Copyright is owned by the Author of the thesis. Permission is given for a copy to be downloaded by an individual for the purpose of research and private study only. The thesis may not be reproduced elsewhere without the permission of the Author.

Live Animal Export from New Zealand by Sea: Stakeholder's Perspectives, Justifications and Underlying Narratives: A Thematic Analysis

A thesis presented in partial fulfillment of the requirements for the degree of

Master of Science

in

Animal Science

at Massey University, Palmerston North, New Zealand

Charlotte Elizabeth Goldsworthy

2026

Abstract

Export of live animals is a contentious topic in New Zealand, raising complex questions around animal welfare, trade legitimacy, and competing stakeholder interests. In 2021, the New Zealand government announced a ban on the live export of cattle, sheep, deer and goats (for breeding purposes only) by sea following a two-year phase-out period. This followed a temporary suspension after the sinking of the *Gulf Livestock 1* vessel in September 2020. The ban, implemented in April 2023, was justified on animal welfare and reputational grounds. Later that year, the National Party proposed reinstating the trade, suggesting amendments to the Animal Welfare Act and a new "gold standard" approach to animal welfare. Since then, there has been strong and persistent lobbying over the trade's reinstatement.

This study investigates stakeholder perceptions and justifications on live animal export by sea from New Zealand, exploring the different beliefs and reasons underlying diverse perspectives and the broader narratives shaping these views. It draws on two qualitative datasets: public submissions to the 2019 government review of the live animal export trade and semi-structured interviews with key stakeholders. Thematic analysis of the submissions revealed eight main themes shared by supporters and opponents, though operationalised differently to justify positions. Stakeholder interviews provided deeper insight into the values and intuitive reasoning underlying these perspectives.

Language drawn on by participants was used to better understand positions on the trade, with rationales falling into two broad categories: intrinsic, focused on animal well-being, and instrumental, focused on human benefits. These value orientations broadly mapped onto positions on the trade, with opposition aligning with intrinsic valuations and support with instrumental reasoning. These valuations shaped perceptions of acceptable welfare risk and confidence in regulatory oversight and management. Engagement with the concept of sentience was analysed, highlighting the role it may play as a strategically employed "buzzword."

New Zealand's international reputation was identified as a contested concept, mobilised to justify opposing positions in two distinct forms: reputation for high animal welfare standards, or as a reliable trading partner. Opponents emphasised the former, while supporters prioritised the latter, reflecting fundamentally different views of what constitutes reputational harm or benefit. Industry transparency emerged as a shared priority across opposing perspectives, but for divergent reasons, with opponents associating lack of transparency with scepticism toward industry practices and oversight, and supporters emphasising its role in rebuilding industry trust and demonstrating compliance.

This study demonstrated that debates around live export by sea are structured through competing justificatory narratives, making consensus difficult, yet some shared values and common ground suggest potential for more constructive engagement between stakeholder groups. This study addresses a noticeable gap in the social research on live export by sea in New Zealand and contributes to the limited research examining how contested agricultural practices are framed and legitimised in public policy discussions. It is particularly timely in light of the government's 2023 announcement of the potential reinstatement of the trade and offers relevance for other countries where similar debates may be unfolding.

Acknowledgements

First and foremost, I would like to sincerely thank my supervisors, Professor Ngaio Beausoleil, Dr Nikki Kells, and Dr Alice Beban. I am endlessly grateful for the time, effort and dedication you have all invested in guiding and supporting me through this process. I feel privileged to have had your expertise and mentorship throughout this study. The insights and knowledge you each bring from your respective fields have been truly invaluable, and you pushed me beyond what I thought I was capable of achieving.

To my interview participants, thank you for taking the time to be part of this research project, without which this study would not have been possible. I am truly grateful for your willingness to share your experiences and perspectives.

To my partner Ryan, your unwavering support, encouragement and understanding throughout this process has been amazing. I appreciate you more than words can express. Thank you for always believing in me, celebrating the small wins, and keeping me grounded when things felt overwhelming.

To my sister E.J, thank you for everything you've done for me over the last few years, you made life that much easier when things were hard. I am grateful for the time we have been able to spend together. I know Mum would be proud of what we have both achieved in our lives so far.

To my work colleague and friend Cameron, thank you for your never-ending support (and laughs) at work. I appreciate you always going the extra mile to help me so I can go home early and get some sleep. Working nights while studying has not been easy, but you have made it far more manageable.

Most importantly, I would like to acknowledge the 41 crew members, and 5,867 cattle lost at sea in the sinking of the *Gulf Livestock 1* carrier. This tragic incident sparked my interest in this topic and inspired me to explore and understand the different perspectives surrounding live export by sea from New Zealand.

Table of Contents

Abstract **2**

Acknowledgements **3**

Chapter One – Introduction **6**

1.1 Background 6

1.2 Research aim and questions 6

1.3 Methodological approach 7

1.4 Significance of the study 7

1.5 Thesis structure 7

Chapter Two – Literature Review **9**

2.1 Introduction 9

2.2 Animal agriculture in New Zealand 9

2.2.1 The history of animal agriculture in New Zealand *9*

2.2.2 Present day animal agriculture in New Zealand *11*

2.3 Animal welfare 12

2.3.1 What is animal welfare? *12*

2.3.2 Animal sentience *13*

2.3.3 New Zealand's animal welfare regulatory system *14*

2.4 Livestock transport 15

2.4.1 Transport within New Zealand *15*

2.4.2 Transport outside of New Zealand *16*

2.5 Live export by sea from New Zealand 17

2.5.1 Background *17*

2.5.2 National regulation *18*

2.5.3 International regulation *19*

2.5.4 Key events in the history of live export by sea in New Zealand *19*

2.6 Animal welfare concerns associated with live export by sea 21

2.6.1 Mortality as a welfare indicator *21*

2.6.2 Documented welfare concerns *22*

2.7 The current situation regarding live export by sea from New Zealand 26

2.7.1 Divided opinions amongst key stakeholders *27*

2.8 Conclusion and research objectives 28

Chapter Three – Methodology **29**

3.1 Methodology overview 29

3.2 Epistemological positioning 29

3.3 Public submissions 30

3.3.1 Data collection *30*

3.3.2 Data analysis *30*
3.4 Stakeholder interviews 32
3.4.1 Development of interview questions *32*
3.4.2 Human ethics approval *33*
3.4.3 Informed consent *33*
3.4.4 Privacy and confidentiality *33*
3.4.5 Research setting *34*
3.4.6 Selection of participants and data collection *34*
3.4.7 Data analysis *35*
Chapter Four – Results **36**
4.1 Overview of public submissions 36
4.1.1 Key themes *37*
4.2 Overview of stakeholder interviews 52
4.2.1 Value placed on animals *53*
4.2.2 Main reasons given for stance on live export by sea from New Zealand *56*
4.2.3 How participants spoke about sentience *68*
Chapter Five – Discussion **77**
5.1 Introduction 77
5.2 New Zealand's international reputation 78
5.3 Animal Welfare 80
5.4 Transparency of the industry 83
5.5 Limitations of the study 86
5.6 Policy implications 87
5.7 Policy update 88
References **90**
Appendix A: Participant Information Sheet **98**
Appendix B: Participant Consent Form **100**
Appendix C: Interview Questions **101**

