversity and conservation, GHG emissions, fire monitoring and management procedures, and food security. Food labelling and oil palm nutritional value/safety have received less focus as NBPOL is no longer involved in downstream operations. Key material issues, along with this report, have been reviewed and validated by the sustainability management team.

### Materiality Matrix



### Assurance

We have not sought third-party assurance for this report. Based on stakeholder feedback, we review the need on an ongoing basis.



## CEO's welcome



### Dear friends, partners and colleagues,

I am pleased to introduce our sustainability report, setting out NBPOL's achievements and initiatives for 2018 and 2019, as well as our ambition and challenges for the coming years.

At the time of writing, we find ourselves in one of the most difficult years in the history of NBPOL as we are tackling the impact of the COVID-19 pandemic on our business, personal lives and the livelihoods of local communities. When the pandemic first hit, the first priority for us was to establish a COVID-19 preparedness and emergency response plan, ensuring that our workers, staff and their dependents were safe and attempt to curtail community spread to the greatest extent possible. Papua New Guinea (PNG) has limited health facilities, and as such prevention has been the focus, and we remain on high alert for outbreaks. In Solomon Islands, we have been more fortunate, as it is among the few countries in the world that has avoided community spread. But the impact of curtailed travel and isolation of our sites remains a challenge, bringing hardship to many of our people.

Our business has seen some negative effects from the pandemic. Our ingoing and outgoing cargo



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has been affected by quarantine regulations, and along with the increased cost of delays in shipping, we have also suffered from the delay in delivery of critical inputs such as fertiliser. However, I believe that this is a short-term issue which will only have temporary impacts and will not affect our long-term target to reduce production cost.

More critically has been the impact on our human resources, and this will be my key focus for the years ahead. I started the year with huge momentum and ambitious plans to focus on bringing the NBPOL sites closer together under a common culture and shared practices. We created videos in the field to share successes and solutions, and had a training schedule lined out in sparkling new training facilities in Ramu. Due to the pandemic, these efforts ground to a halt, as all travel was curtailed and many of our managers were unable to travel between regions. With a hope that life will start becoming more normal in 2021, this is where much of my focus will be; to build and maintain our talent under a joint NBPOL banner.

In addition to the pandemic-related challenges, the national environment also throws up some issues. As sustainability standards and frameworks such as the HCSA raises the bar for



new agricultural development in high forest cover landscapes, small growers are getting increasingly vocal over the limitations they feel are imposed on them. There is a real disconnect between the expectation of forest and biodiversity protection by Western palm oil consuming countries and the need for small growers to be able to earn a livelihood from their land. While NBPOL continues its strong support for multistakeholder initiatives and forest protection, we seek to represent the smallholder PNG perspective in these forums, while at the same time working with local landowners to identify ways to bridge this divide.

Despite these challenges surrounding our business, I feel that we are making tremendous progress across most aspects relating to sustainability. Our commitment to meet the highest global certification standards remain. All of our operations are in compliance with the RSPO 2018 P&C and we are making tremendous progress towards our target of certifying 100% of our operations to the Rainforest Alliance Sustainable Agriculture Standard as the first palm oil company outside of Latin America to achieve Rainforest Alliance certification.

Of course, the real work happens on the ground, and this is where real change can be seen. I am particularly pleased to see that our focus on health

and safety is helping us with significant accident reductions across our business. I am also proud of the expansion in our work to empower women across our sites, including a significant effort to prevent domestic violence in partnership with the UN and our local churches.

In the past year we have expanded our conservation and biodiversity protection work considerably. Our efforts to protect and enhance the population of the world's largest butterfly the Queen Alexander's Birdwing Butterfly has evolved and is going from strength to strength. We have also entered into a partnership with Bristol Zoo to enhance our conservation work, and we are working with Toledo Zoo on a project in the Solomon Islands to save the Santa Cruz Ground Dove from extinction.

We have always strived to be leaders in our industry, and I am really proud to see that our work continues to be widely recognised. We were recently ranked in the top position in the ZSL SPOTT benchmark that compares detailed practices of 100 palm oil producers globally, and we received the Sustainable Pathfinder Award by the Rainforest Alliance in 2018 for responsible palm oil leadership. The award recognises companies from various industries for the work they have done in advancing sustainable practices. This is the first time that this type of recognition was presented to a company in the palm oil sector. With such accolades, I feel confident that our hard work to engage with and meet the expectations of our stakeholders is on the right path.

In these difficult times, I would like to extend my heartfelt thanks to every single employee in NBPOL. Together, we have overcome tremendous challenges, sometimes isolated from our families, and without the level support that we would normally be able to give our teams. Nevertheless, NBPOL continues its path to continued success in our commercial, environmental and social objectives, and this could never have been achieved without the hard work and dedication of each one of our people.

**Jamie Graham,**  
CEO  
New Britain Palm Oil Limited

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”



# 2018–2019 highlights

 <b>ORGANISATION</b>	 <b>COVID PREPAREDNESS</b>	 <b>R&amp;D</b>
<b>Acquisition of Markham Farming Company Limited (MFCL) in 2018</b> 12 <sup>th</sup> palm oil mill commissioned in 2020	Rolled-out COVID-19 preparedness emergency response plans in 2020	New SuperFamily seeds developed Trialling fertilisers to cater to certain oil palm progenies
 <b>COUNTRY COLLABORATION</b>		 <b>INTERNATIONAL RECOGNITION</b>
<b>New PNG Palm Oil Platform</b> launched in 2018		<b>NBPOL ranked #1 on ZSL SPOTT in 2020</b>
 <b>CERTIFICATION</b>	 <b>ENVIRONMENT</b>	
<b>100% RSPO certified since 2012</b> , including all smallholders	<b>18,841 ha set aside for conservation</b> (12.8% of total titled land)	<b>GHG emission intensity reduced by 1.3%</b> against 2017 baseline
MFCL completed <b>RaCP</b> and achieved <b>RSPO certification</b> in March 2020	New biodiversity programmes: Santa Cruz ground dove; Bristol Zoological Society	RAI climate-positive since 2011
New national interpretation of RSPO P&C 2018 completed	New QABB breeding project, and laboratory built for the programme	<b>New water project</b> bringing <b>28 water pumps</b> to <b>7,350</b> community members in Oro
<b>All sites certified to the 2018 RSPO P&amp;C</b>	MFCL completed RSPO Remediation and Compensation Procedure	
<b>4 sites certified to Rainforest Alliance SAS as of May 2020</b> , including almost 200 smallholders	 <b>SMALLHOLDERS AND COMMUNITIES</b>	
<b>NBPOL received Sustainable Pathfinder Award</b> in May 2018	<b>100% of our smallholders</b> have attended at least one awareness and training session	Strengthened focus on programmes for women; new research programme to identify opportunities and constraints for rural women's engagement in small-scale enterprises in PNG
 <b>EMPLOYEES</b>	Continued research programmes to improve smallholder yield, determining the effectiveness of smallholder training	New research programme to understand sufficiency on the average income of smallholders
<b>Living wage equivalent to PGK</b> provided to lowest earners – <b>66% higher than the national minimum wage</b>		
<b>New training</b> for palm oil cadets to expand PNG management team		
New OSH Improvement Strategy		
Group <b>lost time incident rate</b> has <b>more than halved (51.4%)</b> since 2017		



## Targets and progress

Targets	Target dates (year end)	2018/2019 progress, unless otherwise stated
<b>Environmental management</b>		
No land developed on peat	Ongoing target	Achieved
BOD levels below 90ppm for all mills built before 2013	Ongoing target	Achieved for 5 sites – not achieved for 3 mills in WNB in 2018 and 2 mills in WNB in 2019
3 new methane capture projects completed across the Group	Initial target 2020. Target revised to 2023	Not on track. Delays due to capital investment restraints.
<b>Smallholder and community engagement</b>		
100% of RSPO premium paid to smallholders	Ongoing target	Achieved
Develop Group-wide tracking categories for grievances	Initial target 2019. Target revised to Q2 2022	Not achieved
<b>Labour standards</b>		
Reduce Group lost time incident (LTI) rates by 5% annually <sup>1</sup>	Ongoing target	Achieved
No work-related fatalities	Ongoing target	Achieved at GPP, HOP, POL – Not achieved at WNB and RAI in 2018 and not achieved at WNB and MBE in 2019
All employees paid above the living wage	Ongoing target	Achieved
No employees work more than 12 hours of overtime per week	Ongoing target. Target revised to 16 hours of overtime for 2020 onwards <sup>2</sup>	Not achieved
All employees have a minimum of 1 day off per 7 days	Ongoing target	Achieved
<b>Management systems and certification</b>		
No expansion without FPIC	Ongoing target	Achieved
No legal non-compliances	Ongoing target	Achieved at all sites except for 4 non-compliances at WNB in 2018. These were related to health and safety-related recommendations from the PNG Department of Labour & Industrial Relations. These have since been rectified
No expansion into an area without an HCV-HCSA assessment using licensed assessors and submitted to HCVRN for quality review	Ongoing target	Achieved
Maintain RSPO certification for all sites (inclusive of smallholders)	Ongoing target	Achieved
Certification against Rainforest Alliance SAS for eligible sites	Initial target 2020. Target revised to 2021	On track Achieved for 3 sites as of December 2019 and 1 site in May 2020. A postponement in certification at the remaining 2 sites was because of audit delays due to COVID-19 movement restrictions
Reduce GHG emissions by 30% against a 2017 baseline	2024	On track
Implement SMART forest monitoring and satellite monitoring protocols	2024	On track Achieved for 5/9 HCV sites

WNB – West New Britain  
HOP – Higaturu Oil Palm

RAI – Ramu Agri Industries  
POL – Poliamba

MBE – Milne Bay Estates  
GPP – Guadalcanal Oil Palm

<sup>1</sup> Lost time incident rates were previously reported as lost time accident rates.

<sup>2</sup> Target revised to be in line with national legislation and Rainforest Alliance Sustainable Agriculture Standard requirements.

# About New Britain Palm Oil Ltd

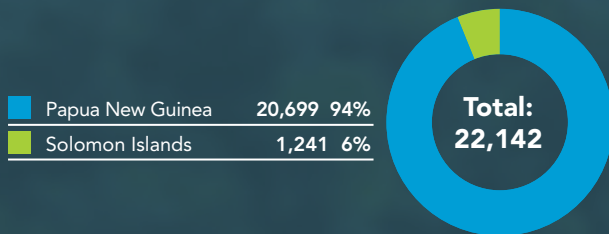
## OVERVIEW

New Britain Palm Oil Limited ('NBPOL' or the 'Group') was founded in the West New Britain province of Papua New Guinea (PNG) in the late 1960s, marking the beginning of the country's palm oil industry. In 2006, the Group acquired land in Solomon Islands, followed by operations in PNG's Ramu Valley in 2008, and subsequently the acquisition of palm oil plantations in Milne Bay, Poliamba and Higaturu in 2010. After successful listings on the Port Moresby and London Stock Exchanges, the Group became a wholly-owned subsidiary of Sime Darby Plantation (SDP) Berhad in March 2015. With corporate headquarters in Port Moresby, NBPOL operates six sites – five in PNG and one in Solomon Islands – employing over 22,000 employees.

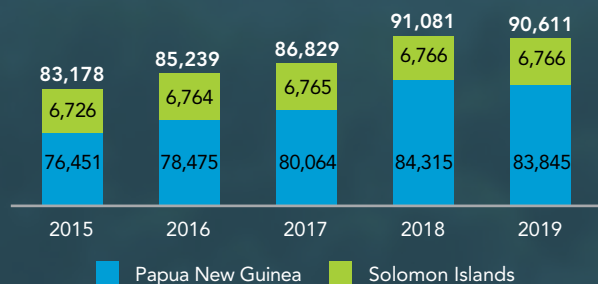
Our primary business is palm oil. Of our 146,950 hectare landbank, 62% is planted with oil palm and covers over 90,000 hectares. We lease the majority of our hectareage from local landowners with customary rights to the land. As of December 2019, we have over 50 estates, 11 palm oil mills and six palm kernel mills to grow, harvest and process fresh fruit bunches (FFB) into crude palm oil (CPO) and palm kernel oil (PKO). In 2018, we acquired Markham Farming Company Limited (MFCL) under our Ramu Agri Industries Ltd (RAI) site, bringing three additional palm oil estates into our landbank. In 2020, we commissioned a 12<sup>th</sup> mill at Markham Valley. Our palm products are sent to refineries and sold to international markets, particularly in Europe. Up till 2018/19, NBPOL owned palm oil refineries in Liverpool in the United Kingdom, and West New Britain (WNB). These are owned and managed by our parent company's upstream business, Sime Darby Oils. NBPOL is now entirely focused on upstream palm oil operations.

### NBPOL AT A GLANCE:

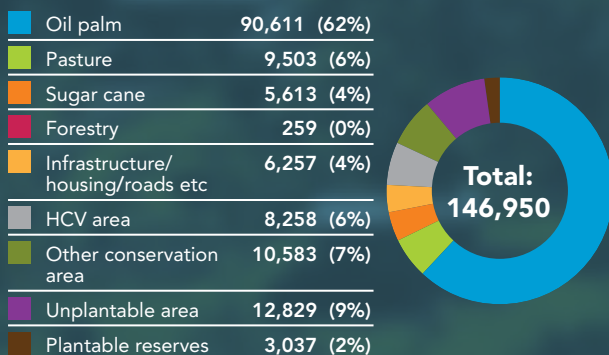
Employees by region 2019 (no., %)



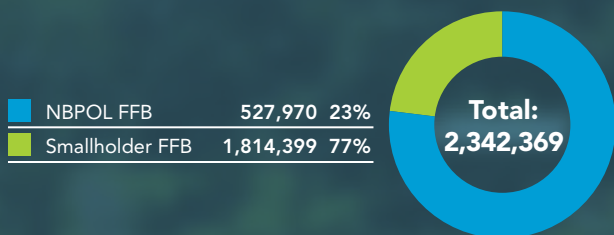
Oil palm planted area 2015–2019 (ha)



Breakdown of titled land 2019 (ha., %)



FFB supply by source 2019 (MT, %)





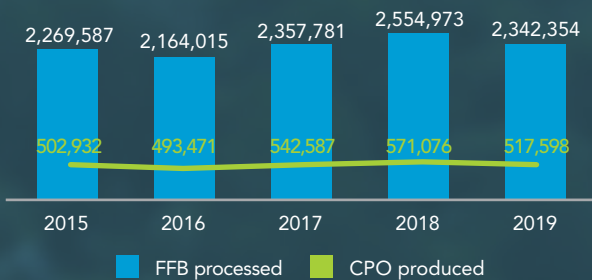
In addition to the FFB we produce, we purchase some from smallholders. In 2019, over 17,000 smallholder blocks supplied around 23% of our FFB. Including what we harvested, we processed about 2.3 million tonnes of FFB in 2019 and produced 517,598 tonnes of CPO. We do not purchase oil from any third-party supplier.

NBPOL is a vertically integrated producer of fully traceable Roundtable on Sustainable Palm Oil (RSPO)-certified palm oil products. We are now working towards becoming 100% certified to the Rainforest Alliance Sustainable Agriculture Standard (SAS). At NBPOL, we also produce and sell world-class oil palm seeds domestically and globally through our Dami Seed Production Unit at WNB. Demand and production of our seeds have reduced in recent years due to lower CPO market prices.

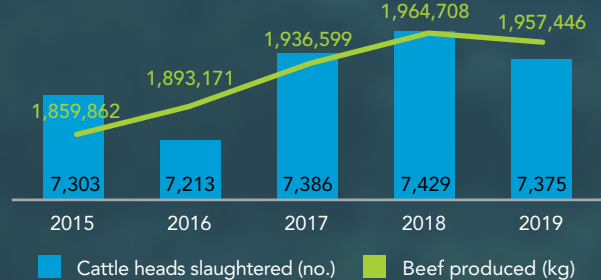
Our other businesses include raising and processing beef cattle and producing cane sugar, both of which are

sold solely for local consumption. As PNG's largest commercial producer of high-quality beef, NBPOL operates five pastures and two abattoirs in WNB and Ramu. In 2019, we produced almost two million kilograms of beef. While sugarcane is indigenous to PNG and is grown widely in village gardens throughout the country, commercial cultivation and production are carried out exclusively by our Ramu Agri Industries (RAI) Ltd operations under the household name, Ramu Sugar. There was a decline in cane yield in 2019. We can attribute this reduction to a major infestation of top shoot borers (a common pest in Ramu), and reduced fertiliser use. We have since improved our monitoring methods to mitigate against future occurrences of this magnitude and have begun to see improved yields in 2020. Our total titled land comprises 6% and 4% of cattle pastures and sugar plantations, respectively.

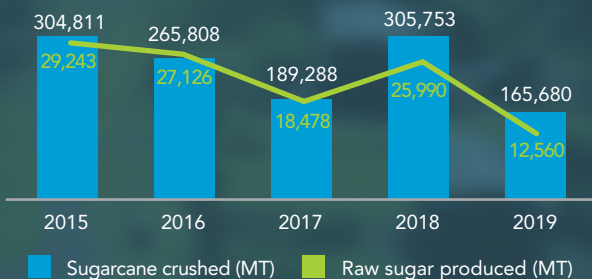
**CPO production 2015–2019 (MT)**



**Beef production 2015–2019**



**Sugar production 2015–2019 (MT)**



**Oil palm seeds production 2015–2019 (no.)**



Note:  
2016 and 2017 data restated

# NBPOL AT A GLANCE

## WEST NEW BRITAIN (WNB), PNG

Established in 1967
ISO14001 certified since 2004
RSPO certified since 2008; RA SAS certified since 2017
<b>Palm oil operations: 21 estates, 5 mills and 1 palm kernel crusher</b>
Oil palm hectareage: 38,947 ha
FFB harvested: 746,497 MT
Palm oil production: 228,663 MT CPO, 27,792 MT PKO
Conservation area: 7,016 ha
Smallholder blocks: 8,303
Smallholder FFB produced: 351,929 MT, 29.5%
<b>Dami Research Station and Seeds Production Unit</b>
Seeds produced: 3,245,335
<b>Cattle operations: 2 pastures, 1 abattoir</b>
Pasture hectareage: 394 ha
Cattle heads: 4,024
Beef production: 248,136 kg
Land: combination of state-owned with a direct lease as well as customary rights land, cultivated under lease-back

Poliamba (POL), PNG

West New Britain (WNB), PNG

Ramu Agricultural Industries (RAI) Ltd., PNG

## RAMU AGRICULTURAL INDUSTRIES (RAI) LTD., PNG

Acquired in 2008
RSPO certified since 2010; RA SAS certified since 2018
<b>Palm oil operations: 11 estates, 1 mill and 1 palm kernel crusher</b>
Oil palm hectareage: 18,169 ha (including MFCL)
FFB harvested: 228,029 MT
Palm oil production: 55,643 MT CPO, 5,075 MT PKO
Conservation area: 4,554 ha
Smallholder blocks: 322
Smallholder FFB produced: 9,714 MT, 3.9%
<b>Cattle operations: 3 pastures, 1 abattoir</b>
Pasture hectareage: 9,108 ha
Cattle heads: 21,042
Beef production: 1,568,891 kg
<b>Sugar operations: 2 estates, 1 sugar and ethanol factory</b>
Sugarcane hectareage: 5,613 ha
Sugar production: 12,560 MT
Land: primarily state agricultural lease

## PAPUA NEW GUINEA

Higaturu Oil Palm (HOP), PNG

Milne Bay Estates (MBE), PNG



**POLIAMBA (POL), PNG**

Acquired in 2010  
 RSPO certified since 2012  
**Palm oil operations: 5 estates, 1 mill and 1 palm kernel crusher**  
 Oil palm hectareage: 5,461 ha  
 FFB harvested: 79,319 MT  
 Palm oil production: 20,360 MT CPO, 1,982 MT PKO  
 Conservation area: 1,188 ha  
 Smallholder blocks: 1,789  
 Smallholder FFB produced: 13,986 MT, 13.6%  
 Land: combination of state agricultural lease and customary land leased by the company

**GUADALCANAL PLAINS PALM OIL LIMITED (GPPOL), SOLOMON ISLANDS**

Acquired in 2005  
 RSPO certified since 2011  
**Palm oil operations: 3 estates, 1 mill, 1 palm kernel crusher and 1 effluent tertiary polishing plant**  
 Oil palm hectareage: 6,766 ha  
 FFB harvested: 141,292 MT  
 Palm oil production: 35,124 MT CPO, 3,494 MT PKO  
 Conservation area: 1,047 ha  
 Smallholder blocks: 232  
 Smallholder FFB produced: 5,496 MT, 3.5%  
 Land: primarily customary land leased by the company

**HIGATURU OIL PALM (HOP), PNG**

Acquired in 2010  
 RSPO certified since 2012; RA SAS certified since 2019  
**Palm oil operations: 6 estates, 2 mills and 1 palm kernel crusher**  
 Oil palm hectareage: 10,535 ha  
 FFB harvested: 252,097 MT  
 Palm oil production: 79,682 MT CPO, 8,163 MT PKO  
 Conservation area: 2,586 ha  
 Smallholder blocks: 5,810  
 Smallholder FFB produced: 92,420 MT, 24.8%  
 Land: combination of state agricultural lease and customary land leased by the company

**MILNE BAY ESTATES (MBE), PNG**

Acquired in 2010  
 RSPO certified since 2012; RA SAS certified in May 2020  
**Palm oil operations: 7 estates, 1 mill and 1 palm kernel crusher**  
 Oil palm hectareage: 10,756 ha  
 FFB harvested: 240,533 MT  
 Conservation area: 2,450 ha  
 Palm oil production: 58,066 MT CPO, 5,585 MT PKO  
 Smallholder blocks: 711  
 Smallholder FFB produced: 11,553 MT, 4.3%  
 Land: combination of state agricultural lease and customary land leased by the company

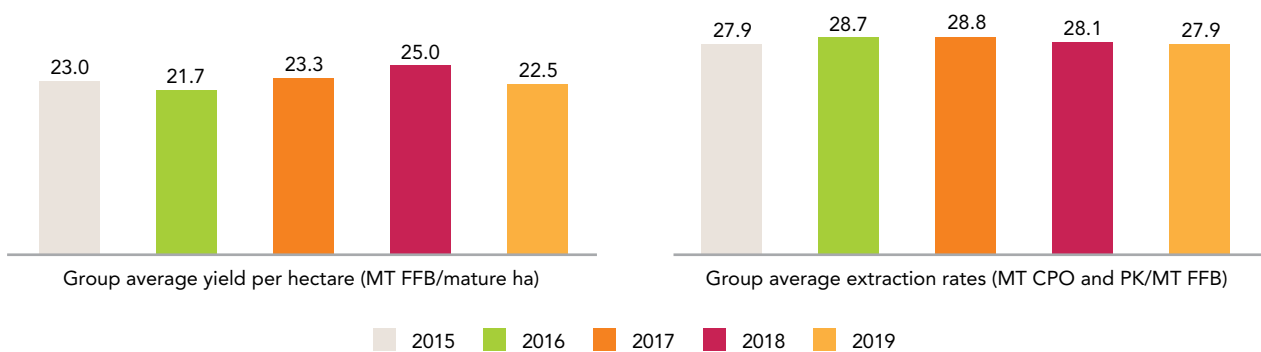
**SOLOMON ISLANDS**

Guadalcanal Plains Palm Oil Limited (GPPOL), Solomon Islands

# LEADING RESEARCH AND DEVELOPMENT IN PAPUA NEW GUINEA

At the heart of our growth strategy is the Group’s 30:30 Production Charter. The charter guides our operations in good agricultural practices towards our goal of achieving a 30% combined extraction rate and an average yield of 30 tonnes per hectare across our estates. In 2019, we reduced our fertiliser use which contributed to a decline in yield per hectare. This has since turned around, and we have seen improvements in 2020. Our extraction rates have remained relatively stable.

## Towards 30:30: Group FFB yield and extraction rates 2015–2019



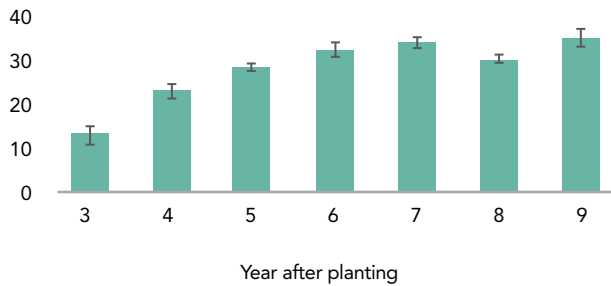
NBPOL has been a leader in palm oil research and development (R&D) since the 1970s. The Dami Research Centre leads our R&D work. Our team also helps manage the country’s Oil Palm Research Association (PNGOPRA), the research arm of the oil palm industry in Papua New Guinea. The organisation is membership-led and researches agronomy, entomology, plant pathology, and smallholder and socioeconomics. PNGOPRA also provides recommendations and technical help that contributes to the development of sustainable oil palm practices and assists milling companies and associated smallholder farmers in responsible agricultural management. NBPOL’s head of R&D is also the PNGOPRA director of research, and PNGOPRA’s research is operated at Dami with substations throughout the country. Consequently, NBPOL and PNGOPRA’s research work are primarily interlinked.

