



Better Planet: Circularity And Environmental Protection

At F&N, we recognise the role of our business in protecting the environment. The transition to a circular economy offers opportunities to create business value as well as minimise environmental impacts. We promote circularity and environmental efficiency in our operations through our management of energy, water and waste. We promote a circular economy across our value chain through the critical topic of packaging. We recognise the interaction of the F&B sector with biodiversity and we are committed to sourcing ingredients with respect of impacts on ecosystem.

We have identified five main issues in relation to our environmental efforts:

Operational Eco-Efficiency

- Energy and Climate Change
- Water Stewardship
- Waste Management

Value Chain Impacts

- Packaging
- Biodiversity

Material Topic and Targets for Better Society

Energy and Climate Change

- Reduce the Group's energy intensity ratio at our plants (from a 2020 baseline) by 8% by 2025
- Reduce the Group's GHG emissions intensity ratio at our plants (from a 2020 baseline) by 8% by 2025

Water Stewardship

Reduce the Group water intensity ratio at our plants (from a 2020 baseline) by 8% by 2025

Waste Management

Reduce the solid waste sent to landfill (from a 2020 baseline) by 30% by 2025

Packaging

25% of beverage and dairy packaging to contain recycled materials by 2025

Contributing to SDGs

Primary



Secondary



Operational Eco-Efficiency

F&N recognises that our company creates environmental impacts through energy, water and resource consumption. To reduce our impacts on the environment, our employees at the plants investigate ways to improve our manufacturing processes and optimise eco-efficiency. Details on how we approach each environmental impact are elaborated in the following sections:

- Energy and Climate Change
- Water Stewardship
- Waste Management

Environment, Safety and Health Policy

F&N implements environmentally sustainable business practices aligned with our core values and the circular economy principles. Our operations are guided by the ESH Policy. It serves as a framework for all F&N's decisions concerning the environment across our value chain – production operations, business facilities, products, distribution and logistics, and management of waste. We work with local communities to protect and preserve the environment and strive for zero waste and zero pollution.



ENERGY AND CLIMATE CHANGE

GRI Index: GRI 302-1, GRI 302-3, GRI 305-1, GRI 305-2, GRI 305-4

SDG's



GHG emissions from our business operations contribute to climate change. In turn, the effects of climate change also affect F&N. The ripple effects of climate change result in a strain on production and poses climate-related risks such as price fluctuations of raw material commodities, and the access to water resources, for F&N. At the same time, it also provides climate-related opportunities, such as cost savings, and alignment with consumer expectations. For a more detailed focus on climate change risks, refer to the 'TCFD and Climate Risk Management' chapter of this Report.

F&N is committed to reducing the energy intensity and GHG emission intensity at our plants, as per our 2025 sustainability targets. We assume the responsibility to minimise our carbon footprint across our value chain. To further highlight this commitment, and to support the efforts to mitigate the effects of climate change, we would also be declaring a 2040 target for the net-zero of Scope 1 and 2 GHG emissions.

APPROACH

F&N's approach is guided by the five principles of the Energy and Climate Change Strategy:



2025 TARGETS

- Reduce the Group's energy intensity ratio at our plants (from a 2020 baseline) by 8% by 2025
 - Our group energy ratio decreased by 2% from 2020, due to the various energy efficiency initiatives at our plants
- Reduce the Group's GHG emissions intensity ratio at our plants (from a 2020 baseline) by 8% by 2025
 - Our GHG emissions intensity ratio decreased by 5% from 2020, due to the increased use of renewable energy at our plants