List of Tables

Table 1: *Summary of participants' stance on live export by sea, the main reasons given to support that stance and the values reflected in their reasoning* 54

Table 2: *Participant stances on live export (section 4.2.2) and the number of times sentience was mentioned in their interviews* 69

List of Figures

Figure 1: *Eight participants' stance on live export by sea, main occupations and the main value that they placed on animals.* 55

1.1 Background

Live animal export by sea is a longstanding yet controversial component of New Zealand's (NZ) agricultural sector. Traditionally regarded as supporting rural communities and trade relationships, the practice has faced growing concerns from the public and political scrutiny, particularly in relation to animal welfare.

In 2019 the Ministry for Primary Industries (MPI) announced a review of NZ's livestock export system, with stated objectives being to improve the welfare of livestock (classified as cattle, deer, goats and sheep) being exported, and to protect NZ's reputation. The review included consignments of livestock travelling by air or ship and of any size. The public consultation ran over nine weeks, between 18 November 2019 and 22 January 2020 and sought public feedback on four suggested options for improvement: a total ban, a conditional ban, new regulations or continuous improvement. Feedback was collected via written online submissions and an online survey accessed through MPI's website, with the aim being to reflect on ways to improve the welfare of exported livestock, whilst protecting the reputation of NZ, complying with international obligations and ensuring the resilience of rural communities.

Following this, on 14 April 2021, the New Zealand Government announced a ban on the export of all livestock by sea would be coming into effect, following a two-year phase out period. The reasons cited were animal welfare risks and reputational concerns, prompted by the sinking of the *Gulf Livestock 1* vessel off the coast of Japan. On 30 April 2023, a total ban on exporting livestock by sea came into effect. Just prior to the ban coming into effect, the National Party announced its intentions to reinstate the trade if elected, as part of their "Getting Back to Farming" initiative, and reversing what they deemed the (then current) Labour Government's "war on farmers" through overregulation. This announcement reignited the live export debate amongst stakeholders and the general public. On 14 October 2023, the National Party won the general election, and have committed to reinstating live export by sea, proposing a "gold standard" approach to ensure high animal welfare standards. Some of the improvements proposed by the National Party include the use of purpose-built ships, importer certification, enhanced animal monitoring, and legislative changes by way of amendments to the Animal Welfare Act 1999. Public consultation was expected to take place in 2024 but has not yet occurred.

1.2 Research aim and questions

This study aims to explore the social perceptions and justifications of stakeholders on the live export of animals from NZ by sea. It aims to not only explore the different beliefs of these stakeholders, but also the underlying reasons for their perspectives and the broader narratives that shape their positions.

The key research questions are:

- How do stakeholders frame their perspectives on the live export of animals by sea from NZ, and what social perceptions and justifications do they draw upon?
- What are the underlying values, beliefs, and broader narratives that shape stakeholders' perceptions and justifications?

1.3 Methodological approach

To address these research questions, this study used a qualitative methodology. This approach allowed me to focus on understanding human experiences, perspectives and social contexts by exploring people's thoughts, feelings and motivations in regard to live animal export by sea. Two datasets were analysed: the public submissions from the New Zealand Government's 2019 review of the live export trade and transcripts from semi-structured interviews I conducted with key stakeholders. Thematic analysis was used to analyse both data sets and identify common themes and narratives around how live export is perceived, justified and contested by different stakeholders. As part of this project, an extensive literature review was undertaken to explore existing research and scholarly work relevant to live animal export by sea from NZ.

1.4 Significance of the study

This research contributes to a comprehensive understanding of the live export debate by examining its social context and the ways in which it is discussed, framed and perceived by different stakeholders.

Through the literature review and analysis of the two datasets, I have been able to contribute to the field of animal welfare science in a way that has not been investigated before. This research contributes to the ongoing debate surrounding the legitimacy of live animal export by sea from NZ and may also offer comparative insights relevant to the perspectives and attitudes of stakeholders in other countries facing similar tensions between economic interests, animal welfare concerns, and societal values in relation to the live export trade. It addresses a notable gap in the social understanding of how stakeholders perceive live export, with particular attention to the values that inform and shape these views. This study is particularly relevant in the current NZ context, as the government's 2023 announcement to reinstate live export by sea has reignited public and political controversy on the issue.

To the best of my knowledge – and based on an extensive review of available academic and grey literature – no prior research in this field has been conducted or published within the NZ context. While every effort has been made to locate relevant sources, it may be possible that some work may exist outside of commonly used scholarly and public databases.

1.5 Thesis structure

This thesis is structured as follows:

- **Chapter Two** reviews relevant literature on animal agriculture and the transport of livestock in NZ, live animal export by sea, animal welfare, and industry and international standards.

- **Chapter Three** outlines the research design, data collection and analytical methods used throughout the research project.

- **Chapter Four** presents the findings from the thematic analysis of the public submissions from the 2019 government review on live export by sea, and the semi-structured interviews undertaken with stakeholders.

- **Chapter Five** discusses the findings from chapter four and analyses these findings in relation to existing literature. It also serves as the final chapter of the thesis, summarising key insights, outlining limitations, and suggesting recommendations for future research and policy development.

2.1 Introduction

Live animal export by sea from NZ has long been a subject sparking both economic interest and ethical debate. As both national and international attention on the trade grows and regulatory systems continue to evolve, it is increasingly important to understand the broader context in which this practice exists.

This literature review aims to provide context to the live export debate by examining the role of the trade within animal agriculture in NZ and how this role has changed over time. As positions on live export often centre on animal welfare concerns, particular attention will be given to identifying and analysing these concerns as they are raised in the existing literature, to help better understand stakeholder and societal perspectives on the perceived risks and benefits associated with the trade. To complete this review, I will draw on literature such as academic journals, government reports and industry publications.

This review begins with an overview of the historical development and economic significance of animal agriculture in NZ, followed by an analysis of animal welfare within the country, including how it is characterised, assessed, and regulated. It then examines livestock transport, both domestically and for international export, with particular focus on the live export of animals by sea and the relevant regulatory frameworks. Building on this, the chapter explores industry standards and international regulation and incorporates a timeline of key events in the history of live export by sea from NZ to provide historical context. This is followed by an exploration of the associated animal welfare concerns. Finally, the chapter considers the current situation regarding the practice, including the government review of the trade, plans for its potential reinstatement, and divided public views.

