



New Zealand King Salmon

Climate-Related
Disclosures FY24



CONTENTS

Introduction	3
Governance	7
Strategy	12
Risk Management.....	19
Metrics and Targets	21
Glossary.....	26
Appendix.....	27

INTRODUCTION





Introduction

New Zealand King Salmon Investments Limited ('NZKS') is pleased to release its first Climate-Related Disclosures ('CRDs') prepared in accordance with the requirements of the Aotearoa New Zealand Climate Standards.

NZKS is a climate-reporting entity under the Financial Markets Conduct Act 2013. The reporting period covered by this report is for the 12 months from 1 February 2023 to 31 January 2024 (FY24).

NZKS is proud to produce a healthy, nutritious, and high-quality protein, and firmly believes that farmed salmon has a key role to play in sustainable and resilient food systems. As a primary sector company, NZKS is fundamentally dependent on the natural environment. NZKS is well versed in adapting its business to a changing climate, and is also mindful of the importance of maintaining a high-level of focus on this. NZKS' ability to adapt and look to the risks and opportunities that climate change may bring is integral to the future resilience of the business and is something that Management acknowledges and is focussed on. Management also acknowledges the business's own operations, as with any activity, have an impact on the environment, and is continually looking at how it can

reduce the environmental impact within operational constraints. NZKS has the intention to grow operations as Management believes the future world will require more nutritious, lower carbon protein alternatives. NZKS understands that with growth comes the potential for increased emissions but is committed to grow in a responsible and sustainable way.

NZKS acknowledges that it is only at the beginning of its sustainability reporting journey but with the business now steadied and producing positive results, NZKS has been able to increase its focus on creating a resilient, sustainable business. A key project delivered as part of this, was building the base year of carbon emissions for Scope 1, 2 and 3 emissions. This has been a significant undertaking from Management. NZKS' refreshed strategy is also supporting the business to embrace Environmental, Social and Governance (ESG) principles and ingrain these in our corporate culture to guide decision making and performance assessment.

Statement of Compliance

These climate-related disclosures comply with the Aotearoa New Zealand Climate Standards issued by the External Reporting Board. In preparing NZKS' climate-related disclosures, the Board and Management have elected to use the following Adoption Provisions:

Adoption provision 1: Current financial impacts

This adoption provision exempts NZKS from disclosing the current financial impacts of its physical and transition impacts identified in NZ CS 1 paragraph 12 (a). The adoption provision also exempts NZKS from paragraph 12 (c) of NZ CS 1, where NZKS is required to explain why it is unable to disclose quantitative information.

Adoption provision 2: Anticipated financial impacts

This adoption provision exempts NZKS from disclosing its anticipated financial impacts of climate-related risks and opportunities in its first reporting period.

This adoption provision also includes exemption from:

- a. Paragraph 15 (c) of NZ CS 1, where NZKS is required to disclose a description of the time horizons over which the anticipated financial impacts of climate-related risks and opportunities could reasonably occur.
- b. Paragraph 15 (d) of NZ CS 1, where NZKS is required to explain why it is unable to disclose quantitative information for paragraph 15 (b) of NZ CS 1.

Adoption provision 3: Transition planning

This adoption provision exempts NZKS from disclosing the following in its first reporting period:

- a. The transition plan aspects of its strategy, including how its business model and strategy might change to address its climate-related risks and opportunities; and
- b. The extent to which transition plan aspects of its strategy are aligned with its internal capital deployment and funding decision-making processes.

Adoption provision 5: Comparatives for Scope 3 GHG emissions

This adoption provision exempts NZKS from disclosing the comparative information for Scope 3 GHG emissions.

Adoption provision 6: Comparatives for metrics

This adoption provision exempts NZKS from disclosing comparative information for metrics disclosed in NZKS' first reporting period.

Adoption provision 7: Analysis of trends

This adoption provision exempts NZKS from disclosing an analysis of the main trends evident from a comparison of each metric from previous reporting periods to the current reporting period (NZ CS 3 paragraph 42).

Disclaimer:

NZKS has used reasonable efforts in the preparation of this CRD to provide accurate information, but cautions reliance being placed on representations that are necessarily subject to significant risks, uncertainties or assumptions. This report contains forward looking statements, including climate-related metrics, climate scenarios, targets, assumptions, estimated climate projections, forecasts, statements of NZKS' future intentions, estimates and judgements that may not evolve as predicted. These statements necessarily involve assumptions, forecasts and projections about NZKS' present and future strategies and NZKS' future operating environment.

Such statements are inherently uncertain and subject to limitations, particularly as inputs, available data and information are likely to change. NZKS has used its best efforts to provide a reasonable basis for forward-looking statements and is committed to progressing our response to climate-related risks and opportunities over time but is constrained by the novel and developing nature of this subject matter. Climate-related risk management is an emerging area, and often uses data and methodologies that are developing and uncertain. Climate-related forward-looking statements may therefore be less reliable than other statements NZKS may make in its annual reporting.

We have based these statements on our current knowledge as at 28 May 2024. There are many factors that could cause NZKS' actual results, performance or achievement of climate-related metrics (including

targets) to differ materially from that described, including economic and technological viability, as well as climatic, government, consumer, and market factors outside of NZKS' control. Nothing in this report should be interpreted as capital growth, earnings or any other legal, financial tax or other advice or guidance.



Mark Dewdney
Chair
28 May 2024



Paul Munro
Audit, Finance & Risk
Committee Chair
28 May 2024



GOVERNANCE

Governance

Board oversight of climate-related risks and opportunities

The NZKS Board of Directors (the 'Board') maintains direct responsibility and oversight of climate-related risks and opportunities for NZKS, including those related to climate change.

The Board is presented at each board meeting with Management reports on climate-related matters to ensure the Board remains informed and has oversight over the management of climate-related risks and opportunities.