Operational Eco-Efficiency

PERFORMANCE

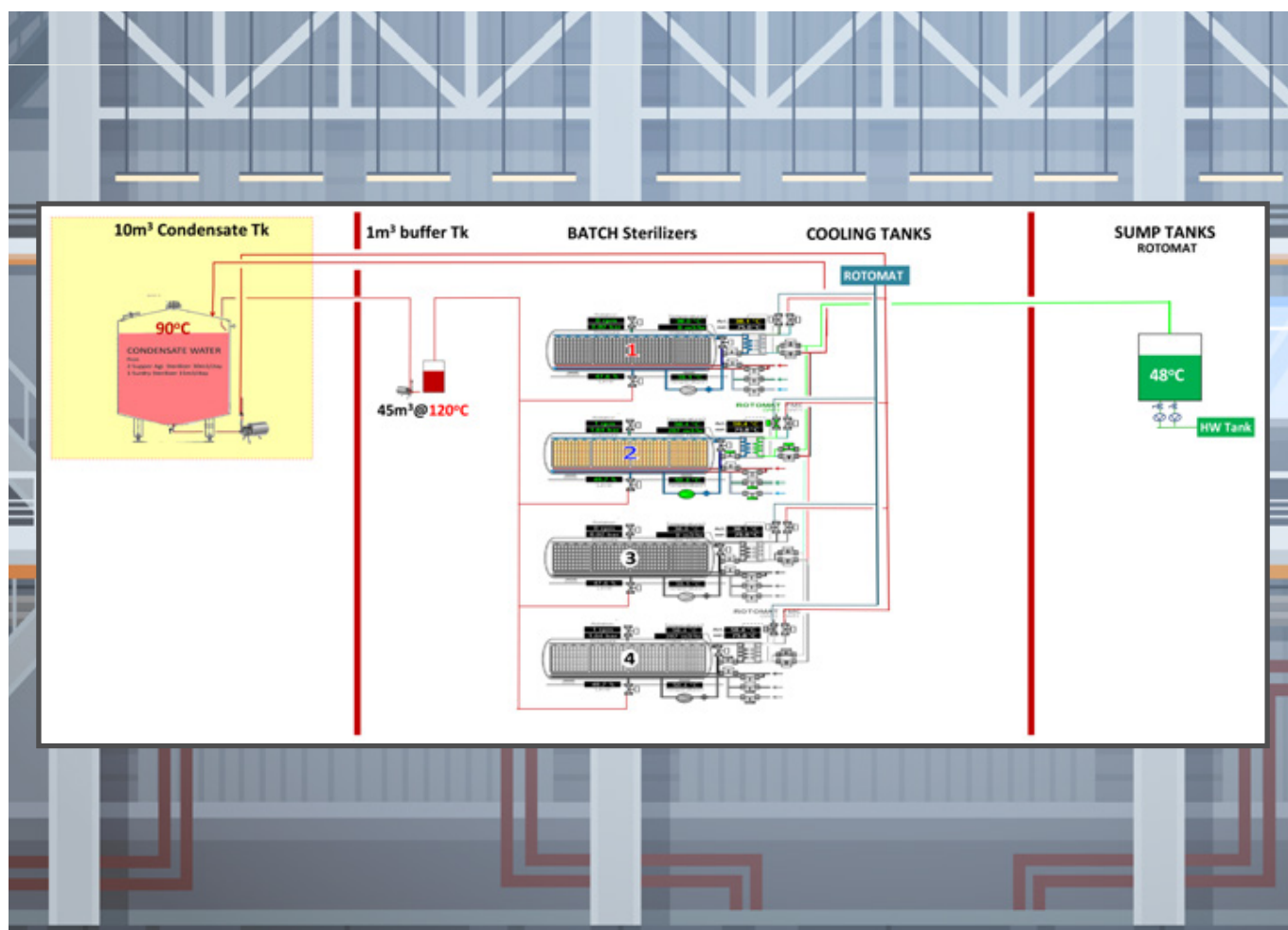
Metrics

GRI 302-1 Energy consumption within the organisation	• See 'Performance Summary' section in this Report on pages 90 and 91
GRI 302-3 Energy intensity ratio	• See 'Performance Summary' section in this Report on pages 90 and 91
GRI 305-1 Direct (scope 1) GHG gas and CO ₂ emissions (CO ₂ e)	• See 'Performance Summary' section in this Report on pages 90 and 91
GRI 305-2 Energy Indirect (scope 2) and CO ₂ emissions (CO ₂ e)	• See 'Performance Summary' section in this Report on pages 90 and 91
GRI 305-4 GHG emissions intensity ratio at plants	• See 'Performance Summary' section in this Report on pages 90 and 91

INITIATIVES

Energy Efficiency in Our Operations

Improving energy efficiency in our operations makes just as much business sense as it is to reduce our environmental impacts. F&N continues to scale up on our GHG reduction projects by improving the energy efficiency in our operations and supply chain.



Thailand: F&NDT – Innovative Heat Recovery System



Installation of innovative heat recovery system to recover heat loss from batch sterilizers and divert to hot water recovery tank for heating milk from 25°C to 75°C. With this installation, F&NDT's natural gas consumption would be reduced by up to 10%, creating cost savings of about THB 9.6 million per year (about SGD 384,000 per year).

Malaysia: F&NHB – Energy Efficient Variable Speed Drive (“VSD”)



A new energy efficient VSD was installed at F&NDM to supply oil free compressed air for general air supply. Energy cost has reduced by about 228,000kWh per year, with about MYR 68,000 (about SGD 20,100) in cost savings.

Renewable Energy Sourcing and Generation

Renewable energy sourcing and generation initiatives will be key for our progress toward our 2025 Energy and GHG reduction sustainability goals.