Dami is known throughout the world as a leader in the production of high-grade oil palm planting material and is a part of our commercial operations.

In 2015 we began our SuperFamily seeds programme: we take the best 0.1% of planting material from the mother palm and cross it with the best pollen from the pisifera palm to produce a super seed. The aim is to generate much higher yields than any other previous material, thereby increasing our production per hectare on existing land. We use the seeds with every replanting programme, and, to date, have replaced an average of 40% of our replants by SuperFamilies. It is projected that with these seeds alone, we will meet our 2030 target to generate an average yield of 30 tonnes per hectare across our estates. We hope to achieve this after the sixth year from planting. In 2018, we took this one step further and partnered with the Sime Darby Plantation research team. Drawing upon their DNA fingerprinting methods and genomic selection techniques, we will better identify the best mother palms to produce the seed.



**Projected yield performance of the Dami SuperFamily® seeds (MT FFB/ha)**



*Note:*  
FFB yields presented are mean of FFB yields recorded from 700 ha of commercial oil palm blocks.



In 2019, we began trialling Structured Crop Recovery Assessments, a programme by Sime Darby Plantation. These are conducted at estates to address yield loss factors, such as harvesting efficiency and evacuation of FFB to the mill. The review also measures crop quality, which directly affects performance oil extraction rates. Actual assessments began in 2020 and have become an invaluable tool for us to measure estate efficiency and minimise crop loss.

Since 2015, we have been conducting trials to test how specific progenies of oil palm that we hope

to plant, respond to certain fertilisers. These trials allow us to identify optimal fertilisers based on the on-site ecology, taking into account the environment and relevant planting material. With this knowledge, we can advance tailor-made fertiliser recommendations applicable to different progenies. PNGOPRA has been conducting training for the plantations on leaf and soil sampling techniques and consignment for analysis, and workshops to provide fertiliser use technical services around fertiliser use.







## THE NUMUNDO HALF STAND: RAISING CATTLE BETWEEN ROWS OF OIL PALM

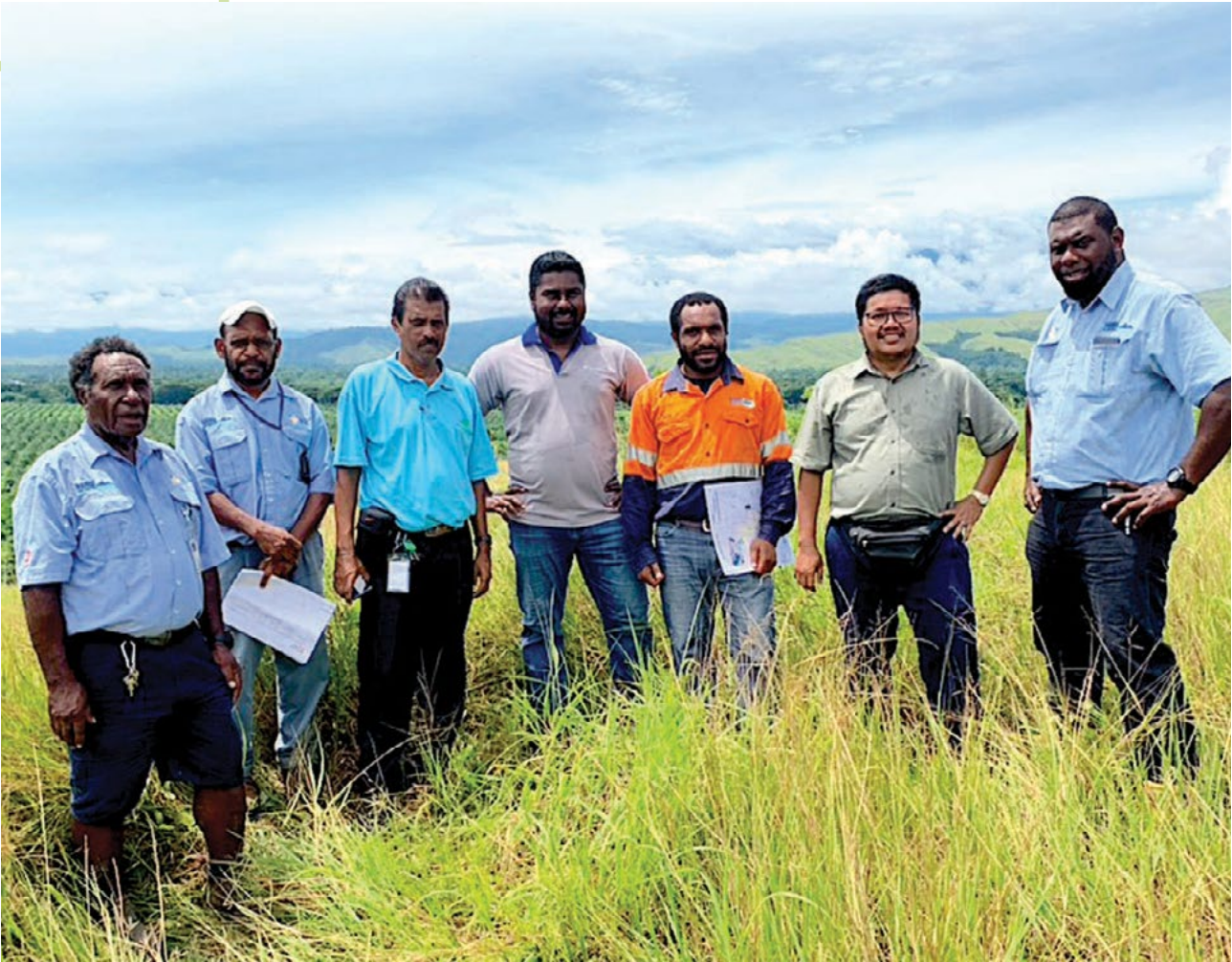


Our Numundo beef operations in West New Britain date back to the 1970s. We breed, grow, fatten, slaughter, process, and refrigerate beef for the local markets. NBPOL established our palm oil production in 1998 along with an existing cattle herd of 460 breeders. At this time, NBPOL introduced the concept of half-stand oil palm planting. While a full-stand system has a palm density of 128 trees per hectare, a half stand has only 72 trees per hectare. We plant this lower density in a skip row layout – two rows planted followed by two of unplanted space for cattle pastures.

We discovered that sharing resources by operating under single ownership and one estate management increases profitability from the same land area. Costs are further reduced by sharing tractors and equipment across the two operations. Sharing labour during peak periods allows us to optimise throughput without increasing the labour force. Cattle grazing means less reliance on weed management by chemical application and manual labour. Reduced pesticide application decreases the likelihood of soil contamination. Fire hazards during dry periods are reduced through natural weed and grass control on paths and non-crop areas. Nutrients from the grass, weed and palm fronds consumed by the cattle are returned to the soil naturally through cow manure.



## Our approach to sustainability



Papua New Guinea and Solomon Islands are two of the world's most ethnically diverse countries and are home to a rich biological diversity. Since we began our operations here over 50 years ago, we have always strived to be responsible operators through being conscious of our presence in these unique landscapes. We made it our mission to balance social, economic, and environmental considerations while always respecting cultural sensitivities and the environment. Over the years, we have seen that certified sustainable oil palm and local inclusion can not only bring profitability to the business, but also facilitate economic development for the people of PNG and Solomon Islands.

At NBPOL, we understand that to improve our sustainability performance, site-level action requires cohesion at Group-level. In late 2019, our senior management team developed three 2020 objectives in externally facilitated workshops. We agreed that our principal sustainability targets of maintaining Roundtable on Sustainable Palm Oil (RSPO) certification and achieving the Rainforest Alliance Sustainable Agriculture Standard (SAS) certification across all sites would be our number one priority. This was followed by two new Group-wide targets to improve the efficiency of our process so we can lower the cost of palm products to customers and to lower free fatty acid levels of our crude palm oil (CPO).



## CERTIFICATION

Ensuring that we certify our palm oil sites to leading sustainability certification standards is integral to how we operate as a business. This approach keeps us responsive to the ever-evolving stakeholder landscape and instils credibility and trust in our operations, both locally and internationally. There is little to no demand for our beef and sugar production to be certified to any standard for the local market. However, our sustainable integrated management system applied across all sites and commodities was developed with ISO14001, ISO45001 and SA8000 standards. This guides us to record and monitor environmental management, occupational health and safety, and internationally recognised standards of acceptable work.

### RSPO certification

In 2008, NBPOL was amongst the first companies in the world to achieve RSPO certification, and in 2012, all six sites became 100% certified to RSPO Principles & Criteria (P&C). The new Markham Farming Company Limited (MFCL) operations, acquired in 2018, achieved certification in March 2020. This certification took place after MFCL had successfully undergone the RSPO's Remediation and Compensation Procedure (RaCP) for areas that were developed by its previous owners without having undergone RSPO-compliant High Conservation Value (HCV) assessments. Completion of the RaCP process and resulting certification occurred just before the implementation of COVID-19 travel restrictions. For more details on the RaCP, please refer to page 36.

NBPOL considers RSPO compliance to be the minimum purchasing requirement. Since 2012, our support programmes and structured certification process has supported the certification of each of our smallholder suppliers. This procedure means we have always operated a fully segregated and fully traceable palm oil supply chain. It also means all existing and newly established smallholder suppliers are compliant with NBPOL and RSPO requirements, and that we operate a low-risk supply chain. Any potential non-compliant supply is subject to the procedures in place at our mills. The recently launched Sime Darby Plantation Crosscheck 2.0 website includes details of all NBPOL estates and smallholders suppliers.

### National interpretation of the new RSPO P&C

In 2018, the RSPO adopted revised P&C guidelines. These came into full effect in November 2019. The 2018 P&C include strengthened direction on the following: no deforestation, no new planting on peat, reinforced protection of human and labour rights, fire prevention, new grievance mechanism requirements, and legal requirements for third-party FFB.

Although the standards are applied globally, national laws and cultures vary for the same criteria. To better adapt the P&C into a national context, NBPOL initiated the National Interpretation Working Group to align relevant national legislation or particular agricultural thresholds for PNG. The P&C alignment took place in 2008, 2013, and 2018. We extended the latest Working Group to include interpretation for Solomon Islands, which is beneficial for streamlining





compliance for NBPOL. In November 2019, the RSPO Board of Governors endorsed the newly approved PNG and Solomon Islands National Interpretation for the Production of Sustainable Palm Oil.

Our Poliamba site was the first to be audited against this new national interpretation in December 2019. The remaining areas were scheduled for certification against the new P&C by November 2020. However, there have been some delays due to COVID-19 travel limitations. The RSPO has issued guidance for audits to take place remotely with assistance from on-site audit facilitators using the appropriate technology to support the validation and recording of proper evidence. In the meantime, all NBPOL sites have transitioned to RSPO P&C 2018 and are fully compliant with the new requirements.

### Rainforest Alliance Sustainable Agriculture Standard (SAS)

In 2016 we began a process to become certified to the Rainforest Alliance Sustainable Agriculture Standard for our palm oil operations. The standard applies to crop and cattle production systems worldwide and assesses operational planning and management systems, biodiversity conservation, natural resource conservation, and community livelihoods and wellbeing.

NBPOL is the only palm oil producer outside of Latin America to achieve Rainforest Alliance SAS certification – a milestone awarded to our West New Britain operations in 2017. In 2018 and 2019, respectively, RAI and HOP also achieved certification. In January 2020, MBE was audited and was certified in May 2020. Although we were on schedule to complete certification for the remaining two sites by the end of 2020, delays have arisen due to COVID-19 movement restrictions. In 2018 alone, almost 350,000 metric tonnes of palm oil was Rainforest Alliance-certified.

In 2018, we extended the scope of WNB’s audit to cover its smallholders for the first time, starting with the Tamba Lease Settlement Scheme (LSS). As of December 2018, 196 smallholders have been certified to the SAS. Initial plans to roll out certification support programmes for smallholders at other sites have temporarily been put on hold.



### SUSTAINABLE PATHFINDER AWARD: NBPOL RECOGNISED AS A RESPONSIBLE PALM OIL LEADER

In 2018, the Rainforest Alliance presented NBPOL with the Sustainable Pathfinder Award for responsible palm oil leadership. The award recognises companies from various industries for their contribution towards advancing sustainable practices. It is the first time recognition has been bestowed on a company in the palm oil sector. The Rainforest Alliance presented the honour at their 31st Spring Gala at the American Museum of Natural History in New York on 9 May 2018.

## COMMENTARY BY PAULA DEN HARTOG

Rainforest Alliance

Throughout their Rainforest Alliance certification journey, NBPOL has been very constructive and proactive in seeking solutions. They have a positive mindset, embrace innovation, and actively encourage stakeholder engagement.

In 2018, NBPOL was awarded the Sustainable Pathfinder Award. This recognition is given to industry-leading pioneers that welcome change and take the first steps to advance sustainability practices. Despite the many challenges facing the palm oil industry, NBPOL strives to improve the environment and livelihoods of the local communities they serve.

### ABOUT:

Paula leads the Rainforest Alliance’s global palm oil strategy coordination and implementation. She regularly liaises with NBPOL for high-level input on the Rainforest Alliance palm strategy.



# SUSTAINABILITY MANAGEMENT

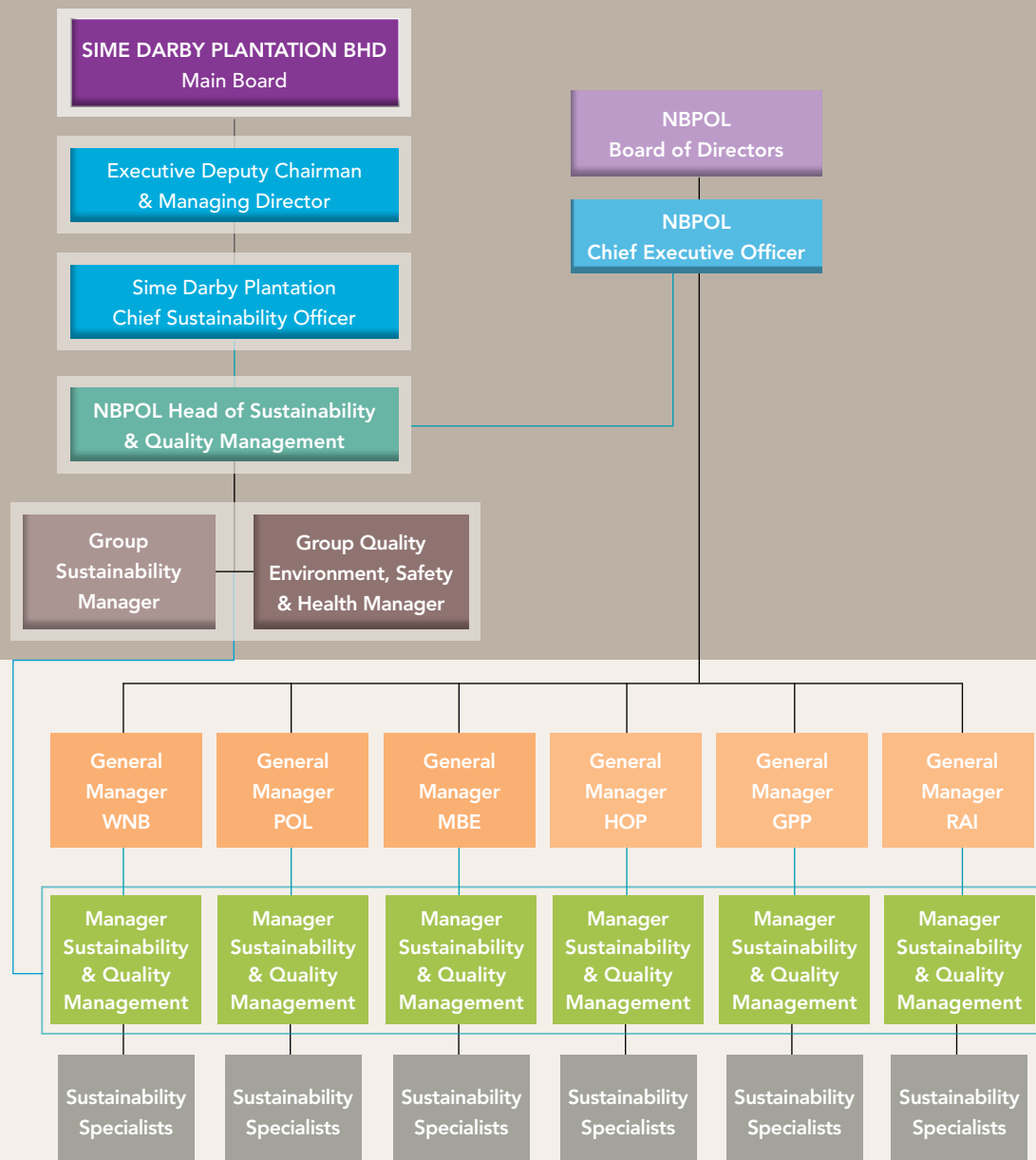
## Corporate governance

NBPOL's Board of Directors is responsible for the overall direction and strategy of the company. As of December 2020, the Board consists of seven members. Six are non-executive directors (this includes four independents and one chairperson). The Executive Director is also the Chief Executive Officer. The first female to join the Board was in January 2020. Two Board members are locals from Papua New Guinea.

As well as being responsible for the company's business strategy, NBPOL's Board is deeply involved

in sustainability management. The Board continues to receive and discuss quarterly sustainability updates and detailed, monthly reports on environmental and social key performance indicators (KPIs). The Chief Sustainability Officer of the Sime Darby Plantation has oversight over NBPOL's sustainability strategy. At NBPOL Group-level, our Head of Sustainability, our Group Sustainability Manager, and our Group Environment, Safety and Health Manager are responsible for ensuring cross-site collaboration. These managers are all based in PNG. Each NBPOL site has a sustainability manager and sustainability specialists in relevant disciplines.

## NBPOL sustainability management structure



### Integrity and anti-corruption

PNG was placed 137 out of 180 in Transparency International's 2019 Corruption Perception Index, ranking it a high-risk country that requires a robust ethical framework for companies to operate in accordance with international standards of integrity. NBPOL has established stringent policies and procedures to address

any form of bribery or corruption in our operations and associations. We are bound by our broad Business Ethics Policy, which guides our business units and the Sime Darby Plantation Code of Business Conduct, which strengthens this commitment throughout our operations.

### Management and capacity building

We keep our teams abreast of the latest sustainability systems. We have implemented a sustainable integrated internal management system, which incorporates ISO14001, OHSAS18001 and SA8000. This system strengthens compliance with our environment policies – a comprehensive training programme has been introduced to all our teams. We recently aligned our occupational health and safety reporting with SDP's approach and now include safety performance in manager performance scorecards.

In 2019, we introduced a Sustainability Quality Management (SQM) Index to better track sustainability indicators regarding certification, environmental management and occupational health and safety. With this system, managers at each site have key performance indicators to report against every month. By coordinating efforts across sites and departments, management is now better

able to understand the challenges in meeting these indicators and prepare effective response plans. The Index allows us to assess performance by site and at Group-level rating system. It also gives us the ability to improve our scores and overall performance.

We conduct site-level training sessions to increase each site's internal auditing capacity. Although we previously focused on RSPO P&C training, we are now building capacity with Rainforest Alliance SAS certification requirements. While internal training continued during COVID-19, all face-to-face external training has been put on hold for several months. Instead, we conducted virtual training sessions to ensure the continuity of the programs as planned. NBPOL provides regular sustainability updates to our external stakeholders, and we keep our employees informed about progress on audits, certifications, community projects, and safety campaigns.





# STAKEHOLDER ENGAGEMENT

Stakeholder engagement is integral to our business. Key stakeholder groups include shareholders, customers, employees, non-governmental organisations, industry groups, and government agencies. Our engagement approach varies from formal to informal, and we evaluate all issues for their potential impacts on stakeholders and NBPOL.

We frequently invite various stakeholder groups on site tours and provide presentations for different sustainability requirements, e.g. certification standards. For stakeholders in and around our operations, NBPOL maintains a network of site-wide social impact registers to identify and mitigate social risks or concerns. To keep these groups informed, we broadcast radio announcements covering a wide range of topics such as environmental programmes, women's empowerment initiatives, health and safety measures, and COVID updates.

Throughout 2018 and 2019, we partnered with a customer and a civil society organisation on a project that aims to nurture a spirit of shared responsibility and foster environmental and community benefits. The project supports NBPOL's One Hour Partnership community development initiative. The programme aims to provide primary health, education, and water services within a one-hour walking distance for those communities surrounding our operations. NBPOL – in partnership with government agencies and country programme partners – is building multi-stakeholder platforms to improve PNG's sustainable palm oil landscape.

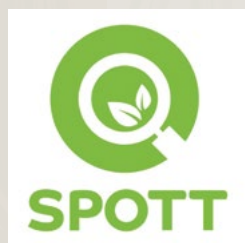
We have developed new partnerships and strengthened existing ones with local and international NGOs that work on various conservation programmes in the provinces in which we operate. Examples of our engagement efforts may be found on our website. For more details, please refer to our stakeholder engagement table on page 68.







## NBPOL RANKED #1 IN PALM OIL TRANSPARENCY ASSESSMENT



NBPOL is annually assessed in the Sustainable Palm Oil Transparency Toolkit (SPOTT) – an initiative developed by the Zoological Society of London to encourage transparency and track progress against sustainability targets. We are proud to have ranked number one out of 100 companies in the 2020 assessment, with a score of 94.4%. SPOTT scores companies' disclosure on their operations, policies and commitments to environmental, social, and governance best practice.



### Shaping national policy through the PNG Palm Oil Platform

The palm oil sector plays a crucial role in Papua New Guinea’s economy. In 2017, the industry generated US\$ 344 million in total export earnings and provided jobs for over 200,000 Papua New Guineans.<sup>3</sup> Although PNG is a global leader in internationally-certified palm oil production, there is a risk that left unrestrained, the country’s landscape could be threatened by newer palm oil and logging operations. Conversely, if the palm oil sector continues to develop sustainably and responsibly, it has the potential to support the nation in meeting many of its development needs. These goals include alleviating poverty and increasing economic opportunities in rural areas while protecting valuable forest resources.

A 2016 United Nations Development Programme (UNDP)-commissioned report on sustainable commodity production in PNG advanced two recommendations:

1. The development of a national palm oil policy to help guide future plantation expansion. This would be supported by the mapping of off-limit regions and appropriate areas for growth.
2. Establishment of a multi-stakeholder platform, to strengthen coordination in the sector and help develop and oversee policy implementation.

Following the report, the Papua New Guinea Palm Oil Platform (PNG POP) was founded in 2018. Facilitated by the UNDP, the Group connects the private sector, government and civil society to establish a long-term

strategy and action plan for PNG and position the country as the global leader in sustainable palm oil production. The forum acts as a mechanism for the industry to openly discuss and develop solutions for the country’s palm oil sector. PNG POP will significantly contribute to the Strategy for Responsible Development for PNG (STaRS) and the Medium-Term Development Plan III. The platform’s main objective is to implement a national action plan to address the root causes that are impeding PNG’s sustainable palm oil production.

As part of its mission to influence and harmonise government policy, in 2019 the platform developed a policy submission along with a draft Declaration on Sustainable Palm Oil. The policy is currently awaiting government endorsement; we expect it to be co-signed by the Minister for Climate Change and Conservation and the Minister for Agriculture and Livestock before being tabled in Parliament.

A communications strategy was developed in 2018 to support the platform’s activities, guide stakeholder engagement, provide a foundation for effective and ongoing communications, and advocate for PNG industry benefits. Please refer to the informative [video](#) for more information on PNG POP.

NBPOL was involved in the development of the platform. Before its establishment, we collaborated with PNG government agencies for several years to formulate the roadmap leading to REDD+ (Reducing Emissions from Deforestation and Forest Degradation in Developing Countries) preparedness and implementation.

3 United Nations Development Programme (n.d.) Papua New Guinea: Sustainable Palm Oil [Online]. Available at <https://www.greencommodities.org/content/gcp/en/home/countries-and-commodities/papua-new-guinea-palm-oil.html> (Accessed 8 October 2020).

## COMMENTARY BY MIRZOHAYDAR ISOEV

FCPF REDD+ Chief Technical Advisor,  
UNDP

We consider NBPOL to be a strategic private sector partner because it has adopted global environmental and social sustainability standards, and practices responsible, sustainable expansion. Their expertise provides a stark contrast to many newly established companies that sometimes lack sufficient knowledge of sustainable practices and the resulting impact of deforestation and forest degradation on climate change. NBPOL also led the national interpretation of the RSPO's 2018 P&C. This was a crucial milestone in contextualising sustainable palm oil production across PNG's unique landscapes.