To manage climate-related matters, the Board delegates part of its responsibilities to the Audit, Finance & Risk Committee ('AFRC') where the committee assumes the key responsibility for overseeing the CRDs and reports through to the Board. The AFRC currently also supports the Board by performing reviews of NZKS' primary business risks and its risk management policy. The AFRC meets on a quarterly basis at a minimum and will hold additional meetings when required. In the first year of CRD adoption the Board has maintained a high level of involvement in this space and has been involved in full oversight of the implementation of the CRDs.

The Fish Farming Committee, established in 2022, also supports the Board in its oversight of climate-related risks and opportunities by the identification of the risk and opportunities specific to the fish farming operations and focussing on the ongoing improvement in fish health and farming strategies. Climate is a risk well considered by this Committee. For example it reports on the water temperature of sea farms, the thermotolerance project and summer progress of NZKS sea farms, including frequent updates on fish welfare over the higher risk months to the Board.

To help the Board and Management in making informed climate-related risk and opportunity decisions, NZKS will seek external specialist advice when required. External independent advisers have provided support with the greenhouse gas ('GHG') emission inventory work, and for the purposes of informing short, medium and long-term scenario planning around the physical and transition risks and opportunities of climate change on NZKS operations. A number of the Board Directors are also members of Chapter Zero New Zealand, which is hosted by the Institute of Directors New Zealand.

During FY24 the Board participated and received updates on various climate-related matters during board meetings, specifically:

- CRD presentation and update from external consultants
- A review of the emissions footprint
- Management-led climate risk and opportunity workshops including how these risks and Management responses may change over varying scenarios
- Climate-related disclosure readiness analysis

The Board uses the following mechanisms to provide oversight of Management in relation to the climate-related risks and opportunities; including setting objectives for climate-related issues. As NZKS develops its emissions inventory base year these will also be the tools used to set climate-related targets.

Risk Management Framework:

Annual reviews are conducted of the NZKS Risk Management Framework to ensure alignment with the evolving climate-related considerations.



Strategy:

The Board was involved in the establishment of the refreshed company strategy where building a sustainable future is a key pillar. This pillar has informed the sustainability strategy that was developed in FY24. This strategy covers the broader ESG space but also supports the sustainability workplan which has a focus on key sustainability projects, including carbon reduction workplans.



Managing climate-related risks and opportunities for the Company:

Ensuring the key climate risks in the risk matrix reviews are held and reported to the Audit, Finance & Risk Committee. This also includes overseeing the setting of the metrics and targets in relation to NZKS' emissions inventory. FY24's focus was on building the base year for Scope 1, 2 and 3 emissions so no metrics and targets were identified for this reporting period. The intention is for targets to be established in the financial year ending 31 January 2025 (FY25) to manage material climate-related risks and opportunities and that these targets are monitored and reported on, including performance against targets. External assurance of NZKS' emissions will be engaged for FY25.



Policy:

Annual reviews are conducted of relevant policies such as the Remuneration Policy. Management also intend to create a sustainability policy in FY25 that supports the sustainability strategy.



Remuneration:

Sustainability remuneration metrics for the Senior Leadership Short Term Incentive (STI) scheme have been considered by the People and Performance Committee. For FY24, as the sustainability space is maturing, no remuneration has been aligned specifically to sustainability metrics. The intention is to evolve the STI scheme to include sustainability once metrics and targets have been clearly defined and these are currently under development by NZKS Management.



Management's role in assessing and managing climate-related risks and opportunities

The Board assigns climate-related responsibilities to the NZKS Executive. This is via mechanisms such as a standing agenda item at board meetings on progress as well as the policies outlined above.