Singapore, Malaysia and Thailand: FNFS, TPL, F&NHB and F&NDT – Installation of Solar Panel



Across the Group's operations in Singapore, Malaysia and Thailand, solar panel are being progressively installed across the rooftops of selected plants. At this point in time, it provides cost savings of around SGD 1.7 million, and an estimated reduction of around 8,900 MT CO₂e in GHG emissions, each year. The solar photovoltaic system reduces the amount of electricity usage by about 15.9 million kWh, significantly reducing F&N's energy offtake from the grid by our switching to renewable energy for daily operations.

Route Planning

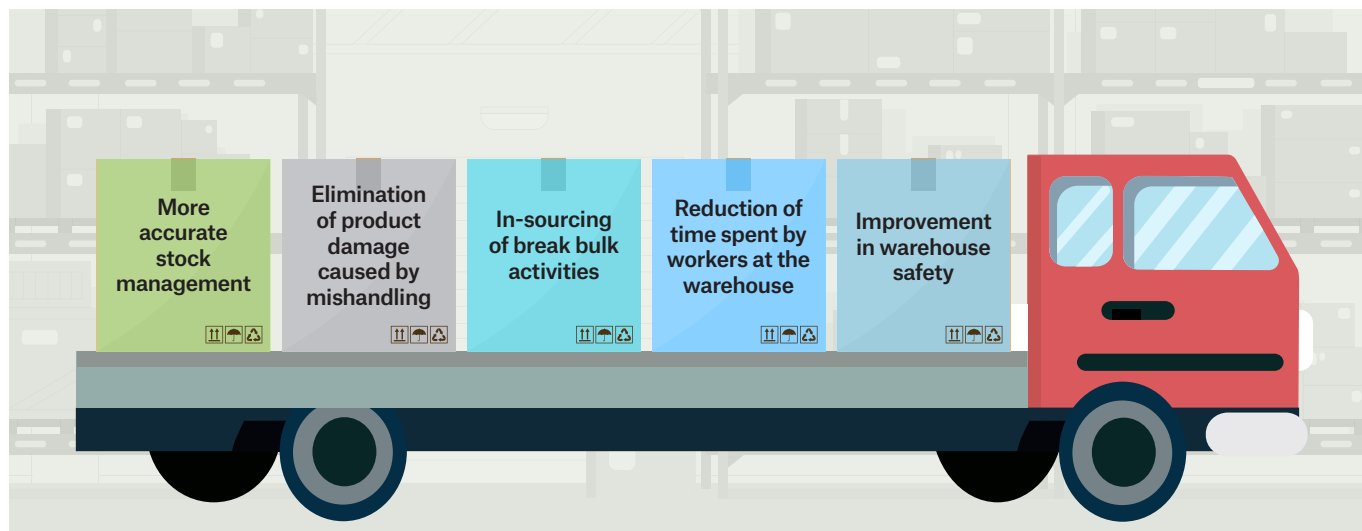
Optimal route planning can help reduce GHG emissions. In the last few years, we have continued to streamline our distribution networks.

Malaysia and Thailand: F&NHB and F&NDT – Shortened Transportation Routes



Since 2014, F&NHB has made over MYR 800 million (over SGD 250 million) of capital investments on new lines and warehouses across production facilities in Malaysia and Thailand. By decentralising our logistics with manufacturing and warehouse operations located in closer proximity, transportation routes will become shorter and fuel consumption and GHG emissions will be reduced.

F&NHB also invested about MYR 180 million (about SGD 58 million) in an integrated warehouse at Shah Alam Plant in Malaysia and established a regional distribution centre (“RDC”) in Rojana in Thailand. Both are equipped with the Automated Storage Retrieval System (“ASRS”) and have commenced operations last financial year. The RDC in Thailand serves as the regional distribution hub for F&NDT's products and is estimated to have reduce material and transport costs by about THB 20 million (about SGD 800,000) in a year. The ASRS automates process of getting finished goods ready for delivery to markets or distributors' warehouses. This system drives improvements through:



Operational Eco-Efficiency

Low Carbon Product

Thailand: F&NDT – Extra Non-dairy Half Creamer for Cooking and Baking



The Extra Non-dairy Half Creamer for Cooking and Baking (385g) is F&NHB's first low-carbon product certified by Thailand Greenhouse Gas Management Organisation ("TGO"). The product's carbon footprint of 295 kg CO₂ successfully meets the requirements of the Carbon Footprint Label Scheme.

F&N is working towards having more products certified by TGO under the Carbon Footprint Label Scheme.

