



NIWA

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SCIENCE FOR A RESILIENT FUTURE

NIWA ANNUAL REPORT
2023



NIWA
Taihoro Nukurangi

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Presented to the House of Representatives pursuant to section 44 of the Public Finance Act 1989.

The NIWA Annual Report for 2023 is presented in two parts – the Year in Review and the Annual Report (Financial Statements). Collectively, these two documents fulfil our annual reporting responsibilities under the Crown Research Institutes Act 1992.

The Year in Review is an illustrated document containing the Chairman and Chief Executive’s report, descriptions of our research capabilities and performance, including our partnerships with Māori, work with collaborators and stakeholders, and an overview of our people.

Both reports are available digitally at:
www.niwa.co.nz/about/annual-reports

Cover: As Cyclone Gabrielle made its final approach to New Zealand on the evening of 13 February 2023, its wind field was expanding and becoming more intense. Red colours indicate areas where wind gusts more than 100 km/h were expected. The dramatic modelling was confirmed with record or near record-breaking gusts at 25 locations in the North Island. The powerful winds helped siphon an atmospheric river of moisture on to the country, caused destructive storm surge, and brought down trees and power lines. [NIWA]

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NIWA Annual Report 2022/23

Science for a resilient future



In February 2023, Cyclone Gabrielle claimed 11 lives, destroyed hundreds of homes and devastated huge swathes of agricultural and horticultural land. In the days that followed, NIWA researchers travelled to Hawke's Bay to assess flood and stopbank extents and collect a range of data to contribute to understanding what happened during the deadly storm. [*Rebekah Parsons-King*]

NIWA SCIENCE

OUR MISSION

To support the wellbeing of Aotearoa New Zealand's people and business through

- improved management of the environment
- sustainable use of natural resources
- effective responses to global change

OUR AIM

To deliver the science that will enable Aotearoa New Zealand to meet its environmental challenges and thrive in a rapidly changing world

We will innovate, generate new knowledge, and apply our science to

- provide industry opportunities
- transition to a low carbon economy
- adapt to a changing climate
- improve the health of our waterways and oceans
- care for our unique biodiversity

To achieve these advancements

- we will partner with Māori
- embrace new technologies
- support major science infrastructure
- collaborate with other science organisations and the sectors that apply our science products and services

OUR SCIENCE

Will support the realisation of these national outcomes by applying innovative technology across multidisciplinary teams

CLIMATE

New Zealand's pre-eminent provider of atmospheric and climate science

- Climate change and variability
- High-precision weather forecasting
- Weather-related hazard forecasting
- Adaptation and mitigation

230 Science staff

New Zealand's largest team of climate scientists

\$42M Annual investment

In weather and climate research

6,500 Climate stations

The National Climate Database with information from 6,500 climate stations covering New Zealand, South-West Pacific and Antarctica

\$18M Supercomputer

Enabling precise, highly localised forecasts

FRESHWATER

Supporting the sustainable management of our freshwater resources

- Freshwater quality and quantity
- Biodiversity and biosecurity
- Sustainable use
- Flood forecasting

240 Science staff

New Zealand's largest team of freshwater scientists

\$40M Annual investment

Increasing knowledge of water quantity and quality

A national flood forecasting service

Providing river flow forecasts for more than 50,000 catchments nationwide

500 Hydrological monitoring stations

A nationwide network of water and soil moisture monitoring stations

MARINE

Understanding, managing and maximising the benefits of our marine estate

- New Zealand's Marine Estate
- Fisheries stock assessment
- Sustainable use of marine resources
- Biodiversity and biosecurity
- High-value finfish aquaculture

260 Science staff

New Zealand's largest team of ocean scientists

\$67M Annual investment

In coast and ocean, fisheries and aquaculture science

Northland Aquaculture Centre

New Zealand's leading science facility for finfish aquaculture

State-of-the-art research vessels

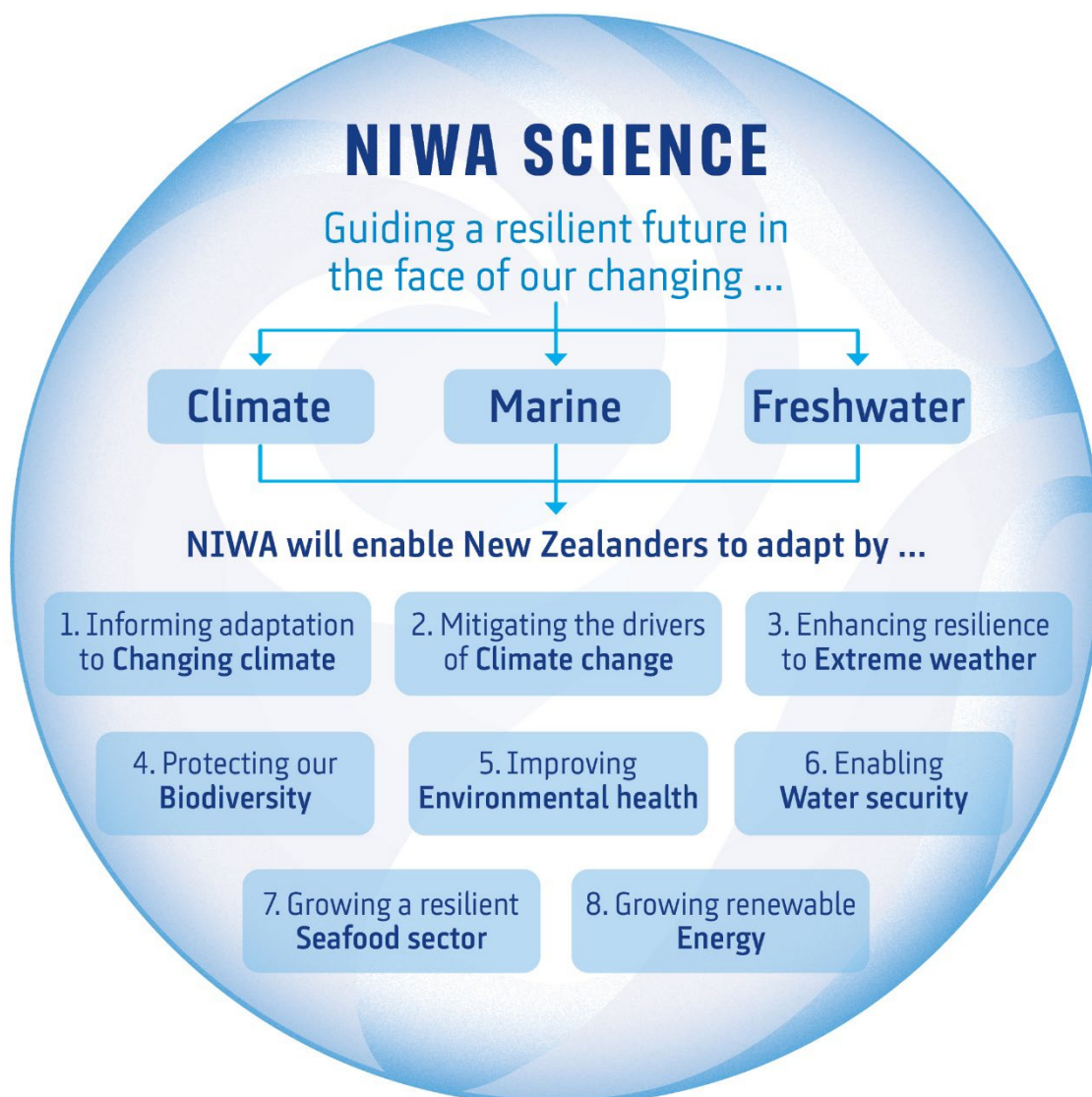
Supporting the New Zealand science community

NATIONAL OUTCOMES

We will innovate, generate new knowledge, and apply our science to address eight key areas of Government priority. These National Outcomes are:

1. Informing adaptation to changing climate
2. Mitigating the drivers of climate change
3. Enhancing resilience to extreme weather
4. Protecting our biodiversity
5. Improving environmental health
6. Enabling water security
7. Growing a resilient seafood sector
8. Growing renewable energy

NIWA'S SCIENCE STRATEGY



STATEMENT OF CORE PURPOSE OUTCOMES

The information in this section of the Annual Report demonstrates how NIWA is delivering on its expected outcomes.

Our purpose, set out in our Statement of Core Purpose, is to:

- enhance the economic value and sustainable management of Aotearoa New Zealand's aquatic resources and environments
- provide understanding of climate and the atmosphere
- increase resilience to weather and climate hazards to improve the safety and wellbeing of New Zealanders




We are expected to fulfil our purpose through the provision of research and transfer of technology and knowledge in partnership with key stakeholders and partners, including industry, government and Māori, to achieve six key outcomes:

1. Increase economic growth through the sustainable management and use of aquatic resources
2. Grow renewable energy production through developing a greater understanding of renewable aquatic and atmospheric energy resources
3. Increase the resilience of New Zealand and South-West Pacific islands to tsunami and weather and climate hazards, including drought, floods and sea-level change
4. Enable New Zealand to adapt to the impacts and exploit the opportunities of climate variability and change and mitigate changes in atmospheric composition from greenhouse gases and air pollutants
5. Enhance the stewardship of New Zealand's freshwater and marine ecosystems and biodiversity
6. Increase understanding of the Antarctic and Southern Ocean climate, cryosphere, oceans and ecosystems and their longer-term impact on New Zealand






The new NIWA Hamilton research facility was officially opened by Research, Science and Innovation Minister Ayesha Verrall on 11 August 2023. The \$45 million state-of-the-art facilities are the first of NIWA's main centres to be rebuilt. [Stuart Mackay]




Increase economic growth through the sustainable management and use of aquatic resources

PROJECT	KEY ACHIEVEMENTS	SECTOR IMPACT
<p><i>Recirculating Aquaculture System update</i></p> 	<p>Our Haku kingfish are now swimming in New Zealand’s first commercial-scale Recirculating Aquaculture System (RAS) at the Northland Aquaculture Centre in Ruakākā.</p> <p>The construction of eight, 350,000-litre fish tanks with two independent water treatment plants is completed.</p>	<p>A joint venture with the Northland Regional Council, the RAS project has been a key strategic priority for NIWA.</p> <p>It represents the next stage in proving the economic, operational and environmental viability of growing kingfish to market size in a land-based aquaculture system that will help the aquaculture sector in its goal of \$3 billion by 2035.</p>
<p><i>Snapper survival rates</i></p> 	<p>Careful fish handling helps support sustainable fisheries. Recent NIWA research for Fisheries New Zealand on survival rates of snapper that are caught recreationally and then released, showed two of the main impacts on fish survival rates were the depth they were caught and how they were hooked.</p> <p>The research suggested that practices such as using recurve hooks (which increase probability of lip hooking) could increase survival rates and save hundreds of thousands of fish per year.</p>	<p>The results give anglers a better understanding of what happens when a fish is thrown back, allows researchers to estimate unseen mortality and helps fisheries managers set optimal fishing regulations, such as daily bag and minimum size limits.</p>
<p><i>Tonga Demersal Lines project</i></p> 	<p>The Tongan deepwater demersal line fishery is a valuable source of income, livelihood and social wellbeing for the people of Tonga. The fishery has a history of boom-and-bust cycles with fluctuating catches and poor economic returns.</p> <p>A NIWA-led project (2015–23), supported by Tongan government agencies and the Pacific community, worked to develop a well-managed, economically and biologically sustainable fishery that could be a model for demersal line fisheries throughout the Pacific.</p>	<p>Outcomes included the identification of increased opportunities through the economic and social analyses. Sustainability of the fishery was enhanced by strengthening the Ministry of Fisheries monitoring and management procedures and through the revision of the Deepwater Fishery Management Plan to include harvest control rules, in-season catch monitoring and an adaptive management framework for effective and transparent decision making.</p>




Grow renewable energy production through developing a greater understanding of renewable aquatic and atmospheric energy resources