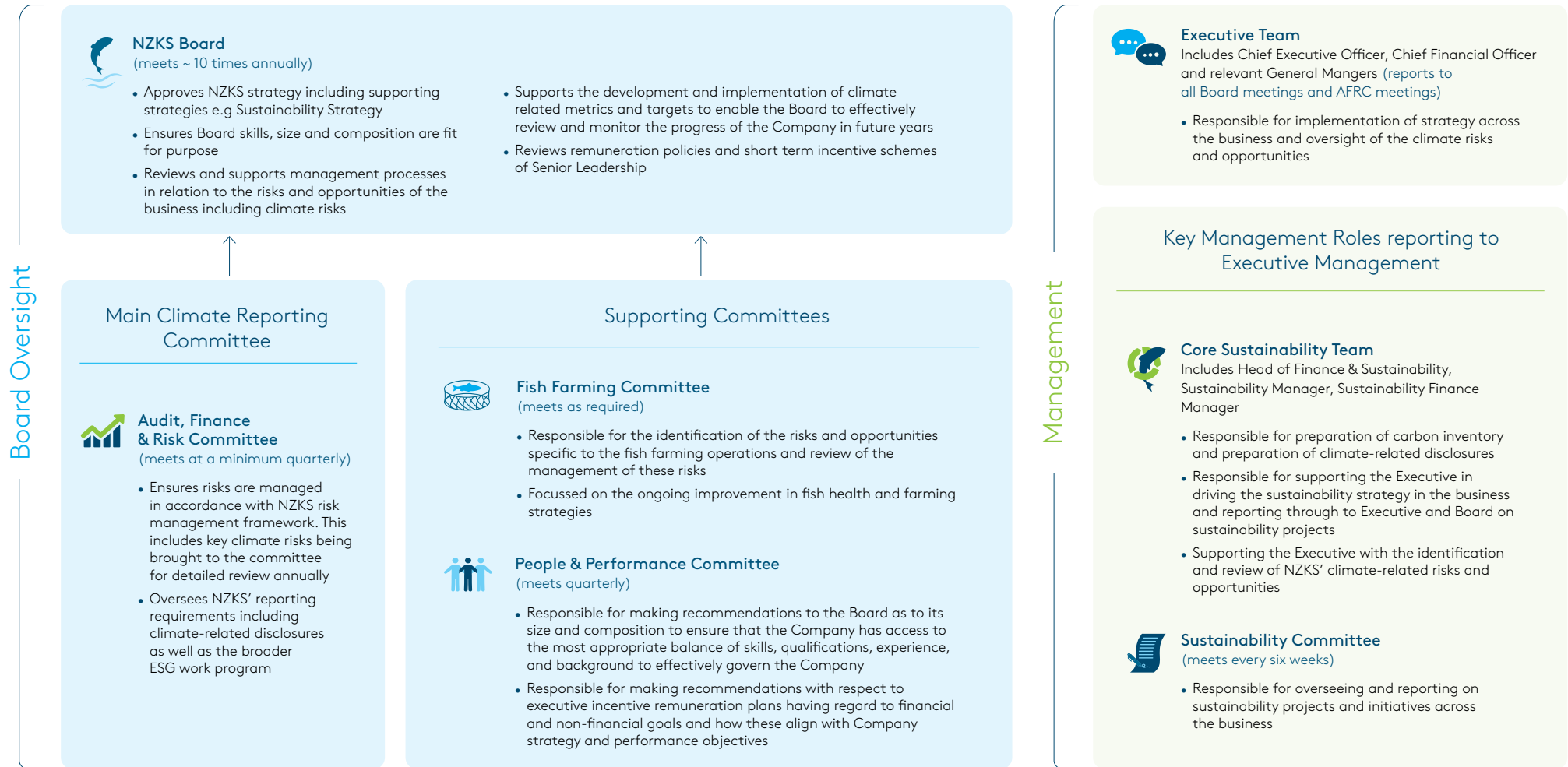
The Executive; being the Chief Executive Officer and the Chief Financial Officer and relevant General Managers, have been delegated by the Board the responsibility for the sustainability strategy and the oversight of climate-related risks and opportunities in the business. The Executive, with the support of the sustainability team, is tasked with overseeing the implementation of the strategy across the business as well as regular reviews of the business' climate-related risks and opportunities. The sustainability team consists of the Head of Finance & Sustainability, Sustainability Manager and Sustainability Finance Manager. The core sustainability team meets on a frequent, ad-hoc basis to discuss the sustainability work programme. This team also meets twice a year with the Chief Financial Officer and the General Manager who oversee the risk register to review and amend climate-related risks and opportunities if required. This team reports through to the Board on any key sustainability developments and any newly identified

risks, assisting the Board in fulfilling its responsibilities related to identifying, assessing, monitoring, and managing climate risk. The sustainability team provides updates to the Board and AFRC at every board meeting as a standing agenda item, involving various levels of Management in the process (refer to Governance structure overleaf).

The sustainability team also heads up the internal Sustainability Committee. This committee is made up of the Chief Executive Officer, Chief Financial Officer, relevant General Managers and other key team members across the business, who will join when required, for project discussions, such as NZKS' Research & Development Manager and head of New Product Development. The Committee meets every six weeks and is responsible for assessing internal sustainability projects, such as waste minimisation and packaging changes. As the metrics and targets set by the sustainability strategy are defined this will be the key committee that these are reported through to as well as progress on NZKS' carbon footprint.

An outline of the organisation structure and the frequency of updates and monitoring on key climate-related responsibilities is provided in the Governance structure overleaf.

Governance structure for climate-related responsibilities



STRATEGY



Strategy

In May 2023, NZKS enlisted the assistance of a sustainability advisory firm and conducted a comprehensive climate-related risk assessment, including scenario analysis.

The assessment involved collaborative workshops with internal stakeholders; including the Acting Chief Executive Officer, Chief Financial Officer, General Manager Aquaculture, General Manager Processing and other relevant roles. Outcomes from the workshop included establishing the scope and boundaries of the risk assessment. This included determining value chain inclusions, time horizons, frequency of assessment, and identifying key risk areas.

The physical and transition risks and opportunities for NZKS were identified in an initial workshop and ranked using the NZKS risk matrix to identify the risks that were of a priority nature i.e., the risks that may have a significant impact on NZKS' operations. A further scenario analysis workshop worked through the risks and opportunities over the varying time spans as well as a baseline scenario and the two Aotearoa Circle Marine scenarios. The purpose of this assessment was

to ensure a comprehensive understanding of the potential climate risks and opportunities affecting NZKS and how NZKS may react to the varying scenarios. The findings from the assessment were incorporated into the overall risk management framework.

NZKS determined that the two scenarios used in NZKS' climate-related risk assessment (based on the Aotearoa Circle Marine Sector scenarios) and the Disorderly scenario from the Network for Greening the Financial System were the most appropriate to use. This will enable some level of comparability to other aquaculture businesses as these scenarios are what other aquaculture business' have utilised when assessing their climate risks and opportunities. For the purposes of the broader scenario analysis the scenario time horizons used are:

Scenario Time Horizons	
Short-term	Today to 2030
Medium-term	2031 to 2050
Long-term	2051 to 2100