2.2 Animal agriculture in New Zealand

The purpose of this section is to provide an overview of animal agriculture in NZ, tracing its historical development, including key moments of expansion and innovation, and examining its current landscape and economic value to the country.

2.2.1 The history of animal agriculture in New Zealand

The history of agriculture in NZ is relatively recent when compared to that of northern hemisphere regions (Didham et al., 2012), with the early stages of agricultural development not beginning until the 1840's (MacLeod & Moller, 2006). Over the past 100 years, the livestock industry has been an important contributor to both the social and economic development of NZ, with agriculture making the single largest contribution to the NZ economy in the 1970's (Stats NZ, 2019).

MacLeod and Moller (2006) have categorised the agricultural development of NZ between 1840 and 2002 into five distinct phases: colonisation, expansion, early intensification, diversification and later intensification.

The colonisation phase of NZ agriculture (1840–1870) was marked by a rapid increase in sheep numbers, facilitated by the extensive burning of indigenous grasslands to create land for grazing. Agricultural practices brought to NZ by British colonisers became embedded as the building blocks and foundations of communities (Tully & Carr, 2024), with sheep and cattle being the first livestock to reach NZ shores during the 1840's on sailing ships from both Britain and Australia (Low, 2008). Early settlers bred Shorthorn cows and established small herds on the outskirts of towns which provided milk, butter, and cheese, with leftovers being sold to local stores (Stringleman & Scrimgeour, 2008). This period saw the beginning of live animal exports in the 1860s.

The 1880's saw the introduction of refrigeration, revolutionising farming in NZ, making it possible to export dairy products overseas (Stringleman & Scrimgeour, 2008). In 1882 the first shipment of refrigerated meat left NZ shores aboard the SS Dunedin bound for Great Britain, transforming the industry and setting a new precedent for the future. This was closely followed by the beginning of the frozen meat trade, with the first shipment of frozen mutton leaving for England on board the *Mataura* (NZ Rural Press Limited, 1990). This resulted in a steady expansion of beef exports to Britain and marked a significant turning point, initiating a phase of agricultural expansion characterised by the large-scale clearing of indigenous forests and the widespread development of permanent pasture (MacLeod & Moller, 2006).

By the beginning of the 20th century herd sizes and cow numbers began to steadily increase following the introduction of mechanical milking (Stringleman & Scrimgeour, 2008). In 1914, the outbreak of the first World War brought a huge demand for frozen meat exports, earning NZ four million in trade income by 1917 (NZ Rural Press Limited, 1990).

The 1920's saw the onset of intensification, driven by advances in soil science, application of fertilisers, and advancements in the breeding of plants and animals. Between 1920 and 1970, livestock numbers increased by approximately 150 percent, national productivity in meat and dairy sectors doubled, and wool production tripled (MacLeod & Moller, 2006). Over this timeframe the area of NZ covered by exotic plantations and agricultural land also increased from 35% to 60% (Molloy, 1980).

Following the end of the Second World War in the 1940s, meat exports to Britain reached their peak, comprising 98% of NZ's total chilled and frozen meat exports (NZ Rural Press Limited, 1990). Dairy cow numbers also saw a substantial increase more than doubling between 1920 and 1950, with butter and cheese exports more than tripling to over two hundred thousand tons, with an increase in value of over 450% (Peden, 2008). After the 1940's a phase of diversification emerged and extended into the 1980s. During this time, traditional livestock farming of cattle and sheep expanded with the introduction of goat and deer farming, horticulture, and agroforestry (MacLeod & Moller, 2006).

Between the 1970's and 1980's the New Zealand Government introduced a range of agricultural support measures, aimed at boosting production; including low interest loans, tax incentives, debt write offs and minimum prices on agricultural products. However, these interventions led to a decline in market responsiveness, reduced innovation, and inefficient resource use. Consequently, productivity declined, and the sector's competitiveness on the open market decreased. In 1984 all

subsidies and support were removed by the government, with a goal of moving towards a more market driven, competitive economy. This became a pivotal year in NZ's farming history (Ministry for Primary Industries, 2017), with changes leading to a shift in farming diversification, seeing a move from beef and sheep farming towards more viticulture, horticulture and dairying (Smith & Montgomery, 2004).

The end of government support forced farmers to adapt rapidly to survive and remain competitive. From the 1980s onward, a subsequent phase of intensification emerged, defined by the adoption of more intensive, market-oriented farming systems (MacLeod & Moller, 2006).

In the ten years following the withdrawal of government subsidies, the NZ agricultural sector shifted from a low risk, high income environment to relatively high-risk, with income levels much lower than before. Horticulture and dairying were able to retain generally high profitability levels when compared with those of sheep and beef farming, with the national dairy herd climbing from 3.2 to over 4.5 million cows, and total milk output more than doubling (Smith & Montgomery, 2004). The rapid expansion of dairying throughout the 20th century, marked by a gradual increase in farm size, can be largely attributed to the use of more intensive farming practices such as irrigation, enabling dairy farming to expand into areas with land previously deemed unsuitable (Iremonger, 2024).

At the end of the 20th century, the gross value of livestock product accounted for 3.5% of NZ's GDP, substantially less than the peak contributions of 10-20% seen in the 1960's. Despite this decline in the proportional contribution of the livestock industries, the absolute value and volume of livestock production have risen. Regardless of increasing costs and worsening terms of trade for farmers, the fundamentals of the livestock industry in NZ have remained sound (Chapman & MacMillan, 2000).

2.2.2 Present day animal agriculture in New Zealand

In NZ today, agricultural land use covers approximately 10.2 million hectares, 38% of the country's total land area, with two million hectares used for dairy farming (Ministry for Primary Industries, 2023a). In 2024, NZ's livestock population included 23.6 million sheep, 3.7 million beef cattle, and 5.8 million dairy cattle. In comparison to 2023, these figures have remained relatively stable, with sheep numbers declining by 3%, dairy cattle numbers declining by 1%, and beef cattle numbers increasing by 1% (Stats NZ, 2025a)

The country's agricultural industry relies heavily on global market trends, with over 80% of agricultural output being exported. This dependence on global markets is what shapes the countries agricultural economy (Smith & Montgomery, 2004) and has allowed NZ to maintain a strong position on the international market for over half a century (Chapman & MacMillan, 2000). Present day agricultural exports include sheep meat, beef, lamb, wool and dairy, as well as a variety of processed and fresh fruits and vegetables (Granwal, 2024), with dairy and sheep/beef products collectively accounting for approximately two-thirds of NZ's agricultural exports (Apatov et al., 2015).

New Zealand's core competitive advantages lie in its relatively small population paired with extensive land available for agriculture, and its pasture-based farming system. This approach relies less on purchased inputs compared to the more intensive agricultural systems commonly found in the Northern Hemisphere. The mild climate allows pasture to grow year-round and livestock to be kept

outside for all seasons. With fewer costs incurred, products can then be sold on the international market at competitive prices (Chapman & MacMillan, 2000).