PROJECT	KEY ACHIEVEMENTS	SECTOR IMPACT
<p><i>Forecasting hydro lake inflows to optimise generation</i></p> 	<p>NIWA has created new natural inflow forecasting systems for clients operating two of the main hydroelectric catchments in the South Island – the Clutha catchment for Contact Energy and the Waitaki catchment for Meridian Energy.</p>	<p>Robust inflow forecasts enable the companies to better optimise their generation and reduce spill – increasing profits while supporting New Zealand’s aim to achieve 100 percent renewable energy. Better forecasts also allow improved flood management and dam safety during high-flow events.</p>
<p><i>Validation completed for high-resolution dataset to more precisely model potential renewable energy generation</i></p> 	<p>To better understand New Zealand’s capacity for renewable energy production, a high-resolution weather reanalysis has now reached the production stage.</p> <p>The reanalysis better resolves New Zealand’s complex terrain and the intricate atmospheric processes that drive our local weather and climate.</p>	<p>Improving understanding of historical trends in wind, cloud, rain and snowfall helps to quantify New Zealand’s capacity for wind, solar and hydroelectric power generation. This work is also helping to make data more accessible for end users.</p>
<p><i>Offshore wind energy resources</i></p> 	<p>New Zealand’s position in the southwest Pacific Ocean means it has one of the best offshore wind energy resources in the world.</p> <p>NIWA is providing advice to wind farm developers to support them in understanding the environmental impacts that offshore windfarms could have on seabirds, fish, benthic communities and marine mammals.</p>	<p>Part of the Government’s emissions reduction strategy is putting a legislative framework in place to enable the development of an offshore renewable energy industry. New ventures need to be informed by scientific evidence on possible impacts, something NIWA is uniquely positioned to do.</p>

Increase the resilience of New Zealand and South-West Pacific islands to tsunami and weather and climate hazards, including drought, floods and sea-level change

PROJECT	KEY ACHIEVEMENTS	SECTOR IMPACT
<p><i>Cyclone Gabrielle flood observations and modelling to inform response and build future resilience</i></p> 	<p>When Cyclone Gabrielle hit New Zealand in February 2023, NIWA researchers contributed to understanding what was happening in a myriad of ways – from weather and landslide forecasting as the cyclone approached, through to assessing flood extents, stopbank breaches and sediment deposition.</p> <p>Staff were also involved in gathering LiDAR data in the immediate aftermath, and in the analysis and modelling to inform recovery and future risk assessments.</p>	<p>The findings from this work helped iwi, government agencies, emergency responders, councils, infrastructure providers and many other partners across Hawke’s Bay and Tairāwhiti to understand the event and to make informed decisions about recovery, particularly in a changing climate.</p>
<p><i>Drought forecasting tool underpinned by NIWA35 model</i></p> 	<p>A trial version of NIWA and MPI’s new drought dashboard has garnered much interest, both through sector briefings and at Fieldays in 2022 and 2023.</p> <p>The drought dashboard is a web-based application that’s underpinned by the NIWA35 climate model, which uses artificial intelligence and innovative climate modelling techniques to predict conditions up to 35 days into the future.</p>	<p>The drought dashboard is helping farmers and growers better prepare for periods of dryness, drought and high rainfall. It will go from trial mode to operational mode by summer 2023.</p>
<p><i>Extreme coastal flooding maps reveal sea-level rise risk</i></p> 	<p>New maps from NIWA and the Deep South National Science Challenge show areas across New Zealand that could be inundated by extreme coastal flooding during a large storm-tide event and with climate change-driven sea-level rise.</p>	<p>The publicly available maps are intended to help councils, the financial industry and national infrastructure and service providers risk assess their portfolios. They can help shape decisions on how we adapt to sea-level rise.</p>




Enable New Zealand to adapt to the impacts and exploit the opportunities of climate variability and change and mitigate changes in atmospheric composition from greenhouse gases and air pollutants

PROJECT	KEY ACHIEVEMENTS	SECTOR IMPACT
<p><i>MethaneSAT research preparing for satellite launch</i></p> 	<p>The NIWA-led MethaneSAT agricultural research programme is part of an international space mission helping to tackle climate change. The research in New Zealand is focused on reducing global emissions from agriculture.</p> <p>Over the past year the team has been carrying out ground-based measurements and modelling of the 200 identified agricultural targets from which the satellite will collect information.</p>	<p>This work is part of the preparation for the satellite’s launch in early 2024. Ultimately, the findings from MethaneSAT will help identify where emissions can be reduced or eliminated most effectively.</p>
<p><i>Improving indoor air quality to reduce COVID-19 transmission</i></p> 	<p>After the COVID-19 pandemic, demand soared for the assessment of ventilation and indoor air quality.</p> <p>The NIWA air quality team developed a prototype Smart Home Air Quality System (SHAQS). Each SHAQS delivers real-time and summary information for multiple rooms to users and managers, allowing air improvement plans to be rapidly developed, actioned and evaluated.</p>	<p>The SHAQS have been tested in churches, early childhood centres, a marae, Pacific Islander community centres, clinics, vets, a gym, a media studio, a library, a bus and private homes.</p> <p>The data is informing changes in ventilation practice and helping the Ministry of Health develop future pandemic plans.</p>
<p><i>GoSouth atmospheric research increases understanding of cloud processes</i></p> 	<p>NIWA air quality researchers hosted a group from the Leibniz Institute for Tropospheric Research (TROPOS) and Leibniz University Hannover in Germany to carry out an extensive atmospheric research campaign outside Invercargill.</p> <p>The coastal location was chosen to minimise human influences and to observe clean air coming direct from the Southern Ocean.</p>	<p>The researchers gained valuable data about particles in the air, turbulence and meteorological conditions in the marine boundary layer – all of which influence the formation of clouds.</p> <p>The findings are helping improve climate model predictions for the Southern Hemisphere. The German team hopes to return for a bigger joint campaign in the future.</p>

Enhance the stewardship of New Zealand's freshwater and marine ecosystems and biodiversity

PROJECT	KEY ACHIEVEMENTS	SECTOR IMPACT
<p><i>Corbicula (golden clams) response</i></p> 	<p>The gold clam (<i>Corbicula fluminea</i>) is an invasive species that reproduces rapidly in freshwater, forming large populations that can clog hydro and irrigation pipes and out-compete native species. Once established, densities can reach tens of thousands per square metre.</p> <p>It was first found in May 2023 in the Waikato River, Lake Karāpiro. At the request of the Ministry for Primary Industries, NIWA has led site surveys of the Waikato River and Lake Taupō.</p>	<p>The surveys have involved a multi-pronged approach including visual searches, eDNA and physical sampling. Clams were confirmed at the original sites plus two other upstream locations.</p> <p>This information provides baseline data into the known distribution of this invasive species, however further research is required to understand the impacts on native species and their habitats.</p>
<p><i>Fish passage guidelines & workshops</i></p> 	<p>Dams, weirs and culverts make it difficult for native freshwater fish to navigate New Zealand's waterways. NIWA is partnering with mana whenua, agencies and landowners to co-develop fish passage action plans and to deliver training on fish barrier assessment, barrier remediation and effective outcome monitoring.</p>	<p>The NIWA-developed Fish Passage Assessment Tool and Barrier Assessment and Reporting Tool support the documentation, prioritisation and reporting of instream barriers and the risk they pose to migratory fish.</p> <p>Co-developed plans identify the impacts of fish passage barriers within catchments and prioritise their remediation strategies, fulfilling requirements of the National Policy Statement for Freshwater Management (NPS-FM).</p>
<p><i>Understanding ecosystem health by monitoring kākahi</i></p> 	<p>The lifecycle of kākahi (freshwater mussels) is complex – they need the right fish hosts and a healthy environment to thrive. The adults remove algae and some sediment from the water, and they are an important part of a healthy freshwater ecosystem. By monitoring local populations, we can better understand the health of kākahi and their habitats.</p> <p>For the last nine years, NIWA has supported events to assess kākahi populations in Wairarapa moana.</p>	<p>The data being collected by community volunteers and Greater Wellington Regional Council is used to inform strategies to enhance the cultural values and ecology of the moana.</p> <p>About one-third of the collectors have attended the surveys every year since its inception. These experienced collectors have become leaders, training new attendees in the finer points of kākahi monitoring and the methodology behind it.</p>

Increase understanding of the Antarctic and Southern Ocean climate, cryosphere, oceans and ecosystems and their longer-term impact on New Zealand

PROJECT	KEY ACHIEVEMENTS	SECTOR IMPACT
<p><i>2023 Antarctic voyage</i></p> 	<p>In early 2023, RV <i>Tangaroa</i> undertook a 45-day voyage to the Southern Ocean and Ross Sea. The researchers had 15 separate objectives to better understand fundamental processes in the Ross Sea, the role of the Marine Protected Area (established in December 2017) and the impact of climate change.</p> <p>These included research into coastal habitats, ocean physics, biogeochemistry, plankton, pelagic fish and marine mammals, along with atmospheric measurements.</p>	<p><i>Tangaroa</i> voyages are a key component of New Zealand's Antarctic science effort and are essential to increase knowledge about key environmental and biological processes in the Ross Sea region of Antarctica and the Southern Ocean. They improve understanding of ecosystem function and likely responses to future change.</p>
<p><i>Ross Ice Shelf stability work</i></p> 	<p>Alongside its well-known work at sea, NIWA researchers are also working on the ocean under the Ross Ice Shelf to understand how this is driving change in the largest ice shelf in the Ross Sea and how it might change under different climate scenarios.</p> <p>Antarctica's massive ice shelves flow out from the continent and float on the surrounding sea, holding 90% of the world's ice and 80% of its freshwater.</p>	<p>The loss of land-based ice is now the largest single contribution to sea-level rise. Predicting how the ice sheet will evolve in the future is key to the resilience of communities, both in New Zealand and around the world. NIWA works with global partners in developing this science.</p>
<p><i>Antarctic toothfish abundance in the Ross Sea</i></p> 	<p>A long-running time series of research surveys is helping New Zealand monitor abundance of Antarctic toothfish in the southern Ross Sea.</p> <p>Carried out for Fisheries New Zealand in collaboration with the fishing industry, the eleven longline surveys to date are used to estimate year-class strength of Antarctic toothfish and provide essential input into the stock assessment used to inform international management decisions.</p>	<p>The voyages reflect industry support for this world-class science. They have resulted in a substantial increase in the knowledge and understanding of the distribution and relative abundance of a range of fish and invertebrates caught on the longlines, and they provide a key role in monitoring the Ross Sea Region Marine Protected Area.</p>



The experimental, commercial-scale Recirculating Aquaculture System (RAS) at NIWA's Northland Aquaculture Centre is reaching full swing and tens of thousands of kingfish are now occupying the 350,000 litre tanks. The system is designed to demonstrate the viability of commercial-scale production of high-value seafood on land. [Stuart Mackay]

PERFORMANCE TARGETS 2022/23

NIWA will measure its performance against the outcomes and operating principles in its Statement of Core Purpose using the following set of indicators.

Financial Indicators

Measure	Calculation	Reporting frequency	Target 2022/23	Actual 2022/23
Operating margin	Earnings Before Interest, Tax, Depreciation, Amortisation and Fair-value (EBITDAF)/Revenue	Annual	17.8%	14.5%
Profit per FTE	EBITDAF/FTEs	Annual	\$46,000	\$39,000
Quick ratio	Current assets less inventory less prepayments/ Current liabilities less revenue received in advance	Quarterly	1.6*	1.2
Interest coverage	EBITDAF/ Interest paid	Quarterly	22.9	13.16
Profit volatility	Standard deviation of EBITDAF for past five years/ Average EBITDAF for the past five years	Annual	24.2%*	21.7%
Forecasting risk	Five-year average of return on equity less forecast return on equity	Annual	2.9%*	2.1%
Adjusted return on equity	NPAT excluding fair value movements (net of tax)/Average of share capital plus retained earnings	Quarterly	4.9%	4.4%
Revenue growth	% change in revenue	Annual	7.4%	9.3%
Capital renewal	Capital expenditure/Depreciation expense plus amortisation expense	Quarterly	260.6%	245%

*The NIWA Statement of Corporate Intent for 2022/23 published figures of 1.51 for quick ratio, 19.4% for profit volatility and 3.2% for forecasting risk. These figures were incorrect.

Organisational Performance Indicators – 2022/23 at a glance

Measure	Calculation	Reporting frequency	Target 2022/23	Actual 2022/23
End-user collaboration*	Revenue per FTE from commercial sources	Quarterly	\$108,000	\$123,995
Research collaboration*	Publications with collaborators	Quarterly	85%	93%
Technology & knowledge transfer*	Commercial reports per scientist FTE	Quarterly	1.0	1.77
Science quality*	Impact of scientific publications	Annually	2.5	4.46
Operational efficiency*	Revenue per FTE	Quarterly	\$261,000	\$271,500
Operational delivery	% projects delivered on time	Annually	>90%	99.5%
Strategic progress	% annual KPIs achieved	Annually	>90%	100%

*Ministry of Business, Innovation & Employment generic indicators

FINANCIAL SUMMARY

NIWA Group Financial Summary

in thousands of New Zealand dollars	2023	2022	2021	2020	2019
Revenue and other gains	186,036	170,233	176,887*	158,860*	161,292
– Research	101,063	95,614	109,111	93,800	94,901
– Commercial science	84,972	74,618	67,775	65,059	66,390
– Other income	1	1	1	1	1
Profit before income tax	7,764	8,958	22,594	9,982	8,708
Profit for the year	5,938	6,470	16,263	7,370	6,247
Capital expenditure	45,270	40,817	23,080	14,757	21,460
Adjusted return on average equity (%)**	4.4	5.0	13.9	6.9	6.2
Return on average equity (%)	3.8	4.3	11.6	5.7	5.1

* Includes \$8.27 million from the Government's COVID-19 Response and Recovery Fund (CRRF).