Operations Exposure to Climate Change Risks

The increasingly visible impacts of climate change around the globe are disrupting societies and businesses. F&N too is vulnerable to such climate-related risks, from extreme temperatures to floods and drought, which have the potential to halt our operations and disrupt our supply chain.

Singapore, Malaysia and Thailand: Group – Climate-Related Risks and Opportunities Assessment



To better understand our position, F&N conducted an inaugural climate-related risks and opportunities assessment to identify and assess the potential climate-related physical and transition risks and opportunities. These risks and opportunities will be integrated into the organisation's overall F&N ERM framework for monitoring in order to drive strategic decisions for managing them.

For details on the climate-related risks and opportunities assessment, refer to the 'TCFD and Climate Risk Management' section of this Report.

WATER STEWARDSHIP

GRI Index: GRI 303-3, GRI 303-4, GRI 303-5

SDG's



Water is an important resource for F&N because it is used extensively in our products and operational processes. The success to our business depends on a reliable supply of water and effective water management. Through our climate-related risks and opportunities assessment, approximately 70% of our key sites are in areas with medium to high exposure to water-stress - where demand of good quality water exceeds the availability. With climate change expected to intensify the severity of flooding and water-stress in the near future, we are committed to responsible water stewardship by managing our water use to safeguard the availability of clean water for the local communities, in the markets we operate.

APPROACH

Guided by the F&N ESH Policy and the principles of circular economy, F&N has organised initiatives to increase water security and reduce our water consumption. Water-related risks and opportunities are identified and addressed by collaborating with relevant stakeholders to create shared value projects.

To reduce risks towards our water supply, we utilised a range of internal water assessments and have deployed action policies in all our facilities.



- F&N conducted a climate-related risks and opportunities assessment to identify potential sites that are faced with medium to high exposure to water stress, and flooding.
- The sustainability team utilises publicly available tools such as the World Resources Institute Aqueduct and World Wildlife Fund Water Risk Filter to evaluate water-stress areas.
- F&N has an established system within all operations for systematic daily and monthly tracking and monitoring of water consumption and effluent quality.

With climate change expected to intensify the severity of flooding and water-stress in the near future, we are committed to responsible water stewardship by managing our water use to safeguard the availability of clean water for the local communities, in the markets we operate.



2025 TARGET

- Reduce the Group's water intensity ratio at our plants by 8% from a 2020 baseline by 2025
 - Our group water intensity ratio increased by 3% because of a lower production volume at our dairy plant

PERFORMANCE

Metrics

GRI 303-3 Water withdrawal	• See 'Performance Summary' section in this Report on pages 90 and 91
GRI 303-4 Water discharge See	• See 'Performance Summary' section in this Report on pages 90 and 91
GRI 303-5 Water consumption	• See 'Performance Summary' section in this Report on pages 90 and 91

INITIATIVES

Water Stewardship in Our Operations



F&N implemented various water saving initiatives this year to further progress toward our target of reducing water intensity by 8% by 2025. F&N seeks to improve our water efficiency with our plant engineers looking into closing the loop for our water systems – through treating wastewater from our plants and using the recycled water for general cleaning and cooling purposes.

We also share best practices with suppliers upstream in the value chain. Beyond that, F&N engaged dairy farmers to enhance their water security. This has enabled F&N to improve supply chain resilience through water stewardship. More details can be found in the 'Supply Chain Stewardship' chapter of this Report.

Water-Efficiency and Zero-Discharge in Our Operations.



A range of initiatives have been implemented at our plants to increase water savings through optimising plant processes. Some initiatives include:

- Combining two smaller cooling towers into a bigger cooling tower
- Use of water saving taps, nozzles and self-closing valves
- Adjusting Clean-In-Place ("CIP") process to make it more efficient
- Replacing cube sugar with liquid sugar
- Zero-discharge initiatives based on circular economy principles

In particular, we would like to highlight the efforts at FNFS.

Recognising that soya process is one of the more water intensive processes at FNFS plant, we evaluated our soya activities and implemented changes to improve water efficiency in 2020. Monthly average water usage reduced by about 42% after the implemented changes. The total average yearly water savings was approximately 13,300 m³, with cost savings of around SGD 36,000.

With success of the soya line, F&N worked on the Hipex Production line in 2021 – the second most water intensive process at the F&NFS plant. Changes implemented included swapping out the open-end hose for the spray gun hose with a lower flow rate and controlling CIP process by using pH readings. Monthly average water usage had a 14% reduction, with the total average yearly water savings estimated to be about 4,000 m³. The cost savings are approximately SGD 11,000.

