



2021

SUSTAINABILITY REPORT

**Thai Union Group
Public Company Limited**



Member of
**Dow Jones
Sustainability Indices**
Powered by the S&P Global CSA







TABLE OF CONTENTS

1.	ABOUT THIS REPORT	04
2.	CEO MESSAGE	08
3.	SUSTAINABILITY HIGHLIGHTS	12
4.	BUSINESS OVERVIEW	16
5.	SEAFOOD SOURCING LOCATIONS	18
6.	SUSTAINABILITY AT THAI UNION	20
7.	MATERIAL ISSUES & STAKEHOLDER ENGAGEMENT	32
8.	SAFE & LEGAL LABOR	38
9.	RESPONSIBLE SOURCING	50
10.	RESPONSIBLE OPERATIONS	62
11.	PEOPLE & COMMUNITIES	76
12.	PERFORMANCE SUMMARY	84
13.	GRI CONTENT INDEX & UNGC COP	102
14.	LRQA INDEPENDENT ASSURANCE STATEMENT	118



1

ABOUT THIS REPORT

This is the ninth sustainability report that Thai Union has made publicly available and demonstrates our ongoing commitment to transparency across our operations and supply chain. It provides information on our annual performance from January to December 2021, showing our progress against the key performance indicators (KPIs) and targets outlined in SeaChange®.

Aligning with our eco-friendly approach to reporting, this report is designed in a digital-only format, making it not only more sustainable but easily accessible for readers. We are also ensuring that information is also freely available and accessible through our SeaChange® website: <https://seachangesustainability.org/>. The website delivers the most up-to-date information about Thai Union's sustainability program, progress, activities and achievements.

This report was prepared in accordance with the Global Reporting Initiative (GRI) Standards: Core Option and its Food Processing Sector Supplement (FPSS). In keeping with the intent of the GRI Guidelines, we have focused on the GRI Standards, as described below. We have also engaged with LRQA to assure the content at a limited level. The scope of this report covers companies under Thai Union Group, as well as subsidiaries where we have at least 50 percent holding, companies that are under Thai Union operational control.



PRINCIPLES FOR DEFINING REPORT CONTENT

Determining the content of this report began by understanding the impacts of our value chain on different stakeholders, including suppliers, customers, governments, local communities and civil society. Next, we engaged external experts and our global leadership team for their insights. The report addresses items of significant interest to stakeholders important to Thai Union's business strategy.

In conducting the analysis of internal and external environments, we abided by the GRI Standards: sustainability context, materiality, completeness and stakeholder inclusiveness. To find out more about our materiality assessments, see our materiality issues section on page [32](#).

WHAT IS REPORT QUALITY ?

The GRI Standards define reporting quality via a set of quality aspects: accuracy, balance, clarity, reliability and timeliness.

We have taken numerous actions to meet these:



We continue to improve the quality of information in our sustainability reports and we publish them in a timely manner, so our stakeholders can effectively integrate the information in their decision making.



In preparing our report, we listen and respond to stakeholder feedback to help ensure the information we report is balanced and reliable.



We value the opinion of our stakeholders, including employees, local communities and interest groups, non-governmental organizations, customers, suppliers and contractors.



We are moving toward more efficient and effective operations with minimum adverse social and environmental impacts along the entire value chain.



We regularly report on key topics and commitments, as well as our work with partners. In 2021, we continued to make progress towards strengthening our sustainability efforts including [partnering with The Nature Conservancy](#) on a pioneering commitment to full supply-chain transparency in our global tuna supply chains; [launched our first Sustainability-Linked Loan](#) and [our first Sustainability-Linked Bond](#). The Company also released its [Tuna Commitment 2021 progress report](#), and introduced our Tuna Commitment up to 2025.



UNGC COMMUNICATION ON PROGRESS

As a participant in the United Nations Global Compact, this report also serves as our annual Communication on Progress (COP) to stakeholders. The COP reports our progress in implementing the Ten Principles of the UN Global Compact within our sphere of influence, as well as our progress in supporting the environmental and social responsibilities of the broader UN Sustainable Development Goals (SDGs).

The report's content has been reviewed and approved by the leadership of relevant business units at Thai Union. There has been no significant change in the materiality reported compared to the previous year.



Thiraphong Chansiri

Chief Executive Officer, Thai Union Group

2

**CEO
MESSAGE**

Sustainability remains at the heart of the Thai Union business, and our ongoing work continues to drive positive change across the global seafood industry.

2021 was another year of enormous challenges, particularly as COVID-19 caused major disruptions around the world for a second consecutive year. Despite this, Thai Union continued to implement its sustainability strategy, introduced new commitments, and ventured into new areas for the first time.

After navigating our way through COVID-19 in 2020, we were well positioned to deal with the impact of the virus again in 2021, having already implemented a number of health and safety measures across our operations. As always, our most important commitment during the year was ensuring the health and safety of our colleagues, while also supporting local communities where Thai Union operates. In response to the pandemic, Thai Union donated nearly 1 million servings of food and other COVID-19 supplies globally during 2021 as part of its Thai Union Cares program.

Climate change is now the most critical issue confronting the world today. We witnessed at the COP26 climate summit in Glasgow the very real warnings about the global impact if immediate and decisive steps are not taken to limit global warming to 1.5 degrees Celsius.

Thai Union is acutely aware of the risks. In 2022, we will release a significant update to our global sustainability strategy, SeaChange®, which will guide us as we continue to be a leader in driving transformative change not just in our operations but across the entire seafood industry. Critically, Thai Union will announce science-based targets as part of our efforts to confront the issue of climate change. This is part of our commitment to “Healthy Living, Healthy Oceans”, and recognition of the role that the oceans and seafood have in addressing this challenge.

We recognize that we cannot make all these changes alone, which is why Thai Union works with a diverse range of partners across business, NGOs, academia and government. Thai Union is a founding member of the Seafood Business for Ocean Stewardship (SeaBOS), of which I am currently Vice Chair, and which allows for important collaboration between the world’s largest seafood companies, scientists and academia. We also formed an important commitment with The Nature Conservancy, to bring even more transparency to Thai Union’s tuna supply chains and tackle issues such as Illegal, Unreported and Unregulated (IUU) fishing, human rights and labor issues.



In 2021, we also introduced our Tuna Commitment up to 2025 that includes new commitments that will ensure we are driving best practice and addressing IUU fishing and modern slavery. Our strategies to protect the environment were also strengthened with the introduction of a new Commitment on Food Loss and Waste Reduction, a Policy on No Deforestation and a Policy for Responsible Sourcing of Palm Oil.



Our longstanding commitment to protect workers was further extended with the adoption of the “Employer Pays Principle”, a key element of Thai Union’s Ethical Migrant Recruitment Policy. We also published our Anti-discrimination & Anti-harassment Policy, while we updated the Company’s Human Rights Policy and Human Rights Risk Assessment.

As global demand for healthy proteins grows rapidly, innovation remains a critical part of our future. We continue to explore innovative areas such as Alternative Protein through our Global Innovation Center (GIC), while Thai Union Ingredients (TUI) is working to commercialize innovations that have been identified by the GIC. TUI is also focusing on maximizing the valorization of the whole fish that is processed by Thai Union. Together, they are not only helping to develop a new seafood industry but are also contributing to our sustainability efforts.

Thai Union’s leadership in sustainability was again acknowledged in 2021 when the Company was named to the Dow Jones Sustainability Indices (DJSI) for the eighth consecutive year and ranked second in the world on the Food Products Industry Index – important recognition that we are making important progress on sustainability. We were also ranked number one on the Seafood Stewardship Index (SSI) for the second consecutive time for our performance delivering towards the United Nations Sustainable Development Goals (UN SDGs).



We also demonstrated our leadership in a new area in 2021: Blue Finance, which includes targets that deliver benefits to the oceans, while the interest rates are linked to sustainability performance targets. During the year, Thai Union launched its first Sustainability-Linked Loans (SLLs) and Sustainability-Linked Bonds (SLBs), totaling THB 27 billion. We have set a target to have 75 percent of our long-term financing in Blue Finance by the end of 2025.

As in previous years, this report provides in-depth details of Thai Union's work across the four programs of SeaChange® – Safe and Legal Labor, Responsible Sourcing, Responsible Operations and People and Communities. The report also provides information on future sustainability plans.

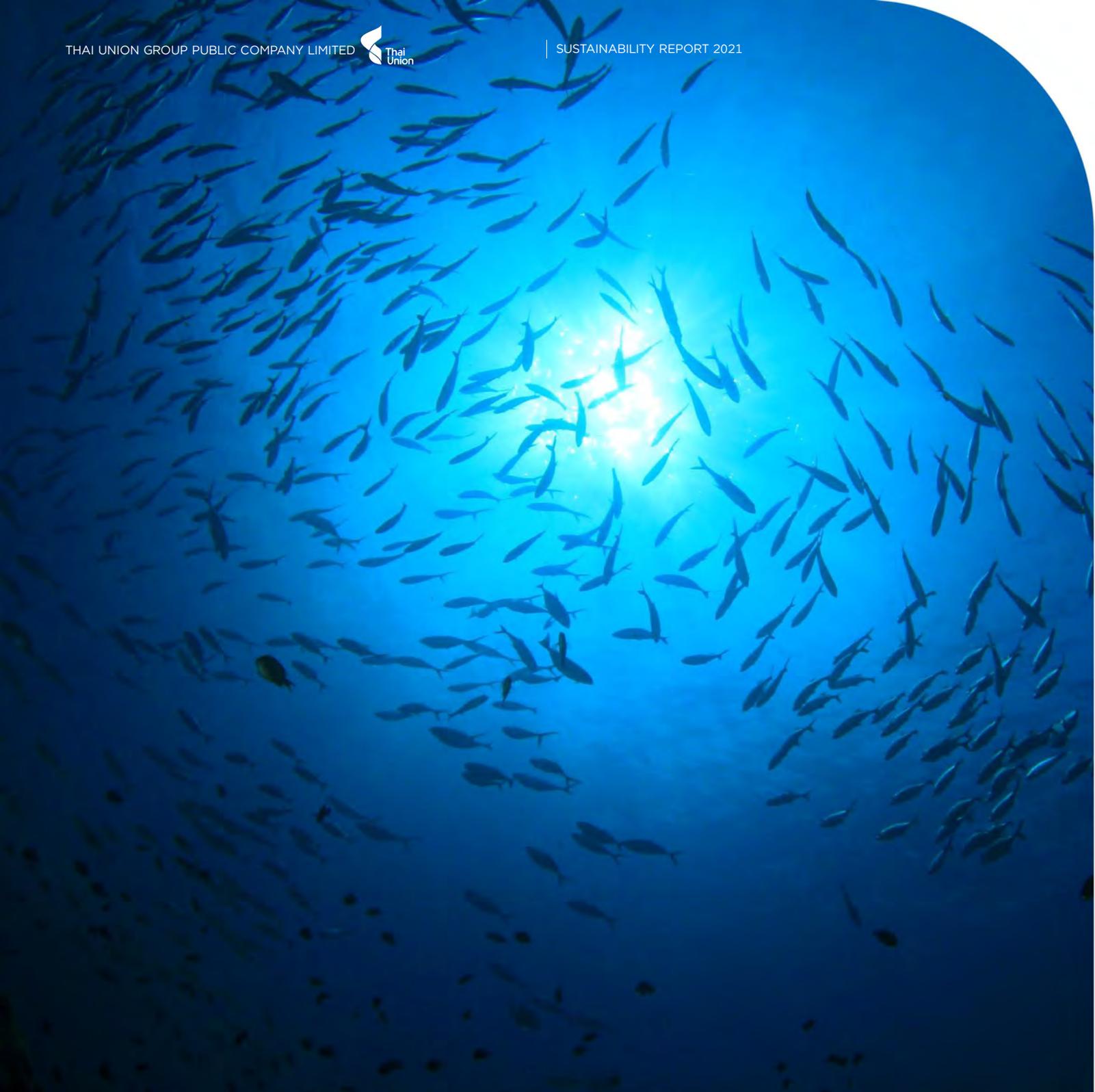
As part of our commitment to supporting the United Nations Global Compact (UNGC), this report also serves as the Company's annual Communication on Progress (COP) to stakeholders. The COP reports our progress in implementing the Ten Principles of the UNGC within Thai Union's sphere of influence.

Thai Union's work on sustainability is a collective effort, and a global one. I am grateful for the ongoing efforts of those within Thai Union and also our partners as we continue to play a leadership role in the industry, pursuing work that will make a positive and long-lasting change.



Thiraphong Chansiri
Chief Executive Officer
 Thai Union Group





3

**SUSTAINABILITY
HIGHLIGHTS**

2021



A large, vibrant blue wave crashing over a sandy beach at sunset. The water is a deep, clear blue, and the sky is a warm, golden yellow. The wave is curling over, creating a tunnel-like effect. The beach is visible in the foreground, and the sun is low on the horizon, casting a long, golden glow over the scene.

Listed on the [Dow Jones Sustainability Indices \(DJSI\) for the 8th straight year](#), and ranked second in the world in the Food Products Industry; received Gold Class Sustainability Award in the S&P Global Sustainability Yearbook 2021

Ranked [No. 1 on the Seafood Stewardship Index \(SSI\)](#) of the World Benchmarking Alliance for the second consecutive time, in recognition of our contribution to the UN SDGs and sustainability leadership in the global seafood industry

Introduced our [Tuna Commitment up to 2025](#), including new commitments to drive best practices in addressing illegal, unreported and unregulated fishing and modern slavery

Launched [Sustainability-Linked Loans and Sustainability-Linked Bonds](#) totaling THB 27 billion, with interest rates linked to key performance indicators and sustainability performance targets. By the end of 2025, 75 percent of our long-term financing will be in Blue Finance

PROTECTING WORKERS

Adopted the “**Employer Pays Principle**” as part of our updated [Ethical Migrant Recruitment Policy](#) to ensure that no worker should pay for a job, with full implementation since January 1, 2022

Trialed a new [‘Comic Contract’ for fishers](#) working on Thai vessels to help them understand their terms and worker rights

115 fishing vessels in the tuna Fishery Improvement Projects (FIPs) that Thai Union sources from were audited against Thai Union’s Vessel Code of Conduct

Published the [UK Modern Slavery Act Transparency Statement 2020-2021](#), detailing our achievements and efforts to prevent, detect, and remedy violations of human rights, particularly modern slavery, within our operations and supply chains

Published our [Anti-discrimination & Anti-harassment Policy](#), updated our [Human Rights Policy](#) and [Human Rights Risk Assessment](#), and conducted our first [Living Wage Assessment](#)

PROTECTING THE ENVIRONMENT

Conducted our **first full GHG inventory including Scope 3 emissions** from across the full supply chain, and submitted our **commitment letter to the Science Based Targets initiative** stating our intention to announce near-term and long-term climate targets.

Introduced a new [Commitment on Food Loss and Waste Reduction](#) with a target to reduce food loss in our operations by 50% by 2025

Introduced a [Policy on No Deforestation & Policy for Responsible Sourcing of Palm Oil](#), with a **target of sourcing 100% certified palm oil by 2025**

SUPPORTING PEOPLE & COMMUNITIES

[Donated nearly 1 million servings of food](#) along with other COVID-19 supplies globally, as part of the Thai Union Cares Program, bringing to 4 million the number of donations since the pandemic began

First full year of Thai Union North America’s **Justice, Equity, Diversity, and Inclusion (JEDI) strategy** aimed at building a more diverse and inclusive place to work

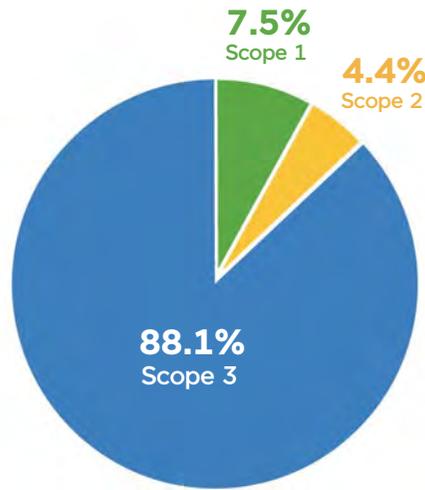
SUPPLY CHAIN TRANSPARENCY

Pioneering commitment with The Nature Conservancy to full supply-chain transparency in our global tuna supply chains, including electronic monitoring/human observers on board tuna vessels

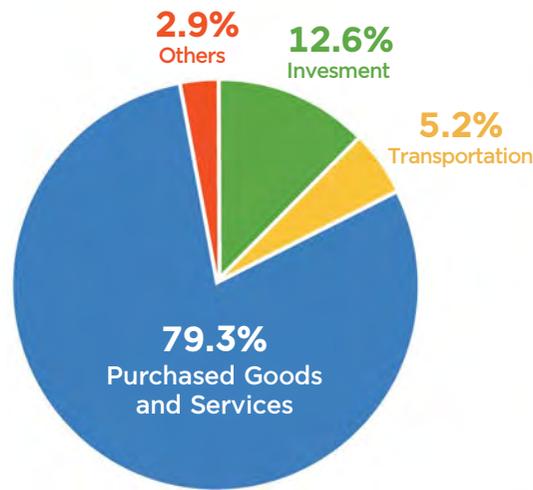
Took part in the [Ocean Disclosure Project](#) as part of our **ongoing commitment to transparency**, publicly sharing details on the global sourcing of our seafood

Piloted the use of [satellite technology to advance seafood traceability and sustainability](#) for shrimp farming operations

THAI UNION'S GREENHOUSE GAS (GHG) INVENTORY 2021



Total GHG Emissions 2021
4.30 million tons CO₂ eq



Scope 3 GHG Emissions 2021
3.79 million tons CO₂ eq

Given the importance of our Scope 3 emissions, we have further explored what the main sources of emissions are. Purchased Goods & Services represents 79.3 percent of our Scope 3 emissions, and within this our major hotspots are: Tuna, Shrimp and Packaging. Collectively, these three hotspots represent over 75 percent in this category and will be the focus of our decarbonization efforts as we move forwards.





4

BUSINESS OVERVIEW

WHO WE ARE

Thai Union Group PCL is the world's seafood leader, bringing high quality, healthy, tasty and innovative seafood products to customers across the world for 45 years.

Today, Thai Union is regarded as one of the world's leading seafood producers and is one of the largest producers of shelf-stable tuna products with annual sales exceeding THB 141.0 billion (US\$ 4.5 billion) and a global workforce of more than 44,000 people who are dedicated to pioneering sustainable, innovative seafood products.

Throughout 2021 our sustainability efforts were recognized as we were again included in the Dow Jones Sustainability Indices, ranking second in the Food Products Industry Index. This marked the eighth year in a row we have been included in the DJSI.

OUR VISION

To be the world's most trusted seafood leader, caring for our resources to nurture generations to come.

OUR GOAL

We are committed to Healthy Living, Healthy Oceans. With a focus on health and wellbeing across our group's portfolio, we will strengthen the growth and profitability of our core businesses and expand into new, attractive areas. We will continue to lead the industry on sustainability while attracting and retaining talent.

OUR MISSION

To be the seafood industry's leading agent of change, making a real positive difference to our consumers, our customers and the way the category is managed.

COMPANY PORTFOLIO

Thai Union portfolio brands include global market leaders Chicken of the Sea, John West, Petit Navire, Parmentier, Mareblu, King Oscar, and Rügen Fisch, along with leading Thai brands SEALECT, Fisho, Qfresh, Monori, Bellotta and Marvo and ingredient and supplement brands UniQ™BONE, UniQ™DHA and ZEAvida. Learn more in our One Report 2021, including consolidated financial statements. View our maps detailing our operations and footprint on the SeaChange® website.

OUR VALUES



Passionate



Humble



Respectful



Responsible



Collaborative



Innovative



5

SEAFOOD SOURCING LOCATIONS

As part of its commitment to transparency, Thai Union is continuing to take part in the Ocean Disclosure Project (ODP), a global platform launched in 2015 by Sustainable Fisheries Partnership (SFP) to allow seafood companies – including retailers, suppliers and fish feed manufacturers – to publicly share the sourcing of their wild-caught and farmed seafood. Through the ODP we publish our global supply chain data in detail, for both wild-caught and farmed seafood.

A new partnership with the SFP announced in 2022 will expand the actions on the transparency of our supply chains on an annual basis. In addition to the previous evaluation provided by the ODP, SFP's Seafood Metrics will allow Thai Union to continue to improve the monitoring, transparency and traceability of its supply chains, as well as assess and monitor its global wild and farmed supply chains used in its businesses in Europe, U.S. and Asia. Seafood Metrics aggregates and tracks information on governance quality, target stock health, human rights risks, and environmental impacts in a company's source fisheries and aquaculture. Additional sustainability indicators, such as certifications, Human Rights Risk Assessment, NGO ratings and traceability will be included in the monitoring.

The map on this page shows the locations of the fisheries and aquaculture farms from which our seafood is sourced. The full, interactive map and data regarding our global supply chain can be found [here](#).

ASSOCIATED FISHERIES





6

SUSTAINABILITY AT THAI UNION

Overview of SeaChange® Sustainability Strategy: Objectives, Programs and Key Progress

Sustainable development is essential to the future of Thai Union's business and our growth; it is fundamental to being a responsible corporate citizen for both our employees and our global community. Being transparent, not only showcasing our achievements, but highlighting the areas we have identified for improvement, is fundamental to our vision of being the world's most trusted seafood leader.

We have a responsibility to set the standard for social, environmental and economic performance across our operations and into our supply chains. Recognizing this responsibility to show leadership, we heeded the calls of our stakeholders with the introduction in 2016 of **SeaChange®**, Thai Union’s sustainability strategy with measurable commitments to delivering real, lasting changes in the way we operate. SeaChange® aims to drive a positive transformation throughout the global seafood industry. We are also committed to “Healthy Living, Healthy Oceans”, recognizing the role that the oceans and seafood play in combating ongoing challenges such as climate change, as well as providing healthy, nutritious diets for consumers. Thai Union will announce a major update to SeaChange® in 2022.

Climate change is now, more than ever, front and center of Thai Union’s focus. We know that significant change is necessary as the world confronts the risks associated with a warming planet. At the COP26 climate summit in Glasgow in 2021, there were stark warnings about the future if action was not taken immediately to tackle climate change and work to keep global warming to 1.5 degrees Celsius.

Having completed our first greenhouse gas inventory across Scope 1, 2 and 3 emissions, in 2022 Thai Union will announce new science-based targets as we seek to pursue more meaningful goals and address the threats that climate change present.

In the coming years, we will work to drive decarbonization programs across our global operations and supply chains. Effective implementation of our climate strategy will entail not only internal efforts, but also collective action with our partners and stakeholders.

Thai Union became a supporter of the Task Force on Climate-related Financial Disclosures (TCFD) in 2021. This year, we will publish our first TCFD Report. We aim to continually improve our climate-related disclosures based on the TCFD recommendations for the benefit of our investors and other stakeholders.

“

In a further demonstration of Thai Union’s leadership in the global seafood industry, the Company paved the path in Thailand for Blue Finance. Thai Union launched its first Sustainability-Linked Loans (SLLs) and Sustainability-Linked Bonds (SLBs), totaling THB 27 billion - the first step towards having 75 percent of our long-term financing in Blue Finance by 2025. An important aspect of Blue Finance is that interest rates for SLLs are linked to Key Performance Indicators (KPIs) around sustainability which, if met, result in being rewarded with lower interest rates.

”



The SLB's structure includes step-up and/or step-down facilities related to the achievement of Sustainability Performance Targets (SPTs) under [Thai Union's Sustainability-Linked Financing Framework](#), where Sustainalytics is the Second Party Opinion, the external organization providing assessment on the Company's Sustainability-Linked Financing Framework. Under this structure, the interest rate payable is adjusted up or down based on whether the Company achieves its agreed targets.

Sustainability strategies are becoming increasingly integrated into the financial strategies of businesses, including Thai Union. The shift into Blue Finance is recognition among not only the business community, but also investors, that climate change is the greatest risk facing the planet and that failure to address the issue and reverse the loss of nature will result in an increased scarcity of resources that businesses rely on. As such, the role of the Chief Financial Officer is becoming more embedded in the approach to sustainability because the success of our sustainability strategy can have a direct impact on our financial performance.

While COVID-19 continued to cause significant disruption to businesses around the world in 2021, including Thai Union, we did not stand still. We maintained our focus on pursuing our sustainability goals and setting the standards for the rest of the industry to follow. We continued to implement programs and policies to further progress on sustainable development. We also continued to work with the broader seafood industry and civil society. As the world emerges from the pandemic, Thai Union hopes that the pursuit of our sustainability commitments will contribute to the post-COVID-19 recovery, and the global efforts to build sustainable and inclusive economies and societies.

In recognition of our efforts to drive positive change across the business and the wider seafood sector, Thai Union was ranked number two in the world in the Food Products Industry of the [Dow Jones Sustainability Indices](#), a family of indices evaluating the sustainability performance of thousands of companies trading publicly around the world. Thai Union has been listed on the index for eight consecutive years. Being listed on the DJSI is an important validation of our sustainability

progress. As the DJSI constantly evolves its scope and requirements, it ensures that Thai Union adapts accordingly to continue its leadership position. The Company was also ranked number one for the second consecutive time on the [Seafood Stewardship Index \(SSI\) of the World Benchmarking Alliance](#), which assessed the contribution of the world's 30 largest seafood companies to the United Nations Sustainable Development Goals.

We think of SeaChange® as a journey that covers every aspect of the seafood business, transparently. This ranges from how we look after the oceans to how we manage our waste; from the responsibility we take for our workers to building brighter futures for the communities around our key sites.