For the year ending October 2025, total meat exports reached $10 billion, an increase of $1.6 billion compared to the previous year. The United States was NZ's top beef export market, while the European Union led in sheep meat exports (Stats NZ, 2025b). For the year ending, June 30, 2025, NZ's wool exports reached $446 million, with China as the largest market, accounting for $176 million. Dairy exports for the same period reached $27.1 billion, also led by China, representing 35% of the total, valued at $10 billion (Ministry for Primary Industries, 2025c).

The economic outlook for NZ's animal agricultural sector remains robust, driven by strong international demand and stable commodity prices. Dairy exports are forecast to increase by 1%, reaching $27.4 billion by the year ending 30 June 2026. Meanwhile, meat and wool exports are expected to rise by 7% for the same period, with projected revenues of $13.2 billion, following a 9% growth period in 2024-25. These trends highlight the continued importance of the primary sector in supporting national export earnings and rural economies (Ministry for Primary Industries, 2025c).

The export of live animals from NZ will be discussed in section *2.4.2 Transport outside of New Zealand.*

2.3 Animal welfare

2.3.1 What is animal welfare?

There is no current universal definition of animal welfare. This may be due to varying perspectives towards animals based on different values and beliefs (Carenzi & Verga, 2009; Willis et al., 2021). Animal welfare may be described as a scientific concept, as it refers to a potentially measurable state of a living animal at a specific point in time which can indicate how the animal is coping with its surrounding environment (Broom et al., 2011; McBride & Baugh, 2022). Additionally, it may also include considerations of how an animal *feels* and the intrinsic nature of what it is to *be an animal*. These differing perspectives make it challenging to establish a single, definitive definition of both *animal welfare* and *animal welfare science* (McBride & Baugh, 2022).

To assess animal welfare multiple indicators are required, as stressors can impact one or multiple parameters at varying times and intensities (Sevi, 2009). Individual animals may also respond differently to the same welfare challenge, due to factors such as sex, genetics, body weight and levels of acclimatisation. To address this, multiple welfare measures are required, allowing for a more accurate interpretation of when an animal's typical responses to stressors become abnormal or pathological (Fleming et al., 2020).

In place of a single, fixed definition, animal welfare is commonly assessed through three key orientations: biological function, natural living and affective state, each of which is grounded in scientific knowledge (Green & Mellor, 2011). The natural living orientation suggests an animal living in as close to its natural, wild state as possible – particularly in terms of its ability to express natural behaviours – is more likely to experience good welfare. Whereas the biological function orientation places emphasis on an animal's growth, health and reproductive success as good welfare indicators

(Fraser et al., 2003). Neither of these orientations consider negative experiences animals can still have when they are in good health and engage in behaviours typical of their 'natural' environment (Gibbs, 2023). Therefore, the affective state approach, which recognises that an animal's welfare is largely determined by its mental experiences, is now widely accepted as the primary determinant of welfare (Kells, 2022).

Predominant orientations applied by individuals can vary based on their own personal worldviews and values (Green & Mellor, 2011). For instance, research indicates that farmers tend to prioritise animal health and productivity when making practical decisions about animal welfare on farm (Hötzel et al., 2025). Similarly, it has been found that veterinary training primarily emphasises health and nutrition, with minimal knowledge provided to students regarding an animal's physical environment and behavioural interactions. These views are limited, as animals can be both healthy and productive, while still having poor welfare, and that focusing solely on physical state or biological function alone does not offer a holistic understanding of animal welfare (Littlewood & Beausoleil, 2021).

The Five Domains Model for the assessment of animal welfare reflects this understanding, encouraging the consideration of conditions affecting an animals internal and external states, and the associated mental experiences (Littlewood & Beausoleil, 2021; Mellor et al., 2020). These are evaluated through four key domains – Nutrition, Physical Environment, Health, and Behavioural Interactions (Littlewood & Beausoleil, 2021; Mellor, 2017). Sensory inputs arising from compromise within the first four physical/functional domains can result in compromise within the fifth domain, Mental State. This provides an overall assessment of the animal's affective state and therefore, its welfare (Mellor et al., 2009; Mellor, 2017; Mellor et al., 2020). The Five Domains Model explicitly considers the provision of opportunities for animals to experience positive affective states, which are central to a sentience-based approach to animal welfare (Robertson & Goldsworthy, 2022).

2.3.2 Animal sentience

Sentience is described as the ability for an animal to consciously perceive and feel things, or to have subjective experiences. These experiences can be positive, potentially enhancing welfare, or negative, potentially compromising welfare (Mellor, 2019). A sentient animal is aware of sensations within its own body, such as hunger, pain, heat and cold, as well as its surroundings and interactions with both humans and other animals (Kumar et al., 2019). The modern animal welfare movement is underpinned by the science of animal sentience, and it is a central concept in animal ethics, bioethics, animal welfare science and related policy (Browning & Birch, 2022; Proctor, 2012).

In 2015, the New Zealand Government amended the Animal Welfare Act 1999 to explicitly recognise that animals (as defined by the Act) are sentient, although the Act does not provide a definition of what "sentient" means. This recognition aligns with the affective state orientation, acknowledging that animals have the capacity to experience pleasure, pain, and suffering, actively seeking experiences that bring satisfaction, and avoiding those that cause distress (Blattner, 2019). This means the Act recognises that opportunities to express normal behaviour patterns are an essential part of an animal's well-being. However, since many farmed animals in NZ are still denied this opportunity, it has been

argued that the recognition of sentience is not fully reflected in practice through the implementation of the Act (James, 2016).

2.3.3 New Zealand's animal welfare regulatory system

There are two main types of legislation in NZ: primary legislation and secondary legislation. Acts are primary legislation, and are laws made by the New Zealand Parliament. The primary legislation that governs animal welfare in NZ is the *Animal Welfare Act 1999*. The *Codes of Welfare* used to support the Act are classed as secondary legislation and are used as an extension of primary legislation (Parliamentary Counsel Office, 2024).

Animal Welfare Act 1999

The Animal Welfare Act 1999 is the primary legislation which governs the welfare of animals within NZ. The Act sets out legal obligations to ensure that owners and people in charge of animals meet their physical, health and behavioural needs, and alleviate pain or distress. The Act is jointly enforced by MPI and the Royal New Zealand Society for the Prevention of Cruelty to Animals (RNZSPA) (Ministry for Primary Industries, 2022a).

Codes of Welfare

The *Codes of Welfare* supporting the *Animal Welfare Act 1999* form part of the Act and outline minimum standards for animal care and management, along with recommended best practices to encourage higher standards of animal care. These codes are not directly enforceable (unlike the Act) but can be used as supporting evidence to demonstrate non-compliance with the Act. In certain situations, more than one Code of Welfare may be relevant. For example, in the case of dairy cattle in NZ, this includes the *Code of Welfare: Dairy Cattle*, the *Code of Welfare: Transport within New Zealand* and where relevant, the *Code of Welfare: Commercial Slaughter* (Ministry for Primary Industries, 2024).