FNFS is intending to move to a new plant this year with plans for more efficient processes and equipment installed. Specifically, an improved water system that helps recover water through the use of Reverse Osmosis. The used water is then channelled to general cleaning and cooling of towers. There are also plans for CIP programmes to recover chemicals and water.

Operational Eco-Efficiency

WASTE MANAGEMENT

GRI Index: GRI 306-1, GRI 306-2, GRI 306-3, GRI 306-4, GRI 306-5, GRI 306-6

SDG's



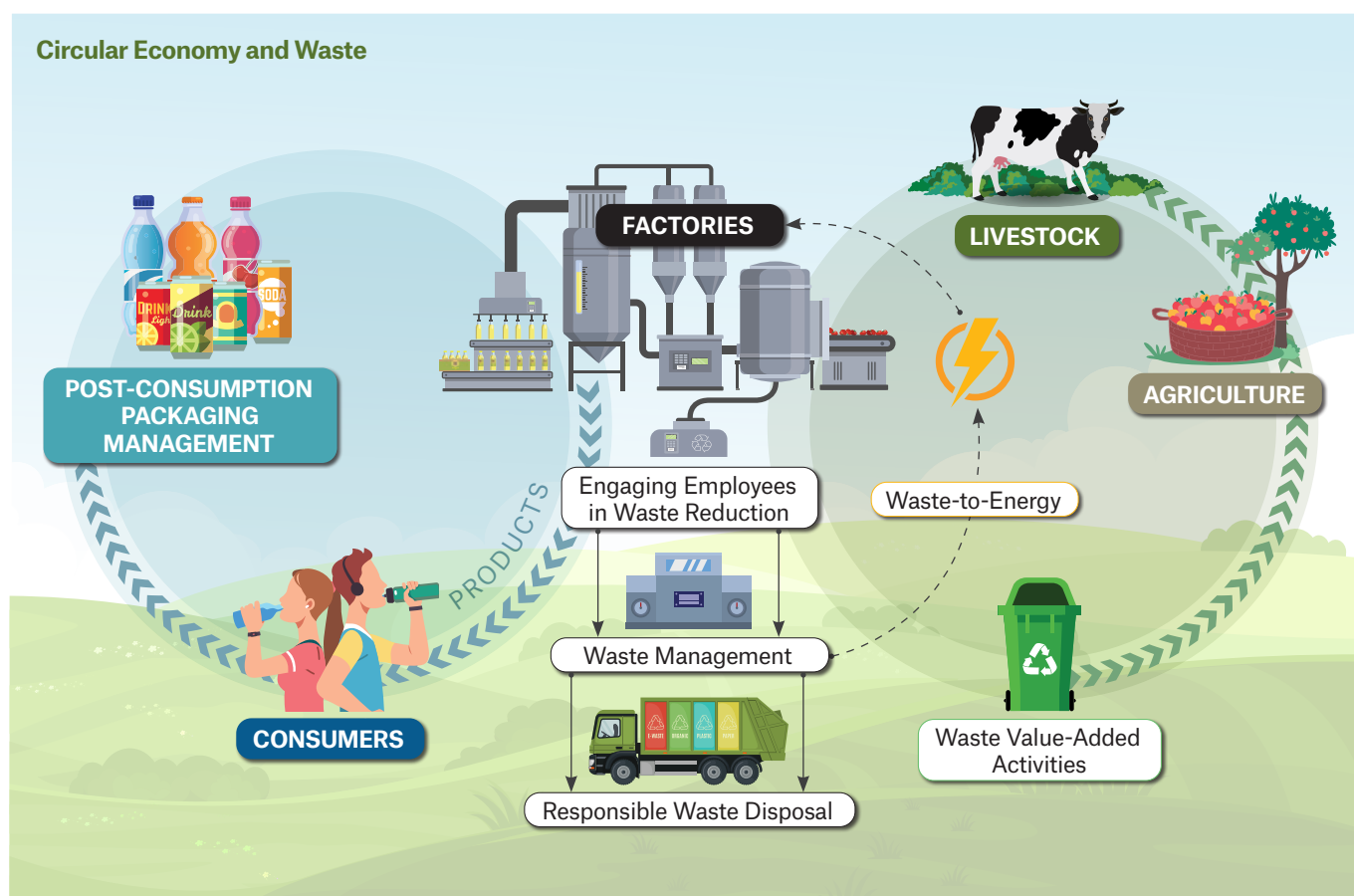
'Waste' is commonly perceived to be a resource that has little to no value for the user. In a world of finite resources, we should no longer treat waste as such. The circular economy views waste as a resource that could regenerate value as an input for another process. Effectively managing waste enhances our ability to achieve resource efficiency, reduces our impact on the environment and could translate to cost savings for the business.