**The 'adjusted return on average equity' uses a valuation basis comparable to that used by other Crown Research Institutes. This valuation basis arose from the transition to New Zealand Equivalents to International Financial Reporting Standards in 2006/07 and reverses the effect of the revaluation of certain land and buildings.

Group actual performance versus Statement of Corporate Intent (SCI)

For the year ended 30 June 2023

in thousands of New Zealand dollars	2023 Actual	2023 SCI	2022 Actual
Revenue and other gains	186,036	177,630	170,233
Operating expenses, depreciation, and amortisation	178,562	166,198	161,331
Profit before income tax	7,764	11,600	8,958
Profit for the year	5,938	6,648	6,470
Average total assets	238,458	226,396	225,998
Average shareholders' funds	157,417	158,389	151,225
Profitability			
Operating profit margin (%) (EBITDA/revenue)	14.5	17.8	16.3
Adjusted return on average equity after tax (%) (net surplus/adjusted average equity)	4.4	4.9	5.0
Return on average equity after tax (%) (net surplus/average equity)	3.8	4.2	4.3
Return on assets (%) (EBIT/average total assets)	3.1	5.0	3.9
Profit volatility (%) (non-adjusted ROE)	21.7	24.2	24.3
Forecasting risk (%)	2.1	2.9	2.2
Liquidity and efficiency			
Current ratio	0.9	1.0	1.3
Quick ratio	1.2	1.6	2.4
Financial leverage			
Debt to average equity (%)	–	–	–
Gearing (%)	–	–	–
Proprietorship (%) (average shareholders' funds/total assets)	65	68*	65

*The NIWA Statement of Corporate Intent for 2022/23 published the figure of 69.7 for proprietorship. This figure was incorrect.

OVERVIEW OF GROUP FINANCIAL PERFORMANCE

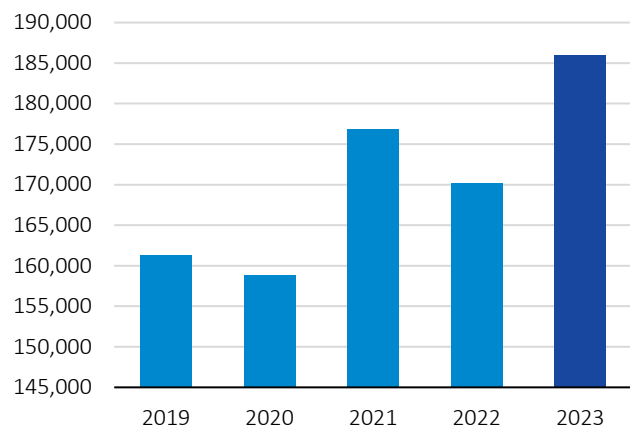
The financial year 2022/23 presented challenges for many businesses, and NIWA was no exception. While there has been a noticeable increase in demand for NIWA’s science, the organisation has been significantly impacted by inflationary pressures.

Revenue

NIWA achieved revenue of \$186.0 million for the year. Compared with the budget set out in NIWA’s Statement of Corporate Intent, revenue was up by \$8.4 million. Year-on-year, revenue was \$15.8 million above the previous year.

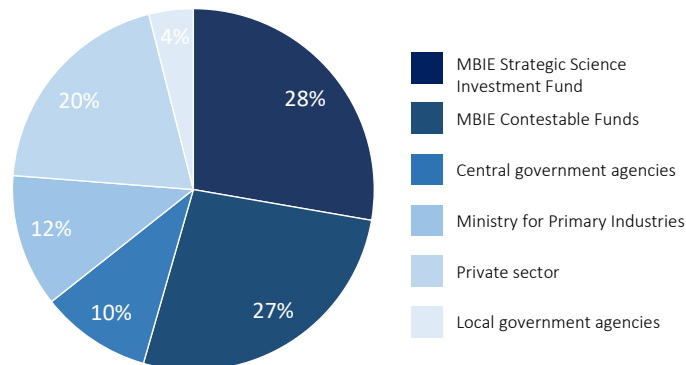
NIWA’s MBIE-funded research revenue was \$5.4 million higher than the prior year. Of this increase, \$3.6 million was associated with NIWA’s ocean-going research vessels, largely due to the biennial voyage of the RV *Tangaroa* to Antarctica. Commercial revenue, sourced both domestically and overseas, was \$10.4 million more than the prior year.

Total revenue
(\$ in thousands)



The share of NIWA’s revenue arising from contracts with the Ministry of Business, Innovation & Employment was 54%, comprising \$50.6 million SSIF funding and \$50.5 million contestable and other contracts. Revenue from the Ministry of Primary Industries at \$21.7 million accounted for 12%. Combined, the share of NIWA’s revenue from these two agencies was 1% lower than the position in 2021/22.

Revenue by source



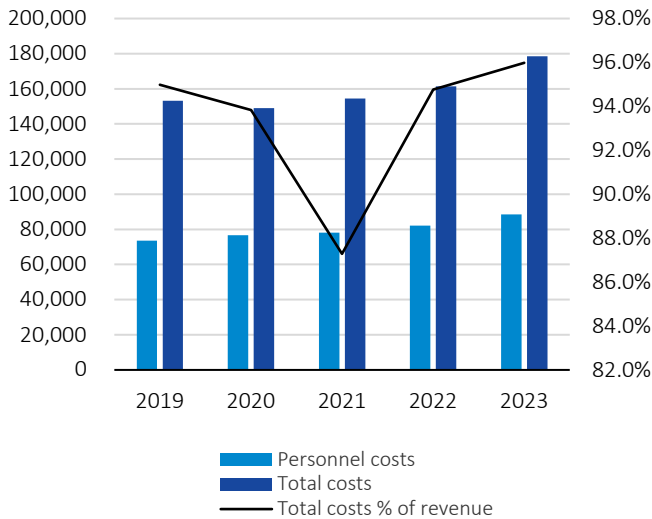
Expenditure

Operating expenses (including depreciation and amortisation) were above budget by \$12.4 million. Year-on-year, operating expenses increased by \$17.2 million.

The increase in operating expenses from the prior year primarily resulted from higher personnel costs due to inflation-driven salary increases alongside intense competition for skills in the market. Travel & accommodation costs grew by \$3.3 million, due both to inflation and to increased travel following the end of COVID-19-related restrictions. The increase of \$4.2 million in Materials & Supplies, Utilities and Insurance expenses was solely driven by inflation. Additionally, research collaboration expenses increased by \$1.4 million year-on-year due to increased subcontractor activity.

Above-budget inflationary pressures were experienced across the full range of costs, both salary and non-personnel. While NIWA’s board and management have taken pricing actions to respond to these pressures and maintain long-term financial sustainability, these will take time to feed through to financial performance because of contracts having been agreed months or even years earlier. However, these actions are nonetheless expected to have a positive impact in the coming financial year.

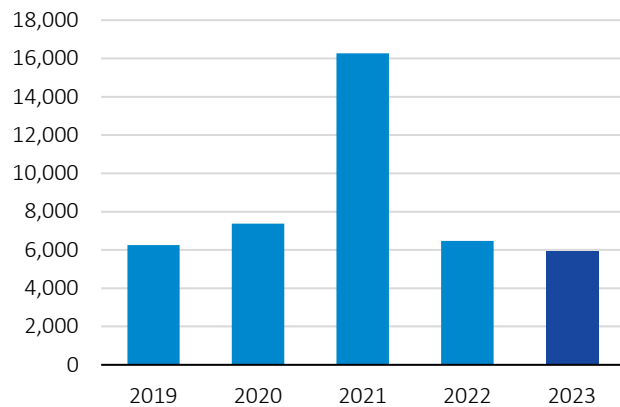
Total expenditure (\$ in thousands)



Profitability

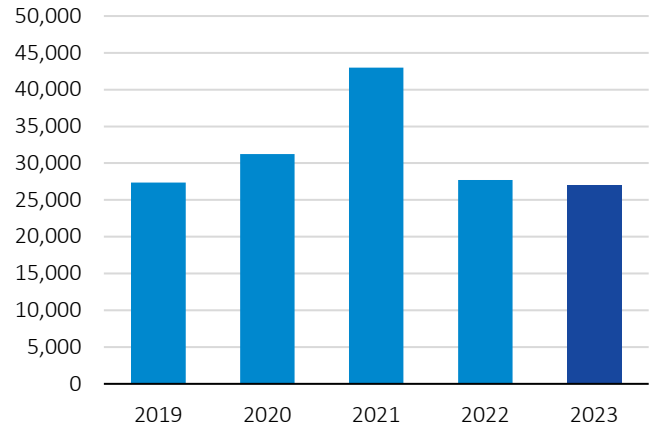
NIWA delivered profit before tax of \$7.8 million and profit after tax of \$5.9 million during 2022/23. Compared with the previous year, these results reflect a reduction of \$1.2 million and \$0.5 million respectively. Compared with budget, the result was \$3.8 million and \$0.7 million lower before and after tax respectively, reflecting the impact of significant inflationary pressures on cost, partly offset by higher revenue.

Net profit after tax (\$ in thousands)



NIWA also closely monitors its Earnings before Interest, Tax, Depreciation and Amortisation (EBITDA), as this measure assists in understanding the Company's capacity to fund future investments and carry debt. NIWA achieved EBITDA of \$27.0 million for the year against a budget of \$31.6 million. We continue to manage this measure carefully to ensure that we remain in a position to finance our planned major facility investments over the coming several years.

EBITDA (\$ in thousands)



NIWA's fundamental financial performance metric is adjusted return on equity, which enables comparison between CRIs on an equivalent basis. The Company delivered an adjusted ROE of 4.4% this year, which was marginally below the budget objective of 4.9% and the 5.0% achieved in the previous year.

Capital management and cash

Cash flows

The following table summarises NIWA's cash flows this year and last year:

(\$ in millions)	2023	2022	Change
Net cash flows from operating activities	16.397	30.167	(13.770)
Net cash flows from investing activities	(37.181)	(19.106)	(18.075)
Net cash flows from financing activities	(2.208)	(2.082)	(0.126)
Net increase/(decrease) in cash	(22.992)	8.979	(31.971)

The above presentation is consistent with New Zealand Equivalents to International Financial Reporting Standards and therefore treats cash flows relating to short-term deposits with maturities greater than three months as investing activities. In order to provide more useful and relevant information concerning the Company's cash flows, the table below restates the summary of cash flows, treating all short-term investments as equivalent to cash:

(\$ in millions)	2023	2022	Change
Net cash flows from operating activities	16.397	30.167	(13.770)
Net cash flows from investing activities	(61.181)	(39.106)	(22.075)
Net cash flows from financing activities	(2.208)	(2.082)	(0.126)
Net increase/(decrease) in cash including other term deposits	(46.992)	(11.021)	(35.971)

Net cash flows from operating activities

Net cash inflows from operating activities decreased by \$13.8 million to \$16.4 million in 2023. This year-on-year change reflected additional personnel and subcontractor costs.

Net cash flows from investing activities

Net cash outflows from investing activities (excluding the impact of cash flows associated with term deposits with maturities in excess of three months) increased by \$18.1 million to \$37.2 million. This year-on-year variance was related to the costs associated with the new Hamilton property, the replacement of the RV *Kaharoa*, and the recirculating aquaculture system at NIWA's Northland Aquaculture Centre.

Net cash flows from financing activities

Net cash outflows from financing activities increased by \$0.1 million to \$2.2 million. These costs relate to the treatment of long-term lease costs under the accounting standard, NZ IFRS 16 Leases. The Company paid no dividend during the year. This was signalled in the previous year's Statement of Corporate Intent and reflects upcoming essential and material investments designed to ensure that our science facilities remain fit for purpose for the coming decades.