The backbone of our sustainability strategy is the ability to fully trace our seafood—from catch to consumption. With full traceability in place, we will be able to identify, investigate and improve performance on key issues such as labor and responsible sourcing.





seachANGE

OUR OVERARCHING OBJECTIVES



Sustainable seas, now and for future generations



Workers are safe, legally employed and empowered



Combating climate change and promoting healthy diets through sustainable seafood

OUR PROGRAMS



Safe & Legal Labor

Providing safe, legal and freely-chosen employment in our own facilities and in supply chains is critically important to Thai Union.

Safe and Legal Labor Roadmap



Responsible Sourcing

Traceability is the key to improving the transparency and operational practices of the entire seafood supply chain.

Responsible Sourcing Goals and Roadmap



Responsible Operations

The way we operate must be environmentally responsible and show a duty of care for our workers.

Responsible Operations Goals and Roadmap



People & Communities

At Thai Union we take responsibility for improving the lives of those living and working in the regions in which we operate.

People and Communities Goals and Roadmap

SeaChange® is an integrated plan of initiatives, organized into four programs, to drive meaningful improvements across the entire global seafood industry

OUR OPERATING PRINCIPLES

Good Governance

Robust leadership, policies and processes ensure our business is focused on delivering our sustainability objectives and is ethical across all our operations.

Transparency

We will remain transparent in all communications with stakeholders, customers and the industry, sharing our learnings and providing regular updates on our progress.

Partnerships and Collaboration

We have and will continue to actively seek out NGOs, governments and industry partners to work with us on initiatives designed to deliver against our overarching objectives. We will continue to share our findings so the entire industry can benefit from our experience and findings.

SUSTAINABLE DEVELOPMENT COMMITTEE

Thai Union's commitment to sustainability is also demonstrated through the Company's [Sustainable Development \(SD\) Committee](#), which is chaired by Thai Union CEO Thiraphong Chansiri, with Adam Brennan, Group Director, Sustainability, as Co-Chair. The high-level decision-making committee brings together key senior executives throughout the year to consider emerging issues and new policy proposals, and make strategic decisions to maintain Thai Union's sustainability leadership within the industry. The decisions of the SD Committee are communicated to relevant business units and functions for implementation in collaboration with our global Sustainable Development team. Importantly, sustainability is also represented at the highest level of the business, with Mr. Brennan a member of the [Global Leadership Team](#).



UN SUSTAINABLE DEVELOPMENT GOALS AND UN GLOBAL COMPACT

While our work is primarily designed to have a positive impact on the seafood industry, the milestones we achieve under our programs will also deliver against the United Nations Sustainable Development Goals (UN SDGs) and are guided by our commitment to the UN Global Compact (UNGC). This report serves as Thai Union's annual Communication on Progress (COP) to stakeholders. In line with SeaChange®, Thai Union is focused on delivering across all the SDGs but is focused on four contributing to broad societal change in areas where we can have direct influence, including:



Aside from the four SDGs mentioned above, our work also contributes to the realization of other UN SDGs, such as Goal 17 on Partnerships and Goal 12 on Responsible Consumption and Production.

HUMAN RIGHTS

- 1 Thai Union will support and respect the protection of internationally proclaimed human rights; and
- 2 Make sure that they are not complicit in human rights abuses.

LABOR STANDARDS

- 3 Thai Union will uphold the freedom of association and the effective recognition of the right to collective bargaining;
- 4 The elimination of all forms of forced and compulsory labor;
- 5 The effective abolition of child labor; and
- 6 The elimination of discrimination in respect of employment and occupation.

ENVIRONMENT

- 7 Thai Union will support a precautionary approach to environmental challenges;
- 8 Undertake initiatives to promote greater environmental responsibility; and
- 9 Encourage the development and diffusion of environmentally friendly technologies.

ANTI-CORRUPTION

- 10 Thai Union will work against corruption in all its forms, including extortion and bribery.



INNOVATION AT THAI UNION

Innovation is critical not only to the future growth of Thai Union, but also to our position as a global leader in sustainability. Our cutting-edge [Global Innovation Center \(GIC\)](#) is developing new products in the Alternative Protein space, while our Thai Union Ingredients business unit is commercializing innovations developed by the GIC by maximizing the valorization of the whole fish processed by the Company.

GIC houses experts in research, technology, innovation, and business management who apply local consumer insights and market trends to emerging products, processes, and technologies. They also work with external partners including universities, research institutions, NGOs and strategic corporate partners, allowing for the transfer of knowledge.

GIC is heavily involved in projects that support Thai Union's sustainability outcomes, including full utilization of products to move towards zero food waste, sustainable packaging solutions, alternative proteins, healthy meal options and products for improved vitality. **(SDG 9 - Industry, Innovation and Infrastructure).**



During 2021, Thai Union launched Alternative Protein as a category under the 'OMG Meat' brand in Thailand, the beginning of a journey to build the 'alternative seafood' category globally. The first products to emerge under this category were plant-based tuna and crab, with plans to soon introduce plant-based shrimp.

[Thai Union Ingredients \(TUI\)](#) collaborates closely with the GIC as part of its efforts to commercialize its innovations while creating a sustainable future for the tuna industry. TUI operates a tuna oil extraction plant in Samut Sakhon, Thailand, an oil refinery in Rostock, Germany and another oil extraction plant in the Seychelles. Both oil extraction plants launched in 2021. TUI also opened a new bone powder production facility in i-Tail Corporation in southern Thailand during the year. By valorizing the full potential of fish, TUI aims to contribute to Thai Union's commitment to "Healthy Living, Healthy Oceans", with



fully traceable products, starting with sustainable sourcing, preserving its natural functionality through gentle manufacturing processes and supplying these ingredients to consumers who process it into a wide range of healthy consumer products.

While Thai Union believes strongly that traditional animal proteins will continue to play a large role in the world, we must also recognize that demand is growing for plant, insect and cell-based proteins. In line with this, Thai Union's venture fund continued to invest in a number of new startups during 2021, including California-based BlueNalu Inc, one of the world's leading cell-based seafood companies which plans to introduce a wide variety of cell-based seafood products including mahi mahi and bluefin tuna. The Company also invested in ViAqua Therapeutics, an Israel-based biotechnology company and developer of an orally administered RNA-particle platform to promote and improve animal health in aquaculture; invested in Israel-based Aleph Farms, one of the world's leading cell-cultivated meat companies; and invested in Orgafeed, one of the leading insect-based pet treat start-ups in Thailand. In a world where all fish are caught from sustainable fisheries, coupled with population growth, it is going to increase the pressure on the availability of healthy proteins, which is why our innovation in areas such as Alternative Protein is so vital to our future.

Furthermore, it is important to us to develop the seafood industry of the future. In 2019, in partnership with the National Innovation Agency of Thailand and the Faculty of Science at Mahidol University we established [SPACE-F](#), the first and most comprehensive global FoodTech startup incubator and accelerator based in Thailand. In 2021, SPACE-F welcomed 18 startups to the third cohort with half of them coming from overseas, consisting of nine accelerators and 9 incubators.

Thai Union also continues to engage with SPACE-F alumni through product trials and investment. In 2020, Thai Union's corporate venture fund invested in SPACE-F alumni HydroNero, a Germany high-tech aquaculture technology company which provides systems to monitor the quality of water for feeding and farming of shrimp. HydroNeo's smart aquaculture management system has been installed at the shrimp farm operated by Okeanos Food, a Thai Union subsidiary. You can read more on page [74](#).



Sustainability can only be achieved through collaboration and shared goals, as highlighted in [UN SDG 17 – Partnerships for the Goals](#). We are committed to change and leading by example to help improve the industry as a whole. A key partnership for Thai Union remains the [Seafood Business for Ocean Stewardship \(SeaBOS\)](#). As a founding member of SeaBOS, we are part of a significant platform for collaboration between science and industry. In 2021, Thai Union President & CEO Thiraphong Chansiri was appointed Vice Chair of SeaBOS, a position of great honor to us and a further demonstration of our commitment to industry-wide initiatives for change.

During the year, Kevin Bixler, Thai Union's Global Director of Group Fish Procurement, was appointed as Chair of the [International Seafood Sustainability Foundation's \(ISSF\)](#) Board of Directors. Thai Union is a founding ISSF participating company, working with other sustainability leaders to ensure continued progress towards the long term sustainability of tuna fisheries.

Thai Union is also taking part in the [Ocean Disclosure Project](#), a global platform where seafood businesses publicly share details on the sourcing of their seafood, as part of our commitment to traceability and transparency to improve the operational and sourcing practices of the entire seafood supply chain.

As the world continued to deal with the COVID-19 pandemic, Thai Union worked with organizations globally to provide support, donating healthy and nutritious products, protective clothing and other supplies to local communities, hospitals, schools and centers caring for people impacted by the virus. We also provided ongoing support for our employees in this challenging situation, and have adapted the work environment across our offices and manufacturing locations to dynamically react to the respective local situation and requirements. We have also deployed initiatives to ensure employees are able to balance their personal and professional responsibilities, while prioritizing their emotional, mental and physical wellbeing.

CASE STUDY 1: BLUE FINANCE

Ocean stewardship is coming into more prominent focus at Thai Union as we push towards the next stage of our sustainability strategy and develop a more formal response to climate change. An important element of the Company's expansion of its work on this issue is the pursuit of [Blue Finance](#).

2021 was an historic year for Thai Union as it paved the path in Thailand for Blue Finance, a further demonstration of our leadership across the global seafood industry as we continue to explore new opportunities to drive change.

Thai Union launched its first Sustainability-Linked Loans (SLLs) and Sustainability-Linked Bonds (SLBs) during 2021, totalling THB 27 billion. That was just the first step towards having 75 percent of our long-term financing in Blue Finance by 2025.

An important aspect of Blue Finance is that interest rates for SLLs and SLBs are linked to Key Performance Indicators (KPIs) around sustainability which, if met, result in being rewarded with lower interest rates. The Sustainability Performance Targets (SPTs) and the Key Performance Indexes (KPIs) of such SPTs for the SLLs and SLBs include:



- Being included in the DJSI Emerging Markets and ranked in the top 10 companies for the DJSI Food Products Industry Index
- Reducing Thai Union's Scope 1 and Scope 2 carbon emissions from manufacturing operations by 4 percent annually (carbon intensity)
- Increasing oversight in our sourcing transparency of tuna supply chains through an increase by 5 percent each year in the use of electronic monitoring (EM) and/or human observers onboard tuna vessels, concluding with 100 percent coverage by the end of 2025.

Investors in the SLBs will be entitled to a lower or higher coupon should the Company achieve or fail to achieve these SPTs/KPIs in 2023 and 2026, while as, these will be tested yearly for the SLLs.

To ensure the SPTs and KPIs are relevant, material, and ambitious, [Sustainalytics](#) was appointed as a second-party opinion provider in giving an independent opinion on the Environmental, Social and Governance (ESG) program at Thai Union and alignment to the Sustainability-Linked Loan Principles (SLLP) 2021 as published by the Loan Market Association (LMA) and the Sustainability-Linked Bonds Principles (SLBP) 2020 as administered by the International Capital Market Association (ICMA). External organizations will also verify each KPI to ensure the evaluation is conducted fairly and independently.

Thai Union's Blue Finance in 2021 included the Company's inaugural SLL which was closed in both Thailand and Japan, with a term of five years. The SLL was split into two separate credit facilities – denominated in Thai baht, U.S. dollars and Japanese yen - equivalent to THB 12 billion. It was oversubscribed by a factor of more than two times the initial facility size when first launched to the markets.



Separately, Thai Union successfully priced a THB 5 billion seven-year senior, unsecured SLB for institutional investors. Not only was it the first SLB in Thailand but also the first globally to introduce step-up and/or step-down facilities related to the achievements of Sustainability Performance Targets.

In addition, Thai Union also issued a THB 6 billion 5-year and 10-year senior, unsecured SLB in Thailand; a THB 4 billion 5-year SLL in Japan; a THB 2 billion sustainability-linked revolving loan in Thailand; and secured USD 70 million in sustainability-linked supply chain finance in Thailand.

Thai Union's leadership in Blue Finance was recognized at the Business+ Product of the Year Awards, hosted by Business+ Magazine and the College of Management, Mahidol University. The Company was also recognized with awards for Best Issuer for Sustainable Finance and Best Deal (Thailand) – Fixed Income/Sustainability-Linked Bond from The Asset, Hong Kong, followed by the Country Award – Thailand Capital Markets Deal from IFR Asia, UK. Lastly, Thai Union was nominated for Best Corporate ESG Bond of the Year and Best Distinguished Issuer Awards hosted by ThaiBMA.

CASE STUDY 2: HEALTHY LIVING

Healthy Living forms one half of our global commitment to “Healthy Living, Healthy Oceans”. It's also at the core of what Thai Union has done for more than 40 years – providing consumers around the world with seafood products that are healthy and nutritious.



Consumers are shifting towards healthier lifestyles, a trend that accelerated during the COVID-19 pandemic. Thai Union has responded to their evolving needs by pivoting towards new product segments and new, innovative products.

A case in point is the establishment of Thai Union Lifescience (TUL) in 2021. Leveraging Thai Union's strengths in tuna sourcing and the Global Innovation Centre (GIC), the new subsidiary aims to develop and distribute supplements and healthcare products to health-conscious consumers.



A key milestone of Thai Union Lifescience was the launch of ZEAvita, its flagship supplement brand. In its initial stage, ZEAvita has focused on four products: Collagen from fish, Tuna Bone Calcium, Tuna Head Fish Oil, and Vitamin IMMU +8 (Vitamin C + D3 + Zinc + other vital vitamins).

The supplements platform itself, borne out of the vision for full responsible utilization of all viable materials that can be derived from every single tuna harvested from the ocean, testifies to Thai Union's full commitment to sustainability. No part of the fish should go to waste.

Clinicals conducted have shown numerous benefits from tuna by-products; from better bioavailability of the hydroxyapatite calcium format derived from tuna bone, to the anti-inflammatory effect achieved with the DHA-rich tuna oil.

Another value-added product, Tuna Essence was formulated based on unique co-product characteristics preserved during Thai Union's patented tuna filleting process. Analysis has revealed several tuna-derived polypeptides present in the Essence and for which there are various anecdotal testimonials on its benefits.



At the other side of the range, potentials for clinically provable therapeutics are also being explored. Areas of interest for by-product application include emotional/cognitive health, vascular wellbeing, renal health and cancer cachexia prevention among others.

Separately in 2021, another subsidiary, Thai Union Ingredients along with Inter Pharma announced a joint investment in Interpharma-ZEAvita. The new strategic joint venture combines Thai Union's expertise in marine ingredients and R&D with Inter Pharma's strength in supplement sales and distribution. In 2021, Interpharma-ZEAvita launched products that are essential for brain, eye and heart health.

These actions underline Thai Union's commitment not only to expand our 'Healthy Living' portfolio for consumers through innovation and collaboration, but also to ensure the sustainable use of ocean resources in parallel.



CASE STUDY 3: SPACE-F + GIC

Innovation is essential for the future growth of Thai Union, and through the world-class [Global Innovation Center \(GIC\)](#), the Company is developing a suite of new products for consumers – from supplements to alternative protein.

GIC has a team of scientists and researchers who digest insights from consumers around the world along with ever-changing market trends, and then uses that knowledge to develop innovative products.

Thai Union is also an active supporter of open innovation, and the GIC works closely with a broad range of stakeholders including academia, research institutions, NGOs, and strategic corporate partners.

An important element of Thai Union's approach to open innovation has been its deep involvement in [SPACE-F](#), Thailand's first global food-tech startup incubator and accelerator program. Thai Union was a joint founder of SPACE-F in 2019, along with Thailand's National Innovation Agency and Mahidol University's Faculty of Science, with the purpose of growing a startup ecosystem dedicated to deep food-tech.

SPACE-F acts as a central platform to gather resources from corporates, venture capitalists, corporate venture capitalists, universities and government to develop and promote deep-tech and innovative food-tech startups with speed and effectiveness.

Many of the startups under SPACE-F focus on developing sustainable products and delivering sustainability solutions.

Since graduating, SPACE-F Batch 1 startups have been able to scale their technologies, gain further traction and investments. The initial 15 startups comprised 7 Incubator and 8 Accelerator teams covering sectors such as Health and Wellness, Alternative Proteins, Smart Manufacturing, Novel Foods and Ingredients, Restaurant Tech, Biomaterials and Chemicals, Food safety and Quality and Smart Food Services.

From the Batch 1 SPACE-F startups, Thai Union announced investments in Alchemy Foodtech Pte. Ltd., Manna Foods Co, and HydroNeo GmbH, which focus on functional nutrition, insect protein, and aquaculture value chain technology, respectively.

In 2021, Batch 2 startups at SPACE-F were successful in conducting proof of concept trials, and launched products into the market. The Batch 2 cohort consisted of 19 startups, including 10 Incubator and 9 Accelerator teams.



Thai Union also saw the success of the Green Giving project 2 in collaboration with Trash Lucky, a SPACE-F Batch 2 alumni, to donate 1,000 personal protective equipment made from recycled PET bottles to frontline medical workers. In November 2021, Thai Union announced an investment in Orgafeed, a leading insect-based pet treat producer and alumni of SPACE-F Batch 1.

Batch 3 of SPACE-F was announced with 18 startups from Thailand, Singapore, the U.S., Canada, Finland, France, Hong Kong and Poland. These include start-ups that are developing high-protein ingredients made using renewable raw materials; a food packaging solution, plastic-alternative made from agricultural waste; developing functional ingredients made of wild mushroom extracts; and developing meat alternatives using a high protein proprietary yeast blend.

SPACE-F is helping to advance innovation in food tech and sustainability, in line with Thai Union's commitment to 'Healthy Living, Healthy Oceans.'







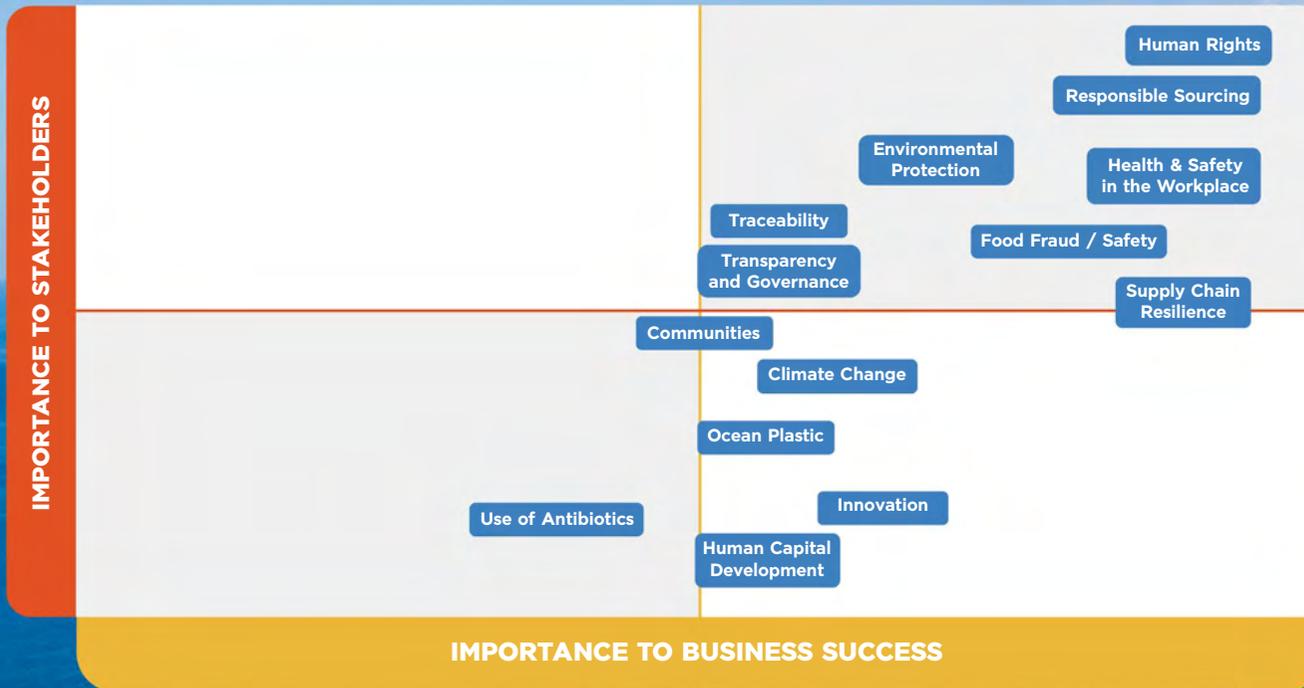
MATERIAL ISSUES AND STAKEHOLDER ENGAGEMENT



Materiality in Risk Assessment One way Thai Union assesses its materiality is through our risk management procedure. Through reviewing activities and partnerships, assessing forthcoming legislation and the implementation of regulations, customer preference and feedback, as well as media profile and risk, Thai Union continuously monitors the materiality of issues and the impact they have on our internal risk profile and those risks are then presented quarterly to the Risk Management Committee.

It is important to us that we not only address the issues that we understand are important to us as a global seafood leader, but that we are also tackling the issues that are of greatest importance to our stakeholders and partners around the world.

MATERIALITY MATRIX



On our previous Materiality Matrix, the top issues followed the pillars of Thai Union’s SeaChange® strategy, with Human Rights and Labor Protection and Responsible Sourcing the top priorities. Thai Union is also continuing to work to address these material issues with academia, with the nine other largest seafood companies in the world through the *Seafood Business for Ocean Stewardship (SeaBOS)*, and with external organizations such as the *Global Ghost Gear Initiative (GGGI)* to tackle the growing problem of ocean plastics. We are also constantly working towards an improved environmental performance, including reducing our carbon footprint and greenhouse gas (GHG) emissions. These issues will remain key priorities for Thai Union for the next decade and beyond of SeaChange®.

Thai Union is committed to listening to customers and better understanding their needs. As part of this, the Company is working with independent consultants Key Traceability to conduct a review of our customers’ sustainability commitments, so that we can respond and provide support so they are able to achieve their goals. This is part of Thai Union’s collaborative approach to the way we operate. As part of efforts to work with customers and other stakeholders, Thai Union will also conduct a new survey and Materiality Index in 2022. Initial discussions with customers have indicated a number of emerging priorities which could impact the current Materiality Index, including stronger commitments on climate change. The issue of climate change is also taking on heightened importance among a broader range of stakeholders including investors, NGOs, regulators and international organizations.

Given Thai Union’s global scale of operations, our material issues and impacts are complex and transcontinental. Through a materiality assessment, we have analyzed our worldwide operations to identify and prioritize the most important issues to our stakeholders and our business as a whole. Thai Union regularly engages with our key stakeholders, allowing us to understand and prioritize our sustainability risks and define appropriate responses to emerging corporate challenges. This includes conducting a stakeholder engagement process to review and input on our SeaChange® goals. Thai Union will announce a major update to SeaChange® in 2022.

FEEDBACK FROM THAI UNION'S STAKEHOLDERS ALONG THE VALUE CHAIN AND OUR RESPONSES

OUR STAKEHOLDERS	ISSUES	THAI UNION RESPONSES
Investors	<ul style="list-style-type: none"> • Improvement of business performance • Good governance • Transparency of information 	<ul style="list-style-type: none"> • Transparency and governance (anti-corruption, data disclosure, tax policy and reporting) • Investor Relations Communications team, quarterly face-to-face investor updates with sustainability briefing
Suppliers	<ul style="list-style-type: none"> • Social and environmental responsibilities • Fair trade • Consistency expectation • Increasing orders 	<ul style="list-style-type: none"> • Climate change and environmental protection • Responsible sourcing (traceability, viability) • Vessel Code of Conduct • Supplier audits and capacity building
Customers	<ul style="list-style-type: none"> • Product quality (health and nutrition) • Eco-labelling (e.g. MSC, dolphin safe, ASC, BAP, carbon footprint of products) 	<ul style="list-style-type: none"> • Innovation and product responsibility (quality, food safety) • Increased customer communication and face-to-face meetings on sustainability held globally • Offering more sustainable alternatives to meet customer demand • Responsible sourcing • Climate change and environmental protection • Updates on GGGI partnership, our Tuna Commitment, Sourcing Transparency report with WWF



OUR STAKEHOLDERS	ISSUES	THAI UNION RESPONSES
End-consumers	<ul style="list-style-type: none"> • Eco-labelling • Competitive price • Food safety • Product quality (health and nutrition) 	<ul style="list-style-type: none"> • Innovation and product responsibility (quality, food safety)
	<ul style="list-style-type: none"> • Social and environmental responsibilities • Eco-labelling (e.g. MSC, dolphin safe, ASC, BAP, carbon footprint of products) 	<ul style="list-style-type: none"> • Responsible sourcing • Can trackers and traceability data as well as product information
Employees	<ul style="list-style-type: none"> • Fair labor practices • Fair compensation and benefits • Safety and wellness • Career development and opportunity • Work-life balance 	<ul style="list-style-type: none"> • Human rights and fair labor practices • Human capital development • Management program • Global program of harmonization of work standards • Brand ambassador program and Thai Union Global rollout
Migrant Workers	<ul style="list-style-type: none"> • Fair compensation and benefits • Fair labor practices • Safety and wellness 	<ul style="list-style-type: none"> • Human rights and fair labor practices • Human capital development
Communities	<ul style="list-style-type: none"> • Legal compliance 	<ul style="list-style-type: none"> • Transparency and governance (anti-corruption, data disclosure, tax policy and reporting)
	<ul style="list-style-type: none"> • Social and environmental responsibilities • Partnership in community development • Socioeconomic development 	<ul style="list-style-type: none"> • Nutritional information • Communities
Government	<ul style="list-style-type: none"> • Legal compliance • Participation in government programs 	<ul style="list-style-type: none"> • Transparency and governance (anti-corruption, data disclosure, tax policy and reporting)



OUR STAKEHOLDERS	ISSUES	THAI UNION RESPONSES
NGOs	<ul style="list-style-type: none"> • Social and environmental responsibilities • Marine conservation • Participation in social and environmental programs 	<ul style="list-style-type: none"> • Climate change and environmental protection • WWF Sourcing transparency report
	<ul style="list-style-type: none"> • Transparency of information 	<ul style="list-style-type: none"> • Transparency and governance (anti-corruption, data disclosure, tax policy and reporting) • Thai Union Europe transparency report
International organizations	<ul style="list-style-type: none"> • Regulatory compliance • Transparency of information 	<ul style="list-style-type: none"> • Transparency and governance (anti-corruption, data disclosure, tax policy and reporting)
	<ul style="list-style-type: none"> • Social and environmental responsibilities • Transparency of information 	<ul style="list-style-type: none"> • Joint workshops such as with the ILO Communities
Academia	<ul style="list-style-type: none"> • Social and environmental responsibilities • Marine conservation • Participation in social and environmental programs 	<ul style="list-style-type: none"> • Climate change and environmental protection • Communities • Collaboration with Stockholm Resilience Centre through SeaBOS • Collaboration with University of Sydney
Media	<ul style="list-style-type: none"> • Transparency of information • Timeliness of information 	<ul style="list-style-type: none"> • Transparency and governance (anti-corruption, data disclosure, tax policy and reporting) • Engagement on material issues

Further to this, Thai Union has continued to improve its Corporate Governance. The Board of Directors has considered and approved Thai Union’s Securities Trading Policy so as to specify rules and practice guidelines on securities trading activities of Directors, Executives and Designated Persons.