APPROACH

Waste is generated throughout all stages of production – along the supply chain and in our direct operations. F&N focuses on driving effective waste management by reducing and diverting our operational waste. We extend our commitments beyond our operations to engage our stakeholders along the supply chain to identify circular opportunities in their operations and assist them in saving costs through the efficient use of resources.

F&N aspires to achieve 'zero discharge, zero waste and zero landfill'. Our manufacturing teams seek to improve efficiency in our operations by applying innovation and discovering new opportunities to close the loop in the material cycle.

Under our ESH Policy, we raise the awareness of employees on responsible consumption and the importance of effective waste management across our business activities.

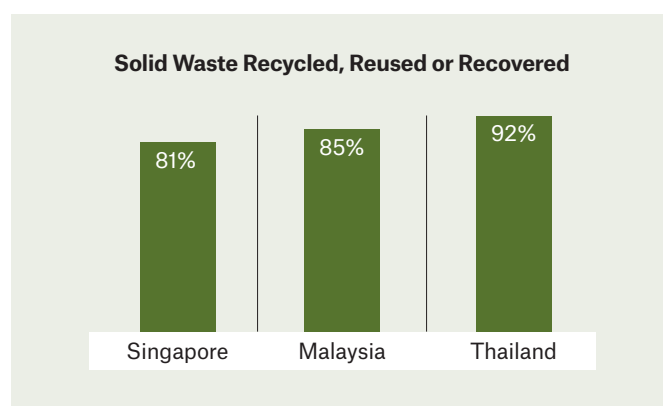
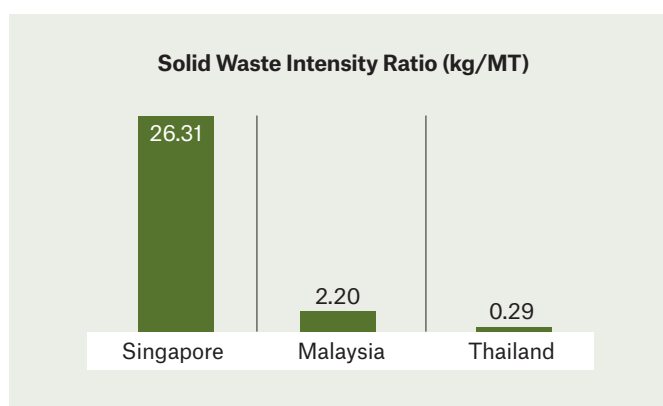


2025 TARGET

- Reduce the solid waste sent to landfill (from a 2020 baseline) by 30% by 2025
 - The total solid waste sent to landfill in FY2022 increased by 21% from a 2020 baseline year

GRI 306-3 (2020) Waste generated	See 'Performance Summary' section in this Report on pages 92 and 93
GRI 306-4 (2020) Waste diverted to disposal	See 'Performance Summary' section in this Report on pages 92 and 93
GRI 306-5 (2020) Waste directed to disposal	See 'Performance Summary' section in this Report on pages 92 and 93

- Solid waste intensity
- % of solid waste recycled, reused or recovered



Plant Management – Road to Zero Waste to Landfill



F&NDT Rojana plant's zero-landfill achievement is made possible through effective awareness raising programmes on waste segregation and reduction for our employees. At F&N, we have ongoing campaigns at plants to cultivate awareness among employees about waste management with the goal of increasing recycling rate. For instance, the F&NDT team avoided the usage of plastic bags in waste collection by reusing bags that were used to contain packaging materials. This change has reduced plastic bag usage by up to 5,200 kg and led to cost savings of over THB 250,000 (about SGD 10,000).



Operational Eco-Efficiency

Food Loss & Waste in the Value Chain

 Food loss and food waste have become a global concern and an issue for sustainable development goals. An estimated 1/3 of all food produced globally is lost or goes to waste. Food loss and waste not only contribute to food shortage, water stress, biodiversity loss, and increases GHG.

As a F&B manufacturer, F&N aspires to optimise our position to minimise food wastage in our entire value chain. We are committed to reducing global food loss/waste by:

- Reducing food loss throughout our value chain, from sourcing, manufacturing and logistics
- Reducing our production waste to landfill by 30% by 2025
- Collaborating with our business partners to reduce food waste

At F&NHB, a framework for managing food loss and waste, guided by the Food and Drink Material Hierarchy from the Food and Agriculture Organization of the UN, has been developed. They collaborate with upstream and downstream partners to look for innovative alternatives to reduce food loss or redirect food loss with focus on prevention, optimisation, recycling and recovery initiatives to minimise food waste along our value chain.