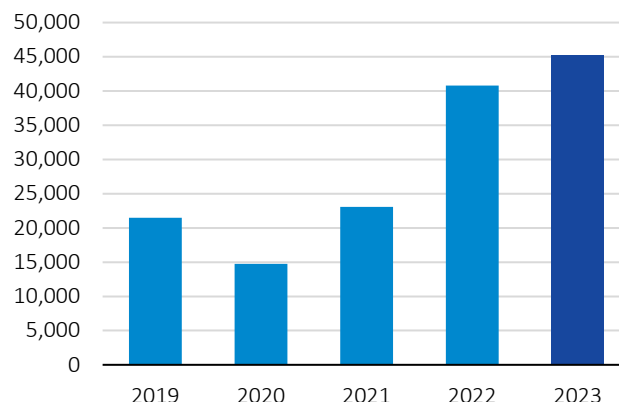
Capital spending

The following table summarises NIWA's capital expenditure this year and last year:

(\$ in millions)	2023	2022	Change
Land, buildings & improvements	32.387	23.686	8.701
Equipment	8.498	9.598	(1.100)
ICT equipment	2.483	2.884	(0.401)
Vessel equipment	(6)	2.972	(2.978)
Other	1.909	1.677	0.232
Total capital spending	45.270	40.817	4.453

Total capital expenditure was \$45.3 million during the year, up from \$40.8 million during the prior year. In addition to the above, a further \$12.5 million is recorded as a prepayment, but can be considered in substance as equivalent to capital spending. This relates to initial payments for the construction of the replacement for NIWA's ocean-going research vessel *Kaharoa*, and is reflected as an investing activity in the cash flow statement.

Capital expenditure (\$ in thousands)



Capital structure and liquidity

Shareholders' equity at 30 June 2023 was \$160.4 million (2022: \$154.5 million) which was \$1.3 million below the level forecast in the SCI budget. Total assets at year-end were \$242.7 million (2022: \$234.2 million). As at 30 June 2023, the Company's net debt balance was zero, equal to that at the prior year-end.

NIWA's liquidity is mainly provided by operating cash flows. In addition, the Company has access to financing facilities of \$20.5 million (2022: \$10.5 million) provided by its bank. This was undrawn at 30 June 2023 (2022: also undrawn).

Dividends

As foreshadowed in the Company's Statement of Corporate Intent, the Directors of NIWA have once again decided not to declare a dividend in respect of the 2023 year. This is in the light of a series of significant capital investments which will be required to maintain and build the Company's capability and financial sustainability for the future. These investments include renovating or replacing the physical infrastructure and facilities at three of the Company's main sites.



NIWA's new mid-sized research vessel, designed to replace RV *Kaharoa*, is making extraordinary progress and is now afloat in Spain undergoing its final fitout. Handover to NIWA is expected in late January-early February 2024, and the vessel is anticipated to be in its home port of Wellington in April 2024. [Armon]

FINANCIAL STATEMENTS

NIWA GROUP

STATEMENT OF COMPREHENSIVE INCOME

For the year ended 30 June 2023

in thousands of New Zealand dollars	Notes	2023 Actual	2023 SCI Budget (unaudited)	2022 Actual
Revenue and other gains	1			
Revenue		186,035	177,628	170,232
Other gains		1	2	1
Total income		186,036	177,630	170,233
Operating expenses	2			
Employee benefits expense		(88,449)	(85,584)	(82,178)
Other expenses		(70,603)	(60,414)	(60,347)
		(159,052)	(145,998)	(142,525)
Profit before interest, income tax, depreciation, and amortisation (EBITDA)		26,984	31,632	27,708
Depreciation	4, 5	(18,514)	(19,338)	(17,978)
Amortisation	7	(996)	(862)	(828)
Profit before interest and income tax (EBIT)		7,474	11,432	8,902
Interest income		858	667	553
Finance expense	5	(568)	(499)	(497)
Net interest and other financing income		290	168	56
Profit before income tax		7,764	11,600	8,958
Income tax expense	11	(1,826)	(4,952)	(2,488)
Profit for the year		5,938	6,648	6,470
Other comprehensive (loss)/income				
<i>Items that may be reclassified to profit or loss</i>				
Foreign currency translation differences of foreign operations		(65)	–	40
Total comprehensive income for the year		5,873	6,648	6,510
Profit attributable to:				
Owners of the Parent		5,792	6,648	6,415
Non-controlling interest		146	–	55
Profit for the year		5,938	6,648	6,470
Total comprehensive income attributable to:				
Owners of the Parent		5,727	6,648	6,455
Non-controlling interest		146	–	55
Total comprehensive income for the year		5,873	6,648	6,510

The accompanying 'Notes to the financial statements' are an integral part of, and should be read in conjunction with, these financial statements.

NIWA GROUP

STATEMENT OF CHANGES IN EQUITY

For the year ended 30 June 2023

<u>in thousands of New Zealand dollars</u>	<u>Note</u>	<u>Share capital</u>	<u>Retained earnings</u>	<u>Non-controlling interest</u>	<u>Foreign currency translation reserve</u>	<u>Total equity</u>
Balance at 1 July 2021		24,799	123,127	333	(289)	147,970
Profit for the year		–	6,415	55	–	6,470
Other comprehensive income		–	–	–	40	40
Total comprehensive income		–	6,415	55	40	6,510
Balance at 30 June 2022		24,799	129,542	388	(249)	154,480
Balance at 1 July 2022		24,799	129,542	388	(249)	154,480
Profit for the year		–	5,792	146	–	5,938
Other comprehensive (loss)/income		–	–	–	(65)	(65)
Total comprehensive income/(loss)		–	5,792	146	(65)	5,873
Balance at 30 June 2023		24,799	135,334	534	(314)	160,353

The accompanying 'Notes to the financial statements' are an integral part of, and should be read in conjunction with, these financial statements.

Share capital

The Group has authorised issued and fully paid capital of 24,798,700 ordinary shares (2022: 24,798,700 ordinary shares). All shares carry equal voting and distribution rights and have no par value.

NIWA GROUP

STATEMENT OF FINANCIAL POSITION

As at 30 June 2023

in thousands of New Zealand dollars	Notes	2023 Actual	2023 SCI Budget (unaudited)	2022 Actual
Equity and liabilities				
Equity				
Share capital		24,799	24,799	24,799
Equity reserves		135,020	136,582	129,293
Shareholders' interest		159,819	161,381	154,092
Non-controlling interest		534	331	388
Total equity		160,353	161,712	154,480
Non-current liabilities				
Provision for employee entitlements	3	963	1,113	966
Lease liabilities	5	18,831	18,000	12,250
Deferred tax liability	12	752	1,612	1,057
Total non-current liabilities		20,546	20,725	14,273
Current liabilities				
Payables and accruals		16,310	16,367	18,477
Revenue in advance		31,157	21,639	33,339
Provision for employee entitlements	3	12,490	10,381	11,042
Taxation payable		–	2,641	396
Lease liabilities	5	1,890	–	2,162
Forward exchange derivatives		–	–	–
Total current liabilities		61,847	51,028	65,416
Total equity and liabilities		242,746	233,465	234,169
Assets				
Non-current assets				
Property, plant and equipment	4	164,354	106,343	136,204
Identifiable intangibles	7	1,166	59,438	1,744
Deferred tax asset	12	136	–	122
Right-of-use asset	5	19,216	16,094	12,537
Prepayments		194	51	269
Total non-current assets		185,066	181,926	150,876
Current assets				
Cash and cash equivalents		9,009	16,108	32,019
Other short-term investments		–	10,000	20,000
Forward exchange derivatives		651	36	570
Receivables	9	16,748	13,054	17,107
Prepayments		15,749	2,618	3,419
Tax Receivable		5	–	–
Assets held for sale	8	–	–	245
Uninvoiced receivables		9,631	6,919	5,690
Inventory	10	5,887	2,804	4,243
Total current assets		57,680	51,539	83,293
Total assets		242,746	233,465	234,169

The accompanying 'Notes to the financial statements' are an integral part of, and should be read in conjunction with, these financial statements.

For and on behalf of the Board:



Barry Harris
Chairman



Janice Fredric
Audit Committee Chair

The financial statements were authorised for issue by the directors on 30 August 2023.

NIWA GROUP

CASH FLOW STATEMENT

For the year ended 30 June 2023

in thousands of New Zealand dollars	Notes	2023 Actual	2023 SCI Budget (unaudited)	2022 Actual
Cash flows from operating activities				
Cash was provided from:				
Receipts from customers and grants		179,943	174,478	176,275
Dividends received		1	–	1
Interest received		858	667	553
Cash was disbursed to:				
Payments to employees and suppliers		(161,291)*	(139,907)	(139,135)
Interest paid	5	(568)	(499)	(497)
Taxation paid		(2,546)	(3,206)	(7,030)
Net cash inflow from operating activities	13	16,397	31,533	30,167
Cash flows from investing activities				
Cash was provided from:				
Sale of property, plant, and equipment		604	(4,000)	1,693
Term deposits maturing		24,000	–	44,000
Cash was applied to:				
Purchase of property, plant, and equipment		(57,367)*	(39,000)	(40,064)
Purchase of intangible assets		(418)	(862)	(735)
Investments in other term deposits		(4,000)	(10,000)	(24,000)
Net cash outflow from investing activities		(37,181)	(53,862)	(19,106)
Cash flows from financing activities				
Cash was applied to:				
Payment for lease principal		(2,208)	(2,136)	(2,082)
Net cash outflow from financing activities		(2,208)	(2,136)	(2,082)
Increase/(decrease) in cash and cash equivalents				
Effects of exchange rate changes on the balance of cash held in foreign currency		(18)	–	52
Opening balance of cash and cash equivalents		32,019	40,573	22,988
Closing cash and cash equivalents balance		9,009	16,108	32,019
Made up of:				
Cash at bank and on hand		4,792	16,108	2,057
Short-term deposits		4,217	–	29,962
Closing cash and cash equivalents balance		9,009	16,108	32,019

The accompanying 'Notes to the financial statements' are an integral part of, and should be read in conjunction with, these financial statements.

*The amount of \$12,549,000 recorded in the Statement of Financial Position as Prepayments relates to the construction of a new research vessel. The associated cash flow is classified as an investing activity in accordance with its substance.

NIWA GROUP

NOTES TO THE FINANCIAL STATEMENTS

For the year ended 30 June 2023

1. Revenue and other gains

Rendering of services

The Group uses the 'percentage-of-completion method' to determine the appropriate amount of revenue to recognise in a given period. The stage of completion is measured by reference to the labour and non-labour costs incurred up to the end of the year as a percentage of total estimated costs for each contract.

Contract duration is typically 1–5 years and revenue is recognised over time as service is rendered. The customer pays a fixed amount over the contract term in accordance with the payment frequency specified in the contract.

Goods sold

The Group recognises revenue from the sale of goods when control of the goods has passed to the customer, the associated costs and possible return of goods can be estimated reliably, there is no continuing management involvement with the goods, and there is a high probability that a significant reversal in the revenue recognised will not occur. Revenue from the sale of goods is measured at the fair value of the consideration received or receivable, net of returns and allowances. The timing of the transfer of control varies depending on the individual terms of the sales agreement.

Government grants

Government grants are recognised under NZ IAS 20 when there is a reasonable assurance that the Group will comply with the conditions attached to the grant, and that the grant will be received.

Government grants related to costs are deferred and recognised in profit or loss over the period in which the Group incurs the costs for which the grant is intended to compensate.

Government grants relating to the purchase of property, plant and equipment are included in non-current liabilities as revenue in advance and they are credited to profit or loss on a straight-line basis over the expected lives of the related assets.

A government grant that becomes receivable as compensation for expenses or losses already incurred, or for the purpose of giving immediate financial support to the Group with no future related costs, is recognised in profit or loss in the period in which the grant becomes receivable.

Strategic funding

NIWA and the Crown are parties to a *Strategic Science Investment Fund – Programmes* Investment Contract (SSIF Contract) under which the Crown contracts NIWA to perform research activities that support NIWA's Statement of Core Purpose (SCP). Specific SCP outcomes, and their associated delivery programmes, are agreed annually with Shareholding Ministers and documented in NIWA's Statement of Corporate Intent.

For financial reporting purposes this Strategic Funding is treated as a Government Grant in terms of NZ IAS 20. Strategic Funding received and recognised during the year was \$50.552 million exclusive of GST (2022: \$50.552 million). All Strategic Funded projects were completed during the year.

Financing components

The Group does not expect to have any significant contracts where the period between the transfer of the promised goods or services to the customer and payment by the customer exceeds one year. As a consequence, the Group does not adjust any of the transaction prices for the time value of money as this is considered to not have a material impact.

Contract balances

Contract assets

A contract asset is the right to consideration in exchange for goods or services transferred to the customer, conditional on something other than the passage of time. If the Group performs under a contract by transferring goods or services to a customer before the customer pays consideration or before payment is due, a contract asset is recognised for the earned consideration that is conditional.

Contract assets are classified as 'Uninvoiced receivables' in the Statement of Financial Position.