Scenario	Kahawai 2050 “Orderly Transition”	Disorderly “Delayed Transition”	Mako 2050 “Intense and Severe Outcomes”
Description	Kahawai, a relatively abundant coastal finfish which transition through several stages of life development, collaborating to avoid danger, and well known to fight hard when caught. This scenario describes a 2050 world that has succeeded in implementing the Paris Agreement (net zero by 2050).	Delayed transition assumes annual emissions do not decrease until 2030. Strong policies are needed to limit warming to below 2°C. Negative emissions are limited.	Mako are a fast, aggressive, and unpredictable shortfin shark species. This scenario describes a 2050 world where change moves rapidly through the marine domain, a failure to curb emissions means that humanity and nature are facing the consequences of significant climate disruption.
Policy Ambition	1.5°C (<2°C)	2°C	>3°C
RCP/SSP Combination Used	RCP 2.6 SSP1	RCP 2.6 SSP2	RCP 8.5 SSP3
Physical Risk Severity	Low—Moderate	Moderate	Extreme
Policy Reaction	Immediate and smooth	Delayed—strong policies once implemented	Lagging, minimal change from current policy
Technology Change	Fast Changes	Slow/Fast Change	Slow Changes
Global Population	8.5b	8.26b	11b
Marine Bio-Physical Impacts (to 2050)	+0.8°C coastal sea surface temperature	+0.8°C coastal sea surface temperature	+1.5°C coastal sea surface temperature
	+0.23 m sea level rise	+0.23 m sea level rise	+0.28 m sea level rise
	8.0 pH ocean acidification	8.0 pH ocean acidification	7.94 pH ocean acidification
	1% decline in dissolved oxygen	1% decline in dissolved oxygen	2% decline in dissolved oxygen



NZKS' assessment of climate-related scenarios was used to inform considerations of physical and transition climate risks and opportunities, which may increase in impact and uncertainty over longer time horizons. Using the above context from the climate-related scenarios, NZKS has assessed its climate-related risks and opportunities across three key time horizons that have the most significant actual or potential financial impact on business operations and are in line with the current risk management framework.

Climate-related risks and opportunities

Time Horizons

Short-term	1–3 years
Medium-term	4–10 years
Long-term	>10 years

The climate risk assessment included locations and operations that are deemed important and material to NZKS, including hatcheries in Takaka and Tentburn, sea farms in Tory Channel, Queen Charlotte Sound, and Pelorus Sound, as well as the Nelson-based processing site. A comprehensive examination of the value chain from hatchery to distribution was carried out, to determine the potential impact of climate-induced physical and transitional changes. This was mainly limited to New Zealand and focused on logistics operations under NZKS' control. Transitional risks involved considering the broader supply chain in the context of export markets, consumer preferences and government policies as exports form a significant part of the NZKS business.

The material climate-related risks and opportunities identified and agreed by NZKS Board and Management are outlined below. NZKS has determined risks that are identified as priority 1 or 2 (on a scale of 1-4) are material.

Risk/Opportunity	Current and Anticipated Impact Description		Management Response	Time Horizon
	Current Impact:	Anticipated Impact:		
Marine heatwaves cause more persistent high summer sea temperatures (Physical Risk)	NZKS currently have followed three sea farm sites.	Regardless of scenario, warming waters are expected. Expectation on increased capital expenditure for additional water space requirements and research & development expenditure on thermotolerance.	Management is investing in thermotolerance work, which is a long-term breeding project to increase resilience of salmon in warmer water temperatures. Management is allocating significant capital to the Blue Endeavour open ocean site to provide additional water space for NZKS to farm in the medium/long-term.	All time horizons
More frequent and longer dry spells and drought (Physical Risk)	Nil	There is an increased risk of drought and therefore water restrictions at multiple sites.	Management has commenced work to have a hydrology mapping exercise performed on the two freshwater sites to better understand the risks of drought. This will enable better planning and use of capital to mitigate risks in the medium/long-term. Management has considered improvements around water recirculation and is actively monitoring the situation in the short term. In the medium to long term, Management intends to implement a water recirculation programme for freshwater sites and investigate how this could be implemented into a potential future greenfield processing site.	Medium/Long-term
Coastal and estuarine flooding: increasing persistence, frequency and magnitude (Physical Risk)	In FY24 NZKS directed capital expenditure to the culvert infrastructure at the Tentburn site due to increased frequency and magnitude of tidal impacts on the culvert.	There is expected to be an increase of flooding at freshwater sites, which may cause damage to infrastructure.	Management have commenced work to have a hydrology mapping exercise performed on the two freshwater sites to better understand the risks of floods. This will enable better planning and use of capital to mitigate risks in the medium/long-term. Management has mitigated short-term flooding risk via capital expenditure on the culvert at Tentburn. Management is also investigating other capital spend options as part of resilience planning.	Medium/Long-term

Risk/Opportunity	Current and Anticipated Impact Description		Management Response	Time Horizon
	Current Impact:	Anticipated Impact:		
Regulatory and legal (Transition Risk/ Transition Opportunity)	Consent renewals	<p>Yet to be determined future regulatory requirements around resource consents including monitoring and reporting obligations.</p> <p>Alternatively, the regulatory environment could be an opportunity, as salmon is a low carbon protein, which may be seen as an industry for the government/councils to support via more flexible resource consent conditions.</p>	<p>NZKS is actively involved in regional processes led by industry groups including being a part of active discussions on the Marlborough Environment Plan. NZKS is also actively focussing on engaging with wider stakeholders of the business such as iwi, NGOs, central and local government.</p> <p>The regulatory and legal environment is being actively monitored by NZKS. Current management focus is on the short-medium term, as with any transition risk, it is an evolving space and can be difficult to predict outcomes so management processes need to be able to be flexible to work within new frameworks quickly.</p>	Medium/ Long-term
Financial (Transition Risk)	Nil	Potential increased costs to the business; such as freight costs, introduction of carbon taxes/regulations, insurances and reporting obligations. Increase in the need for capital expenditure for business resilience to mitigate the effect of climate change.	<p>Management is investigating options for the potential future need to move air freight to sea freight to reduce carbon emissions.</p> <p>Management proactively manages NZKS' risk-based insurance programme.</p> <p>Management understands that capital expenditure is likely to be required to support the business in adapting to a lower emission business so this is already being considered in future capital planning.</p>	Medium/ Long-term
Increased storm and extreme wind events (Physical Risk)	Nil in FY24 but noting in FY23 that a key transport route to get harvest to processing was taken out following a storm for a few weeks and a longer, alternative route was required.	As storms become more frequent and severe there is a potential risk that sea farm assets, roading networks and potentially other key infrastructure may be affected and adversely impact on the NZKS supply chain from harvest to distribution.	NZKS has alternate routes to get harvest from seawater sites and domestic/export logistics has experience in moving goods when routes are closed.	All time horizons
New and emerging technology (Transition Risk/ Opportunity)	Nil	NZKS expect improvements in technology will provide the opportunity to become more efficient and therefore reduce carbon intensity measures. NZKS will continue to assess the risks and opportunities of adopting emerging technology as part of future capital investment decisions.	Management is exploring potential projects, such as a greenfield processing site, to assess lower emission and more efficient technologies.	Medium/ Long-term