The *Codes of Welfare* include minimum standards which outline the minimum requirements that owners and persons in charge of animals must abide by to meet their obligations under the *Animal Welfare Act 1999*. Failure to abide by a minimum standard can be used as evidence in a court of law for prosecution (Ministry for Primary Industries, 2022a). The Codes also include information on recommended best practices. Their purpose is to encourage higher standards of care and conduct that exceed the minimum standards required to meet legal obligations under the *Animal Welfare Act 1999* (Ministry for Primary Industries, 2024).

2.4 Livestock transport

2.4.1 Transport within New Zealand

Transport of livestock within NZ relies on several methods, including land, sea, and air, each with distinct operational characteristics and welfare implications. This section provides a brief description of how each is utilised within the country's agricultural system, highlighting high-level animal welfare concerns and the regulations governing each mode of transport.

Livestock transport within NZ is critical to the country's agricultural supply chain, enabling the movement of animals between farms, saleyards, ports and processing facilities. NZ's geography disperses farming regions throughout the country in both the North and South islands, meaning transportation of livestock is an essential part of the agricultural industry. While road transport is the most used method, sea transport also plays a key role in moving animals between islands for both production and processing purposes.

Land transport

Given its relatively small size (268,027 km^2), transport by road is the most common method used to move livestock across NZ. Cattle, sheep, deer and pigs are transported in specialised trucks designed to be compliant with animal welfare and biosecurity regulations. Livestock are mostly transported on trucks to move between farms, to sale yards or to processing facilities. Stock trucks will often board inter-island ferries to move between the North and South Islands of the country. Welfare guidelines for this mode of transport are outlined in the *Code of Welfare: Transport within New Zealand*, Section 8.1: Transport by Road (Ministry for Primary Industries, 2018c).

Land transport has been recognised as impacting the psychological, physiological and physical well-being of the animals on board, caused by factors such as handling, novel environments, withdrawal from feed and water, and maintaining balance while standing for long periods (Fisher et al., 2009). Journey duration, vehicle design, road conditions, and driving practices can all affect the welfare of animals during road transport. Elevated ambient temperatures caused by insufficient ventilation and high stocking densities are also of concern, with varying impacts on different species (Hall & Bradshaw, 1998).

Air transport

Air is not a commonly used mode of transport for livestock within NZ. This is often limited to the movement of high-value breeding stock. Animal welfare regulations emphasise the importance of ensuring suitable conditions throughout the journey and the minimisation of travel stress. Welfare guidelines for this mode of transport are outlined in the *Code of Welfare: Transport within New Zealand*, Section 8.4: Transport of Animals by Air (Ministry for Primary Industries, 2018c).

Sea transport

Sea transport within NZ refers to the movement of livestock within the country's territorial waters, particularly for the transfer of animals between the North and South Island's on ferries via the Cook Strait. The purpose of this method of transport is typically for finishing or processing in regions where the required facilities are located on a different island. Livestock trucks are driven directly onto ferries with the animals on board, where they remain for the duration of the sailing. Livestock transport, particularly on inter-island journeys, has the potential of exposing animals to conditions that may be detrimental to their welfare (Fisher et al., 1999) and cases have been reported of multiple animal deaths occurring during ferry crossings of the Cook Strait, particularly during warmer weather (Anonymous, 2001).

Welfare guidelines for this mode of transport are outlined in the *Code of Welfare: Transport within New Zealand*, Section 8.3: Transport of Animals within New Zealand Waters (Ministry for Primary Industries, 2018c). However, it is important to note that this legislation is no longer enforceable once the animals leave NZ's jurisdiction. To protect the welfare of young calves, their transportation by sea across Cook Strait is prohibited under Regulation 37 of the *Animal Welfare (Care and Procedures) Regulations 2018* (Ministry for Primary Industries, 2018a).

Additional guidelines to improve practices while transporting livestock are also available from industry bodies such as Dairynz and Beef and Lamb NZ. The NZ Tourism Department has established standards aimed at reducing effluent on NZ roads, including regulations concerning livestock stand-off periods prior to loading, as well as requirements for the management and disposal of effluent from stock trucks during and after transit.

New Zealand also has a compulsory *National Animal Identification and Tracing (NAIT)* program, used for cattle and deer to trace the location and movement of individual animals for biosecurity measures. This program allows MPI to respond quickly in the case of a natural disaster or biosecurity outbreak, protecting NZ's economy, farmer livelihoods and diseases from spreading amongst stock.

2.4.2 Transport outside of New Zealand

New Zealand exports a large number of live animals each year, including cattle, sheep, goats, deer and horses, with live poultry – specifically day-old chicks and hatching eggs – by far the largest export, with numbers reaching 8.1 million in 2022 (Boyer, 2015; Ministry for Primary Industries, 2025a). In the same year, NZ also exported 153,722 cattle, 2027 goats and 39 sheep (Ministry for Primary Industries, 2025a). The total revenue from all live animal exports for the year ending 30 June 2022 was $474 million NZD (Ministry for Primary Industries, 2025c).

A conditional ban on the export of livestock for slaughter was introduced in 2007. Since then, NZ has primarily exported cattle, sheep, goats and deer as breeding stock to help importing countries develop their livestock industries (Ministry for Primary Industries, 2019b). Breeding livestock from NZ are valued for various reasons including improving stock genetics in the importing country, helping stock new dairy farm developments, assisting developing countries with food security, and meeting international trade agreements (Ministry for Primary Industries, 2019a).

Historically, large consignments of livestock were typically transported via sea, with smaller numbers of animals and all live poultry transported via air (Ministry for Primary Industries, 2019a). The last full year of livestock exports via sea was 2022, with a ban on the practice coming into place in April 2023. All remaining live animal exports from NZ are now undertaken via air (Ministry for Primary Industries, 2023a), with 48 cattle, 2006 sheep and 5979 goats exported in 2024 (Ministry for Primary Industries, 2025a). The last live deer export from NZ was a consignment of 28 deer to China via air in 2015 (Ministry for Primary Industries, 2019a).

All exports of livestock via air travelling more than six hours require an *Animal Welfare Export Certificate (AWEC)*[1] and are assessed using the *International Air Transport Association Live Animal Regulations.* Small consignments of livestock are transported in either cargo planes or the holds of commercial passenger planes. No stock person can accompany the animals when travelling in commercial passenger planes as there is no in-flight access to the cargo holds (Ministry for Primary Industries, 2019a).

Industry and international standards for the export of animals from NZ via sea will be discussed in the following section.