Contract liabilities

A contract liability is the obligation to transfer goods or services to a customer for which the Group has received consideration (or an amount of consideration is due) from the customer. If a customer pays consideration before the Group transfers goods or services, a contract liability is recognised. Contract liabilities are recognised as revenue when the Group performs under the contract.

Contract liabilities are classified as 'Revenue in advance' in the Statement of Financial Position.

Revenue and other gains

in thousands of New Zealand dollars	2023	2022
Research		
Strategic Funding	50,552	50,552
Rendering of services	50,511	45,062
Commercial Science		
Rendering of services	77,070	69,189
Sale of goods	7,902	5,429
Dividends	1	1
Total revenue and other gains	186,036	170,233

Revenue recognised in relation to contract liabilities (revenue in advance)

in thousands of New Zealand dollars	2023	2022
Revenue recognised that was included in the contract liability balance at the beginning of the year		
Rendering of services	25,699	20,464

2. Operating expenses

Employee benefits

in thousands of New Zealand dollars	2023	2022
Defined contribution plans	3,246	3,024
Defined benefit plans	408	356
Termination benefits	179	191
Other employee benefits	84,616	78,607
Employee benefits expense	88,449	82,178

Termination benefits were paid out in respect of five employees.

Other expenses

in thousands of New Zealand dollars	2023	2022
Materials and supplies	11,054	8,914
Research collaboration	23,649	22,244
Property occupancy costs	6,224	4,283
Information technology	8,613	11,066
Remuneration of directors	296	234
Foreign currency (gain)/loss	(568)	(833)
Movement within loss allowance provision	(38)	–
Change in the fair value of derivatives	(81)	(562)
Other expenses	21,216	14,804
Total other expenses	70,365	60,150

Auditor's remuneration

in thousands of New Zealand dollars	2023	2022
Auditor's remuneration comprises:		
Audit of the financial statements (Group)	200	168
Audit of the financial statements (Subsidiary)	30	29
Other assurance services	8	–
Total auditor's remuneration	238	197

3. Employee entitlements

Liabilities for wages and salaries, including non-monetary benefits and annual leave, long service leave, retirement leave, and training leave are recognised when it is probable that settlement will be required, and they are capable of being measured reliably. Provisions, in respect of employee benefits, are measured using the remuneration rate expected to apply at settlement. Employee benefits are separated into current and non-current liabilities. Current liabilities are those benefits that are expected to be settled within 12 months from balance date.

Provisions made in respect of employee benefits which are not expected to be settled within 12 months are measured at the present value of the estimated future cash outflows to be made by the Group in respect of services provided by employees up to the reporting date.

in thousands of New Zealand dollars	2023	2022
Remuneration		
Salary accrual	3,958	2,845
Annual leave	7,880	7,545
Training leave	184	200
Long service leave	946	940
Retirement leave	485	478
Total employee entitlements	13,453	12,008
Comprising:		
Current	12,490	11,042
Non-current	963	966

The provisions for long service leave, retirement leave, and training leave are dependent upon several factors that are determined by the expected employment period of employees, current remuneration, and the timing of employees' use of the benefits. Any changes in these assumptions will impact on the carrying amount of the liability. The employment period used to determine the appropriate long service leave liability is based upon historical average length of service. The training leave liability is based upon typical historical usage of the benefit.

4. Property, plant and equipment

Property, plant and equipment is stated at cost less accumulated depreciation to date, less any impairment losses.

Expenditure incurred on property, plant and equipment is capitalised where such expenditure will increase or enhance the future economic benefits provided by an asset's existing service potential. Expenditure incurred to maintain future economic benefits is classified as repairs and maintenance.

The gain or loss arising on the disposal or retirement of an item of property, plant and equipment is determined as the difference between the sale proceeds and the carrying amount of the asset and is recognised in the Statement of Comprehensive Income.

Property, plant and equipment items, except for freehold land and work in progress, are depreciated on a straight-line basis at rates estimated to write off their cost over their estimated useful lives, which are as follows:

Category	Useful life
Buildings and leasehold improvements	5–40 years
Vessels	20–31 years
Plant and equipment	8–10 years
IT equipment	3–8 years
Office equipment	5 years
Furniture and fittings	10 years
Motor vehicles	6 years
Small boats	10 years

Assumptions underlying the estimated useful life of assets include timing of technological obsolescence and future utilisation plans.

Major source of uncertainty

The useful lives of item of property, plant and equipment are key assumptions concerning the future that have a significant risk of resulting in a material adjustment to the carrying amounts of assets and liabilities within the next financial year.

The Group reviews the estimated useful lives of property, plant and equipment items during each annual reporting period.

in thousands of New Zealand dollars	Land	Buildings & leasehold improvements	Vessels	Plant & equipment	IT equipment	Office equipment	Furniture & fittings	Motor vehicles	Small boats	Work in progress	Total
Cost											
Balance at 1 July 2022	15,153	65,781	41,972	118,482	38,967	7,969	2,279	4,517	3,640	48,436	347,196
Additions	3,770	435	(41)	(624)	94	117	10	(26)	(27)	41,130	44,838
Transfers	202	123	64	5,676	1,905	–	198	1,165	259	(9,592)	–
Disposals	–	–	–	(288)	(230)	(72)	(3)	(374)	(90)	–	(1,057)
Foreign currency adjustment	–	–	–	(6)	(3)	–	(1)	–	–	–	(10)
Balance at 30 June 2023	19,125	66,339	41,995	123,240	40,733	8,014	2,483	5,282	3,782	79,974	390,967
Accumulated depreciation and impairment losses											
Balance at 1 July 2022	–	47,625	28,763	92,390	27,031	7,165	1,467	3,998	2,553	–	210,992
Depreciation	–	3,493	1,459	6,457	4,376	303	132	273	182	–	16,675
Disposals	–	–	–	(284)	(226)	(71)	(3)	(375)	(90)	–	(1,049)
Foreign currency adjustment	–	–	–	(3)	(2)	–	–	–	–	–	(5)
Balance as at 30 June 2023	–	51,118	30,222	98,560	31,179	7,397	1,596	3,896	2,645	–	226,613
Net book value at 30 June 2023	19,125	15,221	11,773	24,680	9,554	617	887	1,386	1,137	79,974	164,354

in thousands of New Zealand dollars	Land	Buildings & leasehold improvements	Vessels	Plant & equipment	IT equipment	Office equipment	Furniture & fittings	Motor vehicles	Small boats	Work in progress	Total
Cost											
Balance at 1 July 2021	15,768	63,818	41,813	111,803	36,628	7,840	2,193	4,557	3,635	20,601	308,656
Additions	–	(134)	(641)	3,568	1,657	263	80	119	5	35,165	40,082
Transfers	–	2,344	800	3,101	1,021	–	5	59	–	(7,330)	–
Disposals	(615)	(247)	–	(1)	(342)	(134)	–	(218)	–	–	(1,557)
Foreign currency adjustment	–	–	–	11	3	–	1	–	–	–	15
Balance at 30 June 2022	15,153	65,781	41,972	118,482	38,967	7,969	2,279	4,517	3,640	48,436	347,196
Accumulated depreciation and impairment losses											
Balance at 1 July 2021	–	44,932	27,297	85,820	22,979	6,926	1,347	3,914	2,369	–	195,584
Depreciation	–	2,839	1,466	6,567	4,382	372	119	295	184	–	16,224
Disposals	–	(146)	–	(1)	(338)	(133)	–	(211)	–	–	(829)
Foreign currency adjustment	–	–	–	4	8	–	1	–	–	–	13
Balance as at 30 June 2022	–	47,625	28,763	92,390	27,031	7,165	1,467	3,998	2,553	–	210,992
Net book value at 30 June 2022	15,153	18,156	13,209	26,092	11,936	804	812	519	1,087	48,436	136,204

5. Right-of-use asset and lease liability

Reconciliation of right-of-use asset balance

in thousands of New Zealand dollars	2023	2022
Right-of-use asset net book value opening balance	12,537	8,819
Lease modifications and additions	9,234	5,465
Disposals	(711)	–
Depreciation	(1,839)	(1,754)
Foreign currency adjustment	(5)	7
Right-of-use asset net book value closing balance	19,216	12,537
Represented by:		
Cost	25,509	16,985
Accumulated depreciation	(6,293)	(4,448)
Right-of-use asset net book value closing balance	19,216	12,537

The Group's leases relate to buildings and land. These leases are recognised as a right-of-use asset and a corresponding liability. Each lease payment is allocated between the lease liability and the finance cost. The finance cost is charged to profit or loss over the lease period so as to produce a constant periodic rate of interest on the remaining balance of the liability for each period. The right-of-use asset is depreciated over the shorter of the asset's useful life and the lease term on a straight-line basis.

Assets and liabilities arising from a lease are initially measured on a present-value basis. Lease liabilities include the net present value of fixed payments.

The lease payments are discounted using the interest rate implicit in the lease. If that rate cannot be determined, the Group's incremental borrowing rate is used, being the rate that the Group would have to pay to borrow the funds necessary to obtain an asset of similar value in a similar economic environment, with similar terms and conditions.

Right-of-use assets are measured at cost, comprising the amount of the initial measurement of lease liability. These assets are subsequently depreciated using the straight-line method from the commencement date to the end of the lease term.

Payments associated with short-term leases and leases of low-value assets are recognised on a straight-line basis as an expense in profit or loss. Short-term leases are leases with a lease term of 12 months or less. Low-value assets comprise small storage spaces.

Reconciliation of lease liabilities

in thousands of New Zealand dollars	2023	2022
Net present value of future lease liability opening balance	14,412	11,022
Additions and modifications	9,234	5,465
Disposals	(711)	–
Interest for the year*	561	502
Lease payments made	(2,769)	(2,584)
FX impact	(6)	7
Net present value of future lease liability closing balance	20,721	14,412
Current lease liability	1,890	2,162
Non-current lease liability	18,831	12,250
Total lease liabilities closing balance	20,721	14,412

* The total finance expense of \$568k shown in the statement of comprehensive income for 2023 comprises the lease interest of \$561k shown in the table above, together with other minor interest payments of \$(7)k.

Lease liabilities maturity analysis

in thousands of New Zealand dollars	Minimum lease payments	Interest	Present value
Within one year	2,982	(1,092)	1,890
One to five years	8,463	(3,656)	4,807
Beyond five years	27,492	(13,468)	14,024
Lease liabilities at 30 June 2023	38,937	(18,216)	20,721

in thousands of New Zealand dollars	Minimum lease payments	Interest	Present value
Within one year	2,621	(459)	2,162
One to five years	8,189	(1,066)	7,123
Beyond five years	16,118	(10,991)	5,127
Lease liabilities at 30 June 2022	26,928	(12,516)	14,412

Lease-related expenses included in the statement of comprehensive income

in thousands of New Zealand dollars	2023	2022
Depreciation	1,839	1,754
Short-term and low-value leases	353	298
Interest on leases	561	502
Total	2,753	2,554

6. Heritage assets

NIWA has one collection and three databases that have been defined as heritage assets. Heritage collection assets are those assets held for the duration of their physical lives because of their unique scientific importance, and heritage databases are maintained as an incidental part of existing business operations.

NIWA has the following heritage assets:

Type	Description
Marine Benthic Biology Collection	A national reference collection of marine invertebrates.
National Climate Database	A national electronic database of high-quality climate information, including temperatures, rainfall, wind and other climate elements.
Water Resources Archive Database	A national electronic database of river and lake locations throughout New Zealand, including levels, quality and flows.
New Zealand Freshwater Fish Database	A national electronic database of the occurrence of fish in the fresh waters of New Zealand, including major offshore islands.

The nature of these heritage assets, and their significance to the science NIWA undertakes, makes it necessary to disclose them. In the directors' view, the cost of these heritage assets cannot be assessed with any reliability, and accordingly these assets have not been recognised for financial reporting purposes.

7. Identifiable intangibles

Purchased identifiable intangible assets, comprising copyrights and software, are recorded at cost less amortisation and impairment. Amortisation is charged on a straight-line basis over the assets' estimated useful lives. The estimated useful life and amortisation method are reviewed each balance date.

Category	Useful life
Copyrights	5 years
Development costs	5 years
Software	3 years

Intangible assets which arise from development costs that meet the recognition criteria are recognised as an asset in the statement of financial position.

Capitalisation is limited to the amount which, taken together with any further related costs, is likely to be recovered from future economic benefits. Any excess is recognised as an expense.

All other development and research costs are expensed as incurred.