The Board also has considered and approved amendments to the Corporate Governance Policy in order to enhance good governance at the Company, raising the level of corporate governance to align with international best practice and the guidelines recommended by the regulatory bodies. The main focuses are on Board of Directors’ issues such as the number of external directorships they can hold in publicly listed companies (shall not serve on more than four other publicly listed companies), the appointment of a Lead Independent Director, and Board diversity.



* The above survey was conducted prior to the end of 2020, with a new survey to be held in 2022.



8

SAFE & LEGAL LABOR

Providing safe, legal and freely-chosen employment for workers in our own facilities and in our supply chains is critically important to Thai Union. We meet or strive to meet international frameworks such as the UN Guiding Principles on Business and Human Rights, legislation such as Modern Slavery Acts and most importantly, ensure that people have safe and legal work to help them fully participate in society. While we have significant programs in place for our own employees and for workers in our supply chain, we are also partnering with specialist organizations and NGOs to ensure that those working in the wider industry are also protected.



Thai Union does not own any vessels but we are using our leading market position to improve labor conditions throughout the entire seafood supply chain. We know that full traceability of all our seafood products, from catch to consumption, will help accurately identify gaps in safe and legal labor and, critically, give workers a voice. We are committed to this work and to helping the industry deliver against **UN SDG 8**, aiming to provide decent work and economic growth for communities and individuals throughout the world.



As a member of the UN Global Compact, Thai Union believes it is our responsibility to respect the human rights within our operations and the value chain. In 2021, we continued to make progress in protecting our workers, customers, consumers and local communities where we operate, while also being an advocate for workers to ensure their rights are protected. While COVID-19 continued to cause disruption to business operations around the world in 2021, Thai Union continued to pursue its commitment to labor and human rights.



The Company implemented comprehensive health and safety measures for our employees across all of our work sites in 2021, including social distancing, wearing of personal protective equipment (PPE) as well as workforce clustering. Thai Union also implemented a health and safety training program for fishers working out of Thailand, and conducted remote social audits of fishing vessels and online training for suppliers. Thai Union has also worked to raise social compliance standards of fishing vessels in the Company's supply chain through continuous implementation of our [Vessel Code of Conduct \(VCoC\) and Vessel Improvement Program \(VIP\)](#).

As part of Thai Union's commitment to continuous improvement, the Company has completely transitioned its ethical recruitment practices in 2022 to be aligned with the international standard reflecting the Dhaka Principles for Migration and Dignity and the Employer Pays Principle to ensure that no worker should pay for a job – the cost of recruitment should be borne not by the worker but by the employer. An updated [Ethical Migrant Recruitment Policy](#) was published in 2021, and since January 1, 2022, the Company has started implementing a full [Employer Pays Principle](#) for all recruitment of migrants to work in our Thailand-based operations.

Thai Union knows that the ability to trace all our seafood products and implement strong management of our supply chains supports is critical to enabling our safe and legal labor work programs. An example of this work was completed as a result of the Vessel Code of Conduct work in Thailand with our pet care

customers Nestlé, The J.M. Smucker Company and Mars Petcare who have been working with us to collaboratively fund projects to improve the working conditions of fishers. Thai Union with partners, Creative Contracts, trialed a new 'Comic Contract' for fishers working on Thai vessels, part of the area for improvement in fishers understanding their terms and worker rights. The comic contract trial will support fishing vessels to ensure the required content meets Thai legislation and also the implementation of the ILO C188 Work in Fishing Convention. Further trials will be conducted in 2022. See more details in Case Study 59.

Since 2018, Thai Union has worked with third party consultants to complete assessment of vessels that we source from against the Vessel Code of Conduct. To date the scope has focused on global tuna procurement and vessels in Thailand and has covered a range of gear types including purse seine, pole and line and longline. The program has interviewed approximately 1,000 crew and suppliers, audited over 200 vessels and successfully developed new protocols to allow the continuation of auditing work post-COVID-19. Plans are on-going to expand the audit contents to include topics such as recruitment mapping, and also commence activity in new geographies.

In 2021, Thai Union published its [Anti-discrimination & Anti-harassment Policy](#) as part of a commitment to conduct business with integrity, openness and respect for universal human rights, including the rights to equality and non-discrimination.

The seafood industry is labor intensive and has a complex supply chain with many stakeholder groups involved. The industry faces real challenges like human trafficking, human rights abuses and labor exploitation. Our [Human Rights Due Diligence Framework](#) comprises six pillars: Basic Statement & Policies on Human Rights, Assess Risks, Prevent, Detect, Remedy and Continuous Monitoring & Disclosure, and its implementation is guided by three operating principles: Good Governance, Transparency and Partnerships and Collaboration. Thai Union updated its [Human Rights Policy](#) and [Human Rights Risk Assessment](#) in 2021, with a commitment to use our leadership role to address human rights issues not only in our value chain but also the broader global seafood industry. All findings from the assessment help Thai Union to design appropriate and proportionate human rights policies and prevent, detect and remedy non-compliance among our staff and suppliers. In 2021, Thai Union also began to conduct a living wage assessment. The complexities of Thai Union's supply chain make it essential to have collaborations and partnerships which can further the Company's reach and also enhance our on-the-ground resources and insights. This includes working with partners such as the Migrant Worker Rights Network and the Issara Institute.

CASE STUDY 4: ETHICAL MIGRANT RECRUITMENT

At Thai Union, protecting our workers is one of the Company's top priorities.

A key commitment at Thai Union is to provide safe, legal and freely-chosen employment in our own facilities and in our supply chains. This forms part of the Company's commitment to **UN Sustainable Development Goal 8 - Decent Work and Economic Growth**.

As part of a commitment to continuous improvement, Thai Union issued its first Ethical Recruitment Policy in 2016, which was revised at the beginning of 2021, and then updated again at the end of 2021 to fully align with the international standard reflecting the Dhaka Principles for Migration and Dignity and the Employer Pays Principle to ensure that no worker should pay for a job – the cost of recruitment should be borne not by the worker but by the employer.

Our recruitment and hiring processes must meet our obligations under the UN Global Compact, the United Nations Guiding Principles on Business and Human Rights, and our own Business Ethics and Labor Code of Conduct.

So, starting on January 1, 2022, Thai Union began implementing a full Employer Pays Principle for all recruitment of migrants to work in its Thailand-based operations.

Under the Ethical Migrant Recruitment Policy, it provides a set of principles to ensure that recruitment and hiring are managed consistently, professionally, fairly and transparently. The policy aims to ensure the safe migration and reduce the potential vulnerability of migrant workers to labor exploitation, including the worst forms of child labor and human trafficking, and that the integrity of Thai Union is upheld. You can read more about the policy [here](#).

As part of the recruitment process, Thai Union now pays for all fees and costs incurred by workers seeking to secure employment or placement, whether it be new workers, or recruiting existing workers based on the renewed employment process. Thai Union or its relevant subsidiary are responsible for communicating to jobseekers, workers, recruitment agents, and related parties about the types and amount of recruitment-related fees and costs covered by the Company. Jobseekers are informed in the early stages of recruitment.



THAI UNION'S FISHER WORK & WELFARE PROGRAM

Since 2017, we have been working to drive continuous improvement of labor and ethical conditions in the fishing sector through the implementation of our Vessel Code of Conduct (VCoC) and Vessel Improvement Program. The fisher work and welfare program aims to provide clear guidance to the fishing vessels from which we source and support our work towards

UN SDG 8 - Decent Work and Economic Growth.

The VCoC builds on the Thai Union [Business Ethics and Labor Code of Conduct](#), by maintaining the same 12 fundamental principles but having vessel specific clauses under each of the Principles. It was developed with expertise from engagement with International Labour Organization and the International Transport Workers' Federation (ITF). Since its publication, we have been reviewing it and amending it to meet best practices and shifting standards in the sector. In February 2022, version 2.0 of the VCoC was published with the following languages on the [website](#): Korean, Indonesian, Spanish, Vietnamese, Traditional Chinese and Simplified Chinese.

Thai Union and its subsidiaries only accept migrant workers sourced from formally approved or registered/licensed third party suppliers, such as a recruitment agency, or applications made by workers directly to the Company. In addition, all workers must be provided with all information, including a copy of the contract, in their own language or a language they understand.

You can read more about the fees paid for by Thai Union or one of its subsidiaries [here](#).

An important element of this policy is ensuring its compliance. Recruitment agencies shall authorize Thai Union and its designated agents to engage in monitoring activities to confirm compliance with the policy, including through announced or unannounced audits and grievance mechanisms. These mechanisms include internal processes such as human resources support, a confidential helpline and the Worker Welfare Committees. In addition, third party external and independent processes including helplines and investigation of complaints by local NGOs are also in place and accessible for all employees of Thai Union and its subsidiaries.

In instances of non-compliance, Thai Union and its subsidiaries will seek to work with the partner recruitment agencies to seek a resolution and effective remedies.



ADAPTING THROUGH THE PANDEMIC

Since early 2020, with the consultants, we have been implementing new ways of working to deal with the travel restrictions and impacts of COVID-19. Owing to these vessel inspections and the ability to interview crew has been less than previous years. However, the teams remained committed to getting to a port as and when it was possible to do so, safely.



Thai Union has maintained close contact with the consultants and our suppliers to facilitate completion of remote audits, organizing visits and understanding the challenges faced during this difficult time.

In 2021, the following activities were completed to develop the program:

- The extension of the VCoc to include an Ethical Recruitment Exercise was completed and companies supplying Thai Union with tuna were assessed against it. This means that the auditors were talking with our suppliers and the agencies that they use to recruit fishers to work on board their fishing vessels. It was also possible for auditors to directly interview the recruitment agencies.
- The 2020 updated 'benchmarking' exercises, to deepen understanding of other standards and codes, began a program of completing detailed audits and analysis reporting.
- Consultants were contracted to expand the fisheries audited in 2022 and also to oversee global improvements.
- We continued work with AENOR and Global Seafood Assurances / RFVS to share knowledge and resources to create efficiencies across our programs which establish standards and best practice for fishing vessels and crew welfare.

FOCUS ON CONTINUOUS IMPROVEMENT

With the more desk-based focus of activity over the past year, considerably more time was spent on delivering action plans to drive improvement. This can only be achieved by collaborating with our suppliers, experts and Thai Union colleagues. The results of the audits are used to inform and develop corrective action plans. Here are some activities completed in 2021:

Thai Union was able to accompany the tuna vessel auditors on site visits to Ghana, Seychelles and Mauritius. A full blog on the activities of this trip can be found [here](#). Activities that Thai Union did were: shadow the audits on vessels to help understand on-board challenges and ensuring global harmonization in our auditing program, presented the priorities for markets to suppliers on the VCoC and environment, discuss delivering improvement plans. Additionally, Thai Union met with the Ghanaian Fisheries Commission team to discuss both the fishers work and welfare, the FIPs and the intersects with the government's work.

Since October 2020, a Ghanaian consultant has been contracted to work together with the Ghana Tuna Association, Thai Union and the audit team to implement improvements. The work closed out 58 Areas for Improvement (AFIs) across nine vessels so far by completing crew training, changing contracts, and implementing policies and procedures regarding crew payments and health and safety on board.

In October 2019, Thai Union signed a Memorandum of Understanding (MOU) with our customers Nestlé, The J.M. Smucker Company and Mars Petcare to collaboratively fund projects throughout 2021 to improve the working conditions of fishermen on vessels, focusing

on the findings from vessel audits in Thailand. Although there were delays due to COVID-19 restrictions, two main projects were able to progress this past year:

- Planning continued for the rollout of workshops to train suppliers and their crew to the VCoC, including an emphasis on health and safety. This was able to start in February 2022, in Ranong in partnership ITF Fishers Rights Network (FRN).
- We were able to complete the first sessions for our joint project with [Creative Contracts](#) to trial a 'comic contract' with migrant fishers working in the Thai fishing industry. These contracts use pictures and simple graphics to explain the contracts, making them much more visual and accessible. These contracts include all the content from the Official Thai Government contract and support suppliers by adding all of the other relevant legislation, as well as ILO C188 Work in Fishing Convention.

Thai Union worked to procure medical kits which contain essential medicines that would be on all of the vessels supplying us. We are working with ITF / FRN to distribute these to over 500 vessels in the first half of 2022. This opportunity will also be used to raise awareness of the importance of working on improvements to fully meet the VCoC.



A priority activity in Thailand in 2021 was to develop and establish a formal 'Supplier Change Management Program'. Consultants supported us to develop the framework and will continue to monitor the implementation and progress that is made. In 2022 the work will be ongoing through collaboration with our suppliers to create meaningful changes and develop new projects to address findings in the audit program.

The VcoC program is moving to a stage in its implementation where we have developed a good understanding of the challenges and the work that can be completed to support suppliers meet new industry standards. The critical elements will remain the same; speak to fishers, develop clear actions and recognize the hard work to make changes. As the program expands by adding new fisheries, recruitment mapping exercises and environmental criteria, we will still have improving the lives of the fishers at the heart of the program and we will focus engagement in this way.

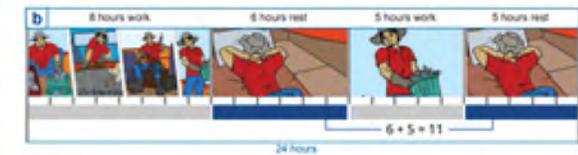
THAILAND FISHING VESSEL EMPLOYMENT CONTRACT



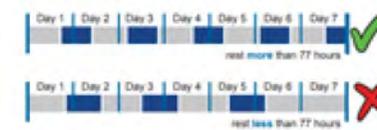
6. What are my work hours?

In any 24 hours, you must have at least 10 hours to rest.

Examples:



In 7 days you must have at least 77 hours to rest.



Thailand Fishing Vessel Employment Contract



AUDITS & REQUIREMENT MAPPING

In 2021, the amount of vessel inspections remained lower than we wanted due to COVID-19 but instead we ramped up the work through the remote audit approach that we developed and by safely taking opportunities to travel when there were openings. Auditing the tuna vessels that are participating in the FIPs which Thai Union sources tuna from remained a priority. See table for details of the percentage of vessels audited in the FIP in total.

As the focus was engaging remotely at the supplier level, we have included the figure of the number of vessels that the supplier level work has covered – this illustrates the work of the improvement program where at a supplier-level better policies, processes and management can be put in place to cover all vessels owned by that company. Vessel inspections and crew interviews are still required to complete the audit process which means that a site visit only has to focus on these activities rather than the document reviews.

As of the end of 2021, 115 fishing vessels, or about half of all the vessels in the tuna FIPs that Thai Union sources from, have undergone the VCoC audit. The table below shows the number of vessels in the FIPs and the number of vessels that have had a vessel audit inspection at least once up to the end of the different years. In addition several vessels have had one or two re-audits to follow up on the improvement projects. Follow-up on-site vessel inspections and interviews of crew are required on 47 vessels following the remote audits which have been included in the data below.

Tuna FIP Name	2019			2020			2021		
	Vessels in FIP	% audited	# audited	Vessels in FIP	% audited	# audited	Vessels in FIP	% audited	# audited
Pacific Longline	17	65%	11	17	100%	17	28	54%	15
Indian Ocean Longline	36	97%	35	36	100%	36	47	81%	38
WCPO Purse Seine	25	12%	3	25	52%	13	37	35%	13
Indian Ocean Purse Seine - SIOTI	28	11%	3	29	55%	16	29	55%	16
Eastern Atlantic Purse Seine - EASTI	37	8%	3	37	8%	3	37	11%	4
Ghana Pole and Line	16	38%	6	16	69%	11	12	58%	7
Liancheng HS Longline	41	5%	2	41	54%	22	41	54%	2
Senegal Pole and Line	9	0%	0	9	0%	0	3	0%	0
TOTAL	209	30%	63	210	56%	118	234	49%	115



In 2020, Thai Union and the Key Traceability auditing team used a benchmarking exercise to determine ethical recruitment requirements to be added to the Thai Union VCoC. This resulted in an extension of VCoC. As the recruitment is managed at company-level, each supplier needs one recruitment mapping exercise and improvement plans are made at fleet-level. The process includes requesting additional information from the fishing companies, such as recruitment processes and procedures, and MOUs with the agencies, and the information from the agency is then provided to auditors for the purpose of conducting interviews with the agencies themselves.

Recruitment mapping exercises detail the recruitment journey of the fishers and explains the links between receiving and sending country agencies including country information, costs borne by the vessel owner, agency, and fisher, and the complete recruitment journey. Mapping exercises have been conducted covering approximately 55 vessels across three suppliers. Common findings include the lack of due diligence conducted by the companies on the recruitment supply chains.

The following summarizes key work achieved in the VCoC program in the tuna FIPs during 2021:

Recruitment mapping exercises covering 63 vessels and an average of 14 crew per vessel.

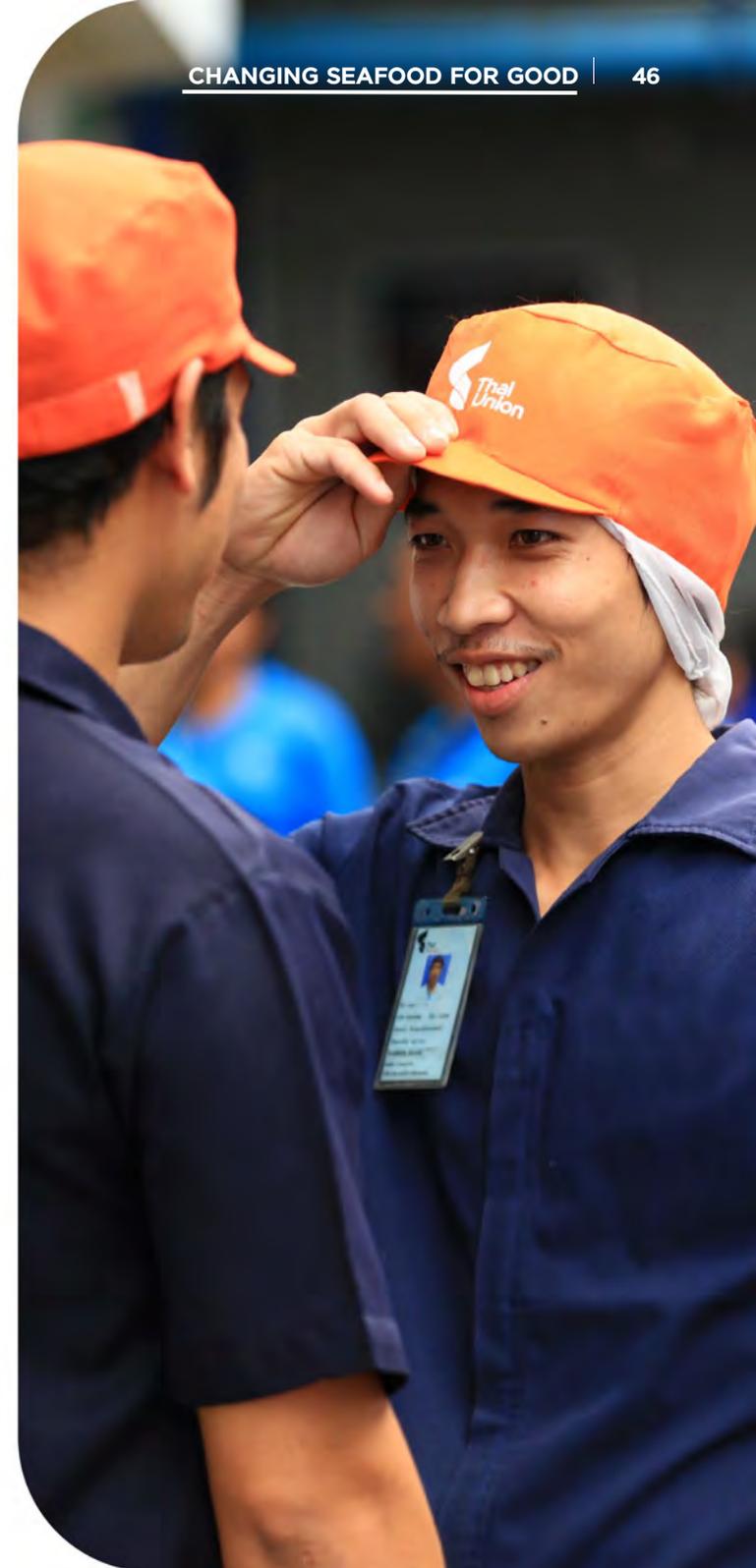
5 tuna vessels boarded & inspected and 7 have begun the recruitment exercise due to be completed beginning of 2022.

Approx. 90 areas for improvement (AFIs) closed out on tuna vessels

5 captains & 17 suppliers spoken to re: audits & improvement plans

Flags audited: Thai, Chinese, Taiwanese, Ghana

46 fishers interviewed for audits



KEY ACTIONS FOR IMPROVEMENT

We wanted to use this reporting opportunity to share some key actions that can be taken in fisheries to improve fisher working conditions and welfare based on our work. Generally speaking, the biggest impacts have been seen by completing engagement with suppliers and crew; improving administrative processes, updating policies and procedures, completing training to educate and empower crew, implement management systems to record, report and maintain items of importance to crew welfare and working conditions.

The following table suggests actions which are likely to be a priority and that can be taken to reduce the likelihood of the most frequently found areas for improvement to meet the VCoC requirements.

1

Business is conducted lawfully and with integrity

A processor can put processes in place at the procurement stage of business to ensure that they are dealing with a legitimate business and that the catch was caught according to legal requirements and is traceable.

2

Work is freely agreed and with documented terms of employment, legally compliant

The content of worker contracts should be compared to the required list and then if required, a new contract drafted and implemented. Ensuring that the information meets legal requirements and all aspects concerning pay, benefits, repatriation etc. Record keeping of resignations and terminations should be maintained. Policies and procedures need to be implemented to make sure that there are no recruitment or hiring related fees being charged to crew – agreements in place with recruitment agencies should be reviewed and amended to meet best practices.

3

Workers are treated equally, with respect & dignity

Policies, procedures and training need to be in place to ensure that there is no discrimination on board and that best practices are understood.

4

Work is conducted voluntarily with no forced or compulsory labor

Two factors influence the risk of the vessel having an AFI raised: the duration of the trips and distance of the crew from home. AFIs resulted if: deposits were charged to the crew; if the auditor did not understand all of the details; if there was differences between the contract or between different contracts for the same fisher; if there was not a clear process for resignation.

5

Workers are of an appropriate age

A procedure for verifying the age of the crew is required.

6

Workers are paid fair wages

Payroll processes should be clear and easy for the crew to understand. Pay slips must be issued which contain information that shows the crew are paid what has been agreed, and be clear about any deductions that are made.

7

Working hours for all workers are reasonable

A system for recording hours that the crew have worked should be workable and agreed. A process for ensuring that the crew know when they should be resting should be implemented.

8

Workers can exercise their right to form / join unions and to bargain collectively

The contracts should state that crew are free to join a union and to collectively bargain. Crew should be aware of this right, and have access to collective bargaining.

9

Workers' health and safety are protected at work

A procedure and form for a H&S risk assessment needs to be developed. Policies, procedures and training need to be in place to ensure that there is understanding of health and safety on board and that all points in the risk assessment are covered. Medical provision needs to be on board with an appointment officer to administer and keep records.

10

Workers have access to fair procedures

This principle had a low level of compliance across many of the different fleets. Positively the tuna vessel auditees have recently started incorporating grievance procedures into their documentation which closes out many AFIs that were raised. The detail for this principle though will not be able to be shown until on site interviews are conducted.

11

Recruitment mapping exercise

Increased levels of due diligence conducted by the companies on their recruitment supply chains is required. Being clear about the requirements and expectations.