2.5 Live export by sea from New Zealand

2.5.1 Background

Animals have been transported by sea for hundreds of years, with the primary reasons for transport usually commercially driven and involving exporting animals for the purpose of either breeding or slaughter (Norris, 2005). As the world's major areas of human population today are not necessarily aligned with the regions that have the resources to produce livestock for human consumption, the last few decades have seen a significant rise in the export of livestock between countries (Appleby et al., 2008).

Prior to the ban coming into effect in April 2023, live export by sea was the primary method for exporting large quantities of livestock (excluding poultry) from NZ. While export for slaughter was officially banned in 2007, livestock have continued to be exported for breeding purposes. Over the past decade, NZ has shipped consignments of live cattle to Mexico, Papua New Guinea, the Philippines, Sri Lanka and Vietnam, with a growing focus in more recent years on shipping dairy heifers to China (Ministry for Primary Industries, 2023b).

From 2015 to 2019, live cattle exports from NZ averaged fewer than 40,000 annually, with numbers rising significantly between 2020 and 2022, exceeding 100,000 cattle per year. This surge in numbers coincided with the government's announcement of a ban on live export by sea coming into place in April 2023, with under 30,000 cattle exported in the first part of that year (Ministry for Primary

[1] more information on Animal Welfare Export Certificate's (AWEC's) can be found in section *2.5.2 National regulation.*

Industries, 2023b). Only one consignment of sheep has been exported since 2008, with 45,112 sent to Mexico in 2015.

2.5.2 National regulation

The Ministry for Primary Industries (MPI) oversee the export of live animals from NZ and have set out specific industry requirements that must be met before any live animals can leave the country.

Most importing countries require guarantees from the New Zealand Government that all animals being exported are healthy and suitable for export. This is provided in the form of a veterinary certificate, issued under the Animal Products Act as part of the Overseas Market Access Requirements (OMARs). Any exports requiring a veterinary certificate also require the exporter to be registered by MPI under the Animal Products Act, where they must comply with, and meet the minimum export standards provided under the Act (Ministry for Primary Industries, 2019a). All commercial exporters must be registered or using a registered exporter and be aware of the current relevant legislation regarding the practice (Ministry for Primary Industries, 2025b).

Exporters collaborate with Recognised Agencies and MPI Verification services to ensure livestock are properly prepared for export, and all requirements of the Animal Products Act, and any OMARs are met. Livestock that have met the provided requirements enter a pre-export isolation facility, where they undergo final assessments for export suitability, and any conditioning required, such as transition to a pellet-based diet for the up-coming voyage. Overseas veterinarians may also arrive in NZ at this time to oversee the consignment of animals (Ministry for Primary Industries, 2019a).

All livestock exported from NZ legally require the issue of an Animal Welfare Export Certificate (AWEC), which is approved and issued by the Director-General for MPI. This must be applied for at least 20 working days prior to the shipment, with the purpose of minimising any welfare risks during export and safeguarding NZ's reputation as a responsible animal exporter (Ministry for Primary Industries, 2025b). Considerations for the approval of an AWEC are set out in the *Animal Welfare Act 1999,* and MPI's guidance document: *Guidance Material for the Transport of Cattle by Sea*. The approval process considers many factors, including the welfare of any animals previously exported by the applicant, the length of the journey, the requirements of the importing country, and the type, number, age, and physiological state of the animals being exported (Ministry for Primary Industries, 2022b).

Exporters may nominate a veterinarian for the sea journey, otherwise MPI will require a veterinarian is always available via phone. Under AWEC conditions, MPI may also request that a veterinarian is present on board the vessel at all times (Ministry for Primary Industries, 2019a). It is also worth noting that while export vessels are in NZ territorial waters, all relevant Codes of Welfare apply to the animals on board.

Exporters are required to submit post-voyage and post arrival reports as a condition of livestock export. Post-voyage reports must be sent to MPI within 20 working days of the animals' arrival in the destination country and must include details of any deaths or illnesses during the voyage. Post-arrival reports must be provided within 60 days of the animals' arrival, and must report on the condition of the animals during the first 30 days in the destination country (Ministry for Primary Industries, 2019a).

2.5.3 International regulation

Live export by sea is a complex trade to regulate, as it spans multiple jurisdictions and the high seas. It involves numerous stakeholders, including international agencies, regulators, shipboard personnel, exporters, and commercial entities. As a result, no single body or agency has ultimate control over the trade (Heron, 2020).

There are no binding international standards or regulations that govern the transport of livestock by sea. However, guidelines have been developed by the World Organisation for Animal Health (WOAH - formerly known as OIE) – a global authority on the health of animals, with 183 member countries, including NZ. WOAH's guidelines are incorporated into the WOAH Terrestrial Animal Health Code, under section 7.2: *Transport of animals by sea* (Norris, 2005). This section sets out minimum animal health and welfare recommendations during all stages of the live export process (World Organisation for Animal Health, 2018). The recommendations outlined in the code are general in nature and do not specify detailed animal welfare indicators or regulations, as these will vary under each country's own national legislation. Additionally, the recommendations given are also not compulsory for member countries to implement.

The export of livestock to countries with different management and slaughter standards is often a cause for concern amongst the public of the exporting country (Phillips & Santurtun, 2013). Upon disembarking the vessel, exported animals fall under the jurisdiction of the importing country's animal welfare regulations and standards, making the enforcement of the exporting country's regulations impossible. This is the case for NZ, where animal welfare outcomes cannot be controlled once livestock leave its jurisdiction, and instances of poor welfare have been reported in countries where livestock have been exported to in the past (Ministry for Primary Industries, 2019a).

This is also relevant to the sea journey, where MPI's *Code of Welfare: Transport within New Zealand* only applies to livestock being transported within NZ's territorial and inland waters, which extend 12 nautical miles from shore. Beyond this zone, NZ's domestic animal welfare laws cease to apply (Ministry for Primary Industries, 2018c; Parliamentary Counsel Office, 2025). MPI's guidance document, *Livestock Export by Sea: Guidance for Cattle,* outlines recommended practices for cattle export by sea, aimed at aligning the trade with international best practice. However, these guidelines are not legally binding, meaning compliance is voluntary and not enforceable (Ministry for Primary Industries, 2022b).

2.5.4 Key events in the history of live export by sea in New Zealand

1860's: Export of livestock begins – primarily to Australia, followed by other regions.

1985: Initial shipments of sheep are sent to Mexico for slaughter, followed by shipments to Saudi Arabia for the Haj religious festival (NZ Rural Press Limited, 1990).

1986: The Live Sheep Advisory Committee is set up by the government and quotas are set on the number of sheep able to be exported in one year. This is opposed by the NZ Livestock

Association and eventually abolished, with the advisory committee disbanded (NZ Rural Press Limited, 1990).

1990's: New Zealand is exporting 500,000 sheep per year to the Middle East. After one such shipment experiences a 12% mortality rate, the government is prompted to introduce welfare codes and a 1% mortality rate threshold.