NBPOL's sustainability ambitions can provide an enabling environment for a sustainable value chain and integrated landscape management. NBPOL is a leading organisation for engaging smallholders and supporting local communities in improving their livelihoods. Consequently, there is capacity to help influence PNG's national policy on:

- Capacity building for smallholders on acceptable agricultural practices.
- Strengthening on-the-ground extension support services.
- Supporting farmers with incentives such as micro-credits and micro-loans.
- Providing on-farm improvements to support smallholders in increasing access to markets.

These might sound ambitious, but they are real and feasible and can be achieved through solid partnerships. While UNDP has expertise in policy dialogue in PNG, NBPOL can be a bridge between government and smallholders. NBPOL is ready to assist and is always open to discussion.

### ABOUT:

The UNDP supports the PNG government through the Forest Carbon Project Facility (FCPF). Mirzohaydar manages the UNDP REDD+ project in the country. The programme began in 2015 and will conclude in 2020 after the successful implementation of two phases of the project. Its primary purpose has been to establish management arrangements and capacity building of the government and support the development of the National REDD+ Strategy.



# GRIEVANCES

As an RSPO-certified organisation, we uphold our commitment to transparency by openly dealing with issues. The [Grievance Procedure for Stakeholder Issues](#) and [NBPOL Procedure for Handling Landowner Grievances](#) guide our process in managing grievances in a practical, timely and appropriate manner that is open and transparent for all affected parties. Our Sustainability Department monitors all registered parties to ensure that corrective action is taken through internal audits to conclude each request or grievance raised.

Any grievances raised, whether internal or external, are addressed by consultative committees. Each site keeps a record of all registered grievances from internal stakeholders (employees) and external stakeholders (including communities, contractors and NGOs). We currently record grievances against locally developed indicators. A majority of complaints can be

handled at the site-level; however, serious grievances are escalated to Group-level. We recognise our tracking approach requires Group-level oversight and monitoring. We are looking into establishing a holistic Group-wide system for tracking and reporting grievances by Q2 2022.

During 2018 and 2019, there were a total of six significant grievances raised – they have all been addressed and closed. Three were environmental cases: one involving a water pollution complaint; another concerning a tractor that destroyed a papaya tree; and a food garden affected in an HCV management area. The health and safety case involved a group of armed men ambushing the grievance-raiser. Two instances were raised where livelihoods were impacted: one a complaint of pests from sugarcane affecting food gardens and another that occurred in Nasuapum village.

## Grievances 2018–2019

Nature of grievance	Cases raised	Closed	Open
Environmental	3	3	0
Human rights	0	–	–
Livelihoods	2	2	0
Land	0	–	–
Health and safety	1	1	0
Encroachment by NBPOL	0	–	–
<b>Total</b>	<b>6</b>	<b>6</b>	<b>0</b>

### Note:

The previous sustainability report's grievance list included the category 'deforestation' – this referred to cases where NBPOL is the aggrieved party. We have replaced the category with 'encroachment by NBPOL'.

To effectively manage and handle site grievances, all our operational areas have established communication and consultation guidance. Site managers are responsible for addressing and closing the respective grievances or escalating them to another department. All sites have designated personnel to handle employee welfare issues or concerns, including domestic violence, sexual harassment, sexual assault, and other domestic matters. These officers maintain welfare records and provide counselling and follow-up to all parties. In addition to the grievance mechanism, we have a Group whistleblowing procedure accessible to all NBPOL directors, employees, related officers, or contractors to report any malpractice or improper conduct. Our [Group Whistleblowing Policy](#) outlines the process for dealing with such reports and guarantees anonymity. This provides a safe avenue for grievances to be raised without fear of reprisal or dismissal.

Since becoming an RSPO member in 2004, NBPOL has only been subject to one formal complaint raised through the RSPO Complaints System. This issue was lodged and resolved in 2015 (for further details, please refer to our 2015 Sustainability Report).

# Environmental protection and conservation

At NBPOL, we are strong advocates for responsible development, minimising harmful impacts on the environment, and enhancing our ecosystems and landscapes. We outline these commitments in our Forest Policy and our certification standards.



## PROTECTING FORESTS AND BIODIVERSITY

### Responsible expansion

Before any new development, NBPOL undertakes rigorous assessments and follows the processes outlined in the RSPO New Planting Procedure (NPP). Our approach includes social impact assessments (SIA), High Conservation Value (HCV) assessments, and High Carbon Stock Approach (HCSA) assessments. These HCV-HCSA assessments are conducted by licensed assessors and are subject to the HCV Resource Network quality review process. We then use our estimates to prepare an implementation plan that

includes mapping of the HCVs in and around existing estates to delimit areas for potential conversion and protection. Our continual community field presence will simultaneously determine which land the communities agree to lease to us. We will then demarcate the required areas for living space and food security. The entire engagement is a dynamic process of integrated land-use planning.

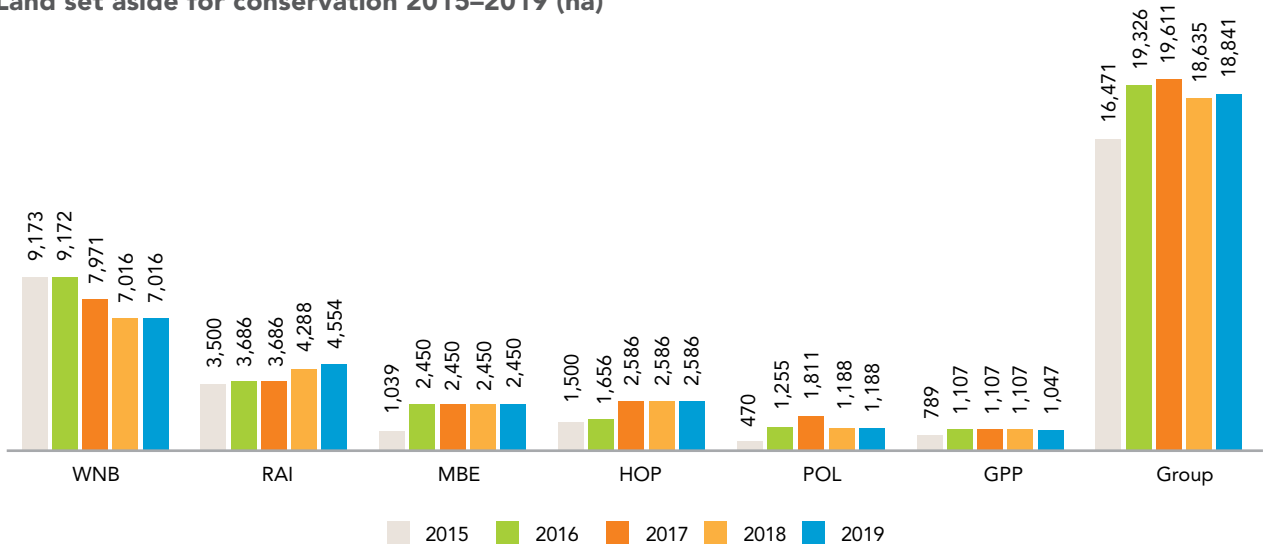
To date, we have submitted NPPs for HOP, RAI and GPP where we had initial plans to develop. We have proceeded with development at HOP but have decided not to develop at RAI and GPP at this point in time. For RAI, this is because obtaining legal land rights has been challenging. At GPP we are facing challenges to implement our no deforestation commitments in the high forest cover landscapes. Strict market demands for no deforestation and the resulting thresholds for conversion set by the HCS Approach place severe restrictions on agricultural development in highly forested less developed countries, such as PNG and Solomon Islands. This approach imposes limits on the ability of local communities in these countries to achieve access to better incomes, infrastructure and social development. We continue to work with multi-stakeholder groups to find ways of addressing these limitations.



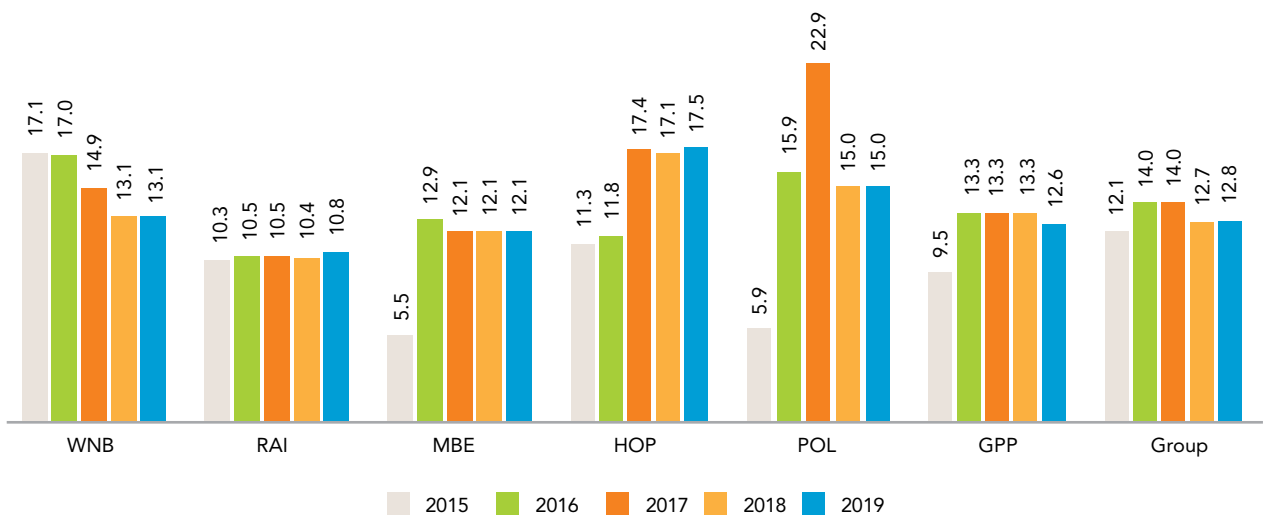
**Managing conservation areas**

As of December 2019, we have reserved 18,841 hectares for conservation across our six sites at Papua New Guinea and Solomon Islands – this amounts to 12.8% of our total titled land.

**Land set aside for conservation 2015–2019 (ha)**



**Titled land set aside for conservation 2015–2019 (%)**



In the RSPO P&C 2018, the definition of peatlands was changed. Consequently, 834 hectares under NBPOL management in West New Britain have now been reclassified as peat. These soils were previously categorised as areas with high carbon content. Planting on these areas was completed over seven years ago and is being managed based on the RSPO’s best management practice guidance for peat management.

We operate in one of the world’s most ecologically diverse regions and continuously strive to preserve and protect the wildlife and rare species found in these areas. NBPOL has implemented a strict no-hunting policy; we emphasise this policy with all the smallholders we work with. We also document IUCN Red List and CITES species that reside our leases. The latest list can be found on page 76.



### Monitoring of conservation areas

Effective monitoring is crucial to supporting and improving our conservation management plans. HCV surveillance is done using an annual two-fold approach, including the use of satellite data, drones and ground-truthing. All data is entered into GIS software (either Spatial Monitoring and Reporting Tool (SMART) or QGIS) with a bi-annual remediation plan submitted, where required, and verified externally during annual audits by RSPO and the Rainforest Alliance. We also carry out spot checks using Landsat and Sentinel imagery which searches for areas that are disturbed or have changes in land use in the HCV areas. Maps of our areas are also available on Sime Darby Plantation's Crosscheck 2.0, an open-source traceability platform made available to the public. While the platform does not currently cover Papua New Guinea and Solomon Islands, its scope will eventually expand to do so.



### Biodiversity programmes

#### New GPPOL sanctuary for the Santa Cruz Ground Dove

The Santa Cruz Ground Dove (*Alopecoenas sanctaecrucis*) was once common in eastern Melanesia but has been heavily impacted by invasive pests such as rats, cats, and feral pigs. The last known wild population, totalling perhaps 300 birds, is confined to the wooded slopes of the tiny island of Tinakula in Temotu Province, Solomon Islands. Consequently, the species is at serious risk of extinction.

We remain hopeful that the Santa Cruz Ground Dove can still be saved. In November 2017, 110 doves, poached from Tinakula and destined to be sold to wealthy collectors in the Middle East, were intercepted by a team of conservationists working in collaboration with the Solomon Islands Ministry of Environment and led by Joe Wood, a Conservation Biologist from Toledo Zoo in Ohio, the United States. While these birds were successfully rehabilitated, they could not be returned to Tinakula because of a volcanic eruption that destroyed much of the island's forest habitat.

## COMMENTARY BY JOE WOOD

Toledo Zoo

I have been delighted with NBPOL's enthusiasm for this project, and by their obvious commitment to the conservation of biodiversity. I am very excited by the direction in which conservation breeding facility is headed, and by the potential for partnerships of this kind to play a key role in reversing the fortunes of endangered species in Melanesia.

### ABOUT:

The Toledo Zoo and Aquarium (in Ohio, US) educates, inspires, and engages over one million visitors a year. With a strong focus on conservation, the Zoo participates in over 80 species survival programmes and is a major supporter of in-situ conservation projects around the world. Joe Wood has a Master's Degree in Conservation Leadership from the University of Cambridge and specialises in the intensive management of highly threatened animal populations.

Instead, the birds were housed at an improvised facility in Honiara. Sixty were subsequently sent to Wildlife Reserves in Singapore. This facility serves as an 'assurance colony' to provide conservation programs with breeding groups to ensure the species will not become extinct. The rest remained in temporary aviaries on the outskirts of the Capital. Despite their relatively basic accommodation, there has been some breeding from this group, with nine chicks successfully raised to date. Nevertheless, there was an urgent need to build in-country capacity for the conservation of threatened endemic species.

In 2020, NBPOL formed a partnership with Toledo Zoo to build and run a conservation breeding centre for Santa Cruz Ground Doves. GPPOL has donated an area of land in Tetere to construct the facility and will provide basic amenities and other in-kind support for the project. The Zoo has committed to financing the construction and upkeep of the facility and will recruit and train a team of animal keepers.

In March 2020, construction began on the new breeding centre. Although the pandemic hampered building work, the first phase is now complete. We aim to transfer the birds to their new home by May 2021. The long-term plan is to use captive-bred birds for reintroduction, establishing additional populations when islands within the birds' historic range have been cleared of invasive predators.

### **Bristol Zoological Society partnership**

From 21 to 31 July 2019, staff from Bristol Zoological Society visited NBPOL's sustainable oil palm plantations in West New Britain, Papua New Guinea. The study aimed to coordinate rapid biodiversity assessments of the oil palm plantations and High Conservation Value (HCV) areas, conduct social research to explore the relationship between the local communities and the palm oil industry, and increase the Society's understanding of sustainable palm oil production. However, current work with the Society has been put on hold due to COVID-19-related resource and travel limitations. We hope the studies can resume soon.

## COMMENTARY BY GRÁINNE MCCABE

**Head of Field Conservation and Science,**  
Institute of Conservation Science and Learning,  
Bristol Zoological Society

Private sector engagement is crucial in understanding the biodiversity value of the conservation areas managed by RSPO-certified companies. Through our programme with NBPOL, the Bristol Zoological Society developed a detailed understanding of sustainable palm oil production. The pilot research highlighted the species that are found in the HCV areas and oil palm plantations, and the local community's relationship with the palm oil industry.

Effectiveness of the research methods suggests there is great potential to use camera trap images and bioacoustics for long-term monitoring of species in the HCV areas and oil palm plantations. There is also significant potential to expand research collaboration with the local communities to continue evaluating their perceptions of the palm oil industry and assess their use of HCV areas.

### **ABOUT:**

**Bristol Zoological Society is a conservation and education charity based in Bristol, England. Their work includes conducting research on conservation science and working to protect species and habitats overseas. Gráinne is a Biological Anthropologist specialising in primate behaviour and ecology.**



### The QABB breeding project

#### Conservation of the world's largest butterfly

With a wingspan of 19–30cm, Queen Alexandra's Birdwing Butterfly (QABB) (*Ornithoptera alexandrae*) is the largest globally and one of the rarest. Endemic to Papua New Guinea's Northern Province (also known as Oro Province), it can only be found in two locations: the forest areas of the Managalas Plateau, 1,000 metres above sea level, and the coastal lowlands of the Popondetta Plains. QABB numbers in the Managalas Plateau are relatively healthy and thriving, but the Popondetta Plains are small and patchy.

The QABB is one of only three butterflies listed in Appendix I of the Convention on International Trade in Endangered Species (CITES) and is classified as endangered in the International Union for Conservation of Nature's Red List of Threatened Species. On a positive note, the Papua New Guinea government declared the Managalas Plateau a conservation area in 2017, and it is now a protected National Park. However, much more needs to be done to ensure the survival of the species.

#### The NBPOL QABB captive breeding programme

We are privileged that part of our Higaturu operations is home to the QABB species. Consequently, we have designated certain forest areas in the company's lease area to preserve its habitat so that the butterfly can thrive in a legally protected environment.



To further strengthen our conservation efforts, with a long-term aim that the QABB will no longer be an endangered species, NBPOL has built and equipped a new laboratory, flight cages and foodplant nurseries. This has been established at our secure residential and operations compound in an attempt to breed the QABB in captivity. Our objective is to eventually release them into previously inhabited areas enriched with additional foodplants.

Some fundamental questions need to be addressed as the breeding programme continues to develop. We know now there is little genetic variation between the sub-populations. However they may still have different ecological requirements, even in their specific food plants. This is vital information for breeding success. Before any releases can be contemplated, past surveys of existing populations

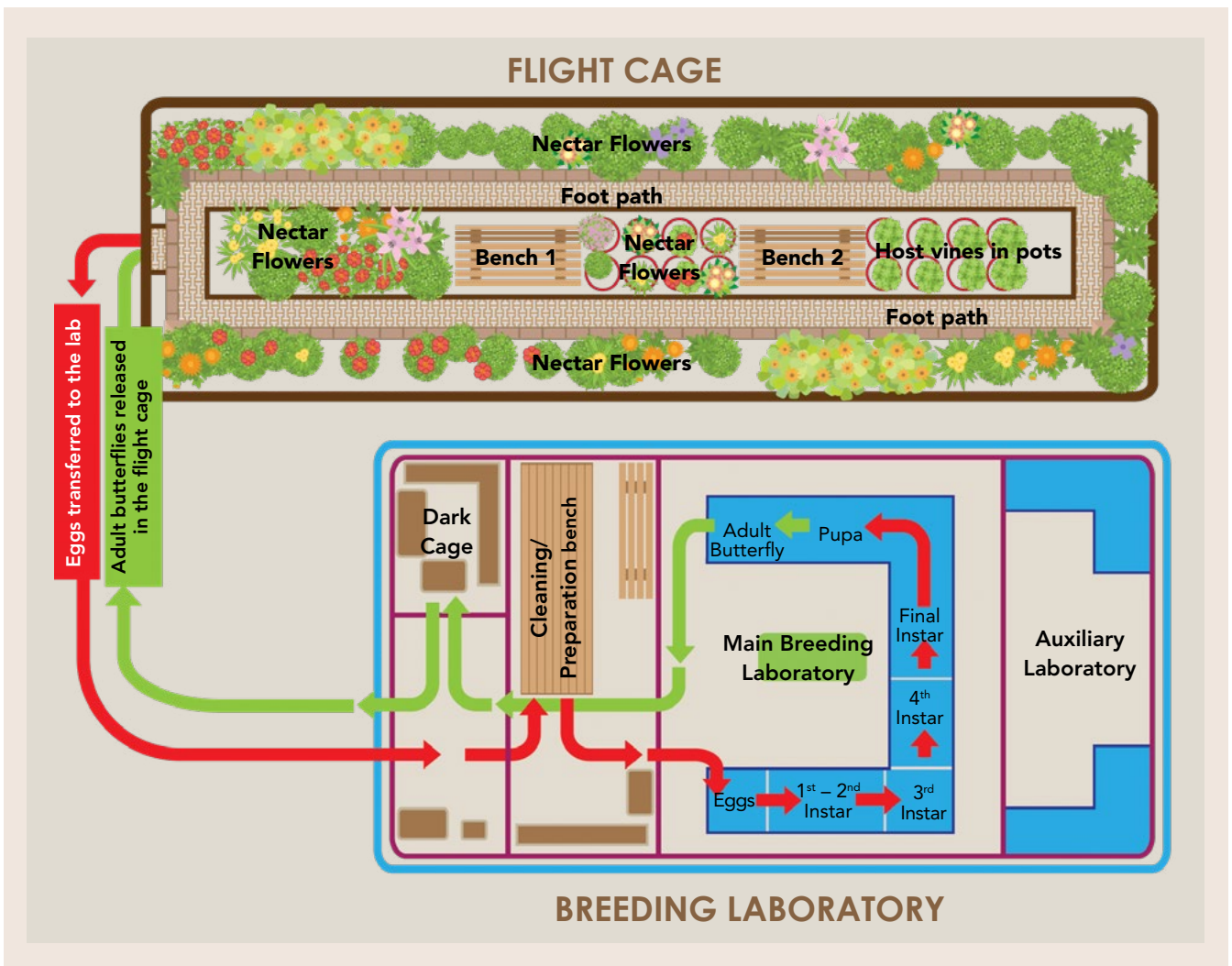


need to be consolidated and possibly repeated so that a conservation baseline is established to measure any future success. NBPOL has engaged a birdwing butterfly expert from France to conduct genetic analysis across the two populations. Although the results have been delayed because of the COVID-19 pandemic, we are advancing with other aspects of the trials.

Given that the QABB species is so rare, we have started developing breeding protocols with a closely related but common species – the Common Birdwing Butterfly (*Ornithoptera priamus*). We will only begin the QABB breeding programme when we have demonstrated two successful Common Birdwing Butterfly egg-to-adult life cycles. NBPOL recorded successful results for the first round of breeding in September 2020. We noted the butterflies were naturally feeding, courting, and mating – a development that bodes well for the second cycle.

**Inside the lab**

Construction of the breeding laboratory began in February 2018 and was completed in May 2019. We also built staff accommodation and hired full-time researchers, ground staff, and a Lead Entomologist. The laboratory contains two primary structures: the breeding room and the flight cage. Our breeding room hosts the caterpillars where they are fed until they pupate. We grow the vines that the butterflies feed on in specially designated onsite nurseries. When the pupae are close to emerging as butterflies, we move them to cool dark boxes to enable the adult butterflies to harden their wings for 24-48 hours after emergence. They are then transferred to a flight cage designed to replicate the QABB’s natural environment: a large tunnel-shaped enclosure. We also developed a bespoke ventilation system to recreate the temperature and humidity of the natural forest habitat. Throughout 2020, we worked on improving the flight cage conditions and enhancing





our knowledge of butterfly behaviour within the captive rearing environment. The results are promising, and we plan to build a more extensive flight cage to house more butterflies.

#### **Working with communities, organisations and partners**

A significant component of this project involves working with local communities, such as the Hombareta Butterfly Conservation Reserve. It is hard to overstate the importance of the QABB to local communities. The Oro provincial flag includes the QABB (representing wildlife) on a green background (for vegetation). QABB sightings in this region are rare. Given the local community's proximity to the QABB's natural habitat, we will seek their help in locating and nurturing the QABB. Higaturu Oil Palm Limited has supported this programme by building a guesthouse in one of the villages near a birdwing butterfly farm to house researchers and visitors.

The QABB have long been targeted by poachers and can fetch up to US\$5,000–10,000 each on the black market. Unfortunately, some community members have been coerced to help meet this growing demand. NBPOL is actively encouraging local stakeholders to shift their attention towards a conservation focus. NBPOL also works with local community-based organisations, such as Partners with Melanesians (PWM), to help in butterfly conservation efforts in the Managalas Plateau Conservation Area.

NBPOL is grateful for support from the Conservation and Environment Protection Authority (CEPA). They closely tracked the project's progress and approved our permit to handle and breed the birdwing butterflies in captivity.

The project is financed by Sime Darby Foundation, whose representatives conduct regular visits and assist in the programme's implementation. The project will run from August 2020 to December 2022, and we hope to raise independent funding to ensure that the project is maintained into the foreseeable future.





## COMMENTARY BY KENN MONDIAI

**Executive Director/Senior Forestry Officer**  
Partners with Melanesians (PWM) Inc.

NBPOL has been an instrumental partner in the preservation of the Queen Alexandra's Birdwing Butterfly. With their help, we have been able to feed and rear the caterpillars until they hatch. We have also regenerated their primary food source – the Aristolochia vines – which they feed on before they are eventually released into the wild. NBPOL has also provided materials, tools, and equipment, such as a Toyota Land Cruiser SUV, to the project communities in the Managalas Plateau conservation area.

The private sector must support biodiversity protection and biodiversity conservation. Regardless of the status and type of entity, this is a global responsibility. NBPOL is doing an excellent job of protecting the environment in and around their establishments. Moving forward, we suggest they explore supporting other areas away from their operations.