NEXT STEPS

In 2022, there are some steps that we think will progress the fisher work and welfare program further:

Formalize Thai Union's system for 'grading' our suppliers into tier ratings and engage with suppliers to move up in the ratings. Recognize those suppliers who show real commitment to meet new standards.

Commence the recruitment mapping exercises in Thailand fisheries.

In Thailand:

- Progress the Supplier Change Management Program.
- Complete the trials of the Comic Contracts, publish articles on the project and implement the contracts with at least two suppliers.
- Complete workshops with at least 450 fishers.

We will continue to conduct audits in 2022:

- For the tuna vessels in the FIPs that Thai Union sources from, the focus will be to, where possible, conduct the vessel inspections of the suppliers that have been remotely audited and to ensure that we have engaged with every vessel owner on an improvement plan by the end of 2022.
- Expand the audits into two new fisheries / geographies.





9

RESPONSIBLE SOURCING

Ensuring that we have robust and effective supply chain management is at the heart of the [Responsible Sourcing](#) program within SeaChange[®]. Underpinning this is the ability to trace our products back to their origins and therefore giving us understanding of the operational practices in our supply chains. Without full traceability we cannot begin to understand and address any issues or mitigate risks. Throughout 2021 we have continued to be part of the business 'adopters' of the Global Dialogue on Seafood Traceability (GDST).

Our Responsible Sourcing program focuses not only on traceability, but also engagement. This provides us with a detailed understanding of the current topics of importance, sharing knowledge, exchanges of data and best practice. We engage on many levels and in many different ways, such as having partnerships, meetings and being part of technical working groups and forums with various different stakeholders:

- Our suppliers
- Our customers
- Government departments
- Industry membership initiatives
- Worker unions
- Expert consultants and academics
- Non-governmental organizations



In 2021 we took the following exciting actions to further demonstrate the strength of our commitment to responsible sourcing:

- Announced a [partnership with The Nature Conservancy](#) on a pioneering commitment to full supply chain transparency in our global tuna supply chains
- Demonstrated our commitment to transparency by taking part in the [Ocean Disclosure Project](#), where we publicly share details on the sources of our seafood
- Started work on creating a detailed program to expand our responsible sourcing practices to other key categories; salmon, shrimp, mackerel and other small pelagic species

The continued spread of COVID-19 in 2021 had a significant impact on our business, and while it also affected how we worked with our suppliers, that work has not stopped and Thai Union continues to provide them with support. As borders gradually reopened and restrictions began to ease, Thai Union was able to increase the amount of training provided throughout 2021. This included training for 50 individuals from eight new suppliers of food ingredients, packaging and logistics on the Company's Business Ethics and Labor Code of Conduct. In addition, we provided support to our suppliers where needed, whether through early payment of invoices and bridging finance, engagement with governments to enable repatriation of fishers, or working collaboratively with our trusted supply chain network so that we could flexibly source from locations around the world to ensure constant supply of seafood to meet demand. In 2021, ongoing strong demand for shelf stable seafood products such as canned tuna meant that our in-depth engagement with our suppliers minimized supply chain disruptions. Two years of navigating through the global pandemic has demonstrated how important it is to have a resilient supply chain, and why having supply chain partners rather than only short-term contracts, is a material issue for Thai Union.

We are ever more cognizant of the need to understand risks and to complete due diligence through our sourcing procedure. By making sure that policies and procedures are implemented at all levels, we ensure that different types of risks are mitigated. Processes in place make sure that:

- We source from fishing companies and vessels that are operating legally in line with regulations
- We understand different aspects of risk with respect to labor and human rights
- We comprehend how we can support the fishers and farmers to reduce environmental impacts
- We can calculate and then implement actions to reduce the carbon footprint of our business and support climate change mitigation



Although we are primarily a processor of seafood, we do have other raw ingredients in our supply chain and have worked to make sure that we have the right policies in place to cover these other areas where we may be having an impact. In 2021 we published our [Responsible Sourcing of Palm Oil Policy](#), recognizing the impact on the environment and communities that palm oil can have when not grown responsibly. By 2025, all palm oil we source shall meet segregated or identity preserved RSPO or equivalent certification requirements. Thai Union also released its [Policy on No Deforestation](#), which includes a commitment to promote responsible aquaculture that preserves biodiversity and protects sensitive habitats; the policy also commits Thai Union to zero gross deforestation: in the future, newly established operational sites, starting in 2021, shall not be located on or in close proximity (within 1 kilometer distance) to protected forest areas or sites of globally important biodiversity.

Aquaculture continues to be a focus for Thai Union, and we continue to work with our shrimp suppliers to raise farm standards towards international certifications such as the Best Aquaculture Practices (BAP), Aquaculture Stewardship Council (ASC), and customer-specific certification programs. As part of our commitment to ensure our suppliers also work towards more robust sustainability practices, we require shrimp suppliers to provide sustainability-related information, such as on shrimp feed. Moreover, we have implemented capacity building programs for shrimp farmers in our supply chains on environmental and labor standards, and responsible and prudent use of antibiotics. 87 Thailand-based shrimp farms in our supply chains received training and completed a preliminary survey on antibiotics.

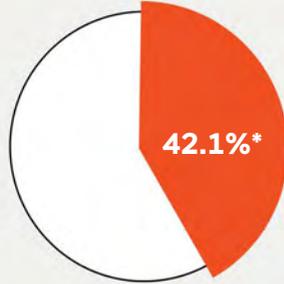
Our processing plants also have in place antibiotics testing procedures to ensure compliance with the applicable market-specific regulations and requirements. Our U.S.-based subsidiary, Chicken of the Sea Frozen Foods (COSFF), has also put in place supplier requirements on Hazard Analysis and Critical Control Point (HACCP) Plan and laboratory testing to ensure that imported shrimp products contain no banned antibiotics. Thai Union also collaborates with SeaBOS member companies and science teams, having agreed on the [SeaBOS Antibiotics Stewardship Roadmap](#) in October 2021.

Thai Union Feedmill (TFM), a subsidiary, has also strengthened its responsible sourcing of raw materials and ingredients used for feed production. This includes sourcing MarinTrust certified fishmeal that comes from wild caught fisheries that adhere to environment and social sustainability standards. TFM is also involved in the MarinTrust Improver Program with the Gulf of Thailand mixed-trawl Fishery Improvement Project (FIP) which assesses the fisheries and their sustainability; it has introduced some new feed products that contain zero fishmeal; replaced fish oil with Corbion's AlgaPrime DHA, an omega-3 rich algae feed ingredient; has achieved 100 percent sourcing of Roundtable on Sustainable Palm Oil (RSPO) certified palm oil; and is committed to sourcing at least 50 percent Round Table on Responsible Soy Association (RTRS) certified (or equivalent) soy ingredients by June 2022 as per the Best Aquaculture Practices (BAP) Feed Mill Standard Issue 3.0.

Share of shrimp raw materials sourced from internationally certified shrimp farms

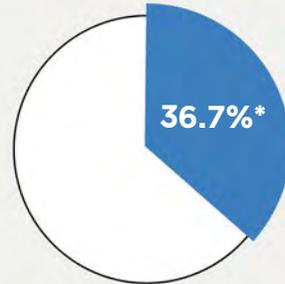
● Internationally Certified
○ Others

Chicken of the Sea Frozen Foods (COSFF)



*BAP certified

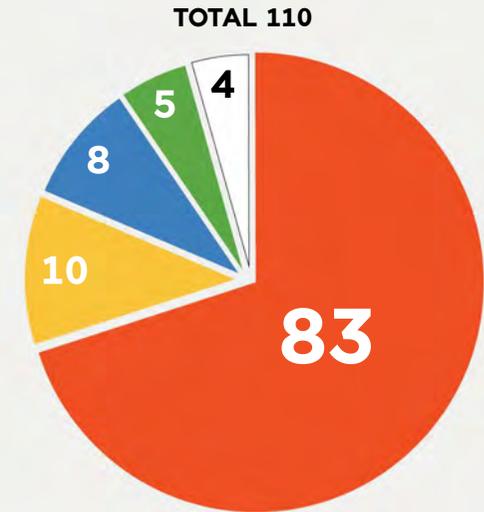
Thailand-based processing plants (Thai Union, Thai Union Seafood, Okeanos Food)



*BAP, ASC, ASIC/SEASAIP and customers' specific certifications

Note: Percentage of procurement spend from certified farms to total procurement spend on shrimp raw materials

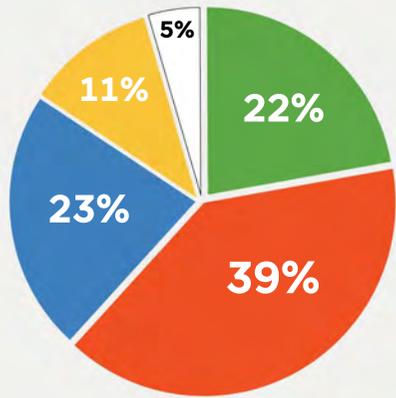
Number of shrimp farm certifications sponsored by Thai Union, by certification standards



- BAP 
- ASC 
- Whole Foods Market 
- Tesco Welfare Approved 
- ASIC/SEASAIP



Share of internationally certified farmed salmon by procurement spend



● Global GAP



● BAP



● ASC



● Agriculture Biologique



○ Others



DIGITAL TRACEABILITY

Digital traceability continues to be an important part of our supply chain management. Our custom-built traceability system, Trax, provides us with digital data management tools to not only run our global operations efficiently, but also to facilitate the functionality of our can trackers, which are found on our brands' products around the world. In recent years, Trax has been expanded to cover more of our facilities and supply chains.

The Trax digital mapping system provides better visibility into our supply chain, which helps us conduct an effective risk analysis. For our wild-caught species, we also started conducting thorough stock and market analysis on a monthly basis, enabling us to more accurately forecast fish availability. The analysis takes into consideration a number of conditions, including stock status, fishery regulations and closure periods, climatic conditions, ocean currents and more.

CREATING LASTING CHANGE IN THE WIDER MARINE ENVIRONMENT

As part of our commitment to Healthy Living, Healthy Oceans, and making progress towards it, Thai Union is working to implement programs that deliver long-term, sustainable change in the marine environment. We recognize that biodiversity is being lost at an alarming rate and as such we need to develop nature-based solutions to address this challenge.

Our work plan with the [Global Ghost Gear Initiative](#) was trailblazing for the seafood industry. We joined GGGI in 2018 to help tackle the issue of abandoned, lost and discarded fishing gear (ALDFG).

One element of Thai Union's work plan with GGGI has been a commitment to expand the FAD Watch program in the Indian Ocean. Here, the "Organización de Productores de Atún Congelado" (OPAGAC), and the Island Conservation Society (ICS) worked with the Seychelles Government to establish the [FAD Watch program](#) in the Indian Ocean to recover lost FADs and stop them from drifting into and beaching in sensitive coastal habitats. Thai Union has been supporting that the FIP in the Indian Ocean commit all 28 purse seine vessels to join FAD Watch and expand the current initiative to five islands identified by OPAGAC as most exposed to FAD beaching. Based on this success, Thai Union is hoping to investigate starting similar projects with other FIPs in the future.



A key objective is to improve management practices for ALDFG in Thailand. In May 2021 we published a [report](#) which detailed findings from a survey and assessment that we conducted of ALDFG in the Thailand commercial fishing sector. This found that environmental conditions were the main loss of gear, that recovery of gear lost could be improved and that there is an opportunity to improve cooperation between fishers and recycling facilities.

Our partnership with The Nature Conservancy (TNC) also has the potential to lead the entire seafood industry towards a more sustainable approach by addressing the widespread practice of illegal, unregulated and unreported (IUU) fishing. As part of the commitment, Thai Union will work with TNC's sustainable fisheries experts to implement 100 percent 'on-the-water' monitoring of our tuna supply chain by 2025, including the deployment of electronic monitoring of all of our partner vessels in our supply chains, including onboard video cameras, GPS, and sensors to automatically track activities onboard-and/or human observers.

THAI UNION TUNA COMMITMENT

In December 2016, Thai Union made a commitment for 'our tuna to be sustainably sourced, with an aim to achieve a minimum of 75 percent of our branded tuna products produced with raw material originating from fisheries that are either Marine Stewardship Council (MSC) certified or in a Fishery Improvement Program (FIP), by the end of 2020.' We were proud to surpass that goal, achieving 87 percent in 2020, and 88 percent in 2021, putting us on track to achieve our goal of 100 percent.

As one of the world's largest canned tuna providers we recognize our responsibility to work to ensure that tuna stocks are healthy for generations to come. Providing nutritious seafood and playing our part in combating climate change through supporting dietary shifts, among other measures, is why Thai Union has made a commitment to Healthy Living, Healthy Oceans, of which our Tuna Commitment is a crucial pillar.

Fish accounts for about 17 percent of animal protein consumed by the global population and overall provides about 3.2 billion people on the planet with nearly 20 percent of their animal protein (reference FAO).

During the five years of our first Tuna Commitment between 2016 -2020, Thai Union made significant progress towards greater seafood traceability and sustainability, including:

RESPONSIBLE SOURCING & THE SDGs

Implementing our Responsible Sourcing program encompasses Thai Union's support for the environmental and social responsibilities of the broader UN Sustainable Development Goals. While trying to contributing to all of the UN SDGs relevant to our business, as part of its Responsible Sourcing program, Thai Union is particularly focused on **SDG 13 - Climate Action and SDG 14 - Life Below Water**. We address them across various Responsible Sourcing programs and initiatives, such as our work on conserving biodiversity and nature-based solutions (SDG 13, 14); our work with the Global Ghost Gear Initiative to reduce marine plastics, which cause significant harm

to the environment, marine animals and negatively impact global fish stocks (SDG 14); implementing stronger traceability initiatives including our work the Global Dialogue on Seafood Sustainability, our partnership with The Nature Conservancy and participation in the Ocean Disclosure Project (SDG 14), and Thai Union's Tuna Commitment (SDG 14), as outlined below. In 2022 we will deepen our understanding and work related to the SDGs through our partnership with the UN Global Compact and other initiatives.



OUR TUNA COMMITMENT TO SUPPORT INDUSTRY IMPROVEMENT

Our Tuna Commitment up to 2025 includes a commitment that “by 2025, the tuna Thai Union sources will be from vessels and suppliers that demonstrate Operational Best Practice to prevent illegal, unreported and unregulated (IUU) fishing and modern slavery.” The updated commitment reflects the needs of customers and stakeholders and supports the evolving dialogue on seafood sustainability. It covers four key tuna species that we source: Albacore, Bigeye, Skipjack and Yellowfin. Operational Best Practice for vessels is defined to include the following aspects which collectively comprise the milestones and targets for the Tuna Commitment:

- Developing and implementing nine tuna FIPs, with the progress of each rated and verified independently by the Sustainable Fisheries Partnership and made publicly available
- Advocating for better fisheries management measures to be adopted at regional/ocean levels
- Installing electronic monitoring systems on longline vessels to increase transparency and number of vessels with coverage
- The further development of the FAD Watch project in the Seychelles
- Participating in the Ocean Disclosure Project, providing full transparency of our global seafood sources
- Conducting third party audits of human rights and social standards on fishing vessels in the Atlantic, Pacific and Indian Oceans
- Participating in several multi-stakeholder groups to address industry challenges, such as the Seafood Business for Ocean Stewardship, the Global Ghost Gear Initiative and the UN Global Compact for the Sustainable Development Goals
- 100 percent compliant with the International Seafood Sustainability Foundation conservation measures, of which Thai Union’s Kevin Bixler has been appointed Chair of its Board of Directors

1. Tuna fisheries that Thai Union sources from are engaged in FIPs towards MSC certification, are in MSC assessment or are MSC certified
2. Vessels have completed Vessel Improvement Plans or meet the Vessel Code of Conduct or equivalent.
3. Vessels are monitored at sea and have either human or electronic coverage.
4. Suppliers and Thai Union operations meet International Seafood Sustainability Foundation (ISSF) conservation measures.
5. Vessels must report data, meet quota allocations and conservation measures according to Regional Fishery Management Organization (RFMO) resolutions.
6. Tuna is traceable to vessel and the Global Dialogue on Seafood Traceability (GDST) Standard 1.0 is implementable.





Supporting continuous improvement remains at the heart of the Tuna Commitment 2025, which is underpinned by Thai Union's [2020 Policy for the Responsible Sourcing of Tuna](#). Traceability remains the backbone of Thai Union's sustainability strategy, with the Company now progressing to achieve the interoperability work of the Global Dialogue on Seafood Traceability (GDST). This will mean that traceability documentation includes the information captured by the Key Data Elements (KDEs) at Critical Tracking Events (CTEs) as described in the GDST "wild events" category systems for the whole supply chain, from boat to Thai Union production. Progress against this will be monitored with the other Tuna Commitments by an independent consultancy firm and then published in future reports.

The implementation of the FIPs that we are involved in remains central to the Tuna Commitment which will deliver lasting change on the water with our suppliers. After achieving such a high volume of tuna being sourced from FIPs in 2020, increasing the volume of tuna that we source from fisheries that meet the MSC standard will be a focus up to 2025. This means moving FIPs into the MSC assessment process.

We know we cannot achieve our Tuna Commitment alone - that's why we work with a range of partners and other stakeholders.

More information on FIPs and fisheries can be found on the SeaChange® website and on YouTube:

- [FIPs](#)
- [What is a fishery?](#)
- The development of FIPs that will contribute to our Tuna Commitment is well underway. By the end of 2020 we were involved in 10 ongoing tuna FIPs. The progress of these FIPs can be tracked on the independent site: fisheryprogress.org.



OUR PROGRESS IN 2021

	2021	2020	2019	2018
MSC	2.4%	3.2%	2%	7%
FIPs	85.7%	83.8%	77%	44%
Total	88.1%	87.1%	79%	51%

*Total refers to tuna sourced from MSC fishery or FIP for Thai Union branded products

CASE STUDY 5: COMIC CONTRACT TRIAL

In Thailand, many of the people who work on fishing vessels that Thai Union sources from come from neighboring countries such as Myanmar and Cambodia and therefore often lack the ability to speak or read Thai. As a consequence, many of them may end up signing contracts that they don't fully understand or that do not contain all of the details they need to know before they enter into a working agreement.

So, Thai Union has worked with Creative Contracts to develop their 'comic contract' -concept for fishers. These use pictures and simple text to better illustrate the content of the contract, making them easier to understand and the information more accessible. Importantly, they include all the details from the official Thai Government contract and support the fishing companies by adding all of the other relevant legislation, as well as aspects in the ILO C188 Work in Fishing Convention.

In 2021, Thai Union successfully completed the first trial of the fisher comic contract in Thailand's Chumphon Province, attended by 23 crew members from Myanmar.

Thai Union instructors guided the crew members through the 16-page contract, explaining all aspects of the document with the aid of translators. This was further reinforced by an instructional video which had audio recorded in Burmese.

Feedback from the trial was positive with useful suggestions to inform the next trial. Crew were asked a questionnaire where they said that they not only understood the contract but were clearer on what their rights are. Crew members also stated that they felt more valued by Thai Union. The International Transport Workers Federation were invited to attend the session.

Thai Union expects to conduct two more trials in 2022, involving suppliers in Prachuap Khiri Khan and Rayong provinces before we assess how to potentially scale up if successful.



CASE STUDY 6: THE NATURE CONSERVANCY

Illegal, Unreported and Unregulated fishing has serious repercussions for everything from overfishing of dwindling tuna stocks to unsustainable levels of bycatch of at-risk sea life like sharks and sea turtles, and has been linked to human rights and labor abuses. The lack of adequate monitoring also contributes to hundreds of millions of dollars in lost revenues for local fishing communities and national governments alike.

As understanding of these issues increases, so too does the standards expected from the companies and brands providing products and services. Amongst many different aspects, the raw materials should be sourced responsibly, ethics should be a key determination and the environment should not be negatively impacted.

At Thai Union we are always exploring opportunities to strengthen our operations and ensure that we meet the growing plethora of existing and emerging best practices. Working with partners is a critical part of this, and in 2021 we joined with The Nature Conservancy (TNC), a leading global conservation organization, on a pioneering commitment to ensure full supply chain transparency in the tuna supply chains that we source from around the world.

Under the commitment, Thai Union and TNC's sustainable fisheries experts will work towards implementing 100 percent 'on-the-water' monitoring of our tuna supply chain by 2025, including deploying human and/or electronic monitoring on all partner vessels in our

supply chains. This will include onboard video cameras, GPS, and sensors to automatically track activities onboard--and/or human observers.

While satellites, drones, vessels and planes can show who is on the water, electronic monitoring takes awareness a step further, providing detailed data on fishing efforts, catch composition, bycatch of non-target species and adherence to environmental and social commitments. Critically, electronic monitoring drives confidence that seafood products have been harvested legally and in line with better fishing practises and monitoring the way the fishing vessel operates.



During 2021, we made solid progress on the commitment, both on the water and across areas such as technology innovation, policy, and in the markets, including:

- Engaging with countries and regional fisheries management organizations (RFMOs) to advance partnership objectives
- Developing a risk-based data adequacy framework to address problematic incentives in the Marine Stewardship Council (MSC) Standard
- Developing with TNC and beginning to implement an electronic monitoring performance standard and continual improvement process in Fishery Improvement Projects (FIPs) and existing Thai Union projects
- Finalizing a project plan for a scalable transshipment prototype
- Beginning to implement advance machine learning and near-real time analysis in the electronic monitoring work flow

CASE STUDY 6: THE NATURE CONSERVANCY



Ongoing implementation of this commitment during 2022 and beyond will involve joint activities to advance social and environmental standards of fisheries including:

- Implement a project to improve functionality, cost and innovation of electronic monitoring systems
- Increased number of vessels with EMS
- Develop a work program on Fish Aggregating Device (FAD) management
- Engaging with other businesses and stakeholders
- Developing a work program looking at applying EM and other technologies to monitor work on vessels
- Advocate for monitoring at sea for European wild caught sprat, mackerel, herring and whiting.

The commitment with TNC also forms an important element of Thai Union's Tuna Commitment 2025, which includes a target that by 2025 the Company's tuna will be from vessels and suppliers that demonstrate Operational Best Practice to prevent illegal, unreported & unregulated (IUU) fishing and modern slavery.

Thai Union makes every effort to support our suppliers to meet new standards, providing expertise and a suitable timeframe for continuous improvement; however, if we see suppliers not making progress or willing to work with us and our consultants then we will review our relationships. This will make sure that we are engaging with those that are in alignment with our vision for the industry and can help serve as a model for how others in the industry can ask more of their suppliers.

**10**

RESPONSIBLE OPERATIONS

Global environmental risks such as climate change, resource consumption and waste management have an increasingly negative impact on our oceans which, in turn, threatens the marine species on which Thai Union depends. The way we operate has to be environmentally responsible and also show a duty of care for our workers.

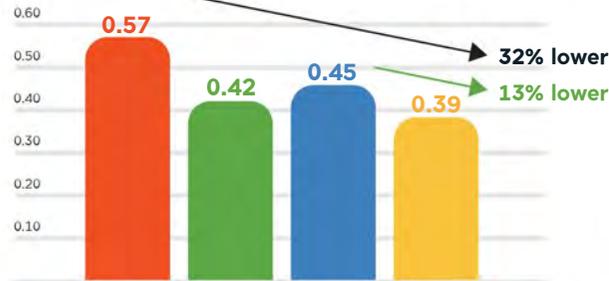
Thai Union has many initiatives in place to help ensure we operate responsibly and manage some of our most material issues. In line with the UN SDGs, we are focused on **SDG 12 for Responsible Production and Consumption**, and **SDG 13 for Climate Action**.



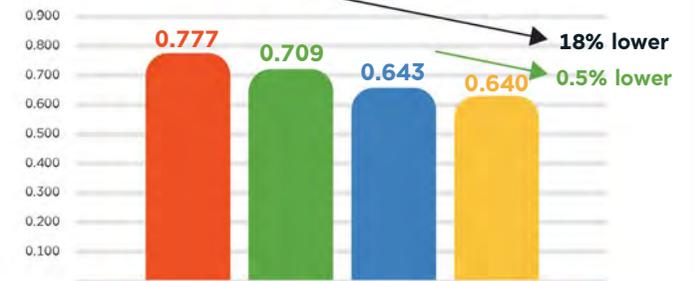
We have been continuously putting initiatives in place that contribute to water reduction, energy efficiency, waste to landfill reduction, reducing greenhouse gas emissions and accident reduction in our workplace. We want everyone who works for Thai Union to play an active role in delivering our safety, health and environmental goals—we see safety and environmental protection as everyone’s business. We also strive to make advances in our occupational health and safety policies, continually strengthening our safety standards, procedures and processes. To see details about Thai Union’s environmental performance see [here](#).



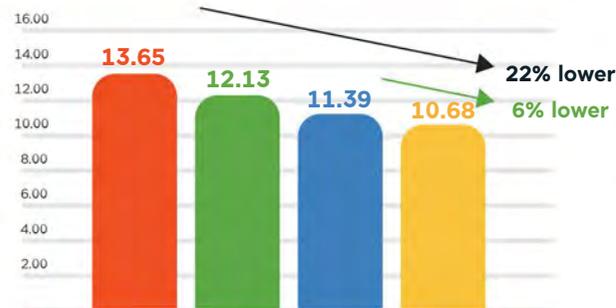
Lost Time Injury Frequency Rate per 200,000 hours worked¹



Greenhouse Gas Intensity (TonCO₂eq/Ton of Production)²



Water Withdrawal Intensity m³/Ton of Production²



Waste to Landfill KG/Ton of Production²



¹ This includes employees and contractors. (see page 100 for reporting coverage)

² This includes manufacturing facilities. (see page 100 for reporting coverage)





COVID-19

At Thai Union, our top priority has always been the health, safety, and wellbeing of all employees, partners, suppliers, customers, and local communities. Since COVID-19 emerged in 2020, we have been working closely with local authorities, community leaders, and NGOs to ensure the safety of our employees and community.