2003: Saudi Arabia rejects a shipment of 57,000 Australian and NZ sheep on board the *MV Cormo Express*. After 2 months at sea, over 6,000 sheep perish on board, with the remainder offloaded in Africa to be slaughtered as food aid. This led to the New Zealand Government suspending all exports of sleep for slaughter.

2007: The export for slaughter ban is extended to include all livestock with a conditional prohibition implemented by the New Zealand Government. Any such export will require prior approval by MPI. There have been no such exports since.

2015: New Zealand exports 45,112 sheep by sea to Mexico for breeding purposes in June 2015. The voyage took 15 days, and 191 sheep and one cow died, a mortality rate of 0.42%. No sheep have been exported via sea from NZ since.

2019: ABC news reveals NZ and Australian exported cattle suffering on Sri Lankan farms. This leads to a petition by animal rights charity SAFE to the New Zealand Government to end live export. Due to the success of the petition, the government announces a review on the live export trade. The review lasts over a year and over 3,500 submissions are received.

2020: The *Gulf Livestock 1* vessel capsizes off the coast of Japan in Typhoon Maysak, losing all 5,867 dairy cattle and 41 of the 43 crew on board. The government announces a temporary suspension on all live exports by sea and launches another review into the welfare of animals on live export ships – The "Heron Review".

2020: Live export resumes with some adjustments to regulations, following recommendations made in the Heron Review.

2021: The Labour Government announce a ban on all live exports by sea will come into effect following a two-year phase out period.

2023: On 30 April, a full ban on live export by sea comes into effect.

2023: The National Party announce live export by sea will be reinstated if voted into government, as part of their election campaign. In October, the National Party win the election and are voted back into government.

2024: The government announce their plans to reinstate live export by sea for breeding purposes, along with proposed amendments to the Animal Welfare Act 1999, including a "gold standard" of animal welfare.

2025: Public consultation of the proposed amendments is expected to take place but has not yet occurred.

2.6 Animal welfare concerns associated with live export by sea

The process of live export by sea can last for many weeks, including sourcing, handling, loading and transporting, all of which may have significant effects on the welfare of the animals. Long-distance transport poses distinct challenges when compared with short-distance transport, and each change in the animal's environment may have physical and mental consequences. The cumulative effects of transport stressors and their impact on welfare have not been well studied.

Stress-inducing factors cattle may face during transport include irregular access to food and water, noise, vibration, new surroundings, and mixing with unfamiliar animals, all of which can activate stress responses. The subsequent release of stress hormones can weaken immune function and impair immune responses. This can increase viral shedding in subclinically affected animals and facilitate the spread of infectious bacteria, leading to fatal bacterial pneumonia due to compromised respiratory defences (Moore et al., 2015).

In recent years, public concern over the welfare of animals in livestock production has grown significantly (Colditz et al., 2014) and maintaining social license has become a critical consideration for the livestock production industry. This is particularly relevant to live export by sea, where heightened public scrutiny makes issues especially prominent (Phillips, 2005). Welfare concerns have centred around extended travel durations, novel environments animals must quickly adapt to and high stocking densities during transport, which are driven largely by the high operational costs of the vessels (Appleby et al., 2008).

There is currently no peer-reviewed scientific research specifically addressing animal welfare conditions on board live export vessels departing NZ. However, there is a substantial body of literature from other countries – particularly Australia, with which NZ has shared some shipping routes and often the same vessels. These studies provide valuable insights into the likely welfare challenges faced by livestock (particularly cattle) during sea transport from NZ.

2.6.1 Mortality as a welfare indicator

The NZ live export industry primarily uses mortality rates to assess and report on animal welfare during voyages. Voyage report summaries, covering 2015 to 2023, are available on MPI's website, showing the number and percentage of mortalities, port of export, destination country, vessel name, voyage length and number of livestock for each consignment. There are no detailed explanations around causes of mortalities or incidents of compromised welfare during the voyages. However, there are short explanations given if significant mortalities are reported (0.5% and over) due to MPI requesting further information from the exporter around the cause of deaths.

There were three incidents of significant cattle mortalities recorded from 2015 to 2023. In 2015 there were 34 recorded deaths, primarily due to acidosis and other metabolic conditions linked to overfeeding concentrates. Two significant mortality events occurred in 2020, with 19 deaths attributed to heat stress and the reoccurrence of salmonellosis, and 49 deaths associated with a number of factors, including a period of extended rough conditions. Both events occurred on board the *Yangtze Harmony* livestock carrier. This was also the year *Gulf Livestock 1* was tragically lost at sea with 5,867

cattle and 43 crew members on board. However, as this journey was not completed it is not included in MPI's official mortality count (Ministry for Primary Industries, 2023).

Any mortalities recorded during the live export process indicate the effects of inadequate care, injury or overwhelming disease, indicating compromised animal welfare and poor quality of life for the animal. However, mortality is a crude indicator of animal health and welfare, and the use of more sensitive measures, capable of detecting issues before animals become clinically ill or die, should significantly reduce the risk of disease related suffering (Von Keyserlingk et al., 2009).

2.6.2 Documented welfare concerns

The health and welfare of cattle can be adversely affected during a voyage without resulting in mortalities. Independent observers on 37 Australian live export voyages to China during 2018 and 2019 identified several key animal welfare risk factors: hunger and thirst, health issues (see below), inadequate pen conditions (bedding and space), absence of veterinarians, exposure to temperature extremes, inadequate ship infrastructure, mechanical breakdown and mismanagement of animals at disembarkation. Notably, 100% of voyages experienced livestock health issues, 81% noted insufficient space, and 51% faced extreme weather conditions during the journey (Hing et al., 2021).

A range of health issues were reported, including respiratory (e.g., Bovine Respiratory Disease), musculoskeletal (e.g., lameness), metabolic (e.g., ketosis), ocular (e.g., pink eye), dermatologic (e.g., ringworm), enteric (e.g., chronic diarrhoea) and systemic (e.g., septicaemia) (Hing et al., 2021). The disease and health status of animals is a key aspect of overall condition and can serve as an indicator of poor welfare (Segner et al., 2012). The following summarises key health and other factors that have been shown to adversely affect animal welfare during long-distance sea transport:

Respiratory diseases

Respiratory diseases, including Bovine Respiratory Disease (BRD) have been identified as the greatest infectious mortality risk for cattle on long-distance live export voyages. A study of 20 long voyages found respiratory disease was the most common cause of death, accounting for 59.4% of overall mortalities (Moore et al., 2014).

There are some accounts of treatment supplies for BRD becoming exhausted in the early stages of live export voyages (Hing et al., 2021), which may have resulted in increased mortality rates. NZ's minimum requirement for antibiotics for the treatment of BRD on board live export ships is 35 doses per 1000 animals (Ministry for Primary Industries, 2022b), similar to that of Australia at 30 cattle doses per 1000 animals, on voyages exceeding 10 days (Department of Agriculture, 2024).