### **ABOUT:**

Kenn's NGO, Partners with Melanesians and its local community-based organisation, the Managalas Conservation Foundation, works with NBPOL on the Managalas Plateau conservation area support project. NBPOL also engaged him as an independent NGO/CSO advocate on a landowners consultation and assessment on land matters in Markham Valley. This was part of the high conservation value assessment (HCVF), and free, prior and informed consent (FPIC) process for NBPOL's new oil palm plantation development programme.

## COMMENTARY BY GUNTHER JOKU

**Managing Director,**  
Conservation and Environment Protection Authority (CEPA) &  
Chief Conservator of Flora and Fauna, Papua New Guinea

Although NBPOL's Higaturu conservation area is prime agricultural land, they have come forward to promote the QABB conservation efforts, immediately calling for the preservation of its forests and lands. Supporting the project is key to keeping the forest intact as the butterfly and the pupa rely on the trees and vegetation for their breeding and survival.

NBPOL's preservation endeavours show how the oil palm industry can engage in a conservation project that also promotes sustainable land use. More importantly, NBPOL has collaborated with landowners to teach them the importance of conserving vegetation to ensure the butterfly's survival. Any arrangements will have to conform to wildlife trade regulations and respect CITES rules on the international trade of endangered species. NBPOL can become a role model for how the industry should meet environmental standards. While environmental laws set out the minimum requirements, companies like NBPOL have strived for continuous improvement. The company is a significant force in promoting sustainable development outcomes by encouraging the oil palm industry to adhere to environmental best practice. NBPOL is also the bridge to markets that will offer a premium price for companies that adopt environmentally sustainable practices.

CEPA is pleased to work with the oil palm industry and other businesses that have adopted robust environment policies to promote environmental standards and sustainability requirements. The PNG government has also learned from responsible oil palm companies and adopted the best practices brought forward by them. CEPA is grateful for having an opportunity to contribute to palm oil industry initiatives, such as the PNG Palm Oil Policy Platform.

### **ABOUT:**

CEPA is a semi-government authority that receives, holds, and manages funds to deliver biodiversity conservation and environment regulatory services in PNG. It issues environmental permits, ensures compliance monitoring of all permitted activities, and provides support to conservation activities.

Financial support for CEPA is provided with funding from the international community and through bilateral support from other countries. As Managing Director, Gunther ensures CEPA is adequately resourced to fulfil its responsibilities in the implementation and enforcement of all relevant laws. He played an active role in developing key legislation, including the Environment Act (2000) and, more recently, the establishment of the Conservation and Environment Protection Authority Act (2004).



### Restoration efforts

Managing over 18,000 hectares of conservation area is challenging, given that encroachment and deforestation regularly occurs and must be addressed effectively but sensitively. We are committed to restoring any conservation areas that have been degraded by human activities such as hunting, logging, and gardening. We aim to restore these areas by replanting them per our conservation management plans. From 2017 to 2019, about 35.8 hectares of unauthorised clearing for subsistence purposes occurred across four of our sites. The clearing was done by local villagers, smallholders, and even some off-duty employees who acted in their own capacity. NBPOL took disciplinary action against those employees. In each clearing violation, restoration work was initiated, or ongoing negotiations are taking place. In two instances, formal cases were lodged to the National Forestry Department and the Regional Lands Department. A list of these cases is published on our website. In two instances, formal cases were lodged to the National Forestry Department and the Regional Lands Department a resolution. A list of these cases is published on our [website](#).

At RAI, we have also taken additional steps to restore 128 hectares to improve the conservation status of the landscape and enhance connectivity between the

420 hectares of conservation land located within the boundaries of our management unit.

Poliamba has also signed a memorandum with the PNG Provincial Forestry Authority to collaborate in a reforestation programme of New Ireland Province's Kaut nursery. In May 2018, a tree-planting programme took place in the province at Sicacui. This was carried out with involvement of community members where NBPOL was able to educate locals about the importance of buffer zones. With their assistance, we were able to plant 212 trees. Our long-term objective is that this will act as a tool to strengthen the buffer area.

### Community forestry programme at RAI

International Agricultural Research (ACIAR) has commissioned a four-year forestry research project to support PNG's Forest Policy Medium Term Development Plan to increase the area of planted forests in PNG from 62,000 hectares to 150,000 hectares by 2025. The programme, managed through the University of the Sunshine Coast in Australia is a collaboration with various government, NGO, private sector and community partners in PNG. Initiated in 2017, the project aims to identify how PNG's community forestry can be enhanced and scaled up to achieve better economic, social and environmental outcomes areas.





Ramu Agri Ltd.'s sustainability department is one the key implementing partners. At RAI, the objectives are to design and test tree-based livelihood systems for family-focused community based reforestation and identify how this can be scaled up across the landscape. Three local communities have been engaged via Ramu and Markham Valley. To support this, scientific trials have been carried out by researchers, including an agroforestry demonstration plot for farmers to see and understand how it works. Over the course of 2018 and 2019, over 10 technical sessions and tree nursery trainings have been conducted with more than 100 local participants. More than 10 family-based nurseries have been established by local participating families. By 2019, an estimate of 12 farmers associated with the project have planted 2,155 seedlings. Through the programme, champion farmers are empowered to conduct training for other interested local participants.

### Mangrove rehabilitation along the Numundo shoreline

NBPOL has been working with Mahonia Na Dari, a local NGO, to encourage mangrove rehabilitation along the Numundo shoreline at our WNB operations. The programme's objective is to restore the Kimbe Bay shoreline, slow down erosion, correct the buffer areas near our plantations, and encourage a supportive marine habitat.

We launched the project in 2017 with the aim of planting 10,000 mangrove seedlings along the coastline. We participate in Mahonia Na Dari's education programmes to encourage local communities to support mangrove preservation and engage schools

to operate mangrove nurseries and conduct plantings. NBPOL provided logistical support and funded the project with a start-up grant of PGK 15,000.

Our experience has shown that continuous monitoring and inspection of the buffer areas are required to determine and replace mangroves that may have died or have been destroyed because of tide or human activity. To avoid high mortality rates, we refrain from planting seeds in extremely sandy areas and in high volumes to assist the monitoring process. For areas not suited for mangroves, we also plant other suitable beach trees.

Since the beginning of the programme began in 2017 up until November 2019, and with the help of Mahonia Na Dari, NBPOL staff, marine science researchers, Numundo's surrounding community, and student volunteers from 23 local schools, we have planted over 5,000 seedlings along the Numundo shoreline. Local community awareness sessions have contributed to the success of this programme. By teaching the benefits of planting mangroves, local villagers can adopt similar practices, too. We have also erected signage to communicate the project's benefits and discourage vandalism of the plants.

Now the project is complete, discussions are underway for a second phase, possibly with a species of beach tree.









# FIRE MONITORING AND MANAGEMENT



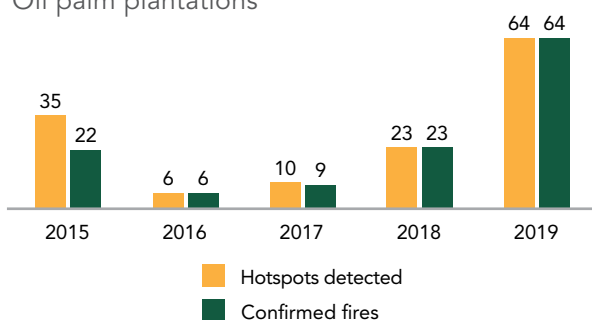
Since 1969, NBPOL has been practising zero burning across our palm operations. Given that our sugarcane harvesting process is also fully mechanised, we do not practice conventional burning techniques. We maintain a detailed fire register at each of our sites and investigate all fires to prevent or mitigate them. Firefighting drills are also routinely conducted across our estates so employees can react quickly and appropriately to any fire situation.

Hotspots and fires are monitored through Sime Darby Plantation’s remote sensing platform, an around-the-clock monitoring system using NASA satellite data. Monitoring is not limited to our operations but also detects hotspots for a 5km radius beyond estate boundaries. All cases are reported via Sime Darby Plantation’s Hotspot Alert Dashboard, accessible at <http://www.simedarbyplantation.com/sustainability/hotspot-dashboard/>. Hotspot information is also available via the RSPO’s publicly available platform, GeoRSPO.

There were 23 hotspots identified in 2018 and 64 in 2019, all of which were confirmed fires. From 2018 to 2019, there was a significant increase in the numbers of recorded fires – almost triple over the previous year. Among them, RAI recorded 54 cases. This can be attributed to a period of minimal to practically no rainfall in the northern region of PNG from April to July 2019, when the vast majority of the fires had occurred. There were 22 fires in June and 20 fires in July at RAI – comprising the vast majority. In addition to dry conditions, fires occur due to local communities’ custom of using fire for hunting and clearing gardens. RAI is also located in landscapes where human-made fires on anthropogenic grassland are common. These include fires resulting from accidents or those that were set deliberately, often by communities who wish to maintain grassland without trees to carry out traditional customs, such as hunting game. It remains a constant challenge to address these contributing factors because they are mostly human-made and sometimes part of community traditions that we have limited to no control.

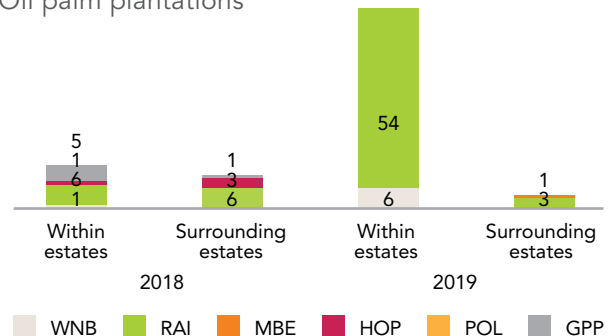
## Hotspots versus fires 2015–2019 (no.)

Oil palm plantations



## Confirmed fires by sites 2018–2019 (no.)

Oil palm plantations



# REDUCING OUR CARBON FOOTPRINT

We are committed to the ongoing reduction of our greenhouse gas (GHG) emissions and carbon footprint at our palm oil operations. Our target is to reduce our emissions by 30% by 2024 from our 2017 baseline. To monitor our progress, we use version 4.0 of the RSPO PalmGHG calculator, which came into effect in January 2020. In terms of calculations, this release does not defer from Version 3.0.1 for data entry but instead provides an alternative platform for submission to the RSPO.

Our most significant source of emissions comes from the impact of previous land-use change, constituting a total of 820,705 tonnes of carbon dioxide equivalent (MT CO<sub>2</sub>e) and responsible for 58% of our 2019 carbon emissions. Our second most significant GHG source is palm oil mill effluent (POME) from our mills.

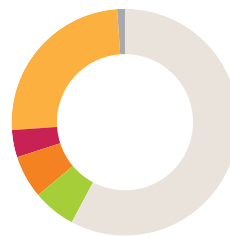
NBPOL's total net emissions for 2019 were 357,775 MT CO<sub>2</sub>e. While this was a 21.4% reduction from 2018 (454,976 MT CO<sub>2</sub>e), total emissions increased by 12.4% from 2017. Specifically, 2018 emissions increased by 43% compared to 2017 figures due to emissions from fertilisers where it nearly doubled. At the recommendation of our R&D and agronomy

departments, we began applying reformulated compound fertilisers that best suit the current age profile of our oil palms. Despite applying similar amounts of fertilisers to previous years during the reporting period, the emission contribution from compound fertilisers as estimated by the PalmGHG Calculator increased markedly. Since then, we have reviewed our fertiliser approach and will provide further updates in our future reports. Emissions from field fuel use have also contributed to the increase, where it grew by 69% from 2017 to 2018, mainly attributed to the rise in CPO production by 8.3% during the same period.

As a result, our carbon footprint, or emissions per tonne of product, similarly increased by 34% from 2017 to 2018 – from 0.47 MT CO<sub>2</sub>e per tonne of crude palm oil (CPO) and palm kernel (PK) in 2017 to 0.63 MT CO<sub>2</sub>e/MT CPO/PK – before decreasing to 0.55 MT CO<sub>2</sub>e/MT CPO/PK in 2019. Emission increases have, however, been offset by conservation areas. This is partially attributed to the acquisition of Markham Farming Company Limited (MFCL) under (RAI) in 2018, resulting in an increase in total crop sequestration area of 23.5%.

## Gross emissions by source 2019 (MT CO<sub>2</sub>e,%)

Land Use Change	820,705;	58%
CO <sub>2</sub> Emissions From Fertiliser	77,922;	6%
N <sub>2</sub> O Emissions	88,743;	6%
Field Fuel	53,684;	4%
POME	354,891;	25%
Mill Fuel	14,254;	1%

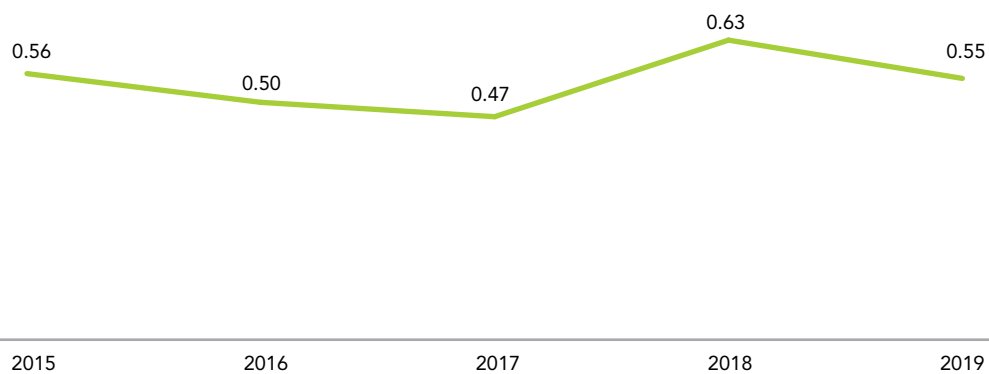


**Palm oil operations emission sources and sinks 2015-2019 (MT CO<sub>2</sub>e)**



	Net Emissions	Land Clearing	Crop Sequestration	CO <sub>2</sub> Emissions from Fertiliser	N <sub>2</sub> O Emissions	Field Fuel	Conservation Credit	POME	Mill Fuel	Mill Electricity
2015	355,717	801,232	-771,001	48,854	68,192	24,747	-171,305	330,514	28,006	-3,522
2016	307,572	827,353	-794,642	42,590	61,717	20,174	-171,305	316,565	17,794	-12,673
2017	318,261	838,734	-822,165	46,104	68,074	31,996	-179,837	345,529	13,965	-24,139
2018	454,976	825,297	-814,011	85,034	95,492	54,105	-179,833	394,049	19,898	-25,056
2019	357,775	820,705	-847,924	77,922	88,743	53,684	-179,833	354,891	14,253	-24,668

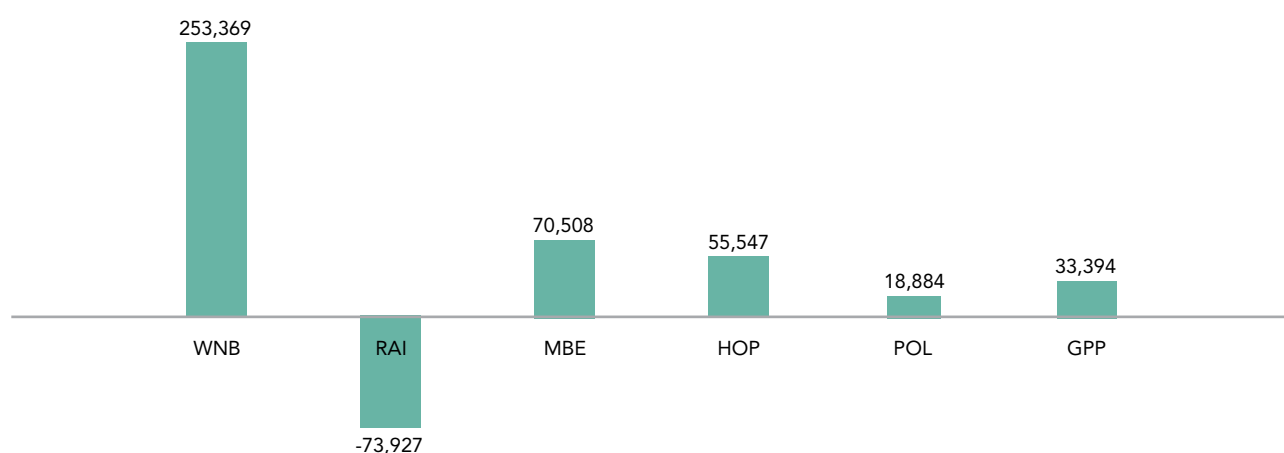
**Overall palm product carbon footprint 2015–2019 (MT CO<sub>2</sub>e/MT PK/CPO Ex-mill)**



**Emissions by site**

Our largest site at WNB is responsible for almost 58% of our combined net GHG emissions. These emissions are due to its size and because most of the area was developed as greenfield, whereas other sites were created on grassland or previously cultivated land. This has resulted in high emissions numbers derived from previous land-use changes. In contrast, RAI has negative emissions, as all oil palm was planted either on grass or on former sugar plantations, which have very low sequestration values, making it a carbon positive plantation.



GHG emissions by site 2019 (MT CO<sub>2</sub>e)Palm product emissions by site 2015–2019 (MT CO<sub>2</sub>e/MT PK/CPO Ex-mill)

Site	Mill Name	2015	2016	2017	2018	2019
WNB	Numondo, Kumbango, Mosa, Kapiura, Warastone	0.83	0.81	0.81	0.66	0.67
RAI	Gusap	-1.82	-2.05	-1.29	-0.57	-1.25
MBE	Hagita	1.07	0.93	0.87	0.85	0.84
HOP	Sangara, Sumberipa, Mamba	0.74	0.67	0.53	0.46	0.63
POL	Poliamba	1.12	0.82	0.58	0.8	0.91
GPP	Tetere	0.69	0.73	0.61	0.72	0.81

We have two operational biogas plants at WNB to facilitate emission reduction. These supply power to the local electricity grid, housing compounds, workshops offices, and the Kumbango Oil Refinery (now under Sime Darby Oils' management). We are exploring additional biogas facilities at Kapiura, Numondo, and Waraston mill. Although we had hoped to build these facilities by 2020, due to insufficient funds, the project is now expected to be completed in 2023.

We also recycle our biomass waste back into our operations, which contributes to a reduction in emissions. Our empty fruit bunches are applied back at the plantations as compost, POME is treated and used as irrigation for the fields, and palm kernel shells are used as fuel for boilers at our mills.

## Beef and emissions

We understand that beef production is an emissions-intensive industry. However, nutrition deficiency is prevalent amongst much of Papua New Guinea, mainly due to a lack of animal protein. This deficiency is a contributing factor to the poor development and growth of children. Therefore, meeting the growing demand for beef consumption at an affordable price is the cattle farming industry's primary objective.

4 Government of Papua New Guinea (n.d.) Papua New Guinea National Nutrition Policy 2016–2026, p. 8 [Online] [http://www.health.gov.pg/pdf/PM-SNNP\\_2018.pdf](http://www.health.gov.pg/pdf/PM-SNNP_2018.pdf) (Accessed 8 October 2020).



# CHEMICAL AND PEST MANAGEMENT

In accordance with NBPOL's RSPO and RA SAS commitments, we continuously strive to reduce our chemical usage. We achieve this through biological controls, wherever possible, and by strict monitoring of pesticide use.

## Biological controls

We have been implementing an integrated pest management (IPM) system since 1998. The system outlines our principles of field monitoring, cultural control practices, biological controls, and the targeted use of pesticides to maintain pest damage below economic damage thresholds. The system is supported and updated by ongoing research and development.

Our IPM strategy is guided by good agricultural practice. These methods include ground cover management, maintaining nectar-producing plants, and using high-quality planting materials to suppress pests and diseases. We manually weed around immature plantings to reduce the need for chemical application. NBPOL has trained our field operators to recognise signs of pest and disease outbreaks.

Our approach helps initiate early control responses, whereby we mitigate smaller weed infestations or insect pests by manual weeding or hand picking. We also train smallholder extension officers in the early detection and reporting of potential outbreaks.

Our R&D team is continuously reviewing and improving our use of biological controls through a long-term R&D programme. We are trialling a wide range of methods, including the mass rearing and distribution of native hymenoptera egg parasitoids, and stichotrema to control sexava, baculovirus to control oryctes, psyllid bugs to suppress mimosa, and the gall fly to combat chromolaena.

## Reducing chemical use

We do not use chemicals identified by the WHO as Class 1A or 1B, or those listed on the Stockholm or Rotterdam Conventions and the FSC Highly Hazardous list; we also avoid bio-accumulative or persistent pesticides. We ban the use of paraquat and in 2016, substituted methamidophos for dimehypo, a less toxic Class 3 chemical that has been trialled and shown to be an effective alternative.

### PESTICIDES ALLOWED FOR USE IN OUR OPERATIONS AT OIL PALM PLANTATIONS 2018-2019

ADJUVANTS	FUNGICIDES	INSECTICIDES	HERBICIDES	RODENTICIDES
Propionic acid	Thiram	Dimehypo	Dicamba	Flocoumafen*
Alcohol alkoxyate	Thiabendazole	Imidacloprid*	2, 4-D Amine	Brodifacoum*
Alkyl polyoxyethylene		Carbofuran (GPPOL only in 2018)*	Fluazifop-P-butyl	
		Cypermethrin	Glufosinate-ammonium	
			Glyosphate	
			Metsulfuron methyl	
			Diuron	
			Triclopyr	
			Fluroxpyr	

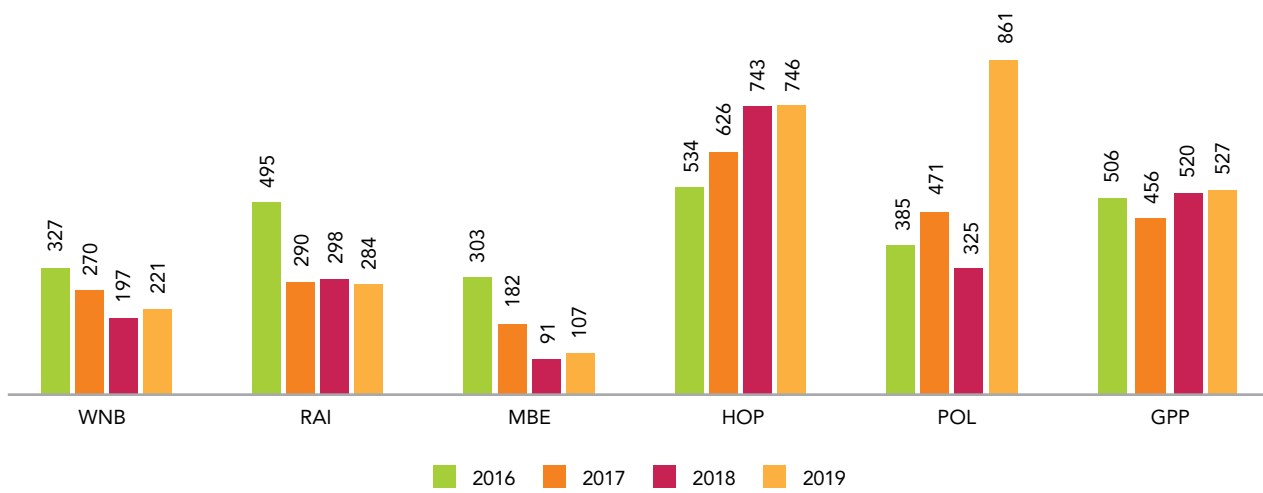
**\*Notes:**

1. Imidacloprid is a banned chemical by RA and now is being phased out at NBPOL. This was strictly used as a soil application for white grub in cane and CRB-G in palm at GPP in 2018.
2. Carbofuran was used strictly to manage the CRB-G outbreak at GPP in 2018, for which RSPO's approval was obtained.
3. These rodenticides are being phased out, as we transition to cholecalciferol (vitamin D3) products.



NBPOL monitors the use of pesticides through monthly reports submitted by our estate offices. We limit our reporting to herbicides due to their common usage in plantation management. This is also because insecticides, rodenticides and other pesticides are used infrequently and are targeted and moderated under the restrictions set out by the RSPO P&C and the SAN List of Prohibited Pesticides. Our IPM strategy also enables us to implement controls without resorting to prohibited chemicals. We have continuously reduced our pesticide usage over the past decade and, based on available public data, have one of the lowest usage levels in the industry.

**Herbicide usage in oil palm plantations by site 2016-2019 (toxicity units/ha)**



Pesticide usage typically varies year-on-year in line with climatic conditions, pest levels and crop lifecycles. At WNB, we have amassed 22 years of data, which enables the tracking of long-term trends. During this time, we have noted a dramatic decrease in toxicity units. We can mainly attribute this trend to the phasing out of paraquat, which we completed in 2012. For our other sites, systematic tracking began later, and we will continue to report on long-term trends.