Raw Materials Upstream	• Work closely with our suppliers to ensure our raw materials are of set standards and quality. • Track, measure and monitor any losses of our raw materials on monthly basis to reduce food loss.
Production Processes Within Our Plants	• Track, measure and monitor our manufacturing processes. • Improve our food loss management by identifying key categories and waste streams. • Reduce impact from operations by complying with, and going beyond, relevant regulations.
Collaboration with Partners	• Team up with partners to look for innovative programmes/initiatives to reduce food loss or reuse food loss for alternative usage.
Managing Food Surplus Downstream	• Regularly track, measure and monitor any food surpluses in retail. • Channel our surplus food to organisations and communities.

Various initiatives have been implemented by F&NHB toward this end, including:

Collaborating with partners to re-use food loss, for example transforming sludge into fertilisers

 In 2022, 100% of industrial sludge from our dairy production were converted into organic fertiliser and distributed to local farmers. Over 540 MT of industrial sludge from our wastewater treatment plants were converted into fertiliser.

Channelling surplus food to charitable organisations and communities in need

 Since 2019, F&NHB had established a partnership with Yayasan Food Bank Malaysia to support the Food Bank Siswa programme. We have also supported various communities in need with surplus food.



F&NHB ... collaborate(s) with upstream and downstream partners to look for innovative alternatives to reduce food loss or redirect food loss with focus on prevention, optimisation, recycling and recovery initiatives to minimise food waste along our value chain.



Value Chain Impacts

The impacts of our products extend beyond our direct operations. The raw materials and ingredients we source for our products and packaging are all associated impacts of our business. Packaging and biodiversity are therefore regarded as material issues to F&N. We attempt to address these value chain impacts through improved packaging and better raw material sourcing. More information can be found in the following sections:

- Packaging
- Biodiversity

PACKAGING

GRI Index: GRI 301-1, GRI 301-2

SDG



The sourcing of packaging materials and the management of post-consumer packaging are major societal concerns. Increasing awareness on the environmental impacts of single-use plastics is leading consumers and stakeholders to actively demand F&N companies to act. Various stakeholders are pressuring companies to invest in packaging solutions that are holistic and sustainable. Governments in where we operate have introduced environmental policies that are designed to encourage companies to rethink their production methods - Thailand's 'Roadmap on Plastic Waste Management', Malaysia's 'Roadmap towards Zero Single-Use Plastics' and the launch of Singapore's Plastics Recycling Association. Rethinking packaging enables F&N to support the respective government's policies as well as be prepared for future stringent regulations.

Packaging is one of the critical aspects where we could influence and minimise negative impacts on the society and environment. We explore sustainable solutions with a focus on packaging design and materials that would encourage recyclability and circularity.

APPROACH

F&N focuses on designing our packaging with the environment in mind and looks into investing in new innovations, integrating circular economy concepts, and working closely with our stakeholders to innovate packaging solutions.

F&N's packaging approach is focused on:

- Reducing the amount of materials used in our packaging
- Increasing the use of recycled materials, e.g. replacing virgin aluminium and tin cans with recycled materials
- Designing packaging to be recyclable

F&N actively works across the supply chain to find solutions to manage post-consumer packaging. We have partnered with other organisations to close the loop and we are seeking to work with new suppliers that meet our requirements for sustainable packaging materials.

2025 TARGET

- 25% of beverage and dairy packaging to contain recycled materials by 2025
 - Average recycled content in our packaging has improved from 22% in FY2020 to 23% in FY2022

PERFORMANCE

GRI 301-1 Materials used by weight or volume	• Over 1.9 million MT of materials used
	Notes: 1 Materials are sourced from external suppliers 2 Data are sourced from direct measurements
GRI 301-2 Recycled input materials used	• About 22% of recycled input materials used

Value Chain Impacts

INITIATIVES

Launch of Green Lab



Combining the expertise and resources of Times Printers and Print Lab, the sustainable packaging business was officially launched under the brand Green Lab in May 2022. Green Lab offers a solution to our customers where the responsible use of packaging can have a positive impact of the environment, but not at the expense of price, quality, or convenience.

Green Lab offers customers highly customisable biodegradable paper bags, fully compostable plant-based alternative for plastic carrier bags, an extensive range of fully-compostable F&B packaging and cutlery supplies, eco-packaging boxes and eco-pouches. The products are also printed with environmentally friendly soy-based printing ink.

Green Lab aims to be Singapore's one-stop eco-solutions provider for business and services alike, providing new and exciting possibilities for corporations to realise and play a role in a sustainable future, supporting them in their quest to meet their ESG objectives.