Over the past two years, we have implemented comprehensive measures to prevent infections inside factories. These include social distancing, wearing of personal protective equipment (PPE) as well as workforce clustering. The Company also has comprehensive protocols in place for those who test positive, including taking care of the affected employees while isolating them according to government guidelines, identifying and testing close contacts and deep cleaning visited work areas. In addition, we have also arranged for employees to be vaccinated against COVID-19, including under the national vaccination program and through self-funded vaccinations for employees.

SAFETY AND OCCUPATIONAL HEALTH

Thai Union's number one priority is building a safe workplace to reduce the risks of injuries and fatalities.

In order to ensure that we are prepared to respond to these major hazards - we can reduce physical and financial losses and we can ensure business continuity - the following measures have been put in place: SHE risk assessments, particularly fire risk assessments; 'Gemba' walks by management; SHE approval prior to budget approval of major projects; timely incident notification and reporting; and root cause analysis to prevent incident recurrence.

We are committed to achieving our Lost Time Injury Frequency Rate (LTIFR) targets through the implementation of our Group SHE Management Guidelines, adhering to SHE mandatory requirements, and top three issues and root cause analysis including near miss programs.

In 2021, we reduced Lost Time Injury Frequency Rate - LTIFR³ by 13 percent compared to 2020 which surpassed our target of an 8 percent year-on-year reduction. We have strengthened our accident management program, which includes our accident reporting and escalation, to ensure proper investigation as well as knowledge sharing and implementation of preventive measures across our sites. We also maintained our occupational illness frequency rate for employees at zero⁴.

We continue our focus on fire risk at our factories. In 2020, we assessed our factories in order to identify gaps and needed risk controls. In 2021, we initiated risk controls which included, but were not limited to, improvement of our fire protection system, strengthening our electrical inspection and maintenance, and setting minimum safety requirements of our new projects. We are committed to spending more than THB 200 million over the next five years to improve fire protection facilities at our factories.

³ Number of lost time injuries per 200,000 hours worked for employees and contractors.

(see page 100 for reporting coverage)

⁴ Number of occupational illnesses per 200,000 hours worked for employees in the manufacturing facilities.

(see page 100 for reporting coverage)

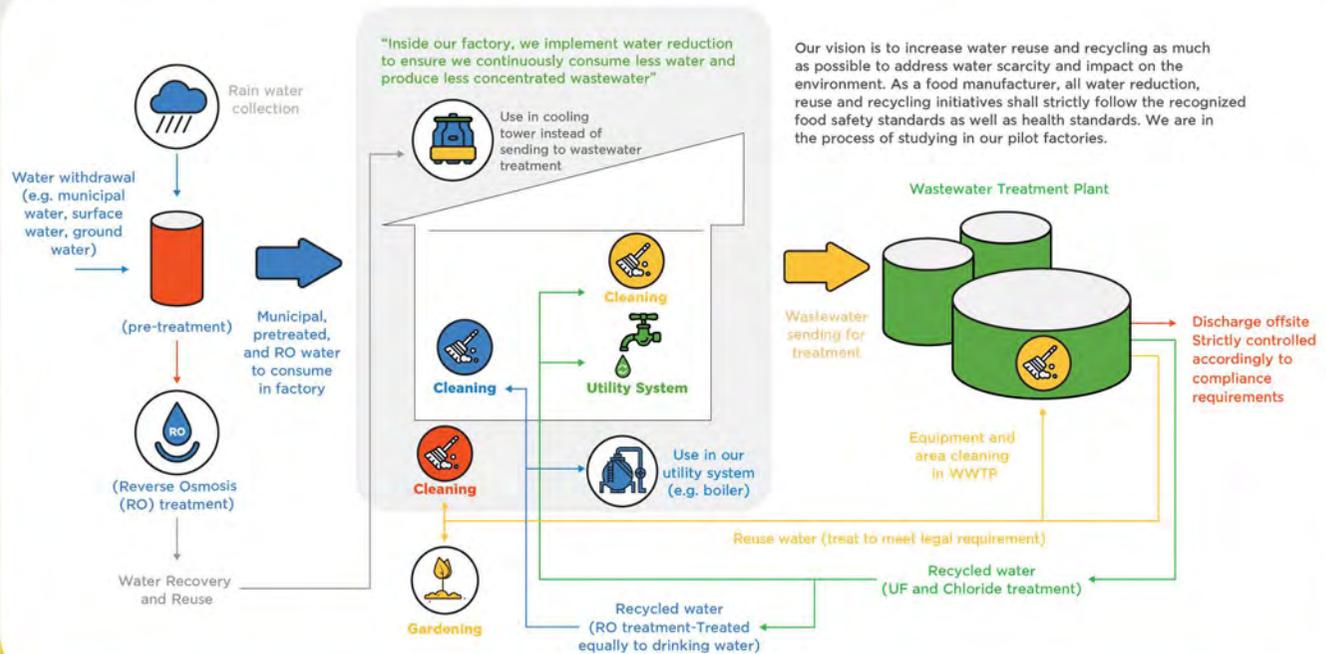
ENVIRONMENTAL PROTECTION AND CLIMATE CHANGE

Thai Union is committed to protecting the environment by exploring innovations and initiatives to keep minimizing our consumption of natural resources and adverse impacts on environment. We continue our focus on improvement of our greenhouse gas intensity, our water withdrawal intensity and waste-to-landfill intensity.

Comparing 2021 to 2020:

CLIMATE

Our greenhouse gas intensity (Scope 1 & 2) has reduced by 0.5 percent. In 2021, we continued to expand our solar energy at our factory in Samut Sakhon, installing or completing an additional 7 Mega Watts of solar energy and we have avoided greenhouse gas emissions of 4,409 tons CO₂e from solar energy. We also continually worked towards efficiency improvement, either by improvement of administrative control or engineering design. In addition, we are exploring converting our coal boiler to bio-mass fuel.



Our vision is to increase water reuse and recycling as much as possible to address water scarcity and impact on the environment. As a food manufacturer, all water reduction, reuse and recycling initiatives shall strictly follow the recognized food safety standards as well as health standards. We are in the process of studying in our pilot factories.

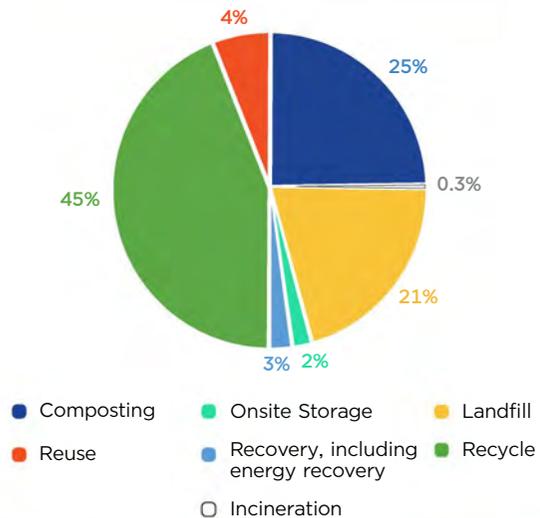
WATER

Our water withdrawal intensity was reduced by 6 percent. In addition to improving our water consumption efficiency, we have reused and recycled water totaling 1,888,825 m³. As a food processing manufacturer, food safety and quality cannot be compromised. We are working closely between our production department, quality control department and engineering department to ensure we achieve both quality control and reduce our water withdrawal and discharge.

SOLID WASTE & WASTEWATER

Our waste-to-landfill intensity increased by 1 percent mostly due to COVID-19 related measures implemented by the Company to ensure the health and safety of all its workers. The waste included protective equipment worn by workers, sanitation equipment as part of the regular cleaning of work areas, along with the disposal of COVID-19 test kits used by workers. We focus on waste segregation and waste utilization in order to divert the waste from disposal. As a result, we have sent 32,234,812 tons of our waste to either be reused or recycled, which accounted for 49 percent of our total generated waste and only 21 percent of our total generated waste was sent to landfill. Key initiatives include reduction of sludge by using a bio-gas incinerator, converting sludge to soil fertilizer, and strengthening our packaging (of raw material) collection for recycling.

Waste Disposal by Disposal Method Types in 2021



WATER MANAGEMENT

Water is essential to continuity in the food business, thus responsible water management is critical to the future of Thai Union's business, especially in water stressed areas where we operate. We facilitate sustainable management of water catchments around our factories by improving water usage efficiency and reuse & recycle water in production process.



WATER STRESS RISK ASSESSMENT AND MANAGEMENT

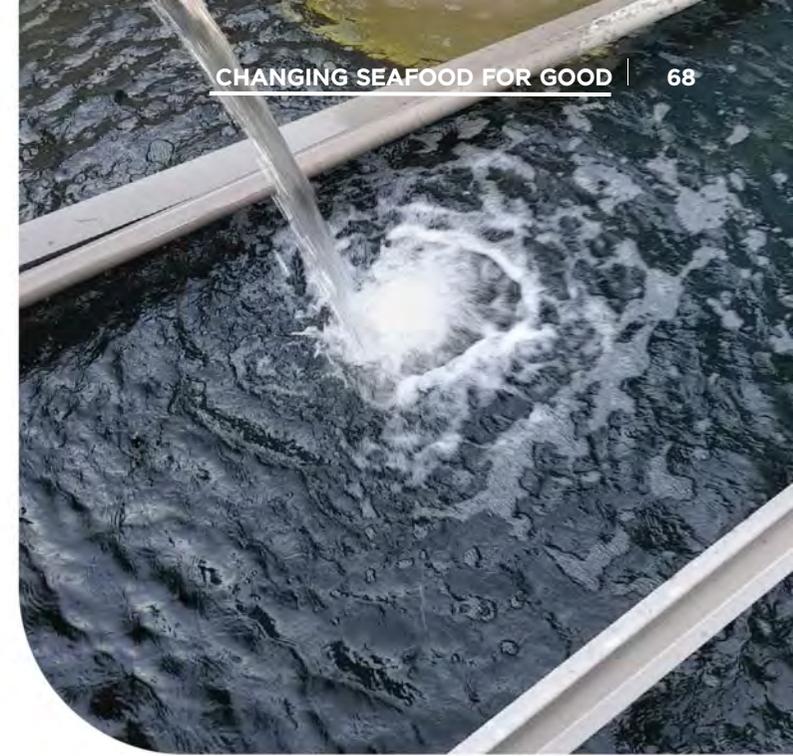


In 2021, Thai Union assessed water related risks by the Aqueduct Water Risk Atlas 3.0, developed by the World Resources Institute (WRI). The assessment includes Physical Risk Quantity (e.g. baseline water stress, Riverine Flood Risk, and Drought Risk), Physical Risk Quality, and Regulatory and Reputational Risk for our manufacturing facilities⁵ and our critical tier 1 suppliers.

We found that 3 percent of our manufacturing facilities⁶ are located in water stress areas where water withdrawal accounts for 2 percent of our total water withdrawal. In addition to consumption efficiency improvement and pushing for higher reuse and recycled water, we have also explored water withdrawal sources in order to reduce the impacts on water stress in the area. In 2021, 1,218,599.94 m³ came from rainwater collected internally and externally, and seawater.

Baseline water stress measures the ratio of total water withdrawals to available renewable surface and groundwater supplies. Water withdrawals include domestic, industrial, irrigation, and livestock consumptive and nonconsumptive uses. Available renewable water supplies include the impact of upstream consumptive water users and large dams on downstream water availability. Higher values indicate more competition among users. Overall water risk measures all water-related risks, by aggregating all selected indicators from the Physical Quantity, Quality and Regulatory & Reputational Risk categories. Higher values indicate higher water risk.

The result of the risk assessment using Aqueduct Water Risk Atlas 3.0, developed by the World Resources Institute (WRI), shows that all 64 critical tier-1 suppliers are located



in the area where “Untreated Connected Wastewater” is present. We have been working with our suppliers as part of our Sustainable Supply Chain Management, which includes education and supplier audit with regards to the topic, to assure them as part of our supplier selection that Thai Union is working to eliminate the risk. You can read more about the Aqueduct 3.0 relevant global water risk indicators [here](#).

All of these efforts not only reduce the operational risks of both Thai Union and our suppliers, but also reduce impacts that may occur to the surrounding communities when water risk is significantly presented, which could happen at present or in the future.

⁵ See coverage on page [100](#)

⁶ Aqueduct Country Rankings

REDUCING FOOD LOSS & WASTE

Food loss and waste is a global challenge that requires a significant commitment and determination to address. The statistics around the issue are quite confronting: according to the Food and Agriculture Organization of the United Nations, with [14 percent of food produced lost from post-harvest up to, but excluding, the retail level](#). Even worse, 17 percent of food produced is wasted at retail, food service and household levels.

Even more startling is the fact that an [estimated 8-10 percent of global greenhouse gas emissions are associated with unconsumed food](#), according to the UN Environment Programme.

We are ambitious at Thai Union, and that includes setting ambitious goals. On this critical issue, our goal is that no food should ever be lost or wasted. That's an enormous

challenge, but we believe you need to aim high if you want to achieve change.

In 2021, we introduced our [Commitment on Food Loss and Food Waste Reduction](#), with a target of reducing food loss in our own ambient, frozen and chilled seafood operations by 50 percent by 2025, compared to a 2021 baseline. Thai Union is also committed to working with our customers and partners to further reduce food waste at the retail and consumer level.

As a global seafood leader, we recognize the role that the food industry plays in supporting the implementation of UN Sustainable Development Goal 12 – Responsible Consumption and Production that also tackles global food waste at the retail and consumer levels, as well as, food losses along the supply chain. That goal includes

Target 12.3, which aims to “by 2030 halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains, including post-harvest losses.”

Our efforts to overcome food loss and waste also support Thai Union's corporate commitment to “Healthy Living, Healthy Oceans”. It also contributes to our initiatives and programs that support UN SDG 2 – Zero Hunger and UN SDG 13 – Climate Action.





With operations globally, tackling food loss and waste is an enormous undertaking. But, Thai Union, along with its brands and subsidiaries, are already implementing numerous programs globally to contribute to the reduction of food loss and waste, both in our operations and supply chains. These include:

- Reduction of waste disposal to landfill, which in turn reduces the emission of methane, a potent greenhouse gas generated from decomposed organic matter
- Actions to minimize food loss at our factories
- Food waste reduction and food donation programs by our brands
- Food loss reduction upstream in the supply chain
- Supporting a startup with a focus on food waste reduction

One initiative being pursued is a circular economy pilot program established at a Thai Union processing plant in Samut Sakhon to turn food loss at its plant into a soil conditioner, which is then used at vegetable farm it manages. The ingredients from that farm are then sent back to TUM to use in its products.

The Thai Union plant is working with Asia Recycle, a company that currently manages waste for the plant, to help turn the food loss into soil conditioner, instead of sending it to landfill. In addition to reducing the amount of food loss, the program also delivers cost savings for the farm.

If successful, the pilot program will be expanded, with the potential to introduce it at other Thai Union plants.

In our factories, we have also introduced measures to help minimize food loss such as improving production yields and “right the first time” production targets. For the small number of products that are not “right the first time”, the products are either reworked/reprocessed into

marketable products or sold to employees at discounted prices. If any of the products were deemed unsuitable for human consumption, they would be used for animal feed or other useful purposes.

Thai Union has improved food loss data collection process for all of our operations globally, so that we can measure, track, and report on our progress.

Looking ahead, we will continue to strengthen efforts to reduce food loss and waste in line with our commitment made. The Company will also continue investing in innovations that divert potential food loss away from going to landfill to other meaningful purposes that create value for business and the planet.

Food Loss across Thai Union’s Operations ¹			Remarks:
Indicators	Unit	2021	
Total weight of food loss from operations² (A)	Ton	114,220.84	¹ Per Thai Union’s Commitment on Food Loss & Waste Reduction, we have set a target of reducing food loss discarded in our own ambient, frozen and chilled seafood operations by 50 percent by 2025, compared to a 2021 baseline of 1,223.58 tons. ² Food loss categories from our operations include food scraps, by products, and inedible parts of raw materials, such as tuna, salmon, shrimp, and other seafood species. ³ Intensity is calculated from Ton of food loss discarded (A-B), divided by Revenue from ambient, frozen and chilled seafood operations that manufacture products intended for human consumption. As food loss definition does not cover products intended for non-human consumption, revenue from Thai Union Feedmill PCL. (TFM) is excluded from the denominator.
Total weight of food loss volume used for alternative purposes (B)	Ton	112,997.26	
Animal feed	Ton	67,020.54	
Composting	Ton	362.49	
Input for production of other products, e.g. tuna oil and tuna bone calcium	Ton	45,325.84	
Incineration with energy recovery	Ton	0.00	
Other alternative use	Ton	288.40	
Total food loss discarded (A-B)	Ton	1,223.58	
Landfill	Ton	1,202.44	
Incineration with energy recovery	Ton	21.14	
Food loss intensity³	Ton/billion THB	10.84	
Data coverage	%	100%	

CASE STUDY 7: REDUCING FOOD LOSS & WASTE

Innovation is playing an important role in helping Thai Union address the issue of food loss and waste.

The traditional tuna canning process uses around 40 percent of the whole fish. As one of the world's largest producers of shelf-stable tuna products, we were conscious of the need to improve the utilization of the fish.

Research by Thai Union's world-class Global Innovation Center (GIC) determined that we could valorize parts

of the tuna that would normally be inedible, allowing them to be used in nutritional marine based ingredients and food supplements.

This includes extracting high-in-DHA omega-3 tuna oil from tuna heads, and turning tuna bone into calcium supplements. The GIC continues to conduct research on how to transform the inedible parts of tuna into nutritious, value-added products for human consumption. We are also maximizing the use of shrimp parts, such as shrimp

heads for snacks and shrimp shells for animal feed, which help reduce food loss.

Our subsidiary, Thai Union Ingredients, is also working to ensure that every part of every fish is properly used to reduce wastage. In 2021, TUI introduced its UniQ™BONE bone powder which is produced by converting tuna bone into fine, off-white powder with a natural taste and smell. UniQ™BONE can be used for various types of food, capsules, tablets and as an additive for pet food and pet nutrition. TUI has also launched the UniQ™DHA tuna oil range, using selected raw materials via a gentle extraction process.

Thai Union Ingredients is building a new protein hydrolysate and collagen peptide plant to service fast-growing markets in Asia such as China and Japan. The plant will produce products that are made from 100 percent natural tuna parts, and also use protein hydrolysate and collagen peptide in supplements and medical foods.

The recent opening of a new tuna oil factory also increases utilization of whole tuna up to 45 percent, which still leaves plenty of room to increase co-product valorization. With the addition of a protein processing factory, the net utilization of whole tuna is expected to reach 51 percent during the first phase of implementation, with potential to reach 90 percent utilization of the whole fish.

Tuna's 5 Wonders



Thai Union's GIC has delivered significant innovations derived from various parts of tuna, to ensure every part of the fish is utilized to accelerate sustainability through high-value byproducts.



Oil from tuna head

Oil extracted from tuna head through cold-pressed process minimizes the impact on the oil quality versus using heat.



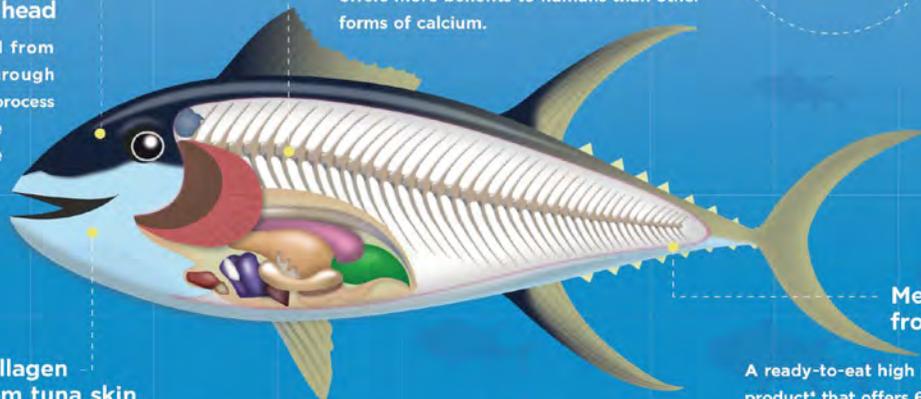
Calcium from tuna bone

Calcium from tuna bone frame is the same form of calcium found in human bone and offers more benefits to humans than other forms of calcium.



Peptides from tuna dark meat

Bio-Active Peptides increases body absorption through the natural digestive process.



Collagen from tuna skin

Extraction and application of collagen to isolate specialized functionality from collagen sources in the form of bio-active collagen peptides.

Medical foods from tuna white meat

A ready-to-eat high protein Surimi based tuna product* that offers 60% less sodium and low in phosphorus and potassium, which is ideal for patients with chronic kidney disease.

*patent-pending

CASE STUDY 8: SUSTAINABLE PACKAGING

Thai Union has committed to achieve 100 percent reusability, recyclability, or compostability of our branded packaging by 2025. We have also committed to having an average of 30 percent recycled content in our branded packaging by 2025. Both are part of the goals under the Company's global sustainability strategy, SeaChange®.

Packaging is an important component of any product and contributes significantly to a Company's overall environmental impact. By developing and implementing sustainable packaging initiatives, our environmental footprint is reduced. By exploring sustainable packaging in our innovation research, we ensure a continuous pipeline of improvements, which will help achieve Thai Union's goals for carbon footprint reduction and environmentally-friendly packaging.

A proper packaging design also addresses the significant issues of climate change, resource repletion and environment pollution. At Thai Union, we also understand that packaging should be designed with circular economy principles in mind, which also supports our goal towards "Healthy Living, Healthy Oceans." Our packaging commitment also supports the Company's efforts towards UN Sustainable Development Goal 12, which aims to reduce waste generation through prevention, reduction, recycling and reuse. In 2021, we published a [Global Packaging Strategy: Annual Progress Update](#).

Our Global Innovation Center (GIC) is focusing its developments on addressing packaging sustainability concerns, not just looking at individual components but on total packaging solutions. This approach spans all packaging formats from flexibles and pouches to rigid containers such as plastic cups, and metal and aluminum cans and applications (retortable to frozen product lines) in both human and pet categories.

As we explore opportunities to develop packaging solutions, in 2021 Thai Union announced that its printing and packaging subsidiary, Thai Union Graphic, had signed a memorandum of understanding to launch a new joint venture with Starflex, an industry leader in manufacturing and distributing high quality flexible packaging.

The MoU with Starflex will help Thai Union reach its sustainable packaging goals through the development of innovative design and production, working together to address this key sustainability challenge.

Thai Union is also collaborating with SCG Packaging on a pilot life cycle assessment (LCA) project to assess the carbon footprint of 42 carton products sourced from SCG Packaging. The project will assess areas such as raw material extraction (plantation), to pulp and paper production, and to paper packaging manufacturing. This is the first LCA on Thai Union's packaging and is directly related to the Company's obligation in reducing GHG across the supply chain.

The results of the assessment will be submitted to the Thailand Greenhouse Gas Management Organization (TGO) for verification, by the end of 2022.

Thai Union is also ensuring recyclability through research into the use of mono-material solutions to replace multi-layer or aluminum containing materials currently utilized for flexible packaging. Developing barrier technology that embraces sustainability objectives without compromising on food safety and shelf-life targets is an important focus of this work.



CASE STUDY 8: SUSTAINABLE PACKAGING

Thai Union has also developed a Group-wide packaging database for our branded products, which helps us better understand what packaging materials are currently used for all branded product items, and whether they are sustainable. We then use this database to track progress towards our commitment.

In the UK, the cups and caps in John West fridge pots are currently recyclable utilizing PP plastic material, but aluminum is used for the lidding film and PET for the shrink film. The various materials need to go to different recycling streams upon disposal and the challenge of separating these components could inhibit overall recyclability. Understanding that a key challenge of recyclability is the post-consumer processing chain, Thai Union is researching solutions that focus on utilizing a single pathway for recycling to achieve real impact to both the environment and society. The packaging design must facilitate the effective collection and fit the recycling infrastructures in the target markets.

While metal and aluminum cans are widely recycled globally, Thai Union is exploring options for reducing the carbon footprint for both production and logistics associated with these packaging formats. Through GIC packaging innovations, Thai Union ensures that sustainability solutions not only deliver on sustainability commitments but deliver real impact for ensuring healthy oceans for generations to come.



CASE STUDY 9: SUSTAINABILITY & CLIMATE ACTION IN AQUACULTURE

Thai Union is firmly committed to driving continuous improvement in sustainability, a commitment that extends beyond its own operations. As one of the world's leading seafood companies that process both wild caught and farmed seafood, Thai Union works to build the capacities and standards of its suppliers along with potential future suppliers.

In the Thai province of Samut Sakhon, Okeanos Food – a subsidiary of Thai Union specializing in frozen shrimp products – has been lending its expertise to support shrimp farmers to achieve international certifications on sustainable aquaculture. The Aquaculture Stewardship Council (ASC) is considered one of the world's leading certification schemes for farmed seafood, or aquaculture. The ASC label is found on farmed seafood products that have been independently assessed and certified as being environmentally and socially responsible.