**Herbicide usage at West New Britain oil palm plantations 1988–2019 (toxicity units/ha)**



We restrict employee access to pesticides throughout our operations and store all hazardous substances in designated custom-designed buildings. NBPOL maintains a register of accidents and incidents of chemical abuse or misuse and closely monitors health toxicity.

PNG sugarcane is an indigenous crop that is extremely vulnerable to localised pests and diseases; however, it is highly resistant to biological methods. Limited chemical aerial spraying to control pests is required at our Ramu sugar operations. This is necessary to ripen the canes after rain and control economically damaging moth borers. Aerial spraying is strictly limited to our sugar operations and is not applied to our oil palm – a practice that is prohibited under RSPO rules. In 2019, there was a significant top shoot borer infestation that impacted

sugarcane quality and yield. The top shoot borer is a common pest in Ramu and is closely monitored by NBPOL. However, in 2019 the extent of the damage reached unprecedented and unpredictable levels and required immediate chemical intervention. As Organophosphates have been phased out, we used Pyrethroids to control the outbreak. We have now improved our trap monitoring system with better controls for managing top shoot borers. We are also researching other potential sugar crop infestations, such as downy mildew and sugarcane smut.

## MANAGING GPPOL OUTBREAKS OF THE COCONUT RHINOCEROS BEETLE

In 2018, our Solomon Islands oil palm plantations became infested by the coconut rhinoceros beetle – Guam (CRB-G) biotype. The beetle threatens the region's coconut and palm oil crops. The CRB-G, scientifically known as *Oryctes rhinoceros*, is a newer biotype of the previous coconut rhinoceros beetle that had been managed within the country through various biocontrols such as a virus or fungal measures. The CRB-G beetle is aggressive and resistant to current baculovirus control measures. Its spread reportedly occurred in the central province and began moving along the coast towards Milne Bay.

To curb the outbreak, we implemented a GPPOL IPM strategy. We used a cultural control method of chipping oil palm trunks and harrowing them into smaller pieces. This enhances the decomposition of the palm residue and reduces the breeding sites of the CRB. Through pheromone trapping, we monitor the CRB-G's population and trap them.

Spraying of pesticide is only initiated when damage to the oil palms reaches a certain threshold. In these instances, we have had to use a combination of insecticides, namely Icon 10WP, Confidor/Sucson Maxi, Cypermethrin, and Carbofuran. Because Carbofuran is a WHO Class 1B chemical, we sought approval from the RSPO to use it. As with all chemicals, its use is closely monitored, and all employees are trained and equipped with adequate PPE when administering the chemicals. Carbofuran will be discontinued once a substitute is found.

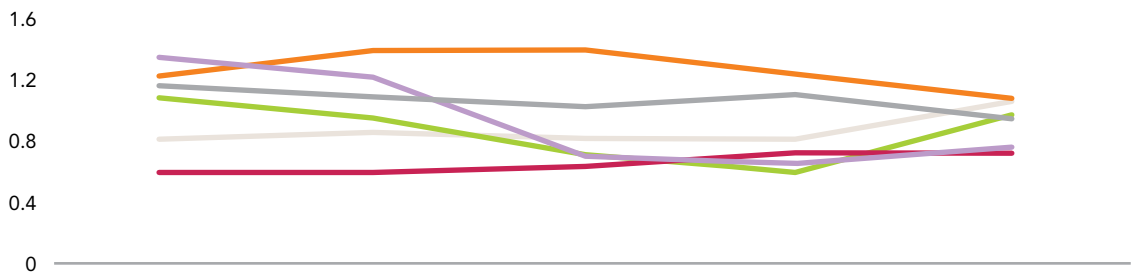
While the outbreak has been brought under control, we continue to look for a biological control agent that can curb beetle infestations. We are working with a researcher in New Zealand to test alternative viruses. Two of these appear to be effective so far, and we continue to test its application by infecting the beetles with the virus and releasing them into the field so they can spread the virus through mating. This remains a work in progress.



# WATER MANAGEMENT AND PROTECTION

NBPOL operates in regions surrounded by extensive coastal reefs that are home to a rich diversity of marine life. Most of our operations are in areas with high rainfall with little need for irrigation or competition for water sources. We mainly draw water from local rivers and boreholes for use at our mills, for irrigation at our palm oil nurseries, and at a limited area at our RAI operations. Water is also distributed to supply houses and offices. Despite water not being in short supply, we monitor our usage. Since 2017, we have witnessed a 28.9% decline in water usage intensity at Milne Bay and 9.5% decline at Guadalcanal. Although intensity has fluctuated for all other regions, all mills have maintained water usage to less than 1.4m<sup>3</sup> per tonne of FFB processed during the past five years.

**Palm oil mill water usage intensity by site 2015–2019 (m<sup>3</sup>/MT FFB processed)**



NBPOL Sites	2015	2016	2017	2018	2019
WNB	0.82	0.86	0.83	0.83	1.06
RAI	1.08	0.95	0.73	0.62	0.97
MBE	1.22	1.38	1.38	1.24	1.07
HOP	0.61	0.62	0.65	0.74	0.74
POL	1.33	1.21	0.72	0.67	0.77
GPP	1.17	1.08	1.04	1.10	0.95

All palm oil mill effluent (POME) is treated before being discharged into waterways, and we ensure biological oxygen demand (BOD) levels meet the highest standards. During 2018 and 2019, there have been a total of 16 incidences where we exceeded the legal BOD threshold. We recognise this occurs at all our West New Britain mills that were built before 2013. To improve the treatment of POME, we desilt the ponds and are rolling out use of Geotubes® to strain out the solids. We are also looking into installing additional ponds to increase effluent retention time and eventually explore changing effluent discharge from direct to waterways to land application.

Where mill effluent is applied to land at RAI, MBE and HOP, we have had no instances of BOD levels above the legal threshold of 4,000 ppm for land application.



**BOD reading of discharged palm oil mill effluent incidents exceeding targets by site 2015-2019**

NBPOL Sites	Target Limit	2015	2016	2017	2018	2019
WNB (4 sites)	90 ppm	5	1	6	11	5
WNB (1 site)	20 ppm	0	1	1	0	0
RAI	4000 ppm <sup>1</sup>	0	0	0	0	0
MBE	4000 ppm	0	0	0	0	0
HOP	4000 ppm	0	0	0	0	0
POL	90 ppm	0	0	0	0	0
GPP	90 ppm	N/A	0	0	0	0
<b>Total</b>		<b>5</b>	<b>2</b>	<b>7</b>	<b>11</b>	<b>5</b>

<sup>1</sup> 4,000 ppm threshold applies to discharge for land application.

We have recently implemented monitoring of chemical oxygen demand (COD) throughout our palm oil mills. As an initial target, NBPOL aims to reduce COD by 10% by 2025, using 2020 as a baseline year.





## WATER COMMUNITY PROJECT IN HIGATURU

60% of Papua New Guineans do not have access to clean drinking water, an essential foundation for the good health of the entire community. Water-borne diseases, such as diarrhoea and acute respiratory infections, continue to be one of the leading causes of deaths in children under five years old. PNG is currently ranked at the bottom of all Pacific countries for all water, sanitation and health statistics, with over 6,000 diarrheal deaths per year.<sup>5</sup> This is not an issue of scarcity, but more of distribution and access to clean water. In many communities, women and school-aged girls are responsible for collecting water for their families and have to walk long distances to do so.

To address these challenges, NBPOL is helping improve local infrastructure, such as the construction of wells. We also educate the public on the importance of protecting our waterways.

In 2017, NBPOL surveyed 21 communities' access to water in the Oro's Higaturu province. The survey showed that 20 of them use surface water sources while one uses a dug well. From this total, 19 villages affirmed that their water source was not of reliable quality. Members of three villages needed to walk more than one kilometre to retrieve water for daily use, two of which would locals more than an hour's roundtrip to do so.

Based on this study, NBPOL, Nestlé Germany and the Earthworm Foundation began a partnership programme to direct clean water to the villages surrounding our HOP operations. During 2018 and 2019, 28 water pumps were installed, which continues to benefit approximately 7,350 community members. Community members have responded positively, reporting that drinking water quality has not only improved but that they also have more time to carry out other activities without the need to walk to the rivers to collect water. Under the programme, we are now undergoing testing of the water quality and training community members to maintain and repair the pumps. This project falls under NBPOL Foundation's One Hour Principle Partnership, a programme we launched in 2013 to ensure that no community member should walk more than one hour to have access to drinking water, health services, and education.

See the [video](#) on the water project for more.

<sup>5</sup> UNICEF Papua New Guinea (n.d.) *Water, Sanitation and Hygiene* [Online] <https://www.unicef.org/png/what-we-do/water-sanitation-and-hygiene> (Accessed 8 October 2020).



## COMMENTARY BY MARTINA JANSSEN

**Sustainability Manager,**  
Nestlé Germany

Creating shared value is fundamental to how Nestlé operates. We are driven by a purpose to unlock the power of food to enhance everyone's quality of life. This objective rests on three pillars: to benefit individuals and families, communities, and the planet. One of our 36 global commitments is to raise awareness on water conservation and improve access to water and sanitation across our value chain.

The Oro water project is a clear example of this, ensuring that we provide the communities with a fundamental human right. In early 2017, Nestlé Germany and NBPOL began talks to partner on the water project. While Nestlé provided funding, NBPOL mobilised the project on the ground with their technical expertise; Earthworm Foundation provided input from a civil society perspective.

NBPOL is very engaged and is passionate to work with local communities. The project strongly focused on local people's needs. Such an approach is not always taken to help stakeholders in other parts of the world where proponents sometimes opt for projects to fill gaps in their certification.

### ABOUT:

**Nestlé Germany is one of NBPOL's customers. Martine has been the sustainability manager since 2013 and oversees the palm oil supply chains and their no deforestation commitment.**

Since 2014, NBPOL and a local NGO, Mahonia Na Dari, have been conducting annual inspections and monitoring of three reef ecosystems. These marine habitats are five kilometres offshore from the NBPOL plantation and are close to the Vesse islands in Silovuti. We initiated this reef check programme after witnessing complaints from island villagers of declining and dying fish stocks. We developed our reef check methodology in collaboration with James Cook University to assess the number of fish populations, their health status, and the reef ecosystem. This is to determine the widespread extent of human and natural impacts on the coral reef systems. Results have shown dramatic changes

to the reef ecosystem. Contributing factors include population growth in the nearby island villages, which has led to greater family livelihood expectations increasing pressure and disturbances on the reef system. Unpredictable weather is also a factor. The sixth study conducted in 2019 showed that fish populations improved at two of the three reefs in recent years, while one recorded a decline due to local overfishing. However, when compared to the 2018 the health of two reefs have declined. The remaining showed some improvement in coral coverage when compared to previous years. The monitoring programme has since ended, at the request of local communities.



## Partnership with people



### TACKLING THE THREAT OF COVID-19

As of the date of this report's publication, we are in the midst of the most significant global health crisis for a generation: the COVID-19 pandemic. To date, there have been 25 positive cases amongst NBPOL employees and their dependents in PNG and none in Solomon Islands. Although the PNG government and the World Health Organization are working closely to increase the country's preparedness, the PNG and Solomon Islands' health care systems have limited resources that treating a large influx of COVID-19 patients would be near impossible. Testing may also be inadequate and not timely enough to respond appropriately and quickly to contain the spread.

We are mindful that both countries have not widely adopted control measures such as social distancing and the wearing of face coverings.

Nevertheless, at NBPOL, we continuously implement measures and proactive steps to protect employees wellbeing. Although we hope that the relatively low impact to our employees continues, we are taking extreme care to prevent community outbreaks by following strict safety measures and actively testing close contacts of any confirmed positive cases.

NBPOL provides employment, infrastructure, and housing support to tens of thousands of employees and smallholders; therefore, we must safeguard our workforce and communities' health and safety.

Many of our expatriate staff, including a high proportion of senior management, have returned to their home countries or consolidated their annual leave to minimise the disruption caused by multiple two-week quarantines.

Ongoing travel restrictions have meant that the majority of these employees are still abroad without a clear indication of when they may be able to return to PNG. We have sought to ensure minimal disruption by encouraging working from home and facilitating online meetings. However, managers and staff at site level in PNG and Solomon Islands often face difficulties due to poor connectivity. A local preference for in-person meetings also compounds business progress.

Site certification physical audits are also currently on hiatus. To address this, we are exploring collaboration with the relevant bodies to conduct technology-driven remote audits.

Since the pandemic began, NBPOL has:

#### 1. Established dedicated teams at Group- and site-level:

- *COVID-19 Coordination Group (Group-level)*: comprised of management committee members and technical advisors. The group is facilitated by the Head of Sustainability and Quality Management (SQM). Meets weekly.
- *COVID-19 management teams (CMT) (one for each site)*: chaired by each site's general manager and facilitated by the sustainability and quality management teams. Meets weekly.
- *Clinical Coordination and Health Management (CCHM) team (Group-level)*: comprised of senior clinical and medical staff members; facilitated by an emergency physician consultant and Group SQM Manager.

#### 2. Issued and implemented procedural documents:

- *Preparedness and Emergency Response Plan (PERP)*: the overarching guidance document for all preparedness and response actions for which compliance is mandatory. Continuously reviewed and updated.
- *Clinical Management Protocol (CMP)*: the guidance document for all company health facilities. Developed and continuously reviewed and updated by the CCHM team.
- *Business Unit (BU) COVID-19 Implementation Plan*: a site-level document that details on-the-ground plans and progress in implementing the PERP. This procedural and status-monitoring document is prepared, reviewed and updated by the six BU CMTs. Tabled at weekly CMT meetings.
- Guideline documents developed for staff leave arrangements during the pandemic period.

3. Conducted awareness programmes for all employees

- 'Pandemic Post': an awareness, idea-sharing, and informative weekly newsletter circulated to staff.
- eTraining for clinic staff: facilitated by the consultant physician and CCHM.
- Frequent circulation of articles and updates in the company newsletter (Niu Briten Drum)
- Awareness material through online messaging mediums.
- Ongoing onsite awareness programmes with employees and surrounding communities focusing on COVID-19 preventative and precautionary measures.



4. Provided financial support for clinics and health authorities

- Procurement of personal protective equipment (PPE), medical equipment, and consumables: for company clinics and the workplace. Approximately PGK 1.1 million invested to date.
- Donations from the NBPOL Foundation, staff, and company to support health authorities in our operative provinces. Approximately PGK 720,000 donated to date.

5. Provided infrastructure support

- Construction and widespread dissemination of hand wash stations in the workplace and also local points of congregation such as bank ATMs, schools, marketplaces and surrounding communities.
- Provision of Fabric Face Coverings and Medical Scrubs for All Sites.

These are unprecedented times, and operating in one of the least developed countries has its challenges. As we continue to adapt and implement measures to comply with government guidelines and ensure business continuity, the health and safety of our workforce will always remain our utmost priority.

**Pandemic Post** No. 13, October 02 2020

**SOP Covid PERP**

**6.8 Precautionary Measures for Employees and Dependents**

The following measures must be implemented in all areas of our operations:

- Selling, chewing and spitting of betelnut (buis) is banned on all company premises.
- Sporting activities on company premises are prohibited unless approved by the site Covid-19 Management team.
- Church and other gatherings are allowed; however, this is only for gatherings of less than 50 persons, where social distancing is implemented, and hand wash stations are in place (and used).
- Take immediate and firm action to remove passengers from labour compounds.
- When transporting employees, please ensure that social distancing is practiced as far as is possible.
- Where practical, serious consideration needs to be made to speed out or stagger working hours.
- All employees and their dependents who are over the age of 60 and/or have existing health conditions must be identified and consideration made to what measures need to be taken to minimize their risk of infection.
- Where practical, hand washing soap should be bulk purchased and given free of charge to labour employees.
- Where practical, hand washing stations should set up at strategic locations across our operations. Prior to employees starting their job for the day, they must first thoroughly wash their hands at the hand washing station. Use of simple bleach or chlorine hand-wash procedure may be considered.

**Covid Situation Report**

Map showing COVID-19 cases in Indonesia:

- WEST SUMBA = 1
- EAST SUMBA = 3
- SOUTHERN HIGHLANDS = 1
- EASTERN HIGHLANDS = 1
- EAST NEW BRITAIN = 2
- WEST NEW BRITAIN = 3
- MAKASSAR = 5
- NEW IRELAND = 1
- AUTONOMOUS REGION OF BOGORVILLE = 1
- CENTRAL = 1
- WESTERN = 101
- NATIONAL CAPITAL DISTRICT = 321
- MALNE BAY = 2

TOTAL CASES: 939  
 DEATHS: 7  
 RECOVERED: 518  
 TOTAL TESTED: 25,883

**HOP Covid Preparedness**

**Higeturu Gender Committee in charge of supplying reusable facemasks**

- HOP Gender Committee tasked to manufacture and supply quality reusable facemasks by HOP Management, a decision supported by the site Covid-19 Management Team as part of preparedness.
- HOP also considers the obligation to ensure all facemasks produced for use by employees comply with health and hygiene standards.
- 3 electric sewing machines purchased and donated for the committee by HOP Management. HOP continues to purchase all other materials required for the manufacturing of facemasks.
- The production team consists mainly of volunteers, directly supervised by project coordinators.
- The facemasks are sewn using nylon and silk material with elastic loop to produce a 3-piece quality reusable facemasks.
- Masks purchased at K3 a piece by HOP and distributed to employees as a PPE item.
- The project also received generous support from individuals who have willingly offered their private sewing machines for use along with the 3 donated by the company.
- 2950 quality reusable facemasks were already sewn by the project team since August.

Volunteers sewing facemasks for HOP employees.

## COMMENTARY BY DR BOBBY M WELLSH,

NBPOL Medical Advisor

When the first coronavirus cases surfaced in Papua New Guinea, the authorities prioritised controlling the outbreak by quickly establishing a national response and coordination framework. However, limited medical facilities and a rugged landscape posed a significant challenge to rural health. The private sector has an important part to play in working with the government to help mitigate these obstacles.

Although NBPOL continues to face multiple challenges, it maintains a current and robust Preparedness and Emergency Response Plan (PERP). This dynamic control model can adapt to continually evolving escalation measures. Despite operational restrictions, NBPOL strikes a delicate balance of focussing on business continuity, managing the outbreak and optimising employee wellbeing. NBPOL is continually exploring innovative ways to safeguard its employees. Measures include private employee testing to enable future planning towards containing the outbreak. The company has even taken proactive steps such as the implementation of prediction modelling as part of a risk aversion process to track the actual number of new cases on the ground against the reported figures.

Having worked with various other organisations, I am impressed by NBPOL's multipronged approach in managing the outbreak as they continue to prioritise stakeholder needs while never compromising the health and safety of their employees. This inclusive approach works in tandem with the latest measures taken by the National Department of Health and provincial health authorities. NBPOL's dynamic team and efficient leadership is not constrained by a fixed set of principles and can quickly adapt to rapidly changing circumstances.

### **ABOUT:**

**Dr Bobby Welsh is an emergency physician at Kundiawa General Hospital. He specialises in critical care, dive and hyperbaric medicine and has been working contractually with NBPOL as an emergency medical advisor officer. He provides NBPOL with technical and clinical advice and assists in the development of PERP and Clinical Management Protocols.**



## ALIGNING WITH COMMUNITY NEEDS

### Supporting our smallholders

Our 17,167 smallholders are some of our most important stakeholders. They are our only external supply source and provide 23% of our annual fresh fruit bunches (FFB). At all our operations, smallholders are, in principle, independent. They retain legal authority over their land and farming systems choices without any mandatory or contractual obligations to the mill. However, in most cases geography means that smallholders are functionally tied to our mills.

Through our smallholder affairs officers and government extension services, we strive to support and encourage our smallholders to meet RSPO requirements. Since 2012, 100% of the fruit received at our mills from smallholders has been certified to RSPO Principles and Criteria. We are currently working towards building on this success by certifying our smallholders to the Rainforest Alliance Sustainable Agriculture Standard.

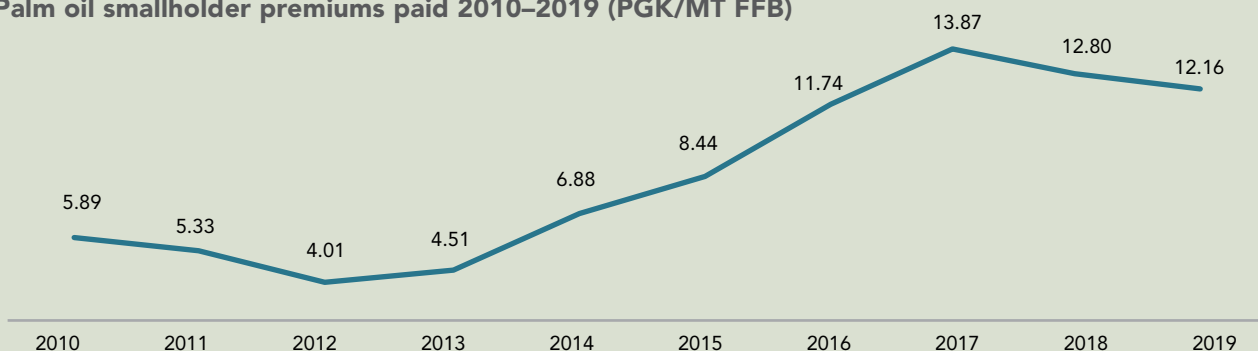
NBPOL covers all smallholder certification costs, which we do not charge back to the growers. We also support our growers through interest-free loans for tools and fertilisers and by providing training and awareness sessions. The topics of these sessions range from agronomic advice, and financial management to health and safety, and most recently COVID-19. The sessions also cover NBPOL's commitments, such as no planting on peat and our Zero Burn Policy. Most smallholders will attend several training and awareness sessions throughout the year. In 2019, we issued a manual to guide our ongoing engagement to Solomon



Islands smallholders. The manual is the result of a joint project with the Earthworm Foundation and was financially supported by Florin AG. Based on information collected from our sites in 2019, 100% of our smallholders have attended at least one awareness and training session, while the vast majority have attended several sessions conducted by NBPOL. During the first half of 2020, we had to suspend training and awareness sessions due to COVID-19-related restrictions, but these have since resumed, together with strict social distancing and enhanced hygiene measures.

All our smallholders receive a significant premium for supplying RSPO-certified fruit because of the value of being able to sell fully segregated oil to our markets. Compared to 2017, premiums paid out have decreased by 12.3% – mirroring the depressed global crude palm oil prices.

### Palm oil smallholder premiums paid 2010–2019 (PGK/MT FFB)



**Notes:**

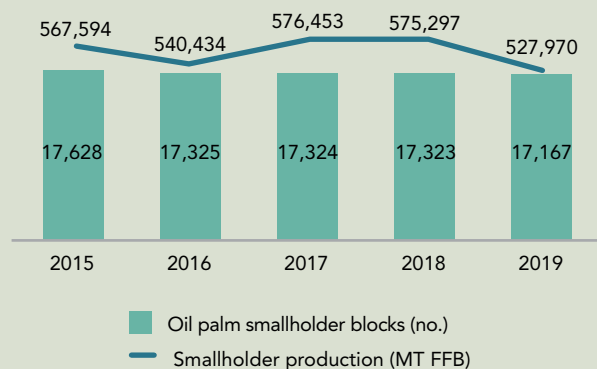
1. Not all sites were certified from 2010 to 2013. The figures for these years are calculated as the average premium to certified smallholders.
2. The equivalent is paid in SBD to smallholders supplying to GPPOL in Solomon Islands.





In recent years we have seen a decrease in smallholder crops. Since 2015, more than 450 smallholders have been removed from our records because they are no longer actively cultivating oil palm. In addition, there were no new blocks added to the NBPOL supply base. There are many reasons for this unwelcome trend: additional smallholder land development costs due to increasingly stringent RSPO requirements, poor infrastructure, and declining interest from the younger generation.

### Oil palm smallholder blocks and FFB production levels 2015–2019







### Upholding land rights

In PNG, we are heavily dependent on communities that control over 97% of the land; 87% in Solomon Islands. Because the majority of our land bank is leased to us, we ensure that due process is established and is truly representative of the rightful customary landowners. Harnessing the principles of free, prior and informed consent (FPIC), we work closely with community members and specifically Incorporated Landowner Groups (ILGs) to determine how the land is used so they can benefit from our activities. We keep them fully informed and consult widely, with meaningful discussions on proposed initiatives and potential impacts.

For any proposed development, we adopt a participatory approach to determine an integrated land-use plan. We involve community members in the process of defining boundaries, land use, living space, food security, and conservation. Each of our six sites has a dedicated lands department with officers specialised in addressing landowner requests, queries, and resolving disputes. We also assist with the registration of the communities' ILGs.