Risk/Opportunity	Current and Anticipated Impact Description		Management Response	Time Horizon
	Current Impact:	Anticipated Impact:		
Market access/ consumer demands (Transition Risk/ Opportunity)	Nil	There is potential risk around increased regulation on packaging, entry requirements and tariffs to gain access to export markets. Alternatively this could be an opportunity as salmon is a low carbon protein this may be seen as a preferred import product. Consumer preference may also move to a lower carbon protein choice.	This is currently a watching brief for NZKS. Management is utilising resources such as NZTE to stay on top of changing regulatory environments overseas.	Medium/ Long-term
Reputational (Transition Risk/ Opportunity)	Nil	An increased focus on the climate space has the ability to be both a risk and opportunity for NZKS depending on how stakeholders interpret climate-related disclosures and other ESG actions.	NZKS has prepared this report which sets out its initial CRDs. NZKS continues to achieve third-party certifications such as the Best Aquaculture Practices (BAP) certification to support our reputation as a company with responsible operational practices. Management is also committed to better understanding potential carbon reduction targets, and is being supported by a third-party emissions reduction adviser.	All time horizons

This climate-related risk and opportunity assessment and scenario analysis discussed above has been integrated into the broader business planning and capital allocation decisions, to ensure that NZKS is taking proactive steps towards transitioning to a lower carbon future and mitigating potential risks to the business.

As noted in the Governance section, the refreshed strategy has supported an increased focus on sustainability and risk management, in which the climate-related risks and opportunities are considered. This has led to an increased

focus on sustainability outcomes and/or emission reductions in business cases for capital expenditure that are presented to the Board for approval. As part of future capital allocation decisions, ESG is also considered as an input into a projects hurdle rate (i.e with all other variables being held consistent the better the ESG outcome would generate a lower hurdle rate—therefore improving the prioritisation of the project). It has also created an increased focus on ensuring the business is resilient to climate and broader ESG risks, as well as understanding the potential opportunities for NZKS. Examples of this include

commissioning of hydrology assessments of freshwater sites, a project initiated to understand emission reductions across the business, understanding how technology can better assist in maximising fish feeding efficiency, and monitoring the changing export landscape via means such as engaging with NZTE. NZKS intends to establish a more formalised plan to show how the business will transition towards a low-emission, climate resilient future state in FY25 but Management believes some positive first steps have been taken in building this into the current business model and strategy.