Subsequent to initial recognition, internally generated intangible assets are reported at cost, less accumulated amortisation and accumulated impairment losses, on the same basis as purchased identifiable intangible assets.

in thousands of New Zealand dollars	Software	Copyrights	Development costs	Work in progress	Total
Cost					
Balance as at 1 July 2022	12,078	215	377	65	12,735
Additions	79	–	6	347	432
Disposals	(462)	–	–	–	(462)
Transfers	348	–	–	(348)	–
Foreign Currency Adjustment	(5)	–	(6)	(1)	(12)
Balance as at 30 June 2023	12,038	215	377	63	12,693
Accumulated amortisation and impairment losses					
Balance as at 1 July 2022	10,598	215	178	–	10,991
Amortisation	955	–	41	–	996
Disposals	(464)	–	–	–	(464)
Foreign Currency Adjustment	–	–	4	–	4
Balance as at 30 June 2023	11,089	215	223	–	11,527
Net book value at 30 June 2023	949	–	154	63	1,166

in thousands of New Zealand dollars	Software	Copyrights	Development costs	Work in progress	Total
Cost					
Balance as at 1 July 2021	11,302	215	374	114	12,005
Additions	593	–	8	134	735
Disposals	–	–	–	–	–
Transfers	183	–	–	(183)	–
Foreign Currency Adjustment	–	–	(5)	–	(5)
Balance as at 30 June 2022	12,078	215	377	65	12,735
Accumulated amortisation and impairment losses					
Balance as at 1 July 2021	9,813	215	140	–	10,168
Amortisation	785	–	43	–	828
Disposals	–	–	–	–	–
Foreign Currency Adjustment	–	–	(5)	–	(5)
Balance as at 30 June 2022	10,598	215	178	–	10,991
Net book value at 30 June 2022	1,480	–	199	65	1,744

8. Assets held for sale

Assets held for sale are stated at the lower of their carrying amount and fair value less costs to sell.

No assets were reclassified as held for sale in 2023 (2022: \$245k). The site at Mahanga Bay was sold in February 2023.

in thousands of New Zealand dollars	2023	2022
Land	–	245
Total	–	245

9. Receivables

Receivables are stated at amortised cost using the effective interest rate, less an allowance for expected losses.

A loss allowance provision is established when the assessment under NZ IFRS 9 deems a provision is required. Changes in the carrying amount of the provision are recognised in the Statement of Comprehensive Income. Debts which are known to be uncollectable are written off against the provision, once approved by the Board of Directors.

in thousands of New Zealand dollars	2023	2022
Trade receivables	16,747	17,048
Sundry receivables	1	59
Loss allowance provision	–	–
Total	16,748	17,107
Classified as:		
Non-current	–	–
Current	16,748	17,107
Total	16,748	17,107

Included in the Group's trade receivables balance at the end of the year is one Crown debtor's balance which equates to 32% of the Group's total receivables balance (2022: 32%). 98% of that debtor's balance is less than 60 days over-due and is deemed to be low credit risk (2022: 94%).

The Group considers that a large proportion of its customers have a low credit risk associated with them. Before providing any service or goods to a new customer on credit terms, a check is undertaken when deemed appropriate to verify the credit-worthiness of the customer.

The Group reserves the right to charge interest at a rate of 2% per month, calculated daily, on all invoices remaining unpaid at the due date.

Included in the Group's trade receivable balance are debtors with a carrying amount of \$378k (2022: \$935k) which are more than 60 days past due at the reporting date. The Group has not created a provision for this balance because the amounts are still considered recoverable. The Group does not hold any collateral over past due or impaired balances.

The Group has applied the simplified approach to providing for expected credit losses, which requires the recognition of a lifetime expected loss provision for trade receivables. To measure the expected credit losses, trade receivables have been grouped based on days past due. The expected loss rates are based on the payment profiles of customers on a lifetime basis and the corresponding historical credit losses over a period of five years, adjusted for any significant known amounts that are not receivable. The total expected credit loss allowance provision has been determined as nil (2022: nil) for the Group.

in thousands of New Zealand dollars	Expected Loss Rate	Gross Carrying Amount	Loss Allowance Provision
As at 30 June 2023			
Current	0.0%	14,586	–
Past due 1 – 30 days	0.0%	1,240	–
Past due 31 – 60 days	0.0%	544	–
Past due 61 – 90 days	0.0%	169	–
Past due >90 days	0.0%	209	–
Total		16,748	–

10. Inventory

Inventory is stated at the lower of cost and net realisable value. The basis on which cost is calculated is first in, first out (FIFO) for consumables, finished goods and work in progress; and weighted average for raw materials.

in thousands of New Zealand dollars	2023	2022
Consumables	835	1,138
Raw materials	859	145
Finished goods	4,193	2,960
Total	5,887	4,243

11. Income tax

The income tax expense for the year is the tax payable on the current year's taxable income, based on the income tax rate for each jurisdiction. This is then adjusted by changes in deferred tax assets and liabilities attributable to temporary differences between the tax bases of assets and liabilities and their carrying amounts in the financial statements, and changes in unused tax losses.

The income tax expense is determined as follows:

in thousands of New Zealand dollars	2023	2022
Income tax expense		
Current tax	2,145	3,791
Deferred tax relating to temporary differences	(319)	(1,303)
Income tax expense	1,826	2,488

Reconciliation of income tax expense

in thousands of New Zealand dollars	2023	2022
Profit before income tax	7,764	8,958
Tax at current rate of 28%	2,174	2,508
Adjustments to taxation:		
Other non-deductible expenses	5	23
Australian-based subsidiary subject to foreign tax (Over)/under provision in previous year	21	5
	(374)	(48)
Income tax expense	1,826	2,488

12. Deferred tax liability and assets

Deferred tax is accounted for using the balance sheet liability method in respect of temporary differences arising from the carrying amount of assets and liabilities in the financial statements and the corresponding tax base of those items. Deferred tax liabilities are generally recognised for all taxable temporary differences. Deferred tax assets are generally recognised for all deductible temporary differences to the extent that it is probable that sufficient taxable amount will be available against which those deductible temporary differences can be utilised.

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply to the period when the asset and liability giving rise to them are realised or settled, based on the tax laws that have been enacted or substantively enacted at balance date.

Current and deferred tax is recognised in profit or loss, except when it relates to items recognised in other comprehensive income or directly in equity, in which case the deferred or current tax is also recognised in other comprehensive income or directly in equity, or where it arises from the initial accounting for a business combination.

in thousands of New Zealand dollars	Opening balance	Credited/ (charged) to profit or loss	Closing balance
As at 30 June 2023			
Temporary differences			
Property, plant and equipment	(2,014)	1,334	(680)
Library books	–	–	–
Uninvoiced receivables	(1,593)	(1,103)	(2,696)
Employee benefits	2,341	(32)	2,309
Unrealised forex gains/losses on creditors/debtors	(185)	221	36
Doubtful debts	–	–	–
Leases	516	(101)	415
R&D Tax credit (Australian-based subsidiary)	–	–	–
Total	(935)	319	(616)

in thousands of New Zealand dollars	Opening balance	Credited/ (charged) to profit or loss	Closing balance
As at 30 June 2022			
Temporary differences			
Property, plant, and equipment	(3,135)	1,121	(2,014)
Library books	1	(1)	–
Uninvoiced receivables	(1,852)	259	(1,593)
Employee benefits	2,166	175	2,341
Unrealised forex gains/losses on creditors/debtors	(27)	(158)	(185)
Doubtful debts	–	–	–
Leases	609	(93)	516
R&D Tax credit (Australian-based subsidiary)	–	–	–
Total	(2,238)	1,303	(935)

In accordance with the Income Tax Act 2007 the Group is not required to establish or maintain an imputation credit account by virtue of its classification as a Crown Research Institute.

13. Cash and cash flows

13a Cash and cash equivalents and other short-term investments

Cash and cash equivalents includes cash on hand, deposits held at call with financial institutions, and other short-term, highly liquid investments with original maturities of three months or less that are readily convertible to known amounts of cash and which are subject to an insignificant risk of changes in value.

Other short-term investments consists of deposits with financial institutions with maturities over three months which are presented as a separate line item in the statement of financial position.

13b Reconciliation of the profit for the year to net cash from operating activities

in thousands of New Zealand dollars	2023	2022
Profit for the year	5,938	6,470
Add/(less) non-cash items		
Net (gain)/loss on disposal of property, plant and equipment	(347)	(966)
Depreciation and impairment	18,514	17,978
Amortisation of identifiable intangibles	996	828
Net foreign currency (gain)	(47)	(12)
Increase/(decrease) in deferred tax	(319)	(1,303)
	18,797	16,525
Add/(less) movements in working capital		
Increase/(decrease) in payables and accruals and revenue in advance	(4,370)	9,764
Increase/(decrease) in employee entitlements	1,445	1,195
Decrease/(increase) in receivables and prepayments	653	842
Decrease/(increase) in inventory and uninvoiced receivables	(5,585)	(827)
Increase/(decrease) in taxation payable and receivable	(401)	(3,239)
Increase/(decrease) in forward exchange derivatives	(80)	(563)
	(8,338)	7,172
Net cash flows from operating activities	16,397	30,167

14. Subsidiaries

The Group financial statements incorporate the financial statements of the Company and entities (including special purpose entities) controlled by the Company. Control is achieved where the Company has the power (including the ability to use the power) to govern the financial and operating policies of an entity so as to obtain benefits from its activities.

All intra-group transactions, balances, income, and expenses are eliminated in full on consolidation.

The subsidiaries of the Group and their activities are listed below:

Name	Country	Principal activities	Ownership
NIWA Vessel Management Ltd	New Zealand	Vessel charters for scientific research	100%
Unidata Pty Ltd	Australia	Supplier of environmental technology products	80%
NIWA Aquaculture Solutions Ltd	New Zealand	Commercial-scale production of high value finfish	100%

All subsidiaries have a balance date of 30 June.

No stake in any subsidiary was acquired or disposed of during the year.

15. Related party transactions

The Government of New Zealand (the Crown) is the ultimate shareholder of the NIWA Group. No transactions with other New Zealand Government-owned entities are considered related party transactions in terms of NZ IAS 24. No related party debts have been written off or forgiven during the year. Any business the NIWA Group has transacted in which a director or an employee has an interest has been carried out on a commercial basis. Any potential conflict is recorded in the minutes of Board meetings for directors and a separate interest register for employees. The interests register

containing all relevant interests is updated on a regular and timely basis.

Key management personnel compensation

in thousands of New Zealand dollars	2023	2022
Short-term benefits	3,830	3,484

The table above includes the remuneration of the Chief Executive, Executive Team and the Board of Directors.

16. Financial Instruments and Risk Management

The classification of financial assets and liabilities depends on the purpose for which the financial assets and liabilities were incurred. Management determines the classification of the Group's financial assets and liabilities at initial recognition.

Financial assets

Classification

The Group classifies its financial assets in the following measurement categories: those to be measured at amortised costs, and those to be measured subsequently at fair value (either through other comprehensive income, or through profit or loss). The classification depends on the Group's business model for managing the financial assets and the contractual terms of the cash flow.

For assets measured at fair value, gains and losses will be recorded in either profit or loss, or other comprehensive income. For investments in debt instruments, this will depend on the business model in which the investment is held. For investments in equity instruments, this will depend on whether the Group has made an irrevocable election at the time of initial recognition to account for the equity investment at fair value through other comprehensive income.

The Group reclassifies debt investments when, and only when, its business model for managing those assets changes.

Measurement

At initial recognition, the Group measures a financial asset at its fair value plus, in the case of a financial asset not at fair value through profit or loss (FVPL), transaction costs that are directly attributable to the acquisition of the financial asset. Transaction costs of financial assets carried at FVPL are expensed in profit or loss.

Financial assets and liabilities at fair value through profit or loss – Derivative financial instruments

This category has two sub-categories: financial assets held for trading, and those designated at fair value through profit or loss at inception. A financial asset is classified in this category if acquired principally for the purpose of selling in the short term, or if so designated by management.

Derivatives are also categorised as held for trading, unless they are designated as hedges. Assets in this category are classified as current assets if they are either held for trading or are expected to be realised within 12 months of the balance sheet date. After initial recognition, they are measured at their fair values. Gains or losses on re-measurement are recognised in the Statement of Comprehensive Income.

Financial Assets at Amortised Cost

The Group classifies its financial assets at amortised cost only if both of the following criteria are met:

- The asset is held to collect the contractual cash flows, and
- The contractual terms give rise to cash flows that are solely payments of principal and interest.

Impairment of financial assets

The Group assesses, on a forward-looking basis, the expected credit losses associated with its assets carried at amortised cost and fair value through other comprehensive income. The impairment methodology applied depends on whether there has been a significant increase in credit risk. Note 9 details how the Group determines whether there has been a significant increase in credit risk.

For trade receivables only, the Group applies the simplified approach permitted by NZ IFRS 9, which requires expected lifetime losses to be recognised from initial recognition of the receivables.