The PNG Government is currently implementing a new legislative and administrative system of voluntary customary land registration (VCLR) to better protect landowners' legal rights. The initiative is in response to widespread concern about the administration of special agricultural and business leases (SABLS). The leases have caused significant controversy due to the potential, in some cases, for wrongful suspension of customary rights. NBPOL is working closely with the PNG Government to convert special agricultural and business leases (SABLS) to voluntary customary land registration (VCLR). This better protects landowners' legal rights and address past controversy due to the potential for wrongful suspension of customary rights, in some cases. This is being carried out on a case-to-case basis to avoid disruption of existing business arrangements between landowners and developers.

We also support landowners with our training programmes. Through a train-the-trainer model, we teach smallholders and landowner groups on practical issues such as intercropping, good agricultural practices, and financial literacy. We estimate that approximately 3,000 landowners



received training on FPIC, grievance handling, conservation and fire in 2018. In 2019, we estimate this was increased to approximately 3,300, including those from NBPOL's Markham Farms Company Limited operations. This does not include our own employees, who are regularly trained on all these aspects.

Since RSPO standards were first introduced to PNG, some local objections have been raised over the resulting land development restrictions. Some people believe that in a country with large areas of high forest cover, and a pressing need to reduce poverty, restrictions on oil palm development and land use is an unacceptable limitation to national development. Recently, the PNG Oil Palm Growers Association (PNGOPGA) reiterated these concerns, particularly the challenges faced by smallholders due to RSPO rules. Most landowners initially welcomed the RSPO certification scheme because they understood the need for sustainable production to combat problems such as climate change and community rights. However, following ongoing updates to the RSPO certification system, the restrictions are now seen by some as too onerous for a country whose most valuable asset is land. In June 2020, the PNGOPGA put forward a set of radical recommendations which included the development of a national PNG palm oil standard. This was designed

to address local needs more than RSPO P&C. The plan also included a proposal to close the local RSPO office, ban RSPO auditors, and promote investment by non-RSPO investors.

As a foreign investor, NBPOL has always embraced its responsibility to contribute to the country's development needs. Although NBPOL is comfortable without further expansion, we must support the government and assist communities that are struggling to improve their livelihoods. Given that 97% of the land in PNG is community-owned, with only 3% owned by the state, it is unrealistic to assume that all forested areas will be automatically protected and there will be no development or expansion. Maintaining the status quo is not an option, though. Stricter RSPO rules will only lead landowners to search for opportunities with other forest-risk commodity companies who will welcome unencumbered development with no incentive to operate sustainably. Instead, we should aim for a system that upholds its sustainability credentials and is sufficiently strict to prevent the conversion of critical ecosystems. The system should also be adaptable enough to ensure that some non-critical areas remain accessible to Indigenous communities faced with ongoing high levels of population growth but want to engage with a certified supply chain. NBPOL is



in a position to meet these requirements but needs to work closely with standard-setting organisations. NBPOL wishes to encourage constructive dialogue with the RSPO and the High Carbon Stock Approach (HCSA) Steering Group for options to improve Papua New Guinea unique situation.

### Community development programmes

Papua New Guinea and Solomon Islands are ranked low on the UN Human Development Index (155 and 153 respectively), which measures basic needs such as primary education, child mortality and access to potable water. We see this as an essential opportunity: operating in remote rural areas means we are often best placed to assist in providing communities with basic facilities, infrastructure, and support to address some of these challenges. In 1997, we established the New Britain Palm Oil Foundation to structure our community investment programmes. Since its inception, the NBPOL Foundation has supported local communities with contributions to community-based projects, as well as enhancements to education and health establishments in West New Britain. We also partner with Yayasan Sime Darby, the philanthropic arm of Sime Darby Plantation, to offer scholarships for tertiary education. To date, 26 scholarships have been issued to deserving students.

At site level, sustainability teams develop local programmes for employees and their dependents. We also organise management plans to address social issues and increase social wellbeing within our operations. These plans have four main components: safe and harmonious communities, education and literacy programmes for all, healthy lifestyles, and spiritual wellbeing. Community members are often involved in our programmes.

### Programmes for women

NBPOL has continued to develop and implement initiatives that encourage women in PNG and Solomon Islands to contribute to their welfare. At each site, we foster local programmes to empower women to use natural resources to generate income.

### Research on promoting rural women's entrepreneurship in PNG

Papua New Guinea's women produce the bulk of subsistence food crops and form a large proportion of labour for the production of export cash crops. Women tend to allocate more of their income than men on providing for their families, so their financial gains lead to direct improvements in the quality of life for their families.

Although women are keen to increase their cash income, they face significant socio-cultural and economic barriers to increasing their engagement in entrepreneurial activities. These obstacles include low literacy skills, limited education, inaccessible agricultural extension, poor financial literacy, limited access to credit, and an entrenched cultural structure that discriminates against women.

Nevertheless, some pioneers are beginning to emerge as significant producers and retailers for domestic and international markets. Many of these women are engaging in crop production and new livelihood activities such as transportation, money lending, and selling phone credits. These entrepreneurs are forging new pathways to improve women's income and status.

Although significant progress is being made, there is little understanding of rural female entrepreneurship in PNG. Consequently, PNGOPRA is collaborating with Curtin University, James Cook University, the Cocoa Board (formally CCI), the Coffee Industry Corporation, and the University of Technology (Unitech) on a four-year research programme to identify opportunities and constraints for rural women's engagement in small-scale enterprises in Papua New Guinea. The project was launched in 2017 and is funded by the Australian Centre for International Agriculture Research (ACIAR).

The project's objectives are to:

- Determine the enabling factors and personal characteristics of successful entrepreneurial rural women.
- Identify the key pathways and processes to facilitate the transition of female smallholders into successful agribusiness entrepreneurs.
- Improve the capacity of women to engage in successful enterprises in agribusiness by better access to business development services (e.g., training and information) and a more conducive policy environment.

This information will form the basis of policy briefs, working papers and reports, and contribute to the growing body of research on Indigenous entrepreneurship in PNG. It is critical to understanding the development of markets in PNG and for designing strategies to raise smallholder productivity and incomes.





In March 2019, a project mid-term review meeting to discuss the benefits and challenges of women in agri-business was held at Kimbe, WNB. The meeting was the first of its kind and the first to take place in WNB. Attendees included government and non-governmental organisations.

Over 50 participants from NBPOL's Smallholder Affairs Department participated: Hargy Oil Palm's Community Affairs department, Oil Palm Industry Corporation (OPIC) Hoskins, Mama Loose Fruit executives, and NBPOL's Women Empowering Women (WEW) initiative. Other attendees included women's representatives to the Provincial Government and Talasea District, officials from the Department of Agriculture and Livestock, the Kimbe Town Market, NGOs, Personal Viability Trainers and other successful businesswomen entrepreneurs. Also present were two female representatives from the Village Savings and Loans Group from Bena in the Eastern Highlands province.

#### **The mama loose fruit initiative**

The Mama Loose Fruit scheme was initiated in 1997 to ensure that women benefit from their families' oil palm blocks. The project involved the introduction of the Mama Card, which enables women (workers, including smallholders, and dependants) to be paid directly for their work. Initially trialled with a group of 10 women, the scheme now has more than 6,000 Mama Cardholders that are benefitting from additional income and directly contributing to the welfare of their families. As part of the Mama Loose

Fruit initiative, trainers organise empowerment programmes for women throughout the community, and we have now made it compulsory for all participants to undertake one day of financial literacy training for each income-generating course they participate in. Related initiatives include the Chicken Revolving Fund, which enables Mama Cardholders to raise and sell chickens as an additional source of income. The group also raises money through grants and donations that go towards facilities to help women generate income.

#### **Women Empowering Women at West New Britain**

Established in 2011, Women Empowering Women (WEW) is an association in WNB formed by like-minded women to encourage strong family settings to empower women and young girls and eliminate all forms of violence against women, children and men.

The WEW team conducts long-term impact projects and programmes focused on community engagement through economic empowerment activities. Activities such as life skills training and workshops for cooking, floral arrangements, draping, and sewing are conducted annually. Interested women and men are provided with hands-on training, which gives them the ability to earn additional income and supplement their fortnightly pay.

The association also works with the West New Britain Health Authority to extend healthcare initiatives amongst women. In 2018 they raised a total of PGK725,543 to purchase a mammogram machine



for the Kimbe General Hospital. The association also frequently supports general maintenance and refurbishment costs at the Kimbe Urban Clinic.

Together with an annual report, the association also produces a bi-monthly newsletter featuring the latest developments and progress within the WEW community.

#### **Days for girls NBPOL Poliamba**

Our Days for Girls programme in Poliamba periodically hosts programmes aimed at educating and supporting young women in the New Ireland Province with information and advice on hygiene, health, and education. We engage youth and communities in various areas through regular workshops to enhance social and personal development skills.

The project was instrumental in establishing the Days for Girls Enterprise: a socioeconomic programme for local girls and women in Kavieng. More than 20 women have been trained in basic sewing skills and use of the Days for Girls kits. We regularly donate Days for Girls kits to community schools, health centres and churches in and around Kavieng, and publish regular newsletters highlighting our achievements. In 2018 and 2019, we donated a total of 54 kits and 682 books, and 56 kits and 682 books, respectively.

#### **Walk for life Poliamba**

The Walk for Life Poliamba group was formed on 31 March 2016 by female employees of Poliamba Limited. The group's primary objectives were to encourage health and fitness and raise funds for medical items at the nearby clinics. The group was joined by Poliamba's staff, dependents and interested individuals who assisted with its fundraising activities. Starting with income generated by sales of merchandise and staff cash donations, the group has expanded their fundraising activities by Walkathons and many other self-sustaining activities. In 2018, the group raised enough funds to purchase water tanks and related accessories that were donated to the Lemakot maternity ward at the Health Centre.

#### **Raising GPPOL awareness gender-based violence at GPPOL**

In Solomon Islands, GPPOL participated in a 16-day campaign against gender-based violence from November to December 2018. The programme was organised by United Nations (UN) Women to advocate eradication of violence against women, girls and children in the community and held under the theme 'Herem Vois Blo Mi (Orange the World:

#HearMeToo)'. Various activities included training for social committee members on company policies related to domestic violence and sexual harassment, human rights, maternal and equal opportunity and equal rights. The training also included an overview of domestic violence and the various forms of abuses women, girls and children face.

Site-based churches also participated and held dedicated church services to raise awareness on the key messages to their respective congregations. Executive staff visited the Christian Care Centre (CCC) to better understand the extent and impact of violence against women, girls and children. They also donated food, clothing and other household items to support the CCC.

To further engage employees and dependents in the campaign, an art and poetry competition was held and winners for the junior, youth and open categories received prizes at the annual GPPOL Fun Festival.

#### **Improving livelihoods through socioeconomic and smallholder research programmes**

Low productivity caused by social and economic factors is the main challenge facing oil palm smallholders.

NBPOL, as the largest member and a managing agent for the PNG Oil Palm Research Association (PNGOPRA), collaborates closely with PNGOPRA's Smallholder and Socioeconomic Research (SSR) Division to provide extensive research and technical advisory services to smallholders. We aim to better understand and improve smallholder productivity and strengthen the country's economic, environmental, and social wellbeing.

#### **Using fertiliser management to maximise smallholder yields**

Maximising smallholder production per hectare is hampered by insufficient knowledge of the factors limiting adequate application of fertiliser. Consequently, the SSR Division has been conducting studies and helping smallholder blocks develop their knowledge and apply best practices. Since 2013, we have been regularly carrying out leaf nutrient analyses across smallholder divisions to obtain information on the nutrient status of the planted oil palms. This guides nutrient and fertiliser management and guards against the over-application of fertiliser. Our approach also allows us to develop site/soil-specific recommendations. The 2019 leaf analyses indicate that there are still some deficiencies in the

key elements of N, P and K. We are working closely with smallholders to mitigate these concerns.

#### **Determining the effectiveness of smallholder training for best management practices**

Since 2014, the SSR Division has been training smallholders on best management practice (BMP). This includes block upkeep, pruning, harvesting standards, fertiliser application, pest and disease surveillance, and financial literacy. The SSR Division established BMP demonstration trial blocks at strategic locations throughout the smallholder project areas to show to growers that oil palm BMP can improve yields and, therefore, incomes. BMP techniques were applied to rehabilitate rundown low yielding blocks of less than ten tonnes per hectare.

In 2019, a study was conducted using smallholder interviews and block and field inspections to determine the BMP training's effectiveness. The team tested the rate of adoption and application of BMP block demonstrations and training. Results indicated that while the pace of the initial implementation was more than half, adoption and continued application was less than 50%. Although most smallholder growers, their households, and family members learn a lot from the training, putting this knowledge into practice is more challenging. This can be due to lack of follow-up training or site visits, information overload, or smallholders simply forgetting what they have learned. To ensure that resources and funding are appropriately allocated, we will comprehensively review the training programmes and assess the level of adoption.

#### **Determining the average income and expenditure for high producing growers**

In 2019, a further study was carried out on the income and expenditure of smallholder oil palm growers. The team looked at Land Settlement Scheme (LSS) blocks to determine the income potential of a high-producing smallholder grower, how much they spent over two-weeks, and whether they were able to save money. The study also examined living standards and other livelihood strategies. The aim was to seek the break-even point or determine the amount of free money from the LSS fresh fruit bunch (FFB) income. Given that the LSS was originally established over 50 years ago, the study sought to re-evaluate the once declared success of the LSS concerning future potential growth and development.

Preliminary results suggest smallholders earn a net income of PGK100–200 per hectare, with an average



of PGK100 per hectare. The residents also use alternative income sources to meet their household requirements – these include garden produce and betel nut. Although this brings the average available money to PGK254, more than half cannot generate savings because of competing social pressures. Other reasons for not saving include increasing numbers of block residents competing for a share of the income.

#### **Improving food security by intercropping food crop amongst oil palms**

PNG has one of the highest population growth rates in the world. A combination of high population growth and local communities increasingly embracing cash-cropping has raised questions of whether subsistence farming and food security is sufficient for many households. PNGOPRA has conducted research with Curtin University on food security status among PNG smallholder farmers to examine various ways smallholders respond to short- and long-term pressures on their farming and livelihood systems.

Residents on individual smallholder blocks have increased four-fold over the last 50 years, from an average of five per block to over 20. When the LSS smallholders first settled, they were given six-hectare blocks: four for planting oil palm and two for gardening. As the population increased, block owners have largely abandoned the two hectares set aside for food gardening and began planting oil palm on the entire six hectares. In response to the reduction of land available for food gardening, smallholders have adopted the practice of inter-cropping newly replanted oil palm with food crops to provide food for their families and provide supplementary income from surplus garden foods sales at local markets.

# PUTTING OUR EMPLOYEES FIRST

## Overview of our workforce

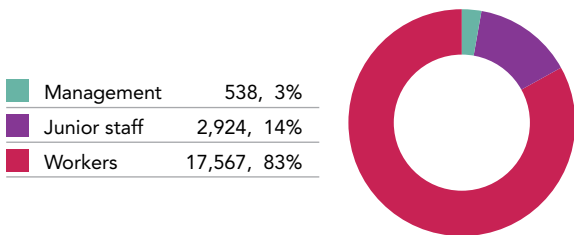
NBPOL employs over 22,100 people in PNG and the Solomon Islands. With such a significant presence, we must uphold the highest standards for a fair and safe workplace.

We are guided by the International Labour Organization's (ILO) core labour standards, which we embed in our policies and the certification standards we subscribe to.

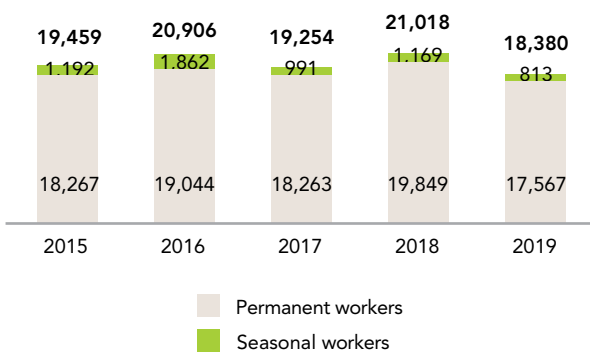
Our employees are predominantly from the countries we operate in, with less than 1% foreign nationals. In addition to our total permanent workforce, we employ 98 apprentices, who are brought in under dedicated schemes to qualify in specific trades. In 2019, we also employed 813 seasonal workers hired for specific projects and in the high season. Seasonal workers are housed and given access to the same benefits as permanent workers.



## Permanent employees by level 2019 (no.,%)



## Field workers by contract type 2015–2019 (no.)

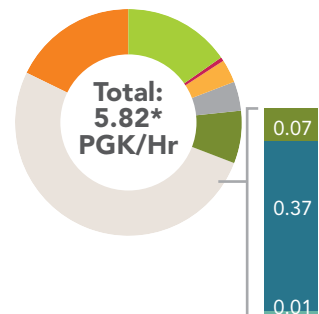


## Earning a living wage

In addition to their wages, almost all our employees are remunerated with housing, utilities, medical care, schooling, and transport. This approach enables them to live beyond the standards required for necessities. Our lowest wage for Grade 1 unskilled workers has always been significantly above the national minimum wage in PNG and Solomon Islands. In 2019, the take-home pay of our lowest wage earners in PNG was PGK 2.98 per hour, but with the added value of the benefits provided, their income equates to PGK 5.82 per hour. This is 66% higher than the mandatory national minimum wage of PGK 3.50 per hour. At Solomon Islands, our workers also receive a take-home pay in line with the national minimum wage, which in August 2019 was updated to SBD 6.20 per hour for the agriculture sector, up from SBD 5.90 in 2018.

## Composition of NBPOL's minimum wage at PNG 2019

Wages	2.98
Housing	1.03
Power/Kerosene	0.9
Water	0.03
Medical	0.19
Transport	0.24
School	0.07
Security	0.37
Refuse	0.01



\* As at December 2019, 5.82 PGK is approximately 1.73 USD.





An essential element of the latest RSPO P&C is that palm oil industry workers should be given a Decent Living Wage (DLW). In 2019, the RSPO launched guidance for members to assess whether their remuneration is sufficient for workers and their families to afford a basic but decent lifestyle. Our assessment included taking into account a family's needs, such as proper housing, sanitation facilities, an adequate, clean water supply, medical care, and educational requirements for the family's children. The guidance is drawn from the Global Living Wage Coalition and currently serves several regions.

However, benchmark estimates are yet to be calculated for countries where guidelines are absent – this includes PNG and Solomon Islands. The RSPO Secretariat is leading the benchmarking and will work with stakeholders in the relevant countries to determine it. PNG and Solomon Islands calculations are scheduled to be ready in October 2021. Until this time, NBPOL will continue to pay our workers above the national minimum wage and maintain records of in-kind benefits. Once the DLW is determined, companies will need to identify any gaps, if any, and implement an action plan to reach the determined wage.

### Working hours

Our employees work a standard week of 44 hours and have at least one day off in seven. However, we have experienced difficulties in curbing excessive voluntary overtime. Although we do pay a premium rate for overtime hours and do not impose overtime hours as a requirement, many workers prefer the extra hours and earnings. We had previously set a target for no employee to work more than 12 hours of overtime a week. However, given the infeasibility we have revised this to 16 hours of overtime a week. This is in line with national legislation and the Rainforest Alliance Sustainable Agriculture Standard threshold of no work week to exceed 60 hours.

### Human resource development

We have recently placed significant importance on upskilling our workforce and providing our employees with career development opportunities. Our talent management strategy applies across our entire operations: from our workers in the field to our executives and senior management. In 2017, we established the NBPOL Management Training Academy to nurture and develop the leadership competency of our staff and groom them

for managerial positions. The Academy also offers training courses on sustainability, palm oil field and mill processes, and logistics. The centre is equipped with classrooms, a library, accommodation, and other facilities.

NBPOL has also set up a talent council set up to identify employees with potential for further mentoring and development.

**Training NBPOL cadets**

In 2018 we launched a new programme to train oil palm cadets. We selected employees from PNG NBPOL palm oil plantations for dedicated training programmes through a combination of classroom theory sessions and on the job training. The programme aims to produce and fast track better quality assistant managers for the plantation estates. Upon graduation, cadets will be assessed on their performance and promoted to assistant manager if the position becomes vacant.

**Cadet training programme overview**

Component	Timeline
Classroom-based theory, conducted by experienced NBPOL staff	1–3 months
On the job training and estate assessments under the supervision of the estate manager	15–18 months
Practical research projects under the guidance of the estate manager	

Throughout 2018 and 2019, NBPOL has conducted training for three intakes for 40 cadets, nine of which are women. Employees have been selected from five sites in Papua New Guinea. They have all completed





the course, and two intakes have graduated from the Academy. The remaining intake was set to graduate in November 2020, but this has been put on hold due to the pandemic.

### Child and forced labour

We strictly adhere to the provisions of the Universal Declaration for Human Rights and the ILO core labour standards on child and forced labour. While local regulations allow those above the age of 16 years old to work, we prohibit the employment of anyone under the age of 18. This policy was updated at NBPOL to align with the **Sime Darby Plantation Human Rights Charter**, adopted in 2017. The company goes to great lengths to verify the age of all our employees, checking birth certificates, school and church records, ID cards from previous employment, driving licences, and statutory declarations. Every potential employee must undergo a mandatory medical examination before beginning work. This includes confirming the age of the applicant by the medical staff. Third parties delivering services to NBPOL are also required to comply with these requirements. The compliance of NBPOL entities and third parties with this crucial requirement is verified through internal and external audits.

In line with the 2018 RSPO Principles and Criteria, NBPOL has developed remediation policies in case child labour is identified. These policies require all parties involved to prioritise the interest of the child in redressing the situation.

While children may traditionally help out their families at the smallholder blocks with farm work such as picking loose fruit and weeding, smallholders are made aware of potential hazards for children and the need for them to go to school. We routinely communicate reminders about child labour policies via field visits, radio programme broadcasts, and through social media activity that specifically targets women.

We also enforce the total prohibition of any kind of forced and coerced labour practices. We do not require bonds, deposits or the withholding of travel documents for any of our workers. NBPOL does not use external recruitment agencies, and there are no recruitment fees. The cost of pre-employment medical examinations is covered by NBPOL.

### Freedom of association

All our employees are free to form and join trade unions of their choice. Around 15% of our employees across all of our sites are members of independent unions. There was one work stoppage in 2018 and three in 2019. Two were as result of strikes: one against an estate manager at WNB and one due to a dispute over wages across several estates. Two work stoppages at WNB were for safety reasons: one was after an attack from local villages and one was after a murder that occurred at Daliavu estate the day before.

### Equal opportunities

We embrace equal opportunities and do not allow any form of discrimination. However, we also understand that more needs to be done at the national and corporate level to improve gender equality in Papua New Guinea and Solomon Islands. All of our employees receive the same pay and benefits regardless of gender, the ratio being 1:1, including lowest-paid workers.

Around 23% of our employees are women, including some heads of department. All sites have established gender committees to ensure that issues of particular concern are raised and addressed. As part of our commitment to gender equality, NBPOL fully supports women pursuing traditionally male-dominated careers, such as tractor operators. This approach is not only appreciated by men but provides positive role models for other women.