RISK MANAGEMENT

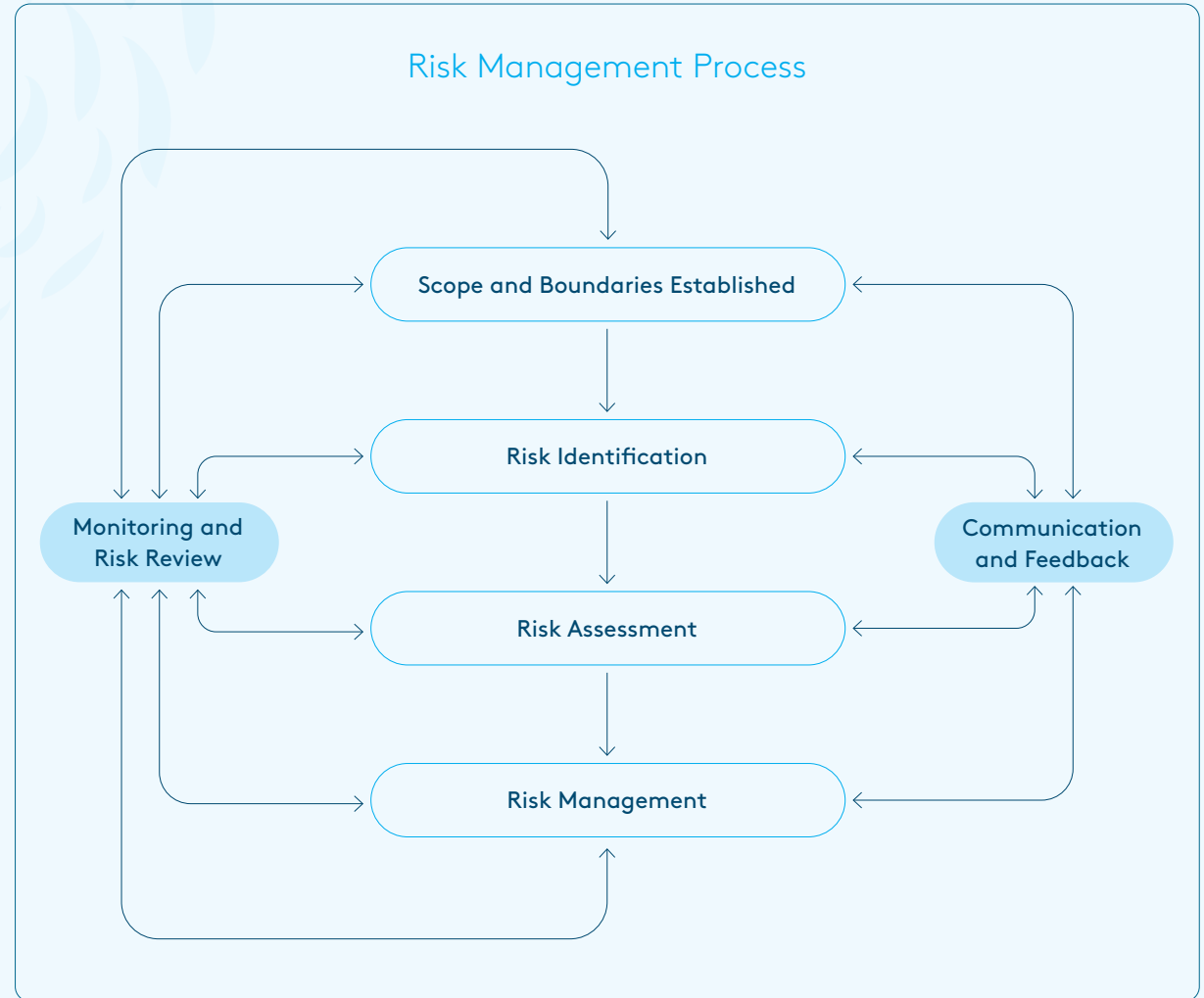
Risk Management

NZKS employs a structured risk management approach that utilises a 5x5 matrix of consequence severity and likelihood.

The risk management framework enables the Board and Management to assess various business and climate-related risks potentially impacting our operations, environment and communities. This allows the business to take appropriate steps to mitigate and manage these risks effectively.

NZKS utilises the risk assessment framework to rate and compare climate-related risks against other business risks. There is a bi-annual review of sustainability risks within the NZKS risk framework by the sustainability team and the risk leaders. There is also an annual workshop with the Chief Executive Officer, Chief Financial Officer, relevant senior leaders, and the sustainability team to reassess and update the climate-related risks and opportunities to ensure the full defined value chain is considered. This also supports NZKS' continued commitment to sustainability, transparency, and responsible business practices.

The risk rating system used for wider business risks is also employed for climate-related risks, taking into account the likelihood and severity of their associated consequences. The risks are prioritised based on their severity, and categorised into priorities 1-4. Those rated as priority 1 require immediate action, where possible, to proactively manage risk and limit exposure. The climate-related risks that have been rated priority 1 or 2 from the climate-risk workshops have been condensed and included in the Company's overall enterprise risk register. This ensures climate-related risks are considered in the same way as other business risks.



An aerial photograph of a salmon farm in a fjord. The water is a vibrant turquoise color, and the surrounding hills are covered in dense green forest. A large, rectangular floating net pen structure is visible in the middle of the water. The sky is clear and blue.

METRICS AND TARGETS



Metrics and Targets

NZKS recognises the significance of monitoring and mitigating GHG emissions. Historically, Life Cycle Assessments (LCA) undertaken on New Zealand farmed King salmon have been utilised by NZKS to support the understanding of the Company's carbon footprint in relation to the farming of salmon.

NZKS notes that there are limitations to utilising industry wide LCAs as they do not give as much detail as company specific carbon emission reporting. As part of the adoption of the Aotearoa New Zealand Climate Standards, NZKS has now undertaken a comprehensive assessment and reporting exercise of its GHG emissions in accordance with the Greenhouse Gas Protocol to form the carbon emission base year for FY24. NZKS engaged EY to perform certain agreed upon procedures on the emissions data collation process to ensure that sufficient processes were in place before the required assurance of emissions data in FY25.

NZKS emissions profile

NZKS' first detailed carbon emissions reporting has been completed for the full FY24 financial reporting period and forms the base year of data. Accordingly, there are no comparatives available.

NZKS measures its GHG emissions in accordance with the requirements of the 'Greenhouse Gas Protocol – A Corporate Accounting and Reporting Standard'. NZKS reports its GHG emissions in tonnes of CO₂ equivalents (tCO₂e), in compliance with the requirements set by the GHG Protocol.

There has also been guidance from the following sources:

- Greenhouse Gas Protocol – Corporate Value Chain (Scope 3) Accounting and Reporting Standard
- Greenhouse Gas Protocol – Technical Guidance for Calculating Scope 3 Emissions (version 1.0)

Emission factors utilised in FY24 have been from the following sources:

- Ministry for the Environment (MfE) 2023 'Measuring Emissions: A guide for organisations' (NZ)
- Department of Climate Change, Energy, the Environment and Water 2022 'Australian National Greenhouse Accounts Factors' (Australia)

- Department for Environment Food & Rural Affairs (DEFRA) 2022 'Greenhouse gas reporting: conversion factors' (UK)
- DEFRA 2021 'Greenhouse gas reporting: conversion factors' (UK), for items not included in their 2022 report.
- Environmental Product Declaration (EPD) information for similar items to products purchased
- Motu factors
- Feed suppliers

The emission factor sources are based on global warming potentials (GWPs) varying from AR4-AR6.

NZKS boundary

NZKS applies the financial control approach when calculating emissions. This is based on the same approach taken when consolidating New Zealand King Salmon Investments Limited for financial statement purposes. Organisational boundaries were applied with reference to the methodology described by the GHG Protocol. To ensure a complete and accurate assessment of all relevant operations, all of the investments of New Zealand King Salmon Investments Limited have been included in the financial control scope of the emissions inventory. Emissions are identified across the entire NZKS operation being at hatcheries, sea farms, processing operations, distribution and office areas.