Okeanos Food worked closely with a shrimp farm near its plant to gain certification from the ASC, providing them with support that included:

- Financial and technical support
- Building the farm's knowledge and awareness around the ASC standards and documentation needed for certification
- Identifying areas for improvements and working with the farm to improve its management system

The farm received ASC certification, which will remain in place for three years before further assessment is required. The farm now has the potential to supply Okeanos Food with high-quality shrimp raw materials that can be used for manufacturing ASC-certified products for the global market.



CASE STUDY 9: SUSTAINABILITY & CLIMATE ACTION IN AQUACULTURE

The guidance from Okeanos Food not only helped the farm with ASC certification, but also exposed them to international standard expectations and strengthened their capacities towards global standards on responsible aquaculture. This includes, among other things, the need to implement programs to reduce greenhouse gas emissions to help mitigate climate change.

As a result, the farm began pursuing initiatives to reduce its emissions including via smart farm technologies they had not previously used in their operations, with the support of Okeanos Food. The farm has installed solar panels, which have helped reduce its energy consumption by 4.7 percent.

The shrimp farm also installed a smart aquaculture management system by HydroNeo, a German high-tech aquaculture technology company which provides systems to monitor the quality of water for feeding and farming of shrimp and also to automate operations. In 2020, Thai Union's corporate venture fund made an investment in HydroNeo. HydroNeo was among the first cohort of SPACE-F, the first food tech incubator and accelerator program in Thailand, which Thai Union is a founding partner of.

Using HydroNeo's system, the shrimp farm can check the water quality and the oxygen level in the water, with the system automatically controlling the energy-intensive aeration, reducing energy use and indirect greenhouse gas emissions.

Taken together, the solar power and HydroNeo's smart farm system have led to an estimated greenhouse gas reduction of 30.4 tons CO₂ equivalent per year. The technologies also saved the farm THB 257,000 baht annually in its electricity bills.



This case is an example of how Thai Union engages shrimp farmers to drive sustainable aquaculture practices, and how technologies can help farmers achieve better economic and sustainability outcomes. Thai Union will look to drive positive change throughout the seafood industry, by piloting and scaling up projects to decarbonize and advance sustainability in our aquaculture supply chains, in close collaboration with farmers and other partners.



11

PEOPLE & COMMUNITIES

Thai Union is committed to helping improve the lives of those living and working in the regions where we operate around the world, from Asia to Africa and from Europe to North America.

Through the People & Communities pillar of our global sustainability strategy, SeaChange®, Thai Union has provided support to those in need. Over the past two years, the Company's Thai Union Cares program has helped ease the burden from the COVID-19 pandemic with donations of almost four million servings of human and pet food around the world, along with COVID-19 supplies and other financial support.



SUSTAINABILITY REPORT 2021

In 2021 alone, Thai Union donated nearly one million servings of food as part of Thai Union Cares – a key component of the Company’s commitment to Healthy Living and taking care of the human and animal communities where it operates.

Thai Union has also implemented activities and programs throughout the regions where we operate, aligning not just with SeaChange® but also the UN SDGs. These programs respond to stakeholder and community needs. Project outcomes are measurable, for example accounting for the number of people who benefited, amount of income generated, or the amount of waste reduced. In addition, the impact of the programs is assessable, including the impact and benefit to the local community, stakeholders or environment, as well as the impact to Thai Union. To implement these, we work with partners globally to ensure we are making the right choices and that our efforts are having a real, positive effect.

There is a global challenge of how to feed an estimated world population of nine billion people by 2030. Without sustainable seafood production, from wild capture to aquaculture to alternative proteins, the world is unlikely to achieve

UN SDG 2 – Zero Hunger.



HUMAN CAPITAL INVESTMENT

Thai Union aims to enable individuals and the organization to achieve greatness. This aim requires a diverse workforce that includes people with disabilities. Thai Union collaborates with the government to employ people with disabilities in hospitals, schools and government offices across Thailand to promote diversity and inclusion in the workplace. Thai Union also provides locations in the workplace for people with disabilities to sell their products.



In 2022, Thai Union will join together with Vulcan Coalition, a Thai AI start-up, creating work opportunities in AI, data labelling, and other comparable jobs at Vulcan facilities for people with intellectual /developmental disabilities. Individuals with disabilities can receive AI training and deliver their knowledge on the Data Image Labelling Services as part of this empowerment and inclusion program.



CORPORATE SOCIAL RESPONSIBILITY AND COMMUNITY INVESTMENT

Thai Union works with a large number of partners including the private sector, local government, international organizations and civil society bodies as part of its broader efforts to address both social and environmental challenges. While the global pandemic resulted in numerous restrictions around the world, Thai Union continued its commitment to good corporate citizenship and engagement with local communities. In 2021, a significant part of this was dedicated to COVID-19, supporting communities through the donation of human and pet food, medical supplies for health services helping those with the virus, and financial aid.

In Thailand, all of our manufacturing locations continued their involvement in local community engagement or development programs. In 2021, as part of its commitment to support the people and communities where it operates, Thai Union Manufacturing (TUM), a subsidiary of Thai Union Group, and the Faculty of Agriculture Kamphaeng Sean Campus, Kasetsart University, signed a MoU for academic cooperation to support the production of organic vegetables for export. Under the agreement, the Faculty of Agriculture Kamphaeng Sean will provide educational and technical support for the production and processing of these vegetables, components of which will be used in TUM products for export. TUM will support educational opportunities for learning about organic farming in the field to benefit both students and local farmers.

Our Human Resources teams are constantly looking at areas where the Company can improve while also implementing policies that ensure everyone is supported, have opportunities to enhance their skills, and have a voice. In 2021, we launched new pillars of learning through our Thai Union Academy, focused on future skills enhancement and executive leadership development. In addition, we are continually focused on scalability with our learning solutions, by providing a readily available online learning platform and updating our programs in line with our strategic direction. Our overall learning strategy is to upskill everyone to ensure they are able to grow professionally, which opens up new opportunities for them to grow within our company.

Due to our focus on growing and developing our leaders from within, we had also launched a leadership executive development program known as “LeadTUGrow”. This intensive six month program equips senior managers with industry-driving skills covering areas of strategy execution, personal effectiveness, and executive team leadership. We launched the program in July 2021 focusing on corporate office leaders and will be launching this program into Europe and the U.S. in the second half of 2022.

During the year, Thai Union also conducted its annual Global Employee Engagement Survey to better understand the Company’s strengths while also identifying areas that need improvement. There was a 92 percent response rate to the survey across 19 countries.



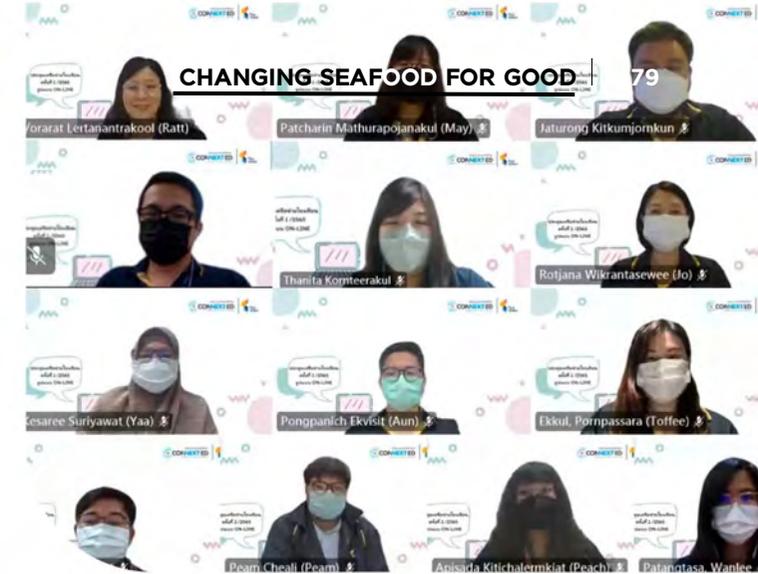
Thai Union Group also joined an international coastal cleanup program to help protect the environment in Thailand’s Samut Sakhon province as part of its commitment to improving the health of the world’s oceans. A total of 1,306 kilograms (1.306 tons) of trash was collected by volunteers during the cleanup, including plastic bags (846 kilograms), plastic bottles (160.5 kilograms), foam (87.5 kilograms) and glass bottles (85 kilograms). The program was part of a global campaign by the Seafood Business for Ocean Stewardship (SeaBOS) and Ocean Conservancy – known as the International Coastal Cleanup – to protect the marine environment. Pakfood Asia, a Thai Union subsidiary, also participated in a related cleanup also in Samut Sakhon where volunteers from the company collected trash that along local waterways. You can review our other progress updates for our core pillar People and Communities [here](#).

RIGHTS AWARENESS

The rights and equal, fair treatment of migrant workers remains a priority for Thai Union. Thai Union has many initiatives underway to help protect the rights of migrant workers in Thailand and beyond, including collaborations with non-governmental (NGO) partners and civil society to facilitate social dialogue and capacity building through training, workshops and practical demonstrations.

For example, ensuring that all workers are an appropriate age is a priority for Thai Union. One of the actions we have taken is to ensure our migrant workers in Thailand understand their rights and the rights of their children to access education to help prevent instances of child labor and trafficking. Migrant workers with children in Thailand often lack access to education due to insufficient knowledge about the Thai school system. To tackle this, Thai Union supports a number of projects in Thailand and beyond in school systems, from building preschools for the children of migrant workers, and supporting schools to develop through CONNEXT ED, to supporting how children are fed while at school.

In 2021, CONNEXT ED was recognized by the Center for Asian Philanthropy and Society (CAPS) - a research and advisory organization in Asia - as a great example of success through a public-private partnership in providing educational opportunities for disadvantaged children. CONNEXT ED is one of 20 programs selected from 11 countries throughout Asia.



Through CONNEXT ED, Thai Union is helping provide educational opportunities for children through supports of knowledge, budget, and personnel from the Company in continuously organising activities with school partners. Thai Union also arranged a coaching course for 26 school directors (72 percent of total school directors) to enhance their coachings skill and improve their leadership. For 60 teachers, Thai Union arranged an active learning course to develop their teaching skills and provided a follow-up session after a trial teaching lesson with their students. In addition, seven schools in our program will apply active learning in the traditional classroom, presenting their own ideas about an innovation learning environment for students. Separately, Thai Union provided an online STEM (Science, Technology, Engineering and Maths) workshop for 25 teachers, demonstrating to them the difference between general teaching and STEM education. Following the course, teachers were able to create their own STEM classroom course for their own students.

DIVERSITY & INCLUSION



2021 saw Thai Union North America's first full year with its Justice, Equity, Diversity, and Inclusion (JEDI) strategy underway. The JEDI Champions, a team of a dozen volunteer employees from multiple departments, divided into four working groups, enacted a wide array of JEDI initiatives. Through consensus-building and shared responsibility they hosted eight staff-wide virtual events on culturally significant holidays, such as Martin Luther King Jr Day and Juneteenth, as well as open educational forums on topics like mental health and wellness. They held staff trainings with a third party organization, for the Champions themselves and the Executive Leadership Team. New policies were passed, to be implemented in 2022, including paid flexible volunteer time, an added

flexible cultural holiday, expanded parental leave, and promoting an anonymous employee hotline to report workplace issues. This foundational year will continue to set the pace as the team continues to build a more diverse and inclusive place to work.

Thai Union aims to enable individuals and the organization to achieve greatness. This aim requires a diverse workforce that includes people with disabilities. Thai Union collaborates with the government to employ people with disabilities in hospitals, schools and government offices across Thailand to promote diversity and inclusion in the workplace. Thai Union also provides locations in the workplace for people with disabilities to sell their products.

Thai Union's leadership development programs are guided by our Capability Framework and Leadership Expectations are defined internally and emphasize the links between our core values, goals and business context. The framework and leadership model help ensure we continue and enhance our track record as an organization that achieves business results, engages and retains our employees, and serves as an industry role model.



CASE STUDY 10: COVID DONATIONS

COVID-19 continued to cause significant disruptions to business operations around the world in 2021.

But the impact was not just felt along the supply chains, it was felt on a much more local level, among communities where the day-to-day lives of people were often severely affected by the pandemic.

Thai Union has a long history of supporting the communities where the Company operates, and providing assistance during the pandemic was no different. In the two years since COVID-19 emerged, Thai Union has donated almost four million servings of human and pet food across Asia, Africa, Europe and North America, providing crucial supplies along with financial support.

In 2021, as the virus continued to spread for a second year, Thai Union donated nearly one million servings of food and other supplies as part of its Thai Union Cares program, which is an essential part of the Company's commitment to Healthy Living.

Under the Thai Union Cares program, Thai Union also provided humanitarian assistance in Thailand's Lop Buri Province during flooding, when many people were trapped inside their homes.

The donations included:

Thai Union Cares Global Donations 2021

Nearly 1-million servings of food donated

- More than 500,000 servings** of protein rich seafood donated to college campuses to support students, USA
- More than 350,000 servings** of Thai Union products donated to government agencies, foundations and civil society, Thailand
- More than 80,000 cans and 6,000 kilograms** of pet food donated to pet foundations, volunteers, non-profit organizations and local communities, Thailand
- 470,000 baht** donated to Bhumirajanakindra Kidney Institute hospital and Samut Sakhon Thai Red Cross for COVID-19 support, Thailand
- More than 44,000 servings** of ready-to-eat meals donated to government agencies, foundations, civil society and local communities, Thailand
- 33,650 sets** of COVID-19 supplies donated to Samut Sakhon provincial office, Samut Sakhon hospital and schools under TU Preschools and the ConnexED project, Thailand
- 500 250 electric fans and power strips** donated to the eighth field hospital in Samut Sakhon, Thailand
- Donated personal protective equipment to **45 schools** under TU Preschools and the ConnexED project, Thailand
- 3,400 cartons** of milk donated to local communities, Thailand
- More than 2,900 kilograms** of rice donated to schools under TU Preschools, Thailand
- 1,330 kilograms** of frozen seabass filets donated to government agencies, foundations and civil society, Thailand



CASE STUDY 11: HEALTHY OCEANS - GREEN GIVING

Protecting the world's oceans and keeping them healthy is not only critical for the planet but also Thai Union's business.

As a company, we have implemented a number of initiatives across our operations as we play our part in caring for the oceans. In 2021 our employees began to embrace the opportunity to also become involved as Thai Union launched a new pilot initiative, the Green Giving program.

Green Giving encourages employees at Thai Union's Bangkok headquarters to help protect the oceans by upcycling plastic waste that could end up in our waters. For the program, Thai Union partnered with Trash Lucky, a start-up from SPACE-F – the first food tech incubator and accelerator program in Thailand, which Thai Union is a founding partner of – to turn plastic waste into usable clothing and other useful items for local communities.

One of the challenges the project faced at the beginning was that employees were working from home due to a new outbreak of COVID-19 which resulted in lockdowns and work-from-home being reimposed. To overcome this, Trash Lucky introduced a QR code which employees could scan and also allowed them to register via its LINE account, after which their recyclable waste could be collected directly from their home.

Once employees returned to working from the office, they were able to drop off their plastic at the Thai Union office.

PET bottles that were collected were upcycled into 300 sets of clothing, which includes a jacket, hat, apron and gloves, and donated to waste pickers in 10 communities throughout Bangkok. The waste pickers earn a living by scavenging and selling recyclables.



Following the success of the program, Thai Union and Trash Lucky launched Green Giving project 2: PET to PPE, in collaboration with three of our plants in Samut Sakhon. The objective of the second Green Giving project was to support Thai Union's commitment to healthy living, striving to take care of people's health and well-being as well as the environment.

With the ongoing spread of COVID-19 in 2021, it has become a priority for Thai Union to support people in local communities where we operate and, at the same time, help protect our oceans. The Green Giving project is an example of Thai Union's commitment to "Healthy Living, Healthy Oceans," whereby the Company not only helps to improve the livelihoods of workers in the local community but also implements a program to reduce plastic waste, which without proper management can often end up in the oceans.

The success of Green Giving project 2 resulted in the donation of 1,000 PPE suits to frontline medical personnel in Samut Sakhon province who were fighting to prevent the spread of COVID-19.





12

**PERFORMANCE
SUMMARY**

ECONOMIC PERFORMANCE

ECONOMIC PERFORMANCE	UNIT	2018	2019	2020	2021
Business Overview					
Net Sales	Mil THB	133,284.64	126,275.25	132,402.44	141,047.69
Total Cost					
Operating Cost	Mil THB	130,041.82	122,490.94	124,568.87	132,827.86
Total Employee expenses & related expenses	Mil THB	12,492.17	11,900.57	13,748.40	12,971.13
Cash paid for interest expenses	Mil THB	1,925.34	2,006.41	2,052.33	1,921.61
Dividend paid	Mil THB	2,819.53	1,908.33	2,538.82	3,946.89
Cash paid for corporate income tax	Mil THB	433.25	-56.77	668.20	883.44
Asia	Mil THB	237.38	168.05	205.34	372.40
Europe & Africa	Mil THB	172.23	328.79	764.14	480.55
North America	Mil THB	23.36	-533.60	-301.27	30.50
R&D / Innovation					
R&D spending as percentage of net sales	%	0.22	0.27	0.24	0.21
Corporate Social Responsibility					
CSR & community investment spending	Mil THB	108.6	74.46	65.08	68.32
Thai Union Group companies covered under SeaChange® & CSR program	%	100	100	100	100

Reference: Performance of Key Environmental and Social Indicators, available on <https://www.thaiunion.com/en/sustainability/report>



ENVIRONMENTAL PERFORMANCE

GROUP-WIDE¹

	INDICATOR	UNIT	2018	2019	2020	2021
	Total Product Volume	Ton	690,454	714,869	778,098	793,282
GHG EMISSION ²	Total GHG Intensity (Scope 1 & 2)	Ton CO ₂ eq/Ton FG	0.78	0.71	0.65	0.64
	Total Emissions	Ton CO ₂ eq				4,297,371
	GHG Scope 1	Ton CO ₂ eq	369,887	337,317	317,453	323,493
	GHG Scope 2	Ton CO ₂ eq	169,743	172,424	186,852	188,119
	GHG Scope 3*	Ton CO ₂ eq	-	-	-	3,785,759
WATER	Total Water Withdrawal Intensity	m ³ /Ton FG	16.4	15.91	17.47	15.41
	Total Water Withdrawal	m ³	11,147,314	11,376,341	13,595,384	12,222,140
	Recycled and Reused Water	m ³	944,558	1,224,253	1,948,273	1,888,825
WASTE TO LANDFILL	Waste to Landfill Intensity	kg/Ton FG	31.46	19.38	17.78	18.04
	Total Waste to Landfill	kg	21,723,407	13,855,171	13,838,269	14,308,000



Remarks:

N/A: Not available data

¹ Group-wide data covers:

- Factories in Thailand, Vietnam, France, Portugal, Poland, Germany, Norway, Ghana, Seychelles, Lithuania and United States of America.
- Office based in Thailand.
- Farms and hatcheries based in Thailand.

² The data of GHG emission of 2020 are recalculated based on the amendment of GHG emission calculation methodology in 2021. The following key amendments of GHG emission calculation methodology are:

- Amendment of emission factors for GHG scope 1 emission aligning with Thailand Greenhouse Gases Management Organization (TGO), GHG Protocol, 2006 Intergovernmental Panel on Climate Change (IPCC) Guidelines for National Greenhouse Gas Inventories, and 2013 IPCC Fifth Assessment Report (AR5).

- Amendment of emission factors for GHG scope 2 (electricity) by country aligning with GHG Protocol: Green-e Energy Residual Mix Emissions Rates (2018), UNFCCC Harmonized Grid Emission factor data set version 3.0 (December 2021), Institute for Global Environmental Strategies (2021). List of Grid Emission Factors version 10.11, and TGO.

- Amendment of GHG emission calculation methodology for wastewater treatment plant, refrigerant, and domestic septic tank regarding to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories Volume 5 Waste.

³ GHG Scope 3 data covers:

- Entities in Thailand, Vietnam, France, Portugal, Poland, Norway, Ghana, Seychelles, Lithuania, United States of America, China, Luxemburg, Ireland, United Kingdom, The Netherlands, Italy, and Germany

Scope 3 Methodology:

Thai Union has calculated scope 3 GHG emissions in line with specifications from the GHG Protocol. Mixed methodology approach prioritizes average data methods for calculating material categories, such as Purchased Goods and Services, while relying on spending-based data for less relevant categories, such as Capital Goods and Business Travel.

ENVIRONMENTAL PERFORMANCE

FACTORY¹

		UNIT	2018	2019	2020	2021
GHG EMISSION ²	INDICATOR					
	Total Product Volume	Ton	690,219	714,498	777,536	792,695
	Total GHG Intensity	Ton CO ₂ eq/Ton FG	0.78	0.71	0.643	0.640
	Total Emission (Scope 1 & 2)	Ton CO ₂ eq	536,494	506,906	499,825	507,311
	GHG Scope 1	Ton CO ₂ eq	369,540	337,052	317,069	323,025
GHG Scope 2	Ton CO ₂ eq	166,954	169,854	182,756	184,286	
ENERGY MANAGEMENT	Total Energy Intensity	GJ/Ton FG	6.21	5.65	5.60	5.45
	Total Energy Consumption	GJ	4,283,160	4,034,686	4,350,452	4,320,120
	Total Direct Energy	GJ	3,043,495	2,799,344	3,039,017	2,998,774
	Non-Renewable Energy Consumption	GJ	2,901,250	2,610,224	2,799,869	2,748,505
	Fuel Oil (Bunker Oil)	GJ	731,721	670,356	726,432	522,192
	Natural Gas	GJ	263,269	114,295	285,944	298,299
	Diesel	GJ	133,767	136,283	32,209	20,877
	Biodiesel (B7) ³	GJ	N/A	N/A	51,114	41,028
	Biodiesel (B10) ³	GJ	N/A	N/A	17,685	23,385
	LPG	GJ	427,493	192,163	205,169	235,271
	Coal	GJ	1,341,402	1,379,047	1,477,229	1,603,647
	Gasoline/Petrol	GJ	2,048	2,966	2,804	2,504
	Biogasoline	GJ	1,550	115,116	1,284	1,303
	Renewable Energy Consumption	GJ	142,245	189,120	239,148	250,268
	Biogas	GJ	50,700	57,422	69,451	71,657
	Wood Pallet	GJ	88,317	115,116	136,940	146,856
Saw Dust	GJ	N/A	N/A	N/A	3	
Solar Panel	GJ	3,228	16,582	32,757	31,752	
Total Indirect Energy (Electricity)	GJ	1,239,665	1,235,341	1,311,435	1,321,346	

Remarks:
N/A: Data not available

¹ Data in 2018-2021 covers factories in Thailand, Vietnam, France, Portugal, Poland, Germany, Norway, Ghana, Seychelles, Lithuania and United States of America.



ENVIRONMENTAL PERFORMANCE

FACTORY¹

	INDICATOR	UNIT	2018	2019	2020	2021
WATER ⁴	Total Water Withdrawal Intensity	m ³ /Ton FG	13.65	12.13	11.39	10.68
	Total Water Withdrawal	m ³	9,421,412	8,668,672	8,853,430	8,463,566
	Water Withdrawal (TDS ≤ 1,000 mg/l)	m ³	9,421,412	8,418,724	8,442,398	7,855,332
	Municipal Water	m ³	6,435,806	6,140,537	5,996,959	4,827,332
	Surface Water	m ³	1,537,961	901,720	691,180	638,795
	Ground Water	m ³	1,405,195	1,332,888	1,494,024	2,118,572
	Rainwater Collected by Organization	m ³	42,451	43,579	260,235	270,358
	Water Withdrawal (TDS > 1,000 mg/l)	m ³	-	249,948	411,032	608,234
	Surface Water	m ³	-	-	7,183	22,640
	Ground Water	m ³	-	-	-	174,947
Sea Water	m ³	-	249,948	403,849	410,647	
Recycled and Reused Water	m ³	934,366	1,224,253	1,948,273	1,888,825	
Water Discharge to the Offsite	m ³	N/A	-	2,469,951	5,906,569	
Total Water Consumption	m ³	N/A	-	6,383,479	2,556,997	
WASTE TO LANDFILL ⁵	Waste to Landfill Intensity	kg/Ton FG	31.34	19.27	17.64	17.90
	Total Waste to Landfill	kg/Ton FG	21,628,046	13,768,871	13,716,606	14,192,376
NON-HAZARDOUS WASTE DISPOSAL ⁶	Reuse	kg	-	2,978,897	3,737,094	2,365,430
	Recycling	kg	-	21,261,550	20,779,810	29,097,963
	Composting	kg	-	2,823,204	9,241,842	16,816,967
	Recovery, including Energy Recovery	kg	-	1,833,015	1,897,356	1,478,895
	Incineration without Heat Recovery (i.e. Mass Burn)	kg	-	1,289,490	550,940	185,850

Remarks:

² The data of GHG emission of 2020 are recalculated based on the amendment of GHG emission calculation methodology in 2021. The following key amendments of GHG emission calculation methodology are:

- Amendment of emission factors for GHG scope 1 emission aligning with Thailand Greenhouse Gases Management Organization (TGO), GHG Protocol, 2006 Intergovernmental Panel on Climate Change (IPCC) Guidelines for National Greenhouse Gas Inventories, and 2013 IPCC Fifth Assessment Report (AR5).