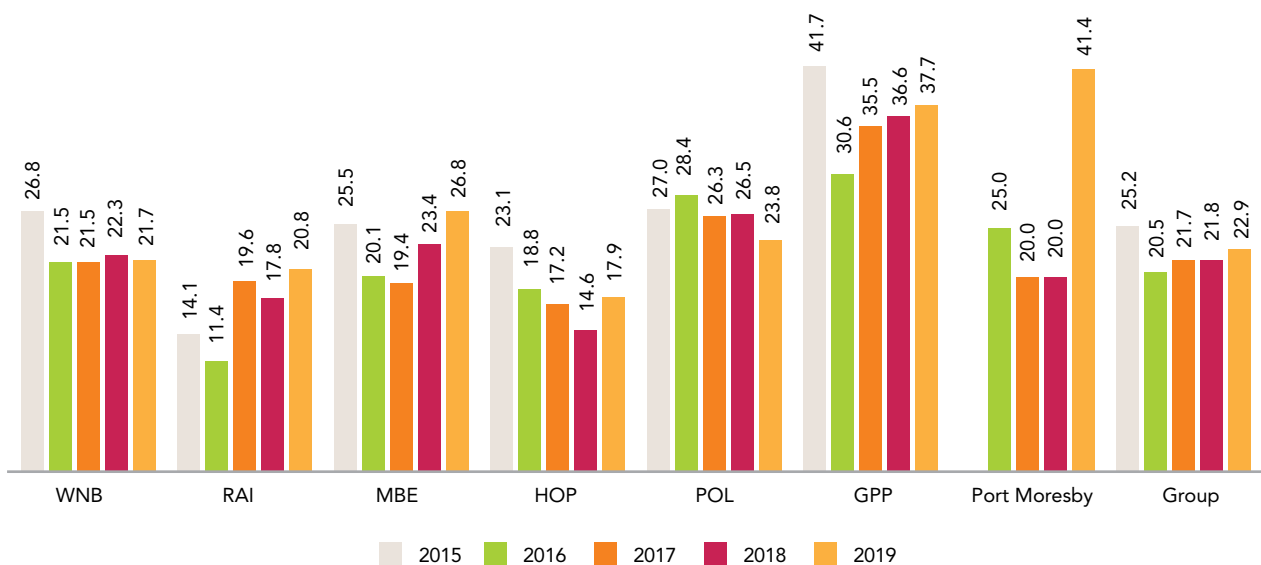


NBPOL implements support for breastfeeding mothers and conducts awareness activities focusing on hygiene, nutrition, immunisation and family planning. The 2018 RSPO Principles and Criteria has introduced a new requirement for all certified operators to evaluate the needs of new mothers and develop support mechanisms. At NBPOL, clinic staff members and aid posts are evaluating the needs of

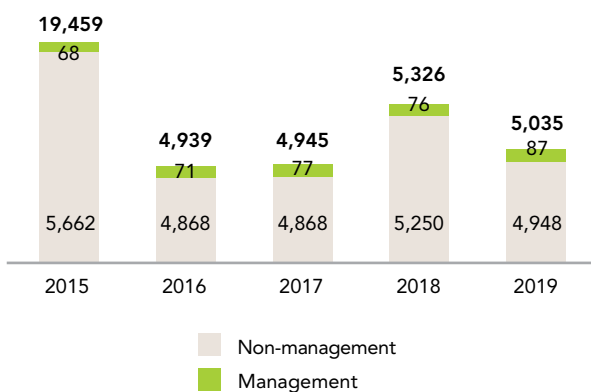
new mothers through questionnaires. The results are centralised and further evaluated by the respective site's committees in charge of social and gender issues.

NBPOL has continued to develop and implement initiatives that encourage women in PNG and Solomon Islands to contribute to their welfare. See page 56 for our dedicated women programmes.

**Female employees by site 2015–2019 (%)**



**Female employees by level 2015-2019 (no.)**



**Improving health and safety standards**

Safeguarding the health and safety of all our employees has always been NBPOL's top priority. We apply the same standards across all business units, including our beef and sugar operations.

**Improved reporting**

We have continued to strengthen our standards and recorded a drop in lost time incident (LTI) rates. This can be attributed to NBPOL's closer reporting to Sime Darby Plantation's systems since January 2018. Although fatalities and permanent disability cases were previously only reported to other business units and at Group level, we now also conduct investigations, implement corrective actions, and report externally on all significant injuries. Our reports include all lost-time incidents resulting in more than four lost days of work, major environmental incidents, non-occupational fatalities, considerable property damage, and significant dangerous occurrences

such as fire, explosions, or scaffolding collapse. This approach ensures all major incidents are investigated, and corrective actions are taken. These updates are shared with other business units so they can also take preventive measures. In 2019, we also began recording all worked labour hours to calculate occupational health and safety data more accurately. Previously, we based this assumption on a 44-hour workweek.

In 2018, there were four legal non-compliances at WNB related to health and safety recommendations

from the PNG Department of Labour and Industrial Relations. These were minor have since been addressed and rectified.

**The OSH improvement strategy**

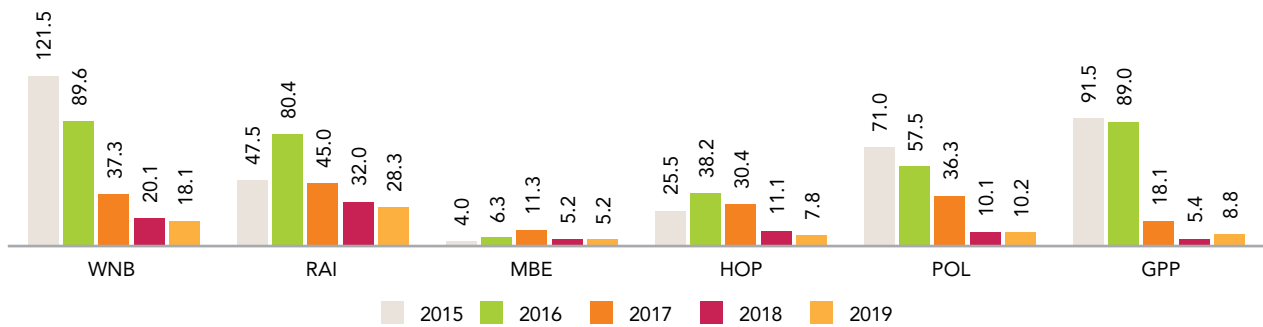
Acknowledging that our accident rates and fatalities required significant improvement, in 2018, we developed an occupational safety and health (OSH) improvement strategy. The framework included the following five initiatives to reduce the numbers of injuries happening across our sites:

 <p><b>SWITCH-ON SAFETY LEADERSHIP WORKSHOPS</b></p>	<p>From July to August 2018, and July to November 2019 a series of workshops facilitated by external consultants were conducted with managers across all sites. The purpose was to empower all managers to become safety leaders and instil a culture of safety first for all our employees.</p>
 <p><b>HAZARD &amp; NEAR MISS REPORTING</b></p>	<p>In May and June 2018, NBPOL implemented practical guidance to better capture all forms of incident reporting, hazard reporting, and near-miss reporting. A booklet entitled Preventing Incidents by Identifying Hazards, Reporting Near Misses and Observing and Recognising Positive Safety Behaviour (PIIRO) was trialled in late 2018 and is now printed for distribution. As of December 2019, 12,800 PIIRO booklets were being published in Malaysia. When we deliver them to the sites in PNG and Solomon Islands, there will be a campaign to increase reporting. To complement the upcoming campaign, the Sime Darby Plantation team in Malaysia is developing a smartphone application to record and easily retrieve this information.</p> <p>Hazard and near miss reporting has helped the Group in reducing loss time incidents.</p>
 <p><b>PPE STANDARDISATION</b></p>	<p>In 2019, NBPOL embarked upon a process across all business units to standardise employee-issued personal protective equipment (PPE). This will ensure alignment of all PPE standards at Group level. The rollout initially prioritised mills, workshops, and construction sites, followed by standardisation at the estate level.</p>
 <p><b>INCLUDING SAFETY PERFORMANCE INTO MANAGER PERFORMANCE SCORECARDS</b></p>	<p>Since 2019, meeting OSH key performance indicators (KPIs) has become mandatory for all managers and is now embedded in their performance scorecards. Consequently, a percentage of their performance targets are affected if any fatalities or accidents happen on their watch. As of January 2020, the potential bonus for all applicable executive staff up to general manager level will be impacted by 50% for a first fatality, and 100% for a second. By adopting this approach, we hope to see a steep reduction in accidents and an elimination of workplace fatalities.</p>
 <p><b>SAFETY ACHIEVEMENT AWARDS</b></p>	<p>In 2018, NBPOL introduced the Safety Achievement Awards which recognises top-performing business units. These awards are based on previous years' safety performance for the lowest accident rates, the highest number of incident-free working hours, and the highest number of reported hazards and near misses.</p>

### Lost time incident rates and severity rates

Due to our concerted efforts, we have witnessed significant improvements to our LTI rates since our last report. Our Group LTI rate has more than halved (51.4%) since 2017, because of reduced rates across all sites. Most notably, rates at HOP and POL have decreased by over 70%. This considerably exceeds our annual target of reducing Group LTI rates by 5%. Harvesting-related injuries remain the most significant cause of accidents, such as thorn pricks and cuts from palm fronds; this results in a severity rate of just over two days lost per accident.

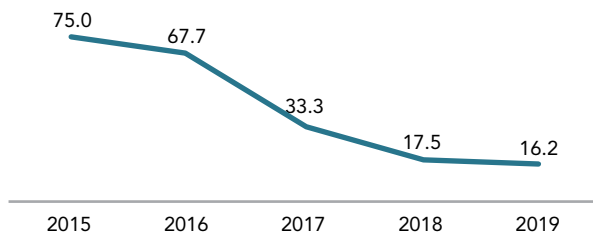
### Lost time accident rate 2015-2019 (per 1,000,000 working hours)



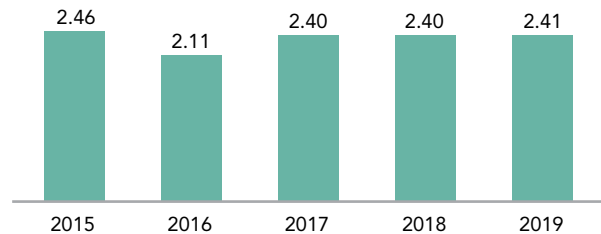
Note:

Lost time incident rates previously reported as lost time accident rates. This has been updated to report incidents which include preventable accidents. This is also aligned with Group-level and SDP reporting systems.

### Group lost time accident rate 2015-2019 (per 1,000,000 working hours)



### Group severity rate 2015-2019 (average lost days per accident)



### Fatalities

We deeply regret that there were eight work-related fatalities in 2018 and 2019: four at our WNB operations, three at RAI, and one at MBE. Seven of these were vehicular accidents: two from collisions, two where employees fell out of moving vehicles, two from overturned vehicles, and one where an employee was trying to prevent a tractor from rolling down a slope. Tragically, one fatality involved a six-year-old boy who was playing near a reversing tractor with a group of boys at our sugarcane harvesting premises in RAI. For each incident, Detailed Investigation Reports (DIRs) and recommended Corrective and Preventative Actions (CAPA) have been completed and issued.

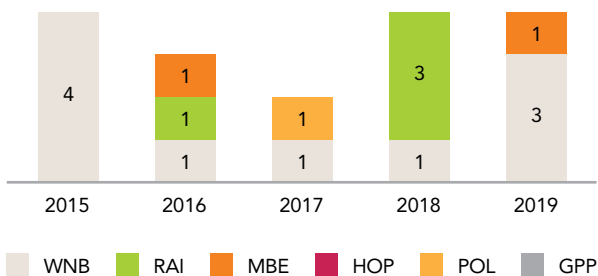
There was also one non-work-related fatality in RAI in September 2019, also due to a collision with another vehicle. In 2017, 25 people on an FFB truck operated by Higaturu Oil Palms were involved in a road traffic accident with a local public motor vehicle. The driver has since been convicted for causing death by dangerous driving.

Effective January 2020, in addition to our site-level investigation and management, we have adopted a revised accident investigation system for all instances of workplace fatalities and permanent disabilities. The Head of Sustainability and Quality Management (HSQM), the Group Manager of Quality Environment Safety and Health (GMOESH),



and the Group CEO are now required to travel to the site to appraise the situation. Investigations will now be led by the GMQESH through consultation with site members – with detailed investigation reports to follow within two weeks of the incident. During the current COVID-related travel restrictions, site SQM managers are leading any investigations, which are then remotely reviewed and approved at Group-level. We have also developed a Group Disciplinary Committee, that works independently from site management. The Committee convenes to determine if an employee can be held responsible for a fatality and whether disciplinary measures need to be taken.

**Fatalities 2015–2019 (no.)**



Due to an alarming number of recurring workplace fatalities, we have reviewed and updated our Safety Permits to Work (PTW) guidance in November 2019. This applies to all NBPOL employees and contractors for specific work, where review and authorisation are required before the work begins. The purpose of the system is to ensure that the system of work is appropriately planned and implemented for jobs that have a significant risk. The PTW system plays an essential role in ensuring safe work practices at operational facilities, thus reducing risk and the chance of an accident. The updated PTW guidance includes four main types of permits that have been identified based on the type of high-risk activities in our operations: servicing or maintaining heavy machinery and equipment, conducting work at heights that can cause a fall, working with open flames or heat, and working in confined spaces.

**Issuing polio vaccinations at RAI**

From April to June 2018, there was an impending threat of a polio outbreak in Moribe, Madang and the Eastern Highlands Provinces. The PNG government declared the three provinces to be high-risk; however, few community members are immune due to underlying causes such as a deficiency of clean drinking water, poor sanitation and a general lack of awareness.

These underlying causes and proximity to the outbreak placed NBPOL’s RAI operations at significant risk. To help mitigate the outbreak, a working group was immediately established to raise awareness and organise an immunisation plan. The Ramu team were the first of three provinces to successfully implement and complete the government-mandated mass immunisation programme. NBPOL supported the immunisation campaign by providing full logistical support, including volunteer and staff member assistance as the vaccinations were administered. We also provided meals for the team and stored the vaccines at the RAI clinic.

NBPOL, government staff and volunteers from the public and private sector assisted in vaccinating 4,522 children under five years and 218 between five and 15 years old – covering most of the targeted residents and their dependents. All the vaccinations were administered through door-to-door home visits. Several awareness sessions and activities took place among company managers, employees and their dependents. In the long term, NBPOL aims to increase immunisation levels for our surrounding communities.

# Stakeholder engagement

Theme	NBPOL's engagement	Frequency
<b>Employees</b>		
Health and safety	Conducting safety campaigns and training	Weekly
Social welfare	Social awareness programmes, gender-based violence (GBV) awareness and support programmes, child labour awareness programmes, social impact registers	At least once a year
Supporting livelihoods	Providing gardening space and tools to resident workers, constructing marketplaces, providing facilities for fishponds and chicken farms; engaging with the government for food security programmes	At least once a year
Financial literacy and empowerment	Providing financial literacy and income management training, savings and superannuation accounts for smallholders; providing a Mama Card system for smallholders	At least once a year
Environmental restoration (protecting buffer zones, enhancing mangroves, shoreline rehabilitation)	Conducting awareness drives and outreach programmes; monitoring and enforcement	Monthly
<b>Customers</b>		
Market standards and customer policies	Conducting briefings and site visits	At least once a year
	Maintaining ongoing dialogue	At least once a year
<b>NGOs</b>		
Collaborations on best practice sharing, certification standards	Conducting briefings and site visits	At least once a year
	Maintaining ongoing dialogue	Monthly
<b>Smallholders, landowners, and communities</b>		
Socialisation of standards and best practice	Carrying out on-farm field days; briefings and site visits; auditing against standards	At least once a year
Environmental restoration (protecting buffer zones, enhancing mangroves, shoreline rehabilitation)	Conducting awareness drives and outreach programmes	At least once a year

Theme	NBPOL's engagement	Frequency
<b>Smallholders, landowners, and communities</b>		
Safeguard community lands and ownership	Ensuring free, prior and informed consent (FPIC); undertaking community needs assessments and participatory processes	At least once a year
	Assisting registration of Incorporated Landowner Groups (ILG)	As and when required
	Ensuring the presence of special lands officers dedicated to communities' land matters	As and when required
	Supporting customary landowners to comply with the PNG government on customary land laws	As and when required
	Developing and implementing land usage agreements	As and when required
Female empowerment and financial literacy	Providing support services for victims of domestic violence and child abuse	At least once a year
	Delivering gender-oriented programmes and workshops	At least once a year
	Providing financial literacy and income management training	At least once a year
	Assisting in women's leadership training	At least once a year
	Providing a Mama Card system	As and when required
Supporting livelihoods	Engaging villagers in community forestry	As and when required
	Running awareness programmes and workshops for access to potable water	As and when required
	Implementing programmes on the best management of oil palm blocks for smallholders	Monthly
	Providing credit to and sharing sustainability premiums with smallholders	Once a year
	Providing loans for chicken farming	As and when required
Education and literacy	Managing book donation programmes; building classrooms	As and when required
Community health	Providing access to clinics and free medical care, coordinating family planning programmes, coordinating workshops on food and personal hygiene	As and when required



Theme	NBPOL's engagement	Frequency
<b>Government and regulators</b>		
Collaborations on empowering outgrowers and community welfare, certification standards	Conducting briefings and site visits	As and when required
	Maintaining close cooperation with the Conservation and Environment Protection Authority (CEPA), Department of Labour and Industrial Relations, Climate Change and Development Authority and Department of Lands and Physical Planning	Monthly
Land and legality issues	Participating in biannual forums	Biannually
<b>Industry associations</b>		
Collaborations on best practice sharing, certification standards, and national sectoral policy	Conducting briefings and site visits	As and when required
	Membership of the PNG Oil Palm Research Association, the PNG Palm Oil Platform, the Palm Oil Producers Association, and the Rural Industries Council	As and when required
<b>Media</b>		
Sharing events, responding to media queries	Conducting briefings and site visits	As and when required
<b>Universities</b>		
Collaborations on best practice sharing and certification standards	Conducting briefings and site visits	As and when required
<b>Multi-stakeholder organisations</b>		
Sustainable palm oil production	RSPO membership	As and when required
No deforestation	Membership of the HCSA Steering Group through our parent company, Sime Darby Plantation	Monthly
Sustainability performance	Securing Rainforest Alliance certification	Monthly

## Base data

Category/ indicator	Measurement unit/breakdown	2019	2018	2017	2016	2015
<b>Employees<sup>6</sup></b>						
Total number of employees	Full time equivalents	21,969	24,417	22,762	24,204	22,794
	WNB	9,652	11,246	10,251	10,601	10,210
	RAI	4,076	4,713	3,644	4,090	3,529
	MBE	3,087	2,835	2,555	3,105	3,029
	HOP	2,335	2,584	2,833	2,865	2,653
	POL	1,549	1,712	1,946	2,013	1,902
	GPP	1,241	1,322	1,435	1,434	1,380
	Port Moresby	29	5	5	4	0
Female employees	Group	5,035	5,326	4,945	4,939	5,730
	WNB	2,095	2,511	2,203	2,279	2,739
	RAI	846	839	716	465	496
	MBE	827	662	495	624	771
	HOP	419	376	488	540	614
	POL	368	453	511	571	513
	GPP	468	484	509	439	575
	Port Moresby	12	1	1	1	0
Female employees – management	Group	87	76	77	71	68
	WNB	32	30	28	27	26
	RAI	17	18	16	12	13
	MBE	6	7	6	7	6
	HOP	16	13	12	11	6
	POL	8	6	6	6	6
	GPP	3	2	5	5	3
	Port Moresby	5	0	0	0	0
Total management (expats and national)	Group	538	545	539	544	532
	WNB	241	228	218	226	224
	RAI	117	118	110	103	102
	MBE	53	60	52	58	58
	HOP	68	73	71	68	67
	POL	31	35	35	36	37
	GPP	28	31	31	30	25
	Port Moresby	21	3	3	3	0

6 Group figures include Singapore and UK from 2015–2017.

Category/ indicator	Measurement unit/breakdown	2019	2018	2017	2016	2015
Employee turnover (%)	WNB	67.53	88.85	48.30	46.57	60.00
	RAI	28.80	53.69	59.35	34.94	39.82
	MBE	29.26	25.03	71.33	50.04	63.96
	HOP	19.40	15.61	18.35	31.51	58.33
	POL	7.69	10.93	29.36	32.43	27.52
	GPP	39.66	65.97	64.76	67.09	82.96
<b>Health &amp; safety</b>						
Lost time incident rate – total number of accidents per employee per 1,000,000 working hours <sup>7</sup>	WNB	18	20	37	90	122
	RAI	28	32	45	80	48
	MBE	5	5	11	6	4
	HOP	8	11	30	38	26
	POL	10	10	36	58	71
	GPP	9	5	18	89	92
Severity rate – average number of lost days per accident	Group	2.41	2.40	2.40	2.11	2.46
Fatalities	Number	4	4	2	3	4
<b>Training</b>						
Total training cost as % of payroll (USD)	WNB	1.0	0.7	2.8	3.1	1.2
	RAI	9.4	2.8	2.0	2.0	2.1
	MBE	2.0	3.0	2.8	3.0	2.5
	HOP	0.9	1.2	3.0	3.0	2.0
	POL	1.1	1.4	2.3	1.3	1.0
	GPP	2.0	1.3	1.1	0.5	0.9

<sup>7</sup> Lost time incident rates previously reported as lost time accident rates. This has been updated to report incidents which include preventable accidents. This is also aligned with Group-level and Sime Darby Plantations reporting systems.



Category/ indicator	Measurement unit/breakdown	2019	2018	2017	2016	2015
<b>Land</b>						
Hectares (ha)	Group – titled	146,950	146,464	139,958	138,194	136,268
	Group – oil palm	90,611	91,081	86,829	85,239	83,178
	Group – cattle pasture	9,502	9,559	8,956	8,956	8,956
	Group – sugarcane	5,613	5,613	5,613	5,613	5,613
	WNB – titled	53,553	53,551	53,551	53,897	53,610
	WNB – oil palm	38,937	39,011	39,143	38,505	37,451
	WNB – cattle pasture	394	394	394	394	394
	RAI – titled	42,137	41,285	35,003	35,004	34,032
	RAI – oil palm	18,169	18,477	14,136	13,491	12,941
	RAI – cattle pasture	9,108	9,165	8,562	8,562	8,562
	RAI – sugarcane	5,613	5,613	5,613	5,613	5,613
	MBE – titled	20,300	20,300	20,300	19,013	19,013
	MBE – oil palm	10,756	10,756	10,746	10,825	10,895
	HOP – titled	14,737	15,105	14,881	14,069	13,279
	HOP – oil palm	10,523	10,581	10,548	10,090	9,564
	POL - titled	7,908	7,908	7,908	7,908	8,030
	POL – oil palm	5,461	5,490	5,492	5,564	5,601
	GPP – titled	8,315	8,315	8,315	8,304	8,304
GPP – oil palm	6,766	6,766	6,765	6,764	6,727	
Area set aside for conservation (ha)	Group	18,841	18,635	19,611	19,326	16,471
	WNB	7,016	7,016	7,971	9,172	9,173
	RAI	4,554	4,288	3,686	3,686	3,500
	MBE	2,450	2,450	2,450	2,450	1,039
	HOP	2,586	2,586	2,586	1,656	1,500
	POL	1,188	1,188	1,811	1,255	470
	GPP	1,047	1,107	1,107	1,107	789
Peat developed	ha	834	0	0	0	0

Category/ indicator	Measurement unit/breakdown	2019	2018	2017	2016	2015
<b>Production</b>						
Fruit processed (MT)	WNB	1,191,675	1,337,648	1,281,919	1,182,673	1,256,795
	RAI	249,635	275,833	239,634	172,984	187,906
	MBE	268,862	268,670	239,086	214,113	232,784
	HOP	372,506	411,387	366,235	365,574	339,504
	POL	102,664	100,433	83,701	78,277	101,096
	GPP	157,012	161,001	147,207	150,394	151,502
Crude palm oil (CPO) (MT)	WNB	250,244	289,947	290,785	264,290	275,809
	RAI	58,679	64,466	58,474	42,536	44,731
	MBE	62,009	62,705	56,907	50,779	52,648
	HOP	86,542	94,729	83,458	83,105	75,354
	POL	22,588	21,195	18,144	16,353	19,471
	GPP	37,536	38,033	35,089	36,407	34,919
Palm kernel oil (PKO) (MT)	WNB	30,369	33,360	31,843	30,285	30,219
	RAI	5,266	5,357	4,995	3,305	3,727
	MBE	5,925	5,651	5,117	4,878	5,806
	HOP	8,756	10,173	9,105	9,159	8,453
	POL	2,180	1,924	1,745	1,633	2,209
	GPP	3,743	3,896	3,491	3,616	3,614
<b>Smallholders</b>						
Smallholder hectares	Hectares	41,041	41,275	41,216	41,152	42,497
Smallholder blocks	Number	17,167	17,323	17,324	17,325	17,602
Smallholder production (MT FFB)	WNB	382,626	404,055	413,510	369,755	389,076
	RAI	10,550	10,856	8,313	6,343	5,268
	MBE	11,936	12,416	15,720	11,178	11,701
	HOP	101,486	121,532	114,008	129,021	132,606
	POL	15,371	19,677	18,663	18,084	21,756
	GPP	6,000	6,761	6,239	6,053	7,187

Category/ indicator	Measurement unit/breakdown	2019	2018	2017	2016	2015
<b>Environment – oil palm</b>						
Water usage (m <sup>3</sup> /MT FFB)	WNB	1.06	0.83	0.83	0.86	0.82
	RAI	0.97	0.62	0.73	0.95	1.08
	MBE	1.07	1.24	1.38	1.38	1.22
	HOP	0.74	0.74	0.65	0.62	0.61
	POL	0.77	0.67	0.72	1.21	1.33
	GPP	0.95	1.1	1.04	1.08	1.17
Total number of significant spills	Number	0	0	0	0	1
Total water withdrawal (ML)	Group	14,881	20,048	14,197	n/a	n/a
Total water discharged (ML)	Group	1,428	1,884	2,084	n/a	n/a
Total water consumption (ML)	Group	13,454	18,165	12,113	n/a	n/a



## IUCN Red List species identified in NBPOL's areas of operation

Common and binomial names	Taxa	CITES	Endemic
<b>ENDANGERED</b>			
<i>Calophyllum waliense</i>	Tree		Yes
<i>Manilkara kanosiensis</i>	Tree		
<i>Ponapea hentyi</i>	Tree		Yes
<i>Diospyros insularis</i>	Tree		
Queen Alexandra's Birdwing ( <i>Ornithoptera alexandrae</i> )	Insect	Appendix I	Yes
Lai-Lai ( <i>Terminalia archipelagi</i> )	Tree		Yes
<b>VULNERABLE</b>			
Black Honey-buzzard ( <i>Henicopernis infuscatus</i> )	Bird		Yes
Blue-eyed Cockatoo ( <i>Cacatua ophthalmica</i> )	Bird		
<i>Pterocarpus indicus</i>	Tree	Appendix II	
Golden Masked-owl ( <i>Tyto aurantia</i> )	Bird	Appendix II	Yes
<i>Helicia neglecta</i>	Tree		Yes
<i>Helicia peekelii</i>	Tree		Yes
<i>Mastixiodendron stoddardii</i>	Tree		
Merbau ( <i>Intsia bijuga</i> )	Tree		
New Britain Boobook ( <i>Ninox odiosa</i> )	Bird		
New Britain Bronzewing ( <i>Henicophaps foersteri</i> )	Bird		
New Britain Goshawk ( <i>Accipiter princeps</i> )	Bird		
New Britain Sparrowhawk ( <i>Accipiter brachyurus</i> )	Bird		
<i>Osmoxylon lanceolatum</i>	Tree		Yes
<i>Mangifera altissima</i>	Tree		
<b>NEAR THREATENED</b>			
<i>Cycas schumanniana</i>	Tree	Appendix II	Yes
Bismarck Hanging-parrot ( <i>Loriculus tener</i> )	Bird	Appendix II	Yes
New Britain Kingfisher ( <i>Todiramphus albonotatus</i> )	Bird		
New Britain Rail ( <i>Hypotaenidia insignis</i> )	Bird		
New Britain Flyrobin ( <i>Monachella coultasi</i> )	Bird		

# GRI Content Index

The Global Reporting Initiative (GRI) is a multi-stakeholder standard for sustainability reporting, providing guidance on determining report content and indicators. GRI is the first and most widely adopted global standard for sustainability reporting and has been designed to enhance the global comparability and quality of information on environmental and social impacts, thereby enabling greater transparency and accountability of organisations. Sustainability reporting

based on the GRI Standards should provide a balanced and reasonable representation of an organisation's positive and negative contributions towards the goal of sustainable development.