Emissions sources excluded

Specific emission sources have been identified and excluded from the NZKS GHG emissions calculation in FY24. These sources are either not applicable to NZKS operations or are relevant but are either not material in the context of the GHG inventory (greater than 5% of overall emissions), material to stakeholders, and/or not technically feasible or cost effective to be quantified at present.

- Category 7: Employee commuting. Information is not tracked; estimated impact is immaterial.
- Category 10: Processing of sold products. Not applicable.
- Category 11: Consumer use of product. No specific data available, estimated impact is immaterial.
- Category 13: Downstream leased assets. No specific data available, estimated impact is immaterial.
- Category 14: Franchises. Not applicable.
- Category 15: Investments. Not applicable.

Metrics and Targets

NZKS' total GHG emissions in FY24 were 78,976 tCO₂e with measured Scope 3 emissions making up ~95% of all emissions. The table shows NZKS' emissions by scope and as a percentage of total Group emissions.

FY24 GHG emissions

Scope	FY24 total emissions tCO ₂ e	
Scope 1	3,619	4.6%
Scope 2	515	0.6%
Scope 3	74,842	94.8%
Total emissions	78,976	100%

Intensity indicators	Liveweight	G&G*
Scope 1,2 & 3	11.15	12.67
Emissions per tonne (tCO₂e/tonne)		
Scope 1 & 2	0.58	0.66
Emissions per tonne (tCO₂e/tonne)		

*G&G (gilled and gutted salmon)

Scope 1 and 2 emissions make up a small portion of the NZKS footprint, with fuel being the largest emission source in this area.

The use of fuel is predominantly from sea farm operations. The main Scope 3 emission sources include upstream freight and purchased goods and services. The most material driver of the upstream freight emissions is derived from getting product to various export markets, and the majority of purchased goods and services emissions is from salmon feed.

NZKS, as an exporter of a low carbon protein¹ has harvest growth initiatives in the medium term with projects such as open ocean salmon farming being commenced. The expectation is that NZKS' absolute emissions will increase as harvest volumes increase. Therefore, to allow for a more comparable year on year metric, NZKS has used an intensity metric of tonne CO₂e per tonne G&G salmon harvested/live weight salmon harvested.

This has been done over Scope 1,2 & 3 as well as Scope 1 & 2 only. The intensity metric over tonne of live weight is a metric utilised by others in the aquaculture industry.

NZKS is committed to sustainability practices and is working towards setting emission reductions targets in FY25. A base year has been established and the understanding of the NZKS emissions profile continues to improve. In lieu of having a base year of carbon emission data, NZKS has focussed its sustainability efforts on areas in which the business has some control and can be linked to a reduction in emissions. In FY24 key emission reduction projects have focussed on reducing waste streams. An ensilage facility has commissioned and is anticipated to be fully operational in FY25. This will remove organic waste from landfill and in turn reduce NZKS' waste to landfill carbon emissions. There have also been other reduction projects that support NZKS' focus on carbon reduction and sustainability. This includes the trialling of hand dryers in non-food safety locations, replacing paper towels, and in the processing site the replacement of light bulbs with LED light bulbs. In addition, there has been a focus on electricity reduction behaviours, such as turning lights off on weekends and switching off containers when not in use.

The specific electricity focus at the processing site level has reduced electricity usage by ~180,000 kWh in the 12 months to March 2024 (compared to an original baseline period of October 2021 to January 2022)².

¹New Zealand farmed salmon sold domestically has a lower carbon footprint compared to the global average for other animal proteins. LCA Report—King salmon from New Zealand. Wellington: thinkstep-anz (2023).

²Based on data from a project undertaken in conjunction with Emsol Limited

With the FY24 base year of data and full emissions profile now available, emissions targets will be developed in FY25. Waiting for the base year to be established ensures that the metrics and targets are both achievable and meaningful to the company.

During FY25 there will also be work around determining and subsequently disclosing on the following:

- Metrics relating to the amount or percentage of assets or business activities vulnerable to climate-related physical or transition risks
- Metrics relating to the amount or percentage of assets or business activities aligned with climate-related opportunities
- How capital has been deployed in the business relating to climate-related risks and opportunities. NZKS notes that there has been specific capital expenditure relating to climate-related risks and opportunities across the business in FY24. This includes investment in culvert improvements at the Tentburn site, the ensilage plant and the transition from diesel to electricity at Takaka as part of a power upgrade on header tanks.

NZKS currently does not have an internal carbon emission price. As NZKS matures in this space this is something that may be considered in the future.

As discussed in the Governance section, NZKS is not yet in the position to link remuneration through to sustainability metrics and targets in a meaningful way.

No assurance has been provided over GHG emissions in FY24. Agreed upon procedures were performed in FY24 to assess the methodologies and assumptions in NZKS' carbon inventory collation processes. This provides NZKS Board & Management comfort that the same methodology can be used for FY25 when assurance is required for GHG emissions. In the event that the assurance process in FY25 identifies any inconsistency with the FY24 base line data, NZKS will restate the baseline data in its FY25 CRD reporting.





Glossary

AFRC

Audit, Finance & Risk Committee

AR4

Fourth Assessment Report from the IPCC

AR6

Sixth Assessment Report from the IPCC

BAP

Best Aquaculture Practices

CRD

Climate-Related Disclosures

ESG

Environmental, Social and Governance

EPD

Environmental Product Declaration

G&G

Gilled and gutted salmon

GHG

Greenhouse gas

GWP

Global warming potential

IPCC

Intergovernmental Panel on Climate Change

Liveweight

Weight of harvested fish before gilling and gutting, in tonnes.