Capital management

The Group has the following requirements imposed upon it under the Crown Research Institutes Act 1992:

- to operate in a financially responsible manner so that sufficient operating funds are generated to maintain financial viability;
- to provide an adequate rate of return on shareholders' funds; and
- to operate as a going concern.

The Group's policy is to maintain a strong capital base to maintain shareholder and creditor confidence and to sustain future development of the business.

The Group's policies in respect of capital management and allocation are reviewed regularly by the Board of Directors.

The advance facility available from ANZ Bank (refer note 16 subsection financing facilities) is subject to two covenants:

1. That the value of the Group's net tangible assets is greater than \$50 million; and
2. That ANZ reserves the right to review the facility in the event of a change in the shareholding structure.

The Group was compliant with these covenants throughout the year.

Capital refers to the equity and borrowings of the Group.

There have been no material changes in the Group's management of capital during the year.

Fair value of financial instruments

The carrying value of all financial instruments is considered to approximate fair value.

All the Group's financial instruments are classified as being within level 2 of the fair value hierarchy as defined by NZ IFRS 13 Fair Value Measurement (2022: the same). Their fair value is determined with reference to quoted rates for identical instruments on active markets.

Credit risk

Credit risk is the risk that a third party will default on its obligations to NIWA and the Group, causing a loss.

In the normal course of business, the Group incurs credit risk from trade receivables, uninvoyed receivables, and transactions with financial institutions (cash and short-term deposits and derivatives).

The Group has a credit policy that is used to manage this risk. As part of this policy, limits are placed on the amounts of credit extended to third parties, and care is taken to ensure the credit-worthiness of third parties dealt with. All credit risk exposures are monitored regularly.

The Group does not require any collateral or security to support financial instruments, because of the quality of financial institutions and counterparties it deals with. There are no significant concentrations of credit risk, other than with the New Zealand Government, which the Group does not consider represents a material credit risk.

The exposure to the Group to credit risk as at 30 June 2023 was \$35,386k (total exposure to credit risk, comprising cash and cash equivalents \$9,009k, uninvoyed receivables \$9,629k, and receivables net of provisions \$16,748k) (2022: \$74,816k).

Further analysis on the receivables balance can be found in note 9.

The Group has not renegotiated the terms of any financial assets which would result in the carrying amount no longer being past due or avoid a possible past due status.

The Group's maximum exposure to credit risk by geographic region is as follows:

in thousands of New Zealand dollars	2023	2022
New Zealand	32,093	72,198
Australia	2,473	1,536
USA	190	370
Other Asia Pacific countries	589	452
Other regions	41	260
Provision for doubtful debts	–	–
Total credit risk	35,386	74,816

Interest rate risk

Interest rate risk is the risk that cashflows will fluctuate because of changes in market interest rates. This could particularly affect the return on investments.

The interest rates on the Group investments as at 30 June:

	2023	2022
Cash (on call)	2.70–2.90%	0.10–2.00%
Other short-term investments	N/A	0.05–3.70%

The directors do not consider there is any significant exposure to interest rate risk.

Currency risk

The Group undertakes transactions in foreign currencies from time to time, and, resulting from these activities, exposures in foreign currency arise. It is the Group's policy to hedge foreign currency trading transaction risks economically as they arise. To manage these exposures, the Group may use financial instruments such as forward foreign exchange contracts.

The Group's exposure to foreign currency denominated non-derivative financial instruments was as follows, based on notional amounts:

in thousands of New Zealand dollars	AUD	EUR	USD	FJD	GBP	CAD	SGD
30 June 2023							
Cash balances	1,931	59	68	4	205	2	14
Trade receivables	171	–	432	–	–	–	38
Trade payables	(230)	(46)	(95)	–	(98)	–	–
Statement of financial position exposure	1,872	13	405	4	107	2	52

in thousands of New Zealand dollars	AUD	EUR	USD	FJD	GBP	CAD	SGD
30 June 2022							
Cash balances	1,138	75	174	4	29	2	2
Trade receivables	390	–	155	–	117	–	36
Trade payables	(229)	(33)	(38)	–	(4)	–	–
Statement of financial position exposure	1,299	42	291	4	142	2	38

NIWA has a regularly reviewed treasury management policy in place which ensures the appropriate management of currency risk.

Liquidity risks

Liquidity risk represents the Group's ability to meet its contractual obligations. The Group evaluates its liquidity requirements on an ongoing basis. In general, the Group generates sufficient cash flows from its operating activities to meet its obligations arising from its financial liabilities and has credit lines in place to cover potential shortfalls.

Payables and accruals of \$10.13 million (2022: \$13.083 million) have a contractual maturity of less than one year. This is based upon the earliest date on which the Group can be required to pay.

Financing facilities

The Group has access to financing facilities made available by ANZ Bank with a total value of \$20.5 million (2022: \$10.5 million). This was undrawn at 30 June 2023 (2022: also undrawn). The total facility of \$20.5 million relates to an overdraft facility of \$0.5 million (on-call) and an overnight placement and short term advance facility of \$20 million.

17. Capital commitments

in thousands of New Zealand dollars	2023	2022
Commitments for future capital expenditure		
Contracted, but not provided for	22,204	46,759

The majority of the 2023 balance relates to contracts that have been awarded for the replacement of the RV *Kaharoa*.

18. Subsequent events

On 26 July 2023 the State Owned Enterprises Minister, Duncan Webb, announced that the Government has commissioned a review of New Zealand's weather forecasting system. The Group's role in the system is intended to be in the scope of this review. The review will commence in September 2023 and the review's final report is anticipated to be with the Government in February 2024. It is currently not known what implications may arise, if any, for the Group as a result of the review and the Government's response.

PREPARATION DISCLOSURES

Reporting entity

National Institute of Water and Atmospheric Research Limited ('NIWA' or 'the Company') and its subsidiaries form the consolidated Group ('the NIWA Group' or 'the Group'). NIWA is a profit-oriented company registered in New Zealand under the Companies Act 1993.

The financial statements for the NIWA Group are presented in accordance with the requirements of the Crown Research Institutes Act 1992, the Crown Entities Act 2004, the Public Finance Act 1989, the Companies Act 1993, and the Financial Reporting Act 2013.

Nature of activities

The NIWA Group conducts research and commercial science in water and atmospheric sciences in New Zealand and internationally.

Basis of preparation

The measurement basis adopted in the preparation of these financial statements is historical cost, except for financial instruments as identified in specific accounting policies above.

The presentation currency of the Group and functional currency used in the preparation of these financial statements is New Zealand dollars.

All amounts disclosed in the financial statements and notes have been rounded to the nearest thousand New Zealand dollars unless otherwise stated.

Accounting policies are selected and applied in a manner that ensures that the resulting financial information meets the concepts of relevance and reliability, ensuring that the substance of the underlying transaction or event is reported.

The accounting policies have been applied in preparing the financial statements for the year ended 30 June 2023 and the comparative information for the year ended 30 June 2022.

The 2023 Statement of Corporate Intent (SCI) Budget that is used for comparative information is not audited.

Statement of compliance

The financial statements have been prepared in accordance with New Zealand generally accepted accounting practice (NZ GAAP). They comply with New Zealand Equivalents to International Financial Reporting Standards (NZ IFRS) and other applicable financial reporting standards appropriate for profit-oriented entities.

The financial statements comply with International Financial Reporting Standards (IFRS).

Goods and services tax (GST)

The financial statements are prepared on a GST-exclusive basis, except for receivables and payables, which are stated GST-inclusive.

Foreign currencies

Transactions

Transactions in foreign currencies are converted to the functional currency of the Group, being New Zealand dollars, by applying the spot exchange rate between the functional currency and the foreign currency at the date of the transaction. At the end of each year, monetary assets and liabilities are translated to New Zealand dollars using the closing rate of exchange at balance date, and any exchange gains or losses are recognised in the statement of comprehensive income.

Translation of foreign operations

On consolidation, revenues and expenses of foreign operations are translated to New Zealand dollars at the average exchange rates for the year. Assets and liabilities are converted to New Zealand dollars at the rates of exchange ruling at balance date. Exchange rate differences arising from the translation of the foreign operations are recognised in other comprehensive income and accumulated as a separate component of equity in the Group's foreign currency translation reserve. Such exchange differences are reclassified from equity to profit or loss (as a reclassification adjustment) when the foreign operation is disposed of.

Adoption of new and revised standards

There are no standards that are not yet effective and that would be expected to have a material impact on the Group.

AUDITOR'S REPORT



Independent Auditor's Report

To the readers of National Institute of Water and Atmospheric Research Limited's Group Financial Statements for the year ended 30 June 2023.

The Auditor-General is the auditor of National Institute of Water and Atmospheric Research Limited Group (the Group). The Auditor-General has appointed me, Troy Florence, using the staff and resources of PricewaterhouseCoopers, to carry out the audit of the financial statements of the Group on his behalf.

Opinion

We have audited the financial statements of the Group on pages 18 to 31 that comprise the statement of financial position as at 30 June 2023, the statement of comprehensive income, statement of changes in equity and cash flow statement for the year ended on that date and the notes to the financial statements that include accounting policies and other explanatory information.

In our opinion, the financial statements of the Group:

- present fairly, in all material respects:
 - its financial position as at 30 June 2023; and
 - its financial performance and cash flows for the year then ended; and
- comply with generally accepted accounting practice in New Zealand in accordance with New Zealand Equivalents to International Financial Reporting Standards (NZ IFRS) and International Financial Reporting Standards (IFRS).

Our audit was completed on 30 August 2023. This is the date at which our opinion is expressed.

The basis for our opinion is explained below. In addition, we outline the responsibilities of the Board of Directors and our responsibilities relating to the financial statements, we comment on other information, and we explain our independence.

Basis for our opinion

We carried out our audit in accordance with the Auditor-General's Auditing Standards, which incorporate the Professional and Ethical Standards and the International Standards on Auditing (New Zealand) issued by the New Zealand Auditing and Assurance Standards Board. Our responsibilities under those standards are further described in the Responsibilities of the auditor section of our report.

We have fulfilled our responsibilities in accordance with the Auditor-General's Auditing Standards.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Responsibilities of the Board of Directors for the financial statements

The Board of Directors is responsible on behalf of the Group for preparing financial statements that are fairly presented and that comply with generally accepted accounting practice in New Zealand.

The Board of Directors is responsible for such internal control as it determines is necessary to enable it to prepare financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, the Board of Directors is responsible on behalf of the Group for assessing the Group's ability to continue as a going concern. The Board of Directors is also responsible for disclosing, as applicable, matters related to going concern and using the going concern basis of accounting, unless the Board of Directors has to cease operations, or has no realistic alternative but to do so.

The Board of Directors' responsibilities arise from the Crown Research Institutes Act 1992.

Responsibilities of the auditor for the audit of the financial statements

Our objectives are to obtain reasonable assurance about whether the financial statements, as a whole, are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion.

Reasonable assurance is a high level of assurance, but it is not a guarantee that an audit carried out in accordance with the Auditor-General's Auditing Standards will always detect a material misstatement when it exists. Misstatements are differences or omissions of amounts or disclosures and can arise from fraud or error. Misstatements are considered material if, individually or in the aggregate, they could reasonably be expected to influence the decisions of readers taken on the basis of these financial statements.

For the budget information reported in the financial statements, our procedures were limited to checking that the information agreed to the Group's statement of corporate intent.

We did not evaluate the security and controls over the electronic publication of the financial statements.

As part of an audit in accordance with the Auditor-General's Auditing Standards, we exercise professional judgement and maintain professional scepticism throughout the audit. Also:

- We identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- We obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances but not for the purpose of expressing an opinion on the effectiveness of the Group's internal control.
- We evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the Board of Directors.
- We conclude on the appropriateness of the use of the going concern basis of accounting by the Board of Directors and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to continue as a going concern.
- We evaluate the overall presentation, structure and content of the financial statements, including the disclosures and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- We obtain sufficient appropriate audit evidence regarding the financial statements of the entities or business activities within the Group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the Group audit. We remain solely responsible for our audit opinion.

We communicate with the Board of Directors regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

Our responsibilities arise from the Public Audit Act 2001.

Other Information

The Board of Directors is responsible for the other information. The other information obtained at the date of our report is the Financial Summary and Group actual performance versus Statement of Corporate Intent on pages 13 to 16, and the Corporate governance and disclosures, Statement of responsibility and Directory on pages 33 to 36, but does not include the financial statements, and our auditor's report thereon.

Our opinion on the financial statements does not cover the other information and we do not express any form of audit opinion or assurance conclusion thereon.