Founding Member of the MAREA



In January 2021, F&NHB and nine other members formed MAREA – an alliance in collaboration with the Malaysian government to enable a voluntary, industry-led Extended Producer Responsibility group. It brings like-minded companies together to focus on boosting the value chain and improving the collection rates and recycling of post-consumer packaging.

'Recycle N Save' Initiative



F&N spearheaded a joint initiative with the NEA of Singapore to introduce 50 reverse vending machines across Singapore since 2019. The initiative was to provide an easily available avenue for consumers to deposit selected used plastic bottles and aluminium cans to encourage a habit of recycling. This supports the national vision of the Sustainable Singapore Blueprint's goal to increase the national recycling rate to 70% by 2030. As of September 2022, more than 12 million aluminium cans and PET bottles have been collected and passed on to recycling facilities.

BIODIVERSITY

GRI Index: GRI 304-1

SDG



A rich biodiversity with healthy ecosystems provides nutrition, shelter, medicine, energy, to all humans. The livelihoods of billions⁵ are directly dependent on thriving biodiverse ecosystems. The urban population would also benefit from a well-protected biodiverse ecosystem; for instance, through providing a physical barrier against zoonotic diseases such as COVID-19.

5 IPBES (2022). Summary for Policymakers of the Thematic Assessment Report on the Sustainable Use of Wild Species of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services. Fromentin, J.M., Emery, M.R., Donaldson, J., Danner, M.C., Hallosserie, A., Kieling, D., Balachander, G., Barron, E.S., Chaudhary, R.P., Gasalla, M., Halmy, M., Hicks, C., Park, M.S., Parlee, B., Rice, J., Tickin, T., and Tittensor, D. (eds.). IPBES secretariat, Bonn, Germany. <https://doi.org/10.5281/zenodo.6425599>

But in recent decades, biodiversity loss and ecosystem degradation are occurring at an unprecedented pace with overexploitation of resources. Safeguarding biodiverse ecosystems will be challenged by intensifying climate change impacts, increasing demand, and technological advances.

F&N is dependent on the natural environment for raw materials such as palm oil, sugar, and paper. A declining biodiverse ecosystem impacts our business too. We foresee scaling up our efforts beyond sustainable sourcing, and together with our suppliers, protect biodiversity and promote natural ecosystems in areas where we operate.

APPROACH

Our subsidiary, F&NHB leads the conversation on biodiversity with internal and external stakeholders to develop a direction in biodiversity management. Launched in 2021, the commitments made in F&NHB Biodiversity Statement serves as a foundation for their initiatives:

1. Avoid deforestation in our supply chain.
2. Avoid operating and developing in close proximity to nationally, or internationally recognised areas of high biodiversity value, including World Heritage areas, International Union for Conservation of Nature (IUCN) Category I-IV protected areas, RAMSAR Sites and key biodiversity areas.
3. In any circumstance where our production sites or a proposed project is located within, or depend upon, areas of high biodiversity value, we will apply the following mitigation hierarchy:
 - a. Avoidance - Avoid operating and developing in areas of high biodiversity value.
 - b. Minimisation - Implement measures/initiatives to monitor and minimise impacts on biodiversity from our operations.
 - c. Restoring - Seek to restore/rehabilitate areas where impacts cannot be prevented.
 - d. Offset - Consider biodiversity compensation/offsets measures, where there is residual impact.
4. In managing potential biodiversity risk, we will engage necessary stakeholders, including local authorities and the communities nearby, and ensure appropriate mitigation strategy is developed to minimise impacts to as low as reasonably possible. We are committed to collaborating with external partners, such as biodiversity experts, to support our biodiversity assessment and management process.

This statement is applicable to all current and future operational sites at F&NHB. Suppliers and business partners are encouraged to commit to protecting the biodiversity and ecosystems in their operations through our Sustainable Agriculture Guideline.

INITIATIVES



F&N sources for sustainable palm oil in a bid to contribute to the conservation of the ecosystem. As an ordinary member of RSPO, we abide by the RSPO Principles and Criteria 2018 and are committed to sourcing for traceable palm oil that is free from deforestation and conversion through suppliers with a no deforestation, no conversion policy.

We engage our palm oil suppliers to ensure the palm oil sourced from them is RSPO certified, sustainable and traceable. Our current palm oil suppliers have *No Deforestation, No Peat, No Exploitation Policies* which they disclose on their websites.

PERFORMANCE

GRI 304-1

Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas.

- None of our operational sites are in or adjacent to protected areas and areas of high biodiversity value outside protected areas.