NGOs

Non-governmental organisations

NZ CS 1

Aotearoa New Zealand Climate Standard 1
Climate-related Disclosures

NZ CS 2

Aotearoa New Zealand Climate Standard 1
Climate-related Disclosures

NZ C S3

Aotearoa New Zealand Climate Standard 1
Climate-related Disclosures

NZKS

New Zealand King Salmon Investments Limited

NZTE

New Zealand Trade and Enterprise

RCP

Representative Concentration Pathway

SSP

Shared Socio-economic Pathways

STI

Senior Leadership Short Term Incentive

tCO₂e

tonnes of CO₂ equivalents

WTT

Well-to-tank

Appendix: GHG methodologies, assumptions and estimation uncertainties

Scope	Category	GHG emissions source	Data source	Calculation methodology, assumptions, uncertainty (qualitative)	Source of emission factors
Scope 1	Stationary/mobile combustion	Fossil fuels used across business	Supplier data	Fuel-based method. Low uncertainty.	MfE (2023)
	Fugitive emissions	Refrigerant used in refrigeration systems	Maintenance records	Top-up method. Considers top-ups on equipment on NZKS sites. Low uncertainty.	MfE (2023)
Scope 2	Electricity	Electricity consumption	Supplier data	Location-based method. Low uncertainty.	MfE (2023)
Scope 3	Category 1: Purchased goods and services	Feed	Emission factors provided by supplier. General ledger used for quantities.	Supplier-specific method. Low uncertainty.	Feed suppliers
		Packaging	General ledger	Average-data method. Weights and composition purchased based on general ledger reports. Low uncertainty.	DEFRA (2023)
		Consumables, raw materials and other spend	General ledger	Spend-based method. Uncertainty as emission factors are applied to a broad category of spend and not based on specific activity data or supplier specific emission factors.	Motu (2007), with annual inflation applied
		Purchased finished goods and third party manufacturing	General ledger	Average-data method. General ledger reports provide the weight of goods purchased and manufactured. Some uncertainty due to generic nature of emission factors, due to availability of relevant emission factors.	Similar products' EPD and DEFRA (2023) for third party manufacturing
		Water	General ledger – supplier invoices	Average-data method. Low uncertainty.	MfE (2023)
	Category 2: Capital goods	Purchase or construction of capital items	General ledger	Spend-based method, emissions recognised when asset capitalised in general ledger. Uncertainty as emission factors are applied to a broad category of spend and not based on specific activity data or supplier specific emission factors.	Motu (2007), with annual inflation applied

Scope	Category	GHG emissions source	Data source	Calculation methodology, assumptions, uncertainty (qualitative)	Source of emission factors
Scope 3 (continued)	Category 3: Fuel-and energy-related activities not included in Scope 1 or Scope 2	Transmission and distribution losses (T&D)	Supplier data	Average-data method. Emissions from T&D losses estimated based on kilowatt hour (kWh) data used in scope 2. Some uncertainty due to availability of specific T&D data.	MfE (2023)
		WTT	Supplier data	Average-data method. Low uncertainty.	DEFRA (2022)
	Category 4: Upstream transport and distribution	Transport of items between locations and to consumer	Supplier data	Fuel-based method and distance-based method (dependent on supplier). Uncertainty exists due to the requirement to make small average based assumptions during the point of calculation to account for data gaps in distance travelled and weight delivered as and when needed.	MfE (2023), DEFRA (2022)
		Freight on feed	Supplier data	Supplier-specific method. Suppliers provide freight emission factor which is overlaid onto quantities purchased from general ledger. Low uncertainty.	Supplier provided emission factor
		Freight on packaging	General ledger data with distance assumptions	Distance-based method. Uncertainty exists due to the requirement to make small average based assumptions during the point of calculation to account for data gaps in distance travelled as and when needed.	DEFRA (2022), MfE (2023)
		Freight on all other goods purchased excluding feed and packaging	General ledger	Spend-based method for freight paid on purchased goods. Uncertainty as emission factors are applied to a broad category of spend and not based on specific activity data or supplier specific emission factors.	Motu (2007), with annual inflation applied
	Category 5: Waste generated in operations	Waste across operations	Supplier data and internal reports	Dependent on waste stream either an average-data method or waste-type-specific method was employed. Uncertainty exists for trade waste and sump clearing GHG emissions due to assumptions required on density of fish waste and emission factor availability for wastewater.	MfE (2023)

Scope	Category	GHG emissions source	Data source	Calculation methodology, assumptions, uncertainty (qualitative)	Source of emission factors
Scope 3 (continued)	Category 6: Business travel	Air travel, car rentals and hotels and accommodation	Supplier data	<p>Distance-based method used for air travel and car rentals. Nights-stayed method was used for hotels and accommodations.</p> <p>For rental cars that did not have distance measured, it was assumed that for each day of hire 50 km was travelled. Assumptions also made on vehicle age and size.</p> <p>Air travel distance provided by travel provider, with emissions calculated on an economy class ticket. Travel classified by domestic, short-haul and long-haul.</p> <p>Room nights were provided by travel provider. If a specific country emission factor was not available for a room night, a similar locations factor was used.</p>	MfE (2023)
	Category 8: Upstream leased assets	Fuel & electricity used in leased assets	N/A	Due to ability to split data these emissions have been captured in Scope 1 and Scope 2.	
	Category 9: Downstream transportation and distribution		Assumptions	Distance-based method. A distance of five kilometres was assumed for the transportation from the retailer to the end-customer. Small average based assumptions made within the calculation to account for data gaps in weight delivered as and when needed.	DEFRA (2022), MfE (2023)
	Category: 12 End of life treatment of sold products		Life Cycle Assessment (LCA) of farmed King salmon from New Zealand (thinkstep anz – 2023), internal sales data	Average-data method. LCA (2023) waste habits used as an assumption for consumer waste for whole fish. All other products have a different assumed waste percentage. Uncertainty given lack of quality data on consumer waste habits and emission factor data availability.	MfE (2023)



 New Zealand
King Salmon