There are two options for preparing a report in accordance with the GRI Standards: Core and Comprehensive. This report has been prepared in accordance with the GRI Standards: Core option.

## GRI 101: Foundation 2016

## GRI 102: General Disclosures 2016

Disclosure		Page or reason for omission
<b>Organisational Profile</b>		
<b>102-1</b>	Name of organisation	About New Britain Palm Oil Ltd 8–11
<b>102-2</b>	Activities, brands, products, and services	About New Britain Palm Oil Ltd 8–11
<b>102-3</b>	Location of headquarters	About New Britain Palm Oil Ltd 8–11
<b>102-4</b>	Location of operations	About New Britain Palm Oil Ltd 8–11
<b>102-5</b>	Ownership and legal form	Corporate governance 18
<b>102-6</b>	Markets served	About New Britain Palm Oil Ltd 8–11
<b>102-7</b>	Scale of the organisation	About New Britain Palm Oil Ltd 8–11
<b>102-8</b>	Information on employees and other workers	About New Britain Palm Oil Ltd 8–11 Putting our employees first 60–65
<b>102-9</b>	Supply chain	NBPOL at a glance 10–11 Certification 16–17
<b>102-10</b>	Significant changes to the organisation and its supply chain	Scope and boundaries 2 About New Britain Palm Oil Ltd 8–11
<b>102-11</b>	Precautionary Principle or approach	Our approach to sustainability 15–24 Protecting forests and biodiversity 25–35
<b>102-12</b>	External initiatives	CEO's welcome 4–5 Our approach to sustainability 15–24 Stakeholder engagement 20–23
<b>102-13</b>	Membership of associations	Our approach to sustainability 15–24 Stakeholder engagement 20–23
<b>Strategy</b>		
<b>102-14</b>	Statement from senior decision-maker	CEO's welcome 4–5
<b>102-15</b>	Key impacts, risks, and opportunities	About this report 2–3 Stakeholder engagement 20–23

GRI 102: General Disclosures 2016		
Disclosure		Page or reason for omission
<b>Ethics and Integrity</b>		
<b>102-16</b>	Values, principles, standards, and norms of behaviour	Sustainability management 18–19 Integrity and anti-corruption 19
<b>102-17</b>	Mechanisms for advice and concerns about ethics	Grievances 24
<b>Governance</b>		
<b>102-18</b>	Governance structure	Sustainability management 18–19
<b>102-19</b>	Delegating authority	Sustainability management 18–19
<b>102-20</b>	Executive-level responsibility for economic, environmental, and social topics	Sustainability management 18–19
<b>102-21</b>	Consulting stakeholders on economic, environmental, and social topics	Sustainability management 18–19 Stakeholder engagement 20–23
<b>102-22</b>	Composition of the highest governance body and its committees	Sustainability management 18–19
<b>102-23</b>	Chair of the highest governance body	Sustainability management 18–19
<b>102-26</b>	Role of highest governance body in setting purpose, values, and strategy	Sustainability management 18–19
<b>Stakeholder Engagement</b>		
<b>102-40</b>	List of stakeholder groups	Stakeholder engagement 20–23
<b>102-41</b>	Collective bargaining agreements	Freedom of association
<b>102-42</b>	Identifying and selecting stakeholders	Stakeholder engagement 20–23
<b>102-43</b>	Approach to stakeholder engagement	Stakeholder engagement 20–23
<b>102-44</b>	Key topics and concerns raised	About this report 2–3 Stakeholder engagement 20–23 Our approach to sustainability 15–24 Environmental protection and conservation 25–48 Tackling the threat of COVID-19 49 Aligning with community needs 52–59 Improving health and safety standards 64–67
<b>Reporting Practice</b>		
<b>102-45</b>	Entities included in the consolidated financial statements	As NBPOL is no longer a listed entity, there are no stand-alone financial statements
<b>102-46</b>	Defining report content and topic Boundaries	About this report 2–3
<b>102-47</b>	List of material topics	About this report 2–3
<b>102-48</b>	Restatements of information	About this report 2–3
<b>102-49</b>	Changes in reporting	About this report 2–3



**GRI 102: General Disclosures 2016**

Disclosure		Page or reason for omission
<b>Reporting Practice</b>		
<b>102-50</b>	Reporting period	About this report 2–3
<b>102-51</b>	Date of most recent report	About this report 2–3
<b>102-52</b>	Reporting cycle	About this report 2–3
<b>102-53</b>	Contact point for questions regarding the report	Contact 87
<b>102-54</b>	Claims of reporting in accordance with the GRI Standards	GRI Content Index 77
<b>102-55</b>	GRI Content Index	GRI Content Index 77–85
<b>102-56</b>	External assurance	We have not engaged third party assurance

**Material Topics**

GRI Standard	Disclosure	Page or reason for omission	
<b>Economic</b>			
<b>Market Presence</b>			
GRI 103: Management Approach 2016	<b>103-1</b>	Explanation of the material topic and its Boundary	A fair place to work 52–53
	<b>103-2</b>	The management approach and its components	A fair place to work 52–53
	<b>103-3</b>	Evaluation of the management approach	A fair place to work 52–53
GRI 202: Market Presence 2016	<b>202-1</b>	Ratios of standard entry level wage by gender compared to local minimum wage	Putting our employees first 60–67 Earning a living wage 60–61
	<b>202-2</b>	Proportion of senior management hired from the local community	Putting our employees first 60–67 Base data 71
<b>Indirect Economic Impacts</b>			
GRI 103: Management Approach 2016	<b>103-1</b>	Explanation of the material topic and its Boundary	Aligning with community needs 52–59
	<b>103-2</b>	The management approach and its components	Aligning with community needs 52–59
	<b>103-3</b>	Evaluation of the management approach	Aligning with community needs 52–59
GRI 203: Indirect Economic Impacts 2016	<b>203-1</b>	Infrastructure investments and services supported	Aligning with community needs 52–59 Supporting our smallholders 52–53 Community development programmes 56–58
	<b>203-2</b>	Significant indirect economic impacts	Aligning with community needs 52–59 Supporting our smallholders 52–53 Upholding land rights 54–56 Community development programmes 56–58

Material Topics			
GRI Standard	Disclosure		Page or reason for omission
<b>Economic</b>			
<b>Procurement Practices</b>			
GRI 103: Management Approach 2016	<b>103-1</b>	Explanation of the material topic and its Boundary	Supporting our smallholders 52–53
	<b>103-2</b>	The management approach and its components	Supporting our smallholders 52–53
	<b>103-3</b>	Evaluation of the management approach	Supporting our smallholders 52–53
GRI 204: Procurement Practices 2016	<b>204-1</b>	Proportion of spending on local suppliers	Supporting our smallholders 52–53 Base data 74
<b>Environmental</b>			
<b>Water and Effluents</b>			
GRI 103: Management Approach 2016	<b>103-1</b>	Explanation of the material topic and its Boundary	Water management and protection 43–48
	<b>103-2</b>	The management approach and its components	Water management and protection 43–48
	<b>103-3</b>	Evaluation of the management approach	Water management and protection 43–48
GRI 303: Water and Effluents 2018	<b>303-1</b>	Interactions with water as a shared resource	Water management and protection 43–48
	<b>303-2</b>	Management of water discharge-related impacts	Water management and protection 43–48
	<b>303-3</b>	Water withdrawal	Water management and protection 43–48 Base data
<b>Biodiversity</b>			
GRI 103: Management Approach 2016	<b>103-1</b>	Explanation of the material topic and its Boundary	Overview 8–9 NBPOL at a glance 10–11 Protecting forests and biodiversity 25–35
	<b>103-2</b>	The management approach and its components	Protecting forests and biodiversity 25–35
	<b>103-3</b>	Evaluation of the management approach	Protecting forests and biodiversity 25–35

Material Topics			
GRI Standard	Disclosure		Page or reason for omission
<b>Environmental</b>			
<b>Biodiversity</b>			
GRI 304: Biodiversity 2016	<b>304-1</b>	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	Overview 8–9 NBPOL at a glance 10–11 Protecting forests and biodiversity 25–35
	<b>304-2</b>	Significant impacts of activities, products, and services on biodiversity	Overview 8–9 NBPOL at a glance 10–11 Protecting forests and biodiversity 25–35
	<b>304-3</b>	Habitats protected or restored	Overview 8–9 NBPOL at a glance 10–11 Protecting forests and biodiversity 25–35
	<b>304-4</b>	IUCN Red List species and national conservation list species with habitats in areas affected by operations	IUCN Red List species identified in NBPOL's areas of operation 76
<b>Emissions</b>			
GRI 103: Management Approach 2016	<b>103-1</b>	Explanation of the material topic and its Boundary	Reducing our carbon footprint 38–40
	<b>103-2</b>	The management approach and its components	Reducing our carbon footprint 38–40
	<b>103-3</b>	Evaluation of the management approach	Reducing our carbon footprint 38–40
GRI 305: Emissions 2016	<b>305-4</b>	GHG emissions intensity	Reducing our carbon footprint 38–40
	<b>305-5</b>	Reduction of GHG emissions	Reducing our carbon footprint 38–40
<b>Environmental Compliance</b>			
GRI 103: Management Approach 2016	<b>103-1</b>	Explanation of the material topic and its Boundary	Our approach to sustainability 15–24 Leading research and development in Papua New Guinea 12–14
	<b>103-2</b>	The management approach and its components	Our approach to sustainability 15–24 Leading research and development in Papua New Guinea 12–14
	<b>103-3</b>	Evaluation of the management approach	Targets and progress 7 Our approach to sustainability 15–24 Leading research and development in Papua New Guinea 12–14
GRI 307: Environmental Compliance 2016	<b>307-1</b>	Non-compliance with environmental laws and regulations	No non-compliance with environmental laws recorded during the reporting period



Material Topics			
GRI Standard	Disclosure		Page or reason for omission
<b>Environmental</b>			
<b>Supplier Environmental Assessment</b>			
GRI 103: Management Approach 2016	<b>103-1</b>	Explanation of the material topic and its Boundary	Certification 16–17 Supporting our smallholders 52–53
	<b>103-2</b>	The management approach and its components	Certification 16–17 Supporting our smallholders 52–53
	<b>103-3</b>	Evaluation of the management approach	Certification 16–17 Supporting our smallholders 52–53
GRI 308: Supplier Environmental Assessment 2016	<b>308-1</b>	New suppliers that were screened using environmental criteria	Certification 16–17 Supporting our smallholders 52–53
	<b>308-2</b>	Negative environmental impacts in the supply chain and actions taken	Restoration efforts 34–35
<b>Social</b>			
<b>Employment</b>			
GRI 103: Management Approach 2016	<b>103-1</b>	Explanation of the material topic and its Boundary	Putting our employees first 60–67
	<b>103-2</b>	The management approach and its components	Putting our employees first 60–67
	<b>103-3</b>	Evaluation of the management approach	Putting our employees first 60–67
GRI 401: Employment 2016	<b>401-1</b>	New employee hires and employee turnover	Base data 72
	<b>401-2</b>	Benefits provided to full-time employees that are not provided to temporary or part-time employees	Overview of our workforce 60
<b>Occupational Health and Safety</b>			
GRI 103: Management Approach 2016	<b>103-1</b>	Explanation of the material topic and its Boundary	Improving health and safety standards 64–65
	<b>103-2</b>	The management approach and its components	Improving health and safety standards 64–65
	<b>103-3</b>	Evaluation of the management approach	Improving health and safety standards 64–65

Material Topics			
GRI Standard	Disclosure		Page or reason for omission
<b>Social</b>			
GRI 403: Occupational Health and Safety 2018	<b>403-1</b>	Occupational health and safety management system	Improving health and safety standards 64–65
	<b>403-2</b>	Hazard identification, risk assessment, and incident investigation	Improving health and safety standards 64–65
	<b>403-3</b>	Occupational health services	Improving health and safety standards 64–65
	<b>403-4</b>	Worker participation, consultation, and communication on occupational health and safety	Improving health and safety standards 64–65
	<b>403-5</b>	Worker training on occupational health and safety	Improving health and safety standards 64–65
	<b>403-6</b>	Promotion of worker health	Improving health and safety standards 64–65 Tackling the threat of COVID-19 49
	<b>403-9</b>	Work-related injuries	Improving health and safety standards 64–65
<b>Training and Education</b>			
GRI 103: Management Approach 2016	<b>103-1</b>	Explanation of the material topic and its Boundary	Human resource development 61–62
	<b>103-2</b>	The management approach and its components	Human resource development 61–62
	<b>103-3</b>	Evaluation of the management approach	Human resource development 61–62
GRI 404: Training and Education 2016	<b>404-2</b>	Programmes for upgrading employee skills and transition	Human resource development 61–62 Training NBPOL cadets 62
<b>Diversity and Equal Opportunity</b>			
GRI 103: Management Approach 2016	<b>103-1</b>	Explanation of the material topic and its Boundary	Sustainability management 18–19 Equal opportunities 63–64
	<b>103-2</b>	Evaluation of the management approach	Sustainability management 18–19 Corporate governance 18 Equal opportunities 63–64
	<b>103-3</b>	Evaluation of the management approach	Sustainability management 18–19 Corporate governance 18 Equal opportunities 63–64
GRI 405: Diversity and Equal Opportunity 2016	<b>405-1</b>	Diversity of governance bodies and employees	Corporate governance 18 Equal opportunities 63–64
	<b>405-2</b>	Ratio of basic salary and remuneration of women to men	Equal opportunities 63–64

Material Topics			
GRI Standard	Disclosure		Page or reason for omission
<b>Social</b>			
<b>Child Labour</b>			
GRI 103: Management Approach 2016	<b>103-1</b>	Explanation of the material topic and its Boundary	Child and forced labour 63
	<b>103-2</b>	The management approach and its components	Child and forced labour 63
	<b>103-3</b>	Evaluation of the management approach	Child and forced labour 63
GRI 408: Child Labour 2016	<b>408-1</b>	Operations and suppliers at significant risk for incidents of child labour	Child and forced labour 63
<b>Forced or Compulsory Labour</b>			
GRI 103: Management Approach 2016	<b>103-1</b>	Explanation of the material topic and its Boundary	Child and forced labour 63
	<b>103-2</b>	The management approach and its components	Child and forced labour 63
	<b>103-3</b>	Evaluation of the management approach	Child and forced labour 63
GRI 409: Forced or Compulsory Labour 2016	<b>409-1</b>	Operations and suppliers at significant risk for incidents of forced or compulsory labour	Child and forced labour 63
<b>Rights of Indigenous Peoples</b>			
GRI 103: Management Approach 2016	<b>103-1</b>	Explanation of the material topic and its Boundary	Aligning with community needs 52–59
	<b>103-2</b>	The management approach and its components	Aligning with community needs 52–59
	<b>103-3</b>	Evaluation of the management approach	Aligning with community needs 52–59
GRI 411: Rights of Indigenous Peoples	<b>411-1</b>	Incidents of violations involving rights of indigenous peoples	Grievances 24



Material Topics			
GRI Standard	Disclosure		Page or reason for omission
<b>Social</b>			
<b>Local Communities</b>			
GRI 103: Management Approach 2016	<b>103-1</b>	Explanation of the material topic and its Boundary	Aligning with community needs 52–59
	<b>103-2</b>	The management approach and its components	Tackling the threat of COVID-19 49 Aligning with community needs 52–59
	<b>103-3</b>	Evaluation of the management approach	Aligning with community needs 52–59
GRI 413: Local Communities 2016	<b>413-1</b>	Operations with local community engagement, impact assessments, and development programmes	Shaping national policy through the PNG Palm Oil Platform 22–23 Aligning with community needs 52–59 Community development programmes 56–58 Programmes for women 56–58 Community forestry programmes 34–35 Improving livelihoods through socioeconomic and smallholder research programmes 58–59
	<b>413-2</b>	Operations with significant actual and potential negative impacts on local communities	Aligning with community needs 52–59 Supporting our smallholders 52–53 Upholding land rights 54–56 Community development programmes 56–58
<b>Supplier Social Assessment</b>			
GRI 103: Management Approach 2016	<b>103-1</b>	Explanation of the material topic and its Boundary	Certification 16–17 Supporting our smallholders 52–53
	<b>103-2</b>	The management approach and its components	Certification 16–17 Supporting our smallholders 52–53
	<b>103-3</b>	Evaluation of the management approach	Certification 16–17 Supporting our smallholders 52–53
GRI 414: Supplier Social Assessment 2016	<b>414-2</b>	Negative social impacts in the supply chain and actions taken	Aligning with community needs 52–59 Supporting our smallholders 52–53 Improving livelihoods through socioeconomic and smallholder research programmes 58–59

# Glossary

## **Biodiversity**

The diversity (number and variety of species) of plant and animal life within a region.

## **Biological Oxygen Demand (BOD)**

The amount of oxygen used when organic matter undergoes decomposition by micro-organisms. Testing for BOD is done to assess the amount of organic matter in water.

## **Chemical Oxygen Demand (COD)**

The measurement of the amount of oxygen required to oxidise soluble and particulate organic matter in water. COD testing involves using a potent chemical oxidising agent to chemically oxidise the organic material in a sample of wastewater under controlled conditions.

## **Effluents**

Water discharged from one source into a separate body of water, such as mill process water.

## **Emissions**

Greenhouse gas (GHG) or carbon emissions are atmospheric gases that absorb and emit radiation within the thermal infrared range. This process is the fundamental cause of the greenhouse effect. The primary greenhouse gases in the Earth's atmosphere are water vapour, carbon dioxide, methane, nitrous oxide, and ozone.

## **Extraction rate**

The amount of oil extracted from oil palm fruit at a mill. Crude palm oil (CPO) is removed from the flesh; palm kernel oil (PKO) from the nut.

## **Fresh fruit bunch (FFB)**

Bunches harvested from the oil palm tree. The weight of the fruit bunch ranges between 10 to 40 kg, depending on the size and age.

## **Free, Prior and Informed Consent**

The principle that a community has the right to give or withhold consent to proposed projects that may affect the lands they customarily own, occupy or use.

## **Greenhouse gas (GHG) emissions**

Gases in the atmosphere that absorb and emit radiation within the thermal infrared range. The primary greenhouse gases in the Earth's atmosphere are water vapour, carbon dioxide, methane, nitrous oxide, and ozone.

## **Global Reporting Initiative (GRI)**

A multi-stakeholder standard for sustainability reporting, guiding report content and indicators.

## **High Carbon Stock Approach (HCS Approach)**

A global methodology used in agricultural land development planning that is currently

applied in fragmented tropical landscapes on mineral soils in the humid tropics. The methodology distinguishes HCS forest areas for protection from degraded lands with low carbon and biodiversity values that may be considered for development.

## **High Conservation Values (HCV)**

Areas with HCVs are natural habitats which are of outstanding significance or critical importance due to their high biological, ecological, social or cultural values. These areas need to be appropriately managed in order to maintain or enhance those identified values. There are six possible HCVs that can be identified, covering environmental and social aspects of a natural forest.

## **International Labour Organization (ILO)**

This is a United Nations agency and tripartite world body representative of labour, management and government. It disseminates labour information and sets minimum international labour standards deemed 'conventions', and offered to member nations for adoption.

## **Integrated Pest Management (IPM)**

IPM is the careful consideration of all available pest control techniques and subsequent integration of appropriate measures that discourage the development of pest populations. IPM aims to keep pesticides and other interventions to levels that are economically justified and reduce or minimise risks to human health and the environment. IPM supports the growth of healthy crops with the least possible disruption to agro-ecosystems and encourages natural pest control mechanisms.

## **International Union for Conservation of Nature and Natural Resources (IUCN) Red List**

Based in Switzerland, and also known as The World Conservation Union, this organisation is involved in the preservation of natural resources. IUCN publishes the Red Data Book, which lists every nation's endangered species.

## **Non-governmental organisation (NGO)**

A term used in this report to refer to grassroots and campaigning organisations focused on environmental or social issues.

## **New Planting Procedure (NPP)**

The RSPO NPP consists of a set of assessments and verification activities to be conducted by RSPO grower members and certification bodies before a new oil palm development. This procedure helps guide responsible planting and ensures that social and environmental requirements have been met. The NPP report undergoes a 30-day public consultation. Planting and associated development can only begin once the NPP is complete, and RSPO approval is granted.

## **PalmGHG**

The RSPO PalmGHG tool that calculates the emissions generated and sequestered from activities and processes engaged during agricultural and mill stages.

## **Palm oil mill effluent (POME)**

By-product of processed FFB.

**Peat** is an accumulation of partially decayed vegetation matter. Peat forms in wetlands or peat lands, variously called bogs, moors, muskegs, pocosins, mires, and peat swamp forests.

## **Rainforest Alliance Sustainable Agriculture Standard (SAS)**

The Sustainable Agriculture Standard is applicable for crop and cattle production systems worldwide and is used to assess operational planning and management systems, biodiversity conservation, natural resource conservation, and community livelihoods and wellbeing.

## **Roundtable on Sustainable Palm Oil (RSPO)**

A multi-stakeholder organisation based in Kuala Lumpur, Malaysia. The organisation has developed a certification scheme for sustainable palm oil.

## **Social Impact Assessment**

This includes the process of analysing, monitoring and managing the intended and unintended social consequences, both positive and negative, of planned interventions (policies, programs, plans, projects) and any social change processes invoked by those interventions. Its primary purpose is to bring about a more sustainable and equitable biophysical and human environment.

## **Stakeholders**

Any group or individual that is affected by or can affect a company's operations.

## **Sustainability**

A term expressing a long-term balance between social, economic and environmental objectives. It is often linked to sustainable development, which is defined as development that meets the need of current generations without compromising the needs of future generations.

## **Toxicity**

This measures the degree to which a substance is harmful to living organisms. Toxicity in agricultural chemicals is measured using LD50 methodology, i.e. the toxicity units corresponding to a lethal dose for 50% of a population of rats.

**Traceability** is the capability to track sustainable palm oil along the entire supply chain.

## **UNDP**

The United Nations Development Programme (UNDP) is the United Nations' global development network that works in about 170 countries and territories, helping to eradicate poverty, reduce inequalities and exclusion, and build resilience so countries can progress sustainably.

**UNICEF** also known as the United Nations Children's Fund, is a United Nations agency responsible for providing humanitarian and developmental aid to children worldwide.



### Contact us

We strive for improvement by continually listening to our stakeholders. If you have any comments or questions on the contents of this report or our sustainability performance, we welcome your contribution.

Please contact us on email [sustainability@nbpol.com](mailto:sustainability@nbpol.com), or through our Port Moresby office:

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