In connection with our audit of the financial statements, our responsibility is to read the other information. In doing so, we consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit, or otherwise appears to be materially misstated. If, based on our work, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

Independence

We are independent of the Group in accordance with the independence requirements of the Auditor-General's Auditing Standards, which incorporate the independence requirements of *Professional and Ethical Standard 1: International Code of Ethics for Assurance Practitioners (including International Independence Standards) (New Zealand)* (PES 1) issued by the New Zealand Auditing and Assurance Standards Board.

In addition to the audit we carried out an engagement in the area of agreed-upon procedures regarding payments received in accordance with a research agreement, which is compatible with those independence requirements. Other than the audit and this engagement, we have no relationship with or interests in the Company or any of its subsidiaries.

Troy Florence
PricewaterhouseCoopers

On behalf of the Auditor-General
Auckland, New Zealand
30 August 2023

CORPORATE GOVERNANCE AND DISCLOSURES

Board and committee meeting attendance

The table below shows director attendance at these Board meetings and committee member attendance at committee meetings. In addition, any director may attend any committee meeting.

Director	Board meetings	ALCR Committee*	People & Culture Committee*	Future Property Programme Governance Committee*
Barry Harris (Chairman)	9	1**	3**	–
Nicholas Main (Deputy Chairman until 31 May 2023)	9	4	–	2
Dr Tracey Batten	9	–	4	2
Janice Fredric	9	4	–	–
Margaret Hyland	9	4	–	–
Mary-Anne MacLeod	9	–	4	–
Dean Moana	9	–	3	2
Livia Esterhazy (from 1 June 2023)	–	–	–	–
Total meetings held	9	4	4	2

* Only attendances by Committee members and Chairman are recorded.

**Barry Harris attends Committee meetings in an *ex officio* capacity.

Directors' remuneration

The total remuneration received or receivable by directors of NIWA during the year was:

in thousands of New Zealand dollars	2023	2022
Barry Harris (Chairperson)	72	72
Nicholas Main (Deputy Chairperson until 31 May 2023)	41	45
Dr Tracey Batten	36	36
Janice Fredric	36	15
Margaret Hyland	36	15
Mary-Anne Macleod	36	36
Dean Moana	36	15
Livia Esterhazy (from 1 June 2023)	3	–

Subsidiary company directors

The following people held office as directors of NIWA's subsidiary companies at 30 June 2023:

Subsidiary Company	Directors
NIWA Vessel Management Ltd	B Harris, N Main, T Batten, J Fredric, M Hyland, M-A Macleod, D Moana, L Esterhazy
Unidata Pty Ltd	W Johnston ¹ , C Pearson ¹ , D Saunders ²
NIWA Aquaculture Solutions Ltd	J Morgan ¹ , P Baker ¹

1. Employee of the Group's parent company
2. Appointed by the minority ownership interest in Unidata Pty Ltd

No fees were paid in respect of membership of subsidiary boards.

Insurance for directors and employees

The NIWA Group has arranged insurance policies for directors and employees which, with a deed of indemnity, ensure that they will generally incur no monetary loss as a result of lawful actions undertaken by them as directors or employees. These include, among others, directors and officers and professional indemnity policies. Certain risks are specifically excluded from the cover provided, including the imposition of penalties and fines in respect of breaches of the law.

Auditors

In accordance with Section 21(1) of the Crown Research Institutes Act 1992, the Group's auditor is the Auditor-General. The Auditor-General has appointed Troy Florence of PricewaterhouseCoopers to conduct the audit on his behalf. The audit remuneration and fees paid for other services are detailed in note 2.

Interests register

The following are transaction types recorded in the interests register for the year.

Interested transactions

Any business the NIWA Group has transacted in which a director has an interest has been carried out on a commercial basis. Any potential conflict is recorded in the minutes of Board meetings. A register containing all relevant interests is updated on a monthly basis.

Directors' remuneration

Details of the directors' remuneration are provided in the 'Directors' remuneration' section above.

Use of company information by directors

Pursuant to section 145 of the Companies Act 1993 there were no recorded notices from directors requesting to use company information received in their capacity as directors that would not otherwise have been available to them.

Share dealings

During the year no director purchased, disposed of, or had recorded dealings of any equity securities of the NIWA Group.

Directors' loans

No loans by the NIWA Group to any director were made or were outstanding during the year.

Disclosure of directors' interests

Directors disclosed, under section 140(2) of the New Zealand Companies Act 1993, the following interests as at 30 June 2023:

Director and company	Position
Barry Harris	
McFall Fuel Ltd	Chair
Rural Fuels Ltd	Chair
OSPRI New Zealand Limited	Chair
TB Free Ltd	Chair
National Animal Identification and Tracing (NAIT) Ltd	Chair
New Zealand Food Innovation (Waikato) Ltd	Chair
Waikato Regional Airport Ltd	Chair
WEL Networks Ltd	Chair
Melody Dairies	Director (appointed 1 July 2022)
Tracey Batten	
EBOS Group Ltd	Director
Medibank Private Limited (Australia)	Director
Accident Compensation Corporation	Director
Mary-Anne Macleod	
University of Waikato	University Council
AgResearch	Director
Araneacattus Family Trust	Trustee
MacMacleod Limited	Director/Shareholder
DairyNZ Limited	Director
Environmental Protection Authority	Director
Ministry for the Environment	Strategic Advice
Various Regional Councils	Occasional Consultancy
Fire and Emergency New Zealand	Director
Janice Fredric	
Mainpower Ltd	Director
Green Power New Zealand Ltd	Director (until May 2023)
Mt Cass Wind Farm Ltd	Director (until May 2023)
Lincoln University	Council Member
Unity Credit Union	Director (until 28 October 2022)
Civil Aviation Authority	Chair
Aviation Security Service	Chair
NZ Shipwreck Welfare Trust	Trustee
Tregynon Charitable Trust	Trustee
Timaru District Council – Audit & Risk Committee	Independent Member
Aurora Energy	Director (appointed July 2022)
Dean Moana	
Whangaokena ki Onepoto Takutai Trust	Trustee
NZ Food & Beverage Group Ltd	Director & Shareholder
Te Runanganui o Ngati Porou	Director & Shareholder
The NZ Institute for Plant & Food Research Ltd	Director
Ngati Porou Holding Company	Director
Tohetaka Ltd	Director/Chair
Ngati Porou Manuka Ltd	Director
Ngati Porou Seafoods Ltd, NP Fisheries Ltd, Real Fresh Ltd	Director

ICP General Partner Ltd	Director
Port Nicholson GP Ltd, Koura Inc GP Ltd	Director
Koura Inc GP Ltd	Director
Ahi Mokopuna GP Ltd	Director
Akaroa Salmon NZ Ltd	Director
AsureQuality Ltd	Director
BV-AQ (Singapore) Holdings Pte Ltd	Director
Margaret Hyland	
Scion Science Advisory Board	Advisor (appointed May 2023)
Cirrus Materials Science	Director
Te Herenga Waka-University of Wellington	Vice-Provost (Research) Chair
Research Trust of Victoria University of Wellington	Deputy Chair
Wellington UniVentures	Trustee
Karori Sanctuary Trust (trading as Zealandia Te Māra a Tāne)	
Livia Esterhazy	
GNS	Director (appointed June 2023)
HortNZ – A Lighter Touch	Programme Director (appointed October 2022)
The Thrive Collective	Director (appointed July 2022)

Employees' remuneration

The number of employees (not including directors) whose remuneration exceeded \$100,000 during the year, stated in brackets of \$10,000, was:

	2023
100,000 – 109,999	71
100,000 - 119,999	65
120,000 - 129,999	60
130,000 - 139,999	54
140,000 - 149,999	34
150,000 - 159,999	29
160,000 - 169,999	12
170,000 - 179,999	11
180,000 - 189,999	9
190,000 - 199,999	7
\$200,000 - \$209,999	14
\$210,000 - \$219,999	5
\$220,000 - \$229,999	5
\$230,000 - \$239,999	2
\$250,000 - \$259,999	1
\$270,000 - \$279,999	2
\$320,000 - \$329,999	1
\$340,000 - \$349,999	1
\$360,000 - \$369,999	2
\$390,000 - \$399,999	1
\$700,000 - \$700,999	1

The remuneration reflected in the above table comprises base salary only. This excludes payments in respect of superannuation or in respect of the cessation of employment of employees.

In 2023, the Group made payments of \$179k for compensation or other benefits in respect of the cessation of employment of employees (2022: \$191k).

Executive Remuneration

Remuneration Components

The Group's Executive Team (ET), including the Chief Executive, receive fixed remuneration only. This consists of base salary and benefits, including KiwiSaver and insurance.

Chief Executive's remuneration

The Chief Executive's remuneration package that applied for 2023, together with the comparative information for the prior year, is as follows:

in New Zealand dollars	2023	2022
Base salary	681,081	658,714
Benefits*	63,083	56,692
Total Remuneration	744,164	715,406

* Benefits include KiwiSaver, insurance and vehicle fuel expenses.

The Chief Executive is a member of KiwiSaver. As a member of this scheme, all Group staff, including the Chief Executive, are eligible to contribute and receive a matching company contribution up to a maximum of 5% of gross taxable earnings. In 2023, the Group's contribution was \$35,194 (2022: \$32,936).

A summary of the Chief Executive's total remuneration during the past five years is as follows:

	Total remuneration
2023	744,164
2022	715,406
2021	718,670
2020	714,996
2019	706,512

Executive Team remuneration

In addition to the Chief Executive, NIWA's Executive Team consists of eight members. The remuneration package for all Executive Team members combined (excluding the Chief Executive) that applied for 2023, together with the comparative information for the prior year, is as follows:

in New Zealand dollars	2023	2022
Base salary	2,563,112	2,347,497
Benefits*	203,305	186,475
Total Remuneration	2,766,417	2,533,972

* Benefits include employer contributions to superannuation schemes (KiwiSaver or legacy government superannuation schemes, as applicable), insurance and wellness allowances.

Donations

Donations of \$2,000 were made during the year (2022: \$1,000).

STATEMENT OF RESPONSIBILITY

The following statement is made in accordance with section 155 of the Crown Entities Act 2004.

1. The Board of the Company is responsible for the preparation of these financial statements and the judgements used therein.
2. The Board of the Company is responsible for establishing and maintaining a system of internal controls designed to provide reasonable assurance as to the integrity and reliability of financial reporting.
3. In the opinion of the Board, these financial statements reflect a true and fair view of the financial position and operations of the Group for the year ended 30 June 2023.



Barry Harris
Chairman

30 August 2023



Janice Fredric
Audit Committee Chair

DIRECTORY

DIRECTORS

Barry Harris, Chairman
Nicholas Main, Deputy Chairman (*until 31 May 2023*)
Dr Tracey Batten
Livia Esterhazy (*from 1 June 2023*)
Janice Fredric
Prof. Margaret Hyland
Mary-Anne Macleod
Dean Moana

EXECUTIVE TEAM

John Morgan, *Chief Executive*
Dr Rob Murdoch, *Deputy Chief Executive and General Manager, Science*
Geoff Baird, *General Manager, Communications & Marketing*
Patrick Baker, *Chief Financial Officer*
Dr Mary-Anne Dehar, *General Manager, People & Capability*
Warrick Johnston, *General Manager, Technology & Innovation*
Dr Helen Neil, *General Manager, Operations*
Marino Tahi, *General Manager, Māori & Pacific Partnerships*
Dr Alex Thompson, *General Manager, Research Strategy*

REGISTERED OFFICE AND ADDRESS FOR SERVICE

41 Market Place
Auckland Central 1010
New Zealand

AUDITOR

Troy Florence with the assistance of PricewaterhouseCoopers on behalf of the Auditor-General

BANKERS

ANZ Bank New Zealand Ltd
ASB Bank Ltd
Westpac New Zealand Ltd

SOLICITORS

Meredith Connell
Atkins Holm Majurey

INSURANCE BROKER

Marsh Ltd

HEAD OFFICE

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WEBSITE AND SOCIAL MEDIA

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facebook.com/nzniwa
twitter.com/niwa_nz
twitter.com/niwaweather
instagram.com/niwa_science
linkedin.com/company/niwa
youtube.com/nzniwa

SCIENCE WORKING FOR AOTEAROA NEW ZEALAND

The Crown Research
Institutes (CRIs)
proudly work,
individually and
collectively, to create
a more prosperous,
sustainable and
innovative Aotearoa
New Zealand.



4,400
SMART AND
PASSIONATE PEOPLE

54
SITES ACROSS
AOTEAROA
NEW ZEALAND

6,000
SCIENCE PROJECTS
EACH YEAR

40
NATIONALLY
SIGNIFICANT DATABASES
& COLLECTIONS



NIWA

Taihoro Nukurangi

Climate, Freshwater & Marine Science