- Amendment of emission factors for GHG scope 2 (electricity) by country aligning with GHG Protocol: Green-e Energy Residual Mix Emissions Rates (2018), UNFCCC Harmonized Grid Emission factor data set version 3.0 (December 2021), Institute for Global Environmental Strategies (2021). List of Grid Emission Factors version 10.11, and TGO.

- Amendment of GHG emission calculation methodology for wastewater treatment plant, refrigerant, and domestic septic tank regarding to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories Volume 5 Waste.

ENVIRONMENTAL PERFORMANCE

FACTORY ¹						
	INDICATOR	UNIT	2018	2019	2020	2021
NON-HAZARDOUS WASTE DISPOSAL ³	Landfill	kg	-	13,575,566	13,296,623	12,572,619
	Other Disposal Methods ⁶	kg	-	-	8,853,430	-
	On-Site Storage	kg	-	-	-	460,000
	Total	kg	-	43,761,722	58,357,095	62,977,724
HAZARDOUS WASTE DISPOSAL ⁵	Reuse	kg	-	236,880	221,247	231,291
	Recycling	kg	-	75,843	254,170	540,127
	Composting	kg	-	-	-	-
	Recovery, including Energy Recovery	kg	-	192,086	209,712	293,205
	Incineration without Heat Recovery (i.e. Mass Burn)	kg	-	10,786	5,213	44,530
	Landfill	kg	-	193,306	419,983	1,619,757
	Other Disposal Methods ⁶	kg	-	-	28,191	-
	On-Site Storage	kg	-	-	-	585,180
Total	kg	-	708,900	1,138,516	3,314,090	

Remarks:

³ The data of biodiesel B7 and B10 are not available in 2018-2019. The company has reclassified and reported energy consumption for biodiesel B7 and B10 since 2020.

⁴ No information available for TDS values of wastewater discharged to the offsite and destination of wastewater discharge in 2021. In addition, the total volume of water withdrawal (TDS>1,000 mg/L) in 2020 has been amended.

⁵ The volume of non-hazardous and hazardous waste from Asia and hazardous waste from Europe in 2020 has been amended from the performance data reported in SD report 2020.

⁶ In 2020, "Other Disposal Methods" is not classified as any specific waste disposal methods listed in the table due to insufficient information.



ENVIRONMENTAL PERFORMANCE

FARM & HATCHERY¹

		UNIT	2018	2019	2020	2021
GHG EMISSION²						
	Total Product Volume	Ton	235	371	562	587
	Total GHG Intensity	Ton CO ₂ eq/Ton FG	10.65	7.64	6.41	6.01
	Total Emission	Ton CO ₂ eq	2,504	2,834	3,600	3,529
	GHG Scope 1	Ton CO ₂ eq	307	265	287	355
	GHG Scope 2	Ton CO ₂ eq	2,197	2,570	3,313	3,174
ENERGY MANAGEMENT						
	Total Energy Intensity	GJ/Ton FG	83.36	58.10	49.38	46.89
	Total Energy Consumption	GJ	19,592	21,562	27,737	27,515
	Total Direct Energy	GJ	4,388	3,783	3,575	4,659
	Non-Renewable Energy Consumption	GJ	4,388	3,783	3,575	4,659
	Fuel Oil (Bunker Oil)	GJ	-	-	-	-
	Natural Gas	GJ	-	-	-	-
	Diesel	GJ	4,231	3,572	-	-
	Biodiesel (B7) ³	GJ	N/A	N/A	3,248	4,467
	Biodiesel (B10) ³	GJ	N/A	N/A	-	-
	LPG	GJ	-	-	92	10
	Coal	GJ	-	-	-	-
	Gasoline/Petrol	GJ	157	211	-	-
	Biogasoline	GJ	-	-	234	182
	Renewable Energy Consumption	GJ	-	-	-	-
	Biogas	GJ	-	-	-	-
	Wood Pallet	GJ	-	-	-	-
	Saw Dust	GJ	N/A	N/A	N/A	N/A
	Solar Panel	GJ	-	-	-	-
	Total Indirect Energy (Electricity)	GJ	15,204	17,779	24,162	22,856



ENVIRONMENTAL PERFORMANCE

FARM & HATCHERY

		UNIT	2018	2019	2020	2021	Remarks:
INDICATOR							
WATER ⁴	Total Water Withdrawal Intensity	m ³ /Ton FG	7,298.29	7,296.14	8,414.43	6,385.30	N/A: Not available data ¹ Data in 2018-2021 covers farms and hatcheries in Thailand. ² The data of GHG emission of 2020 are recalculated based on the amendment of GHG emission calculation methodology in 2021. The following key amendments of GHG emission calculation methodology are: - Amendment of emission factors for GHG scope 1 emission aligning with Thailand Greenhouse Gases Management Organization (TGO), GHG Protocol, 2006 Intergovernmental Panel on Climate Change (IPCC) Guidelines for National Greenhouse Gas Inventories, and 2013 IPCC Fifth Assessment Report (AR5). - Amendment of emission factors for GHG scope 2 (electricity) by country aligning with GHG Protocol: Green-e Energy Residual Mix Emissions Rates (2018), UNFCCC Harmonized Grid Emission factor data set version 3.0 (December 2021), Institute for Global Environmental Strategies (2021). List of Grid Emission Factors version 10.11, and TGO. - Amendment of GHG emission calculation methodology for wastewater treatment plant, refrigerant, and domestic septic tank regarding to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories Volume 5 Waste.
	Total Water Withdrawal	m ³	1,715,316	2,707,669	4,726,094	3,747,236	
	Water Withdrawal (TDS ≤ 1,000 mg/l)	m ³	1,715,316	735,370	410,099	269,378	
	Municipal Water	m ³	11,206	22,696	39,291	45,177	
	Surface Water	m ³	1,687,986	712,674	309,698	141,738	
	Ground Water	m ³	15,380	-	61,111	82,463	
	Rainwater Collected by Organization	m ³	744	-	-	-	
	Water Withdrawal (TDS > 1,000 mg/l)	m ³	-	1,972,299	4,315,995	3,477,885	
	Surface Water	m ³	-	-	-	-	
	Ground Water	m ³	-	-	-	-	
	Sea Water	m ³	-	1,972,299	4,315,995	3,477,885	
	Recycled and Reused Water	m ³	10,192	69,776	-	-	
	Water Discharge to the Offsite	m ³	-	-	1,018,752	2,048,074	
Total Water Consumption	m ³	-	-	3,707,343	1,669,189		
WASTE TO LANDFILL	Waste to Landfill Intensity	kg/Ton FG	398.40	219.62	124.15	90.26	
	Total Waste to Landfill	kg/Ton FG	93,637	81,505	69,731	52,972	
NON-HAZARDOUS WASTE DISPOSAL	Reuse	kg	-	-	-	100	
	Recycling	kg	-	257	5,646	497	
	Composting	kg	-	-	-	-	
	Recovery, including Energy Recovery	kg	-	-	-	-	
	Incineration without Heat Recovery (i.e. Mass Burn)	kg	-	-	465	-	

ENVIRONMENTAL PERFORMANCE

FARM & HATCHERY¹

	INDICATOR	UNIT	2018	2019	2020	2021
NON-HAZARDOUS WASTE DISPOSAL	Landfill	kg	-	81,311	69,702	52,972
	Other Disposal Methods	kg	-	-	-	-
	On-Site Storage	kg	-	-	-	-
	Total	kg	-	81,568	75,812	53,569
HAZARDOUS WASTE DISPOSAL	Reuse	kg	-	-	3,935	10,816
	Recycling	kg	-	269	217	4,159
	Composting	kg	-	-	-	-
	Recovery, including Energy Recovery	kg	-	-	-	-
	Incineration without Heat Recovery (i.e. Mass Burn)	kg	-	-	-	-
	Landfill	kg	-	194	29	-
	Other Disposal Methods	kg	-	-	-	-
	On-Site Storage	kg	-	-	-	-
Total	kg	-	463	4,181	14,975	

Remarks:

³ The information of biodiesel B7 and B10 are not available in 2018-2019. The company has reclassified and reported energy consumption for biodiesel B7 and B10 since 2020.

⁴ No information available for TDS values of wastewater discharged to the offsite and location of wastewater discharge in 2021. In addition, the total volume of water withdrawal (TDS>1,000 mg/L) in 2020 has been amended.



ENVIRONMENTAL PERFORMANCE

OFFICE¹

		UNIT	2018	2019	2020	2021
GHG EMISSION ²	INDICATOR					
	Total Product Volume	Ton	-	-	-	-
	Total GHG Intensity	Ton CO ₂ eq/Ton FG	-	-	-	-
	Total Emission	Ton CO ₂ eq	632	897	880	771
	GHG Scope 1	Ton CO ₂ eq	40	16	97	112
GHG Scope 2	Ton CO ₂ eq	592	881	783	659	
ENERGY MANAGEMENT	Total Energy Intensity	GJ/Ton FG	-	-	-	-
	Total Energy Consumption	GJ	4,914	6,856	5,639	4,747
	Total Direct Energy	GJ	819	762	-	-
	Non-Renewable Energy Consumption	GJ	819	762	-	-
	Fuel Oil (Bunker Oil)	GJ	-	-	-	-
	Natural Gas	GJ	-	-	-	-
	Diesel	GJ	272	217	-	-
	Biodiesel (B7) ³	GJ	N/A	N/A	-	-
	Biodiesel (B10) ³	GJ	N/A	N/A	-	-
	LPG	GJ	-	-	-	-
	Coal	GJ	-	-	-	-
	Gasoline/Petrol	GJ	547	544	-	-
	Biogasoline	GJ	-	-	-	-
	Renewable Energy Consumption	GJ	-	-	-	-
	Biogas	GJ	-	-	-	-
Wood Pallet	GJ	-	-	-	-	
Saw Dust	GJ	N/A	N/A	N/A	3	
Solar Panel	GJ	-	-	-	-	
Total Indirect Energy (Electricity) ⁴	GJ	4,095	6,095	5,639	4,747	



ENVIRONMENTAL PERFORMANCE

OFFICE¹

		INDICATOR	UNIT	2018	2019	2020	2021	Remarks:
WATER ⁵		Total Water Withdrawal Intensity	m ³ /Ton FG	-	-	-	-	
		Total Water Withdrawal	m ³	10,586	17,966	15,859	11,311	
		Water Withdrawal (TDS ≤ 1,000 mg/l)	m ³	10,586	17,966	15,859	11,311	
		Municipal Water	m ³	10,586	17,966	15,859	11,311	
		Surface Water	m ³	-	-	-	-	
		Ground Water	m ³	-	-	-	-	
		Rainwater Collected by Organization	m ³	-	-	-	-	
		Water Withdrawal (TDS > 1,000 mg/l)	m ³	-	-	-	-	
		Surface Water	m ³	-	-	-	-	
		Ground Water	m ³	-	-	-	-	
		Sea Water	m ³	-	-	-	-	
		Recycled and Reused Water	m ³	-	-	-	-	
	Water Discharge to the Offsite	m ³	-	-	-	-		
	Total Water Consumption	m ³	10,586	17,966	15,859	11,311		
WASTE TO LANDFILL		Waste to Landfill Intensity	kg/Ton FG	-	-	-	-	
		Total Waste to Landfill	kg/Ton FG	1,724	4,794	51,932	62,652	
NON-HAZARDOUS WASTE DISPOSAL ⁶		Reuse	kg	-	-	-	-	
		Recycling	kg	-	-	-	130	
		Composting	kg	-	-	-	-	
		Recovery, including Energy Recovery	kg	-	-	-	-	
		Incineration without Heat Recovery (i.e. Mass Burn)	kg	-	-	-	-	

ENVIRONMENTAL PERFORMANCE

OFFICE¹

	INDICATOR	UNIT	2018	2019	2020	2021
NON-HAZARDOUS WASTE DISPOSAL ⁵	Landfill	kg	1,425	4,665	41,141	57,715
	Other Disposal Methods ⁷	kg	4,367	426	-	-
	On-Site Storage	kg	-	-	-	-
	Total	kg	5,792	5,091	41,141	57,846
HAZARDOUS WASTE DISPOSAL ⁶	Reuse	kg	-	-	-	-
	Recycling	kg	169	-	-	-
	Composting	kg	-	-	-	-
	Recovery, including Energy Recovery	kg	-	250	-	-
	Incineration without Heat Recovery (i.e. Mass Burn)	kg	-	-	-	-
	Landfill	kg	299	130	10,791	4,937
	Other Disposal Methods ⁷	kg	1,825	328	469	-
	On-Site Storage	kg	-	-	-	-
	Total	kg	2,293	707	11,260	4,937

Remarks:

³ The data of biodiesel B7 and B10 are not available in 2018-2019. The company has reclassified and reported energy consumption for biodiesel B7 and B10 since 2020.

⁴ For office, the data of energy consumption from cooling system is not available in this reporting year. Therefore, the indirect energy consumption within the organization does not include energy consumption from cooling system.

⁵ No information available for TDS value of wastewater discharged to the offsite in 2021.

⁶ The volume of non-hazardous waste in 2020 has been amended from the performance data reported in SD report 2020.

⁷ In 2018-2020, "Other Disposal Methods" is not classified as any specific waste disposal methods listed in the table due to insufficient information.



OCCUPATIONAL HEALTH AND SAFETY PERFORMANCE

	PERFORMANCE DATA ¹	UNIT	2018	2019	2020	2021
1	Lost Time Injury Frequency Rate (LTIFR) - Employees, Contractors, Visitors	Case per 200,000 hours worked	0.57	0.42	0.45	0.39
2	Lost Time Injury Severity Rate (LTISR) ² - Employees, Contractors, Visitors	Lost day per 200,000 hours worked	N/A	3.93	5.07	5.00
3	Total Recordable Incident Rate (TRIR) ³ - Employees, Contractors, Visitors	Case per 200,000 hours worked	N/A	N/A	0.63	0.61
4	Lost Time Injury Frequency Rate (LTIFR) - Employees	Case per 200,000 hours worked	0.59	0.46	0.48	0.39
5	Lost Time Injury Severity Rate (LTISR) ² - Employees	Lost day per 200,000 hours worked	8.91	3.93	5.39	5.26
6	Total Recordable Incident Rate (TRIR) ³ - Employees	Case per 200,000 hours worked	N/A	N/A	0.68	0.62
7	Lost Time Injury Frequency Rate (LTIFR) - Contractors	Case per 200,000 hours worked	0	0.02	0.22	0.39
8	Lost Time Injury Severity Rate (LTISR) ² - Contractors	Lost day per 200,000 hours worked	N/A	0.03	2.79	3.05

Remarks:

¹ Data covers office, factories, farms and hatcheries in Thailand, Vietnam, France, Portugal, Poland, Germany, Norway, Ghana, Seychelles, Lithuania, Italy, Ireland, Netherlands, United Kingdom, and United States of America.

² No data recorded for LTISR in 2018
³ No data recorded for TRIR in 2018-2019

⁴ No data recorded for High Consequence Injury in 2018-2019



OCCUPATIONAL HEALTH AND SAFETY PERFORMANCE

	PERFORMANCE DATA ¹	UNIT	2018	2019	2020	2021
9	Total Recordable Incident Rate (TRIR) ³ - Contractors	Case per 200,000 hours worked	N/A	N/A	0.24	0.56
10	High-Consequence Work-Related Injury Rate ⁴ - Employees	Case per 200,000 hours worked	N/A	N/A	0.004	0.002
11	Working Hours - Employees	Hours worked	119,279,654.43	119,279,654.43	110,113,322.00	100,071,200.05
12	Working Hours - Contractors	Hours worked	3,744,761.34	13,274,667.17	13,903,515.56	12,245,425.93
13	Lost Time Injury case - Employees, Contractors, Visitors	Case	N/A	N/A	281.00	220.00
14	High-Consequence Work-Related Injury case ⁴ - Employees	Case	N/A	N/A	2.00	2.00
15	High-Consequence Work-Related Injury case ⁴ - Contractors	Case	N/A	N/A	0.00	0.00
16	Fatality Case - Employees	Case	0	0	0.00	0.00
17	Fatality Case - Contractors	Case	0	1	0.00	0.00



PEOPLE PERFORMANCE

HUMAN CAPITAL PERFORMANCE	UNIT	2018	2019	2020	2021
Total workforce	people	47,314	44,551	44,101	44,705
Full time employee (FTE)	people	13,582	14,319	12,967	13,571
Daily staff	people	33,422	30,212	31,134	31,134
Average hours of training per year	Hour/employee	5.6	4.7	5.9	6.7
Average amount spent on training per FTE	Thai Baht	3,505	3,120	1,692	1,394.4
Human capital return on investment ratio ¹	-	1.26	1.32	1.57	1.63
ATTRACT & RETAIN TALENT	UNIT	2018	2019	2020	2021
Employee Engagement survey	% of employee engaged	82	83.5	81	82
Total employee turnover per FTE	%	13.23	16.10	17.49	13.23
Asia	%	14.98	17.74	20.35	14.12
North America	%	26.00	26.78	20.72	17.72
Europe & Africa	%	10.27	11.31	12.97	11.18
DIVERSITY	UNIT	2018	2019	2020	2021
Gender distribution by level					
Total management	people	1,140	1,129	1,235	1,069
Total management – female ratio	%	43.33	46.06	47.21	45.84
Total management – male	people	646	609	652	579
Total management – female	people	494	520	583	490
	UNIT	2018	2019	2020	2021
Management - male	people	646	609	652	579
Top management	people	26	24	22	22
Middle management	people	143	144	215	218
Junior management	people	480	441	415	339



PEOPLE PERFORMANCE

	UNIT	2018	2019	2020	2021
Management - female	people	494	520	583	490
Top management	people	3	2	3	3
Middle management	people	49	51	84	118
Junior management	people	442	467	496	369
Total non-management	people	12,442	12,009	11,732	12,502
Total non-management - female ratio	%	61.20	60.44	58.61	58.44
Total non-management - male	people	4,827	4,751	4,856	5,196
Total non-management - female	people	7,615	7,258	6,876	7,306
Proportion of local hiring of senior management (Headquarters only)	%	50.00	33.33	71.43	100.00
Freedom of association - number of employees represented by trade union²	people	586	564	513	476
	%	81.24	82.88	82.88	76.90
Number of consultations / negotiations with trade union²	Number of sessions	10	10	7	12
Ratio of average total cash compensation of women to men, by employee category³					
Executive				0.77	0.83
Management				0.68	0.75
Non-Management				1.00	0.99



Remarks:

¹ We use a new methodology for calculating Human Capital Return on Investment to align with globally accepted practice, such as that in the S&P Global Corporate Sustainability Assessment (CSA). The ratio is calculated by, first, subtracting Total Operating Expenses less total employee-related expenses from Total Revenue, and then dividing this figure by total employee-related expenses. The resulting ratio examines Thai Union's level of profitability in relation to the total human capital expenses.

² Coverage is limited to our employees based in Ghana and Portugal. In other countries, there are regulatory restrictions on information disclosure relating to trade union membership.

³ Gender pay data coverage is 95% of total FTEs (excluding Rügen Fisch employees due to legal reason).

REPORTING COVERAGE

COMPANIES AND GROUPS OF COMPANIES	COUNTRY	% HOLDING BY TU	2021 REPORTING COVERAGE			
			SALES UNIT : BILLION BAHT	ENVIRONMENTAL INDICATORS	SOCIAL INDICATORS	
Thai Union Group PCL	TU	Thailand	-	12.8	✓	✓
Thai Union Manufacturing Co., Ltd.	TUM	Thailand	99.66	21.1	✓	✓
i-Tail Corporation PCL (formerly known as "Songkla Canning PCL.")	ITC	Thailand	99.55	3.6	✓	✓
Asian-Pacific Can Co., Ltd.	APC	Thailand	99.54	1.8	✓	✓
Yueh Chyang Canned Food Co., Ltd.	YCC	Vietnam	99.55	0.5	✓	✓
Thai Union Seafood Co., Ltd.	TUS	Thailand	51.00	1.3	✓	✓
Pakfood PCL	PPC	Thailand	99.74	5.8	✓	✓
EHS Training and Services Co., Ltd. (formerly known as "T-Holding Co., Ltd.")	EHS	Thailand	100.00	-	N/A	✓
Thai Union Feedmill PCL. (formerly known as "Thai Union Feedmill Co., Ltd.")	TFM	Thailand	51.00	4.5	✓	✓
PT Thaiunion Kharisma Lestari	TUKL	Indonesia	33.15	-	In progress	In progress
AMG - Thai Union Feedmill (Private) Ltd.	AMG-TFM	Pakistan	26.01	0.2	N/A	In progress
Thai Union Graphic Co., Ltd.	TUG	Thailand	98.00	0.1	✓	✓
Seafood International One FZCO	SIC1	United Arab Emirates	60.00	-	N/A	N/A
Thai Union Online Shop Co.,Ltd.	TUO	Thailand	100.00	0.1	N/A	✓
Thai Union China Co.,Ltd.	TUC	China	100.00	0.8	N/A	In progress
TMAC Group	TMAC	Thailand	100.00	0.1	✓	✓
Thai Union Ingredients Co., Ltd	TUI	Thailand	100.00	0.3	✓	✓
Thammachart Seafood Retail Co.,Ltd.	TSR	Thailand	65.00	0.6	✓	✓
Thai Union Lifescience Co., Ltd.	TUL	Thailand	95.20	-	✓	✓
Japan Pet Nutrition Co., Ltd.	JPN	Japan	90.00	-	N/A	N/A
TOTAL ASIA				53.6	100.00%	98.1%



REPORTING COVERAGE

	COMPANIES AND GROUPS OF COMPANIES	COUNTRY	% HOLDING BY TU	2021 REPORTING COVERAGE			
				SALES UNIT : BILLION BAHT	ENVIRONMENTAL INDICATORS	SOCIAL INDICATORS*	
EUROPE & AFRICA	Thai Union Europe One Group	TUE1	France	100.00	22.3	✓	✓
	Thai Union Trading Europe B.V.	TUTE	Netherlands	100.00	1.6	N/A	✓
	MerAlliance Group	MA	France	100.00	5.4	✓	✓
	King Oscar Group	KO	Norway	100.00	1.6	✓	✓
	Thai Union Germany GmbH	TUGe	Germany	100.00	4.5	✓	✓
	Thai Union Canada Inc.	TUCa	Canada	100.00	-	In progress	In progress
	TUMD Group	TUMD	Russia	90.00	0.3	In progress	In progress
	Tuna Logistics Services Ltd.	TLS	Seychelles	100.00	-	N/A	N/A
Total Europe & Africa					35.7	99.1%	99.2%
USA	Tri-Union Seafoods, LLC	TRI-U	USA	100.00	12.7	✓	✓
	Tri-Union Frozen Products Inc.	TUFP	Canada	100.00	35.8	N/A	✓
	U.S. Pet Nutrition, LLC	USPN	USA	100.00	3.2	N/A	✓
	Total USA				51.7	100%	100%
GRAND TOTAL					141.0	99.7%	99.1%

Remarks:

The above data refers to sales structure after exclusion of intercompany transactions.

For the detail of shareholdings and financial changes, please refer to One Report 2021 PDF page 35 (Document [page 67](#))

* Social indicators of Occupational Health and Safety

✓ : The facility which is reported in Thai Union's scope of Environmental & Social Reporting.

N/A for Environmental Reporting : Facilities out of Thai Union's scope of Environmental Reporting are classified as non-manufacturing facility, or has been acquired for less than 2 years.

N/A for Social Reporting: Facilities acquired for less than 2 years were excluded from Thai Union's scope of Social Reporting.

In Progress: Environmental & Social Reporting of this facility is in progress.





13

GRI CONTENT INDEX & UNGC COP



GENERAL STANDARD DISCLOSURES	DESCRIPTION	PAGE OR LINK	EXTERNAL ASSURANCE
ORGANIZATION PROFILE			
GRI 102-1	Name of the organization	Back cover	
GRI 102-2	Activities, brand, products and services	Business Overview, pp.16-17 Seafood Sourcing Locations, pp.18-19	
GRI 102-3	Location of headquarters	Back cover and Annual Report p.3	
GRI 102-4	Location of operations	Annual Report pp.10	
GRI 102-5	Ownership and legal form	Annual Report p.3	
GRI 102-6	Markets served	Annual Report pp.10, 20-29	
GRI 102-7	Scale of the organization	Business Overview, pp.16-17	
GRI 102-8	Information on employees and other workers	Business Overview, p.16-17 Performance Summary – People Performance, pp.98-99	
GRI 102-9	Supply chain	Seafood Sourcing Locations, p.18-19 Annual Report pp.10-11, 107	
GRI 102-10	Significant changes to the organization and its supply chain	Annual Report p.18-19, 52	
GRI 102-11	Precautionary Principle or approach	Responsible Operations, pp.62-63 https://www.thaiunion.com/en/about/safety-health-and-environment	
GRI 102-12	Externally developed economic, environmental and social charters, principles or other initiatives to which the organization subscribes or which it endorses	Sustainability at Thai Union – The Importance of Industry Collaboration, p.26 Our collaboration with SeaBOS pp.26, 33, 52; Sustainable Fisheries Partnership, pp.56-57; The Nature Conservancy pp.55, 60-61, Global Ghost Gear Initiative p.55, Global Dialogue on Seafood Traceability (GDST), pp.50, 58. https://seachangesustainability.org/partnerships-and-collaborations/	
GRI 102-13	Membership of Associations	Sustainability at Thai Union – The Importance of Industry Collaboration, p.26 https://seachangesustainability.org/partnerships-and-collaborations/	
GRI 102-14	Statement from senior decision-makers	CEO Message, pp.8-11	
GRI 102-16	Values, principles, standards, and norm of behavior	Business Overview, pp.16-17	

GENERAL STANDARD DISCLOSURES	DESCRIPTION	PAGE OR LINK	EXTERNAL ASSURANCE
GOVERNANCE			
GRI 102-18	Governance structure	Annual Report pp.136-159, 187-188 Sustainable Development Committee, pp.24 Global Leadership Team, https://www.thaiunion.com/en/about/people/global-leadership-team	
STAKEHOLDER ENGAGEMENT			
GRI 102-40	List of stakeholder groups	Our Material Issues & Stakeholder Engagement, pp.32-36	
GRI 102-41	Collective bargaining agreement	Performance Summary – Freedom of association – number of employees represented by trade union, p.99	
GRI 102-42	Identifying and selecting stakeholders	Our Material Issues & Stakeholder Engagement, pp.32-36	
GRI 102-43	Approach to stakeholder engagement	Our Material Issues & Stakeholder Engagement, pp.32-36	
GRI 102-44	Key topics and concern raised	Our Material Issues & Stakeholder Engagement, pp.32-36	
REPORT PRACTICE			
GRI 102-45	Entities included in the consolidated financial statements	Annual Report pp.80-93, 254-258	
GRI 102-46	Defining report content and topic boundaries	About This Report, pp.4-5	
GRI 102-47	List of material topics	Our Material Issues & Stakeholder Engagement, pp.33	
GRI 102-48	Restatements of information	No change	
GRI 102-49	Changes in reporting	No change	
GRI 102-50	Reporting period	About This Report, p.4	
GRI 102-51	Date of most recent report	About This Report, p.4 https://www.thaiunion.com/files/download/sustainability/sd-report-2020-en.pdf	
GRI 102-52	Reporting cycle	About This Report, p.4	
GRI 102-53	Contact point of questions regarding the report	Back cover	
GRI 102-54	Claim of reporting in accordance with the GRI Standards behavior	About This Report, p.5	
GRI 102-55	GRI content index	GRI Content Index, pp.102-115	
GRI 102-56	External assurance	LR Independent Assurance Statement, pp.119-120	

SPECIFIC STANDARD DISCLOSURES

MATERIAL ASPECT	DMA AND INDICATORS	DESCRIPTION	PAGE OR LINK	OMISSION / NOTES	EXTERNAL ASSURANCE
ECONOMIC (GOVERNANCE, TRANSPARENCY AND COMMUNITY)					
Economic performance	GRI 103	Management Approach	Annual Report pp.110-115		
	GRI 201-1	Direct Economic value generated and distributed	Performance Summary – Economic Performance, p.85 Annual Report p.30-31, 53, 67		
Transparency	GRI 103	Management Approach	Our Material Issues & Stakeholder Engagement – Our Operating Principles, pp.32-33 Annual Report pp.119-135		
	GRI 419-1	Non-compliance with laws and regulations in the social and economic area	Annual Report pp.345		
	Thai Union's own indicator	Public communications and information disclosure	Annual Report p.128-133 https://www.thaiunion.com/en/newsroom/press-release https://seachangesustainability.org/media/press-releases/		
Community	GRI 103	Management Approach	People and Communities, pp.76-82 https://seachangesustainability.org/about-seachange/people-and-communities/		
	GRI 413-1	Operations with local community engagement, impact assessments, and	Performance Summary – Thai Union Group companies covered under SeaChange® and CSR program, p.85		

MATERIAL ASPECT	DMA AND INDICATORS	DESCRIPTION	PAGE OR LINK	OMISSION / NOTES	EXTERNAL ASSURANCE
ENVIRONMENTAL (ENVIRONMENTAL PROTECTION, CLIMATE CHANGE AND OCEAN PLASTIC)					
Energy	GRI 103	Management Approach	Responsible Operations – Environmental Protection and Climate Change, pp.66 https://www.thaiunion.com/en/about/safety-health-and-environment		
	GRI 302-1	Energy consumption within organization	Performance Summary – Energy Management, p.87		
	GRI 302-3	Energy intensity	Performance Summary – Energy Management, p.87		
	GRI 302-4	Reduction of energy consumption	Performance Summary – Energy Management, p.87		
Water and effluents	GRI 103	Management Approach	Responsible Operations – Water Management, pp.63, 66-68		
	GRI 303-1	Interactions with water as a shared resource	Responsible Operations – Water Management, pp.63, 66-68		
	GRI 303-2	Management of water discharge-related impacts	Responsible Operations – Water Management, pp.63, 66-68		
	GRI 303-3	Water withdrawal	Performance Summary – Water, p.86, 88		*
	GRI 303-4	Water discharge	Performance Summary – Water, p.86, 88		*
	GRI 303-5	Water consumption	Performance Summary – Water, p.86, 88		*

MATERIAL ASPECT	DMA AND INDICATORS	DESCRIPTION	PAGE OR LINK	OMISSION / NOTES	EXTERNAL ASSURANCE
ENVIRONMENTAL (ENVIRONMENTAL PROTECTION, CLIMATE CHANGE AND OCEAN PLASTIC)					
Emissions	GRI 103	Management Approach	Sustainability Highlights, pp.14-15 Sustainability at Thai Union, pp. 21, 23-24, 27-28 Responsible Operations – Environmental Protection and Climate Change, pp.62-63, 66 Responsible Sourcing – Sustainability and Climate Action in Aquaculture, pp.74-75		
	GRI 305-1	Direct (scope 1) GHG emissions	Thai Union’s Greenhouse Gas Inventory, p.15 Performance Summary – GHG Emissions, pp.86-87, 90, 93		*
	GRI 305-2	Energy indirect (scope 2) GHG emissions	Thai Union’s Greenhouse Gas Inventory, p.15 Performance Summary – GHG Emissions, pp.86-87, 90, 93		*
	GRI 305-3	Other indirect (Scope 3) GHG emissions	Thai Union’s Greenhouse Gas Inventory, p.15 Performance Summary – GHG Emissions, pp.86		
	GRI 305-4	GHG emissions intensity	Performance Summary – GHG Emissions, pp.87		
	GRI 305-5	Reduction of GHG emissions	Responsible Operations – Environmental Protection and Climate Change, pp.62-63, 66 Thai Union’s Greenhouse Gas Inventory, p.15 Performance Summary – GHG Emissions, pp.86-87, 90, 93		
Effluents and waste	GRI 103	Management Approach	Responsible Operations, pp.63, 67, 69-71		
	GRI 306-3	Waste generated	Performance Summary, pp.86, 88-89		*
	GRI 306-4	Waste diverted from disposal	Performance Summary, pp.86, 88-89		*
	GRI 306-5	Waste directed to disposal	Performance Summary, pp.86, 88-89		*
Ocean plastics	GRI 103	Management Approach	Responsible Sourcing, p.55 Sustainable Packaging, pp.72-73 Sustainable Packaging for Healthy Oceans, Annual Report, p.41-42 Annual Report, p.91-92 https://seachangesustainability.org/ocean-plastics-and-marine-debris/		

MATERIAL ASPECT	DMA AND INDICATORS	DESCRIPTION	PAGE OR LINK	OMISSION / NOTES	EXTERNAL ASSURANCE
	<p>GGGI Best Practice Framework</p> <p>Sustainable Packaging Commitment</p>	<p>Best practices in recovery of fishing gear after it has been lost or abandoned.</p> <p>Reducing plastic waste through our Sustainable Packaging Commitment</p>	<p>Responsible Sourcing, p.55 Annual Report, p.105-106 Survey and Assessment of Abandoned, Lost and Discarded Fishing Gear in Thailand's Commercial Fishing Sector: http://24zosq3n9ti91n0utu26yfp8-wpengine.netdna-ssl.com/wp-content/uploads/GGGI-ALDFG-Survey_Thai-Union-Report_FINAL.pdf</p> <p>Sustainable Packaging, pp.72-73</p>		
<p>Supply chain resilience</p>	<p>GRI 103</p> <p>Thai Union's own indicator</p>	<p>Management Approach</p> <p>Measures and support provided to suppliers and employees to mitigate the impacts of the COVID-19 pandemic on our supply chain and operations</p>	<p>Safe & Legal Labor, pp.39, 42, 45 Responsible Sourcing, p.51 Responsible Operations, p.64 Annual Report, pp.108-109</p> <p>Safe & Legal Labor, pp.39, 42, 45 Responsible Sourcing, p.51 Annual Report, pp. 46, 83, 108</p>		

MATERIAL ASPECT	DMA AND INDICATORS	DESCRIPTION	PAGE OR LINK	OMISSION / NOTES	EXTERNAL ASSURANCE
SOCIAL (HUMAN RIGHTS AND ETHICAL LABOR PRACTICES, RESPONSIBLE SOURCING, HUMAN CAPITAL DEVELOPMENT, AND SAFETY IN WORKPLACE)					
Human rights and ethical labor practices	GRI 103	Management Approach	Safe and Legal Labor, pp.38-48 Human Rights Policy (updated): https://www.thaiunion.com/files/download/sustainability/policy/human-rights-policy-2021.pdf Human Rights Due Diligence Framework (updated): https://www.thaiunion.com/files/download/sustainability/policy/20210601-human-rights-due-diligence-framework.pdf Human Rights Risk Assessment (updated): https://www.thaiunion.com/files/download/sustainability/policy/20210601-thai-union-human-rights-risk-assessment.pdf Ethical Migrant Recruitment Policy (updated): https://www.thaiunion.com/files/download/sustainability/20211223-ethical-migrant-recruitment-policy.pdf Business Ethics & Labor Code of Conduct: https://www.thaiunion.com/en/sustainability/code-of-conduct		
	GRI 412-3	Significant investment agreements and contracts that include human rights clauses or underwent human rights screening	Safe and Legal Labor – Vessel Code of Conduct Audits, pp.45-48 https://seachangesustainability.org/thai-union-working-with-suppliers-to-drive-continuous-improvement-in-the-seafood-sector/		
	GRI 102-41	Percentage of total employees covered by collective bargaining agreements.	Performance Summary – Freedom of association – number of employees represented by trade union, p.99		

MATERIAL ASPECT	DMA AND INDICATORS	DESCRIPTION	PAGE OR LINK	OMISSION / NOTES	EXTERNAL ASSURANCE
SOCIAL (HUMAN RIGHTS AND ETHICAL LABOR PRACTICES, RESPONSIBLE SOURCING, HUMAN CAPITAL DEVELOPMENT, AND SAFETY IN WORKPLACE)					
Forced or compulsory labor	GRI 103	Management Approach	Safe and Legal Labor pp.45-48 UK Modern Slavery Act Transparency Statement 2020-2021: https://www.thaiunion.com/files/download/sustainability/20220408-tu-uk-modern-slavery-act-statement-2020-2021.pdf Vessel Code of Conduct (updated): https://www.thaiunion.com/files/download/sustainability/20220311-tu-code-of-conduct-2.0-en.pdf		
	GRI 409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labor	Safe and Legal Labor pp.45-48		
Responsible sourcing and traceability	GRI 103	Management Approach	Responsible Sourcing, pp.50-61 https://seachangesustainability.org/about-seachange/responsible-sourcing/ Thai Union’s partnership with Sustainable Fisheries Partnership (SFP): https://www.thaiunion.com/en/newsroom/press-release/1521/thai-union-announces-partnership-with-sustainable-fisheries-partnership		
	FP 1	Percentage of purchased volume from suppliers compliant with company’s sourcing policy	Responsible Sourcing, pp.53-54, 56-58 Ocean Disclosure Project: https://oceandisclosureproject.org/companies/thai-union		

MATERIAL ASPECT	DMA AND INDICATORS	DESCRIPTION	PAGE OR LINK	OMISSION / NOTES	EXTERNAL ASSURANCE
SOCIAL (HUMAN RIGHTS AND ETHICAL LABOR PRACTICES, RESPONSIBLE SOURCING, HUMAN CAPITAL DEVELOPMENT, AND SAFETY IN WORKPLACE)					
	FP 2	Percentage of purchased volume which is verified as being in accordance with credible, internationally recognized responsible production standards, broken down by standards	Responsible Sourcing, pp.53-54, 56-58 https://oceandisclosureproject.org/companies/thai-union		
Supplier assessment for labor practices	GRI 103	Management Approach	Safe and Legal Labor, pp.43-48 https://seachangesustainability.org/about-seachange/responsible-sourcing/suppliers/		
	GRI 414-1	New suppliers that were screened using social criteria	Safe and Legal Labor, pp.43-48		
	GRI 414-2	Negative social impacts in the supply chain and action taken	Safe and Legal Labor, pp.43-48		
Human capital development	GRI 103	Management Approach	People and Communities – Human Capital Investment, pp.77-78		
	GRI 404-1	Average hours of training per year, per employee	Performance Summary – People Performance, p.98.		
Safety in the workplace	GRI 103	Management Approach	Responsible Operations, pp.62-65 Annual Report, pp.106-107 https://www.thaiunion.com/en/about/safety-health-and-environment		

MATERIAL ASPECT	DMA AND INDICATORS	DESCRIPTION	PAGE OR LINK	OMISSION / NOTES	EXTERNAL ASSURANCE
SOCIAL (HUMAN RIGHTS AND ETHICAL LABOR PRACTICES, RESPONSIBLE SOURCING, HUMAN CAPITAL DEVELOPMENT, AND SAFETY IN WORKPLACE)					
	GRI 403-1	Occupational health and safety management system	Responsible Operations, pp.63-65 Annual Report, pp.46, 83, 108		
	GRI 403-2	Hazard identification, risk assessment, and incident investigation	Responsible Operations, pp.63-65 Annual Report, pp.46, 83, 108		
	GRI 403-3	Occupational health services	Responsible Operations, pp.63-65 Annual Report, pp.46, 83, 108		
	GRI 403-4	Worker participation, consultation, and communication on occupational health and safety	Responsible Operations, pp.63-65 Annual Report, pp.46, 83, 108		
	GRI 403-5	Worker training on occupational health and safety	Safe & Legal Labor, p.43 Responsible Operations, pp.63-65 Annual Report, pp.46, 83, 108		
	GRI 403-6	Promotion of worker health	Safe & Legal Labor, p.43, 48 Responsible Operations, pp.63-65 Annual Report, pp.46, 83, 108		
	GRI 403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	Safe & Legal Labor, p.43, 48 Responsible Operations, pp.63-65 Annual Report, pp.46, 83, 108		

MATERIAL ASPECT	DMA AND INDICATORS	DESCRIPTION	PAGE OR LINK	OMISSION / NOTES	EXTERNAL ASSURANCE
SOCIAL (HUMAN RIGHTS AND ETHICAL LABOR PRACTICES, RESPONSIBLE SOURCING, HUMAN CAPITAL DEVELOPMENT, AND SAFETY IN WORKPLACE)					
	GRI 403-9	Work-related injuries	Responsible Operations, pp.63, 65 Performance Summary – Occupational Health and Safety Performance, pp.96-97		*
	GRI 403-10	Work-related ill health	Responsible Operations, pp.63, 65 Performance Summary – Occupational Health and Safety Performance, pp.96-97		*
Diversity and equal opportunity	GRI 103	Management Approach	Anti-Discrimination & Anti-Harassment Policy: https://www.thaiunion.com/files/download/sustainability/policy/anti-discrimination-anti-harassment-policy.pdf Training video on non-discrimination & anti-harassment: https://cdn.21impact.com/thaiunion/video/special-episode.mp4 Diversity and Inclusion, p.80 Commitment to zero gender discrimination in workplace, Annual Report p.122		
	GRI 405-2	Ratio of basic salary and remuneration of women to men	Performance Summary – People Performance, p.99		

MATERIAL ASPECT	DMA AND INDICATORS	DESCRIPTION	PAGE OR LINK	OMISSION / NOTES	EXTERNAL ASSURANCE
FOOD SAFETY AND USE OF ANTIBIOTICS					
Food safety and use of antibiotics	GRI 103	Management Approach	Responsible Sourcing, p.52 Annual Report pp.44-45, 47, 86-87, 124 Food Safety & Hygiene Requirements: https://www.thaiunion.com/files/product/food-safety-standards/20180315-tu-fsh-en.pdf Food Safety Standards: https://www.thaiunion.com/en/products-and-brands/food-safety-standards Combating Food Fraud and Food Defense Strategy: https://www.thaiunion.com/en/products-and-brands/combating-food-fraud-and-food-defense-strategy		
	FP 5	Percentage of production manufactured in sites certified by third party according to internationally recognized food safety standard	Annual Report, pp. 44-45, 87 Food Safety & Hygiene Requirements: https://www.thaiunion.com/files/product/food-safety-standards/20180315-tu-fsh-en.pdf		
	FP 12	Policies and practices on antibiotics	Responsible Sourcing, p.52	Omission on reporting due to insufficient reliable data on antibiotics use in the supply chain. Thai Union plans to report on this indicator in the future in line with the SeaBOS requirements.	

MATERIAL ASPECT	DMA AND INDICATORS	DESCRIPTION	PAGE OR LINK	OMISSION / NOTES	EXTERNAL ASSURANCE
INNOVATION					
Innovation	GRI 103	Management Approach	Sustainability at Thai Union, pp.25-26, 30 Innovation at Thai Union, Annual Report pp.40-43		
	GRI 203-1	Infrastructure investments and services support	Sustainability at Thai Union, pp.25-26, 30 Innovation at Thai Union, Annual Report pp.40-43		



UNGC COMMUNICATION ON PROGRESS (COP)

HUMAN RIGHTS	Principle 1 Businesses should support and respect the protection of internationally proclaimed human rights. according to internationally recognized food safety	Sustainability at Thai Union, p.24 Safe and Legal Labor, pp.38-48
	Principle 2 Businesses should make sure that they are not complicit in human rights abuses. standard	People and Communities, pp.79
LABOR	Principle 3 Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining. standard	Safe and Legal Labor, pp.38-48 People and Communities, pp.77-80
	Principle 4 The elimination of all forms of forced and compulsory labor.	Performance Summary – People Performance, pp.98-99
	Principle 5 The effective abolition of child labor.	
	Principle 6 The elimination of discrimination in respect of employment and occupation.	
ENVIRONMENT	Principle 7 Businesses should support a precautionary approach to environmental challenges.	Sustainability at Thai Union, pp.20-24 Responsible Sourcing, pp.50-61
	Principle 8 Undertake initiatives to promote greater environmental responsibility.	Responsible Operations, pp.62-75
	Principle 9 Encourage the development and diffusion of environmentally friendly technology.	
ANTI-CORRUPTION	Principle 10 Businesses should work against corruption in all its forms, including extortion and bribery.	Anti-Corruption Policy & Code of Conduct for Anti-Corruption: https://investor.thaiunion.com/anti_corruption.html Sustainability at Thai Union, p.24 Annual Report, pp.120, 133, 147



Handwritten notice or sign on the wall.





14

**LRQA
INDEPENDENT
ASSURANCE
STATEMENT**

LRQA

LRQA Independent Assurance Statement Relating to Thai Union Group Plc.'s Sustainability Report for the calendar year 2021

This Assurance Statement has been prepared for Thai Union Group PCL. (TU) in accordance with our contract but is intended for the readers of this Report.

Terms of engagement

LRQA (Thailand) Limited (LRQA) was commissioned by Thai Union Group PCL. (TU) to provide independent assurance on its Sustainability Report 2021 "the report" against the assurance criteria below to a limited level of assurance and at the materiality of the professional judgement of the verifier using LRQA's verification approach. LRQA's verification procedure is based on current best practice, is in accordance with ISAE 3000 and uses the following principles - inclusivity, materiality, responsiveness and reliability of performance data.

Our assurance engagement covered TU's subsidiaries in Asia and the United States under its direct operational control only, and specifically the following requirements:

- Confirming that the report is in accordance with:
 - GRI Standards (2016) and core option;
 - GRI Food Processing supplement Sector.
- Evaluating the accuracy and reliability of data and information for only the selected indicators listed below:¹
 - Environmental: GRI 303-3 to 5 Water withdrawal, discharge and consumption, GRI 305-1 Direct (scope 1) GHG emissions, GRI 305-2 Energy indirect (scope 2) GHG emissions and GRI 306-3 to 5 Waste generated, diverted from and directed to disposal;
 - Social: GRI 403-9 and 10 Work-related injuries and ill health, GRI 405-2 Ratio of basic salary and remuneration of women and men.

Our assurance engagement excluded the data and information of TU's subsidiaries where it has no operational control and all its operations and activities outside of Asia and the United States. Our assurance engagement also excluded the data and information of its suppliers and any third-parties mentioned in the report.

LRQA's responsibility is only to TU. LRQA disclaims any liability or responsibility to others as explained in the end footnote. TU's responsibility is for collecting, aggregating, analysing and presenting all the data and information within the report and for maintaining effective internal controls over the systems from which the report is derived. Ultimately, the report has been approved by, and remains the responsibility of TU.

LRQA's Opinion

Based on LRQA's approach nothing has come to our attention that would cause us to believe that TU has not, in all material respects:

- Met the requirements above
- Disclosed accurate and reliable performance data and information as no errors or omissions were detected
- Covered all the issues that are important to the stakeholders and readers of this report.

The opinion expressed is formed on the basis of a limited level of assurance and at the materiality of the professional judgement of the verifier.

Note: The extent of evidence-gathering for a limited assurance engagement is less than for a reasonable assurance engagement. Limited assurance engagements focus on aggregated data rather than physically checking source data at sites. Consequently, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had a reasonable assurance engagement been performed.

LRQA's approach

LRQA's assurance engagements are carried out in accordance with our verification procedure. The following tasks though were undertaken as part of the evidence gathering process for this assurance engagement:

- Assessing TU's approach to stakeholder engagement to confirm that issues raised by stakeholders were captured correctly. We did this by reviewing documents and associated records.

¹ GHG quantification is subject to inherent uncertainty.






- Reviewing TU's process for identifying and determining material issues to confirm that the right issues were included in their Report and updated overtime. We did this by benchmarking reports written by TU and its peers to ensure that sector specific issues were included for comparability.
- Auditing TU's data management systems to confirm that there were no significant errors, omissions or mis-statements in the Report. We did this by reviewing the effectiveness of data handling processes and systems. We also spoke with key people in various facilities responsible for compiling the data and drafting the Report.
- Sampling evidence, to confirm the reliability of the selected specific standard disclosures, remotely at the operations below:
 - Thailand: Thai Union Group PCL. and Okenos Food Co., Ltd. at Samut Sakhon, i-Tail Corporation PCL. at Songkla, Thai Union Feedmill PCL. at Songkla
 - Vietnam: Yueh Chyang Canned Food Co., Ltd.
 - The United States: Tri-Union Seafoods LLC.

Observations

Further observations and findings, made during the assurance engagement, are:

- **Stakeholder inclusivity:**
We are not aware of any key stakeholder groups that have been excluded from TU's stakeholder engagement process. TU has open dialogue with all of its stakeholders to understand their growing expectations.
- **Materiality:**
We are not aware of any material issues concerning TU's sustainability performance that have been excluded from the report. It should be noted that TU has established extensive criteria for determining which issue is material and that these criteria are not biased to the company's management.
- **Responsiveness:**
TU has addressed the concerns of stakeholders in all regions in relation to food waste and Labour practices. However, we believe that future reports should
 - disclose further Climate actions
 - disclose on the total volume of antibiotics by species and breed
- **Reliability:**
Data management systems are considered to be well defined, but the implementation of these systems varies across TU's operational facilities. TU should consider interim verification to further improve the reliability and timeliness of its disclosed data and information.

LR's standards, competence and independence

LR ensures the selection of appropriately qualified individuals based on their qualifications, training and experience. The outcome of all verification and certification assessments is then internally reviewed by senior management to ensure that the approach applied is rigorous and transparent.

This verification is the only works undertaken by LRQA for TU and as such does not compromise our independence or impartiality.



Opart Charuratana
LRQA Lead Verifier

Dated: 20th May 2022

On behalf of LRQA (Thailand) Limited
22th Floor, Sirinrat Building, 3388/46 Rama IV Road
Klongton, Klongtoey, Bangkok 10110 THAILAND

LRQA reference: BGK00000738A

LRQA Group Limited, its affiliates and subsidiaries, including LRQA (Thailand) Limited, and their respective officers, employees or agents are, individually and collectively, referred to in this clause as 'LRQA'. LRQA assumes no responsibility and shall not be liable to any person for any loss, damage or expense caused by reliance on the information or advice in this document or howsoever provided, unless that person has signed a contract with the relevant LRQA entity for the provision of this information or advice and in that case any responsibility or liability is exclusively on the terms and conditions set out in that contract.

The English version of this Assurance Statement is the only valid version. LRQA Group Limited assumes no responsibility for versions translated into other languages.

This Assurance Statement is only valid when published with the Report to which it refers. It may only be reproduced in its entirety.

Copyright © LRQA Group Limited, 2022.



thaiunion.com | seachangesustainability.org

Thai Union Group Public Company Limited

HEAD OFFICE

72/1 Moo 7, Sethakit 1 Road, Tarsrai Sub-district,
Muang Samut Sakhon District, Samut Sakhon Province
74000 Thailand

Tel: +66 (0) 3481-6500

Fax: +66 (0) 3481-6886

BANGKOK OFFICE

979/12 M Floor, S.M. Tower, Phaholyothin Road,
Phaya Thai, Phaya Thai, Bangkok 10400 Thailand

Tel: +66 (0) 2298-0024, +66 (0) 2298-0537

Fax: +66 (0) 2298-0548, +66 (0) 2298-0550

CONTACT

Adam Brennan

Group Director, Sustainability

Adam.Brennan@thaiunion.com