Lameness

Lameness has been documented as the primary cause of mortality in several instances, often due to lame cattle being unable to rise, leading to the development of Bovine Respiratory Disease (BRD) (Hing

et al., 2021). Often, deaths attributed to lameness are a result of an animal's welfare being so severely compromised that euthanasia was required (Moore et al., 2014).

Lameness can be influenced by poor handling, lack of bedding, abrasive floor surfaces, turbulent seas, and extended exposure to excrement (Hing et al., 2021). Abrasive deck surfaces paired with softened hooves from consistently moist conditions under-foot, paired with illness, injury or heavy animals, can lead to painful skin abrasions, bone and joint exposure, hoof damage and secondary infections. These can lead to animals not rising due to pain and discomfort, resulting in dehydration, malnutrition, pressure sores, cellulitis and urinary infections (Simpson, 2012).

Heat stress

Heat stress can occur due to the combination of high ambient temperatures and the heat generated by livestock and the ship's engines (Appleby et al., 2008). This is of particular concern when transporting unacclimatised animals from the Southern hemisphere winter into the Northern hemisphere summer (Beatty et al., 2006).

The inability to dissipate heat, particularly in high humidity, may ultimately result in death (Blackshaw & Blackshaw, 1994). The upper critical temperature at which physiological changes need to occur to reduce heat load is as low as 25-26°C (Berman et al., 1985). Other responses to rising temperatures include reduced feed intake and increased water intake, sweating, and disruptions to plasma electrolytes and blood gas levels (Beatty et al., 2006).

In NZ, all live export ships have a heat stress management plan as part of the voyage instructions, which is initiated should the wet bulb temperature in the animal hold reach 28°C. During extreme periods of heat and humidity, the frequency of cattle inspections must increase in line with environmental demands (Ministry for Primary Industries, 2022b).

Stocking density

Stocking density refers to the number of animals (or total liveweight) within a defined area of space (Petherick & Phillips, 2009). High stocking densities for extended periods of time have been associated with a range of welfare risks, including restricted movement, limited access to food and water, accumulation of animal waste, and excess heat production from metabolic activity (Collins et al., 2018). Due to its effect on an animal's ability to avoid or engage in interactions with other animals and access resources within the environment, stocking density may be one of the key factors influencing animal welfare during transportation (Lee et al., 2012).

Behavioural observations in a controlled research environment showed that increasing the space allowance (decreasing stocking density) resulted in cattle spending more time lying down, isolating from pen-mates while resting, and lying with outstretched legs (Mayes et al., 2025). Although no significant effects on stress physiology were detected, the authors noted that live export ships may introduce additional stressors not accounted for in their study (Mayes et al., 2025).

MPI's guidance document *Livestock Export by Sea: Guidance for Cattle* states that stocking densities must allow cattle to lie down and rise without the risk of being injured. Environmental factors are also considered in relation to space allowances such as voyage length, temperature and humidity levels. An additional 15% space allowance is given for pregnant animals, and animals must be grouped according to size, weight, sex and breed to reduce competition for resources and minimise the likelihood of animal-to-animal aggression (Ministry for Primary Industries, 2022b).

Bedding

The quality and quantity of bedding on board can influence physical and thermal comfort, the risk of slipping and abrasions, opportunities to engage in essential behaviours such as walking, lying and ruminating, air quality, and the incidence of infectious diseases (Banney et al., 2009). Poor flooring conditions are also associated with hoof problems and increased risk of lameness (Fitzgerald et al., 2000).

Cattle show a preference for clean, dry surfaces, and typically lie down as soon as flooring is cleaned and fresh bedding is provided, indicating both fatigue and a reluctance to rest on dirty surfaces (Banney et al., 2009; Simpson, 2012). Reports from voyages from Australia to China indicate that cattle are often exposed to poor underfoot conditions. Independent observers reported that often only light covers of sawdust are applied to the pen floors, leading to the accumulation of urine and faeces (Hing et al., 2021). Pens were only washed once or twice, despite an average journey length of 20 days, and on some vessels, washdowns exposed cattle on lower decks, including hospital pens, to overflow water containing urine and faeces (Hing et al., 2021).

Both NZ and Australian guidelines specify that bedding material must be provided at a rate of at least 7 tonnes or $25m^3$ for every $1000m^2$ (equating to a 2.5 cm layer if distributed evenly) to ensure flooring surfaces remain relatively dry and non-slip. Levels must be checked at least once per day and replenished as often as needed to ensure the health and welfare of the cattle (Department of Agriculture, 2024; Ministry for Primary Industries, 2022b).

Ammonia levels

Ammonia levels are influenced by stocking density, nitrogen content of animal feed, ambient temperature, and the pH of the animal urine. Ammonia can irritate the respiratory system, causing inflammation of the small airways of the lower respiratory tract (Appleby et al., 2008; Costa et al., 2003). Prolonged exposure to high levels of ammonia can lead to coughing, sneezing, watering eyes and nasal discharge (Drummond et al., 1976). Preference studies in pigs and poultry have shown that ammonia levels as low as 10 ppm may be aversive to animals (Kristensen & Wathes, 2000).

In Australia and NZ, ammonia limits on live export ships are set at 25 ppm (Department of Agriculture, 2024; Ministry for Primary Industries, 2022b). However, cases where levels exceeded 25 ppm have been recorded on live export vessels (MAMIC Pty Ltd, 2001). Research on vessels sailing from Australia to the Middle East found ammonia levels to exceed 25 ppm in areas with poor ventilation – specifically

closed decks, near the engine block on open decks and at the front of the vessel (Pines & Phillips, 2011).

Exposure to high ammonia levels altered immune responses in cattle, suggesting that a maximum level of 20 ppm may be more suitable (Tudor et al., 2003). This would align with the current NZ WorkSafe guidelines for human exposure: *"to protect for acute ocular and respiratory tract irritation, respiratory symptoms, and decreased lung function"* (Worksafe, 2025). Under NZ regulations, ammonia levels on live export vessels must be measured and recorded daily during the voyage in a variety of pens and decks across the vessel (Ministry for Primary Industries, 2022b).

Ship infrastructure

Poor ship infrastructure and mechanical breakdowns were key risk factors identified on live export ships sailing from Australia to China in 2018-2019 (Hing et al., 2021). Many of the vessels in question were also used to transport livestock from NZ to China during the same period (Ministry for Primary Industries, 2023b).

The *Gulf Livestock 1*, which sank on a voyage from NZ to China in September 2020, carrying 5,867 dairy cattle and 43 crew members, is an example of the recurring mechanical problems some livestock ships experience. This vessel experienced stability and navigation issues in May 2019, followed by engine failure in June 2019, which left the vessel adrift for over 20 hours. In August 2020, the main engine failed once more, resulting in its sinking off the coast of Japan during typhoon conditions (Hing et al., 2021).

In NZ, responsibility for ensuring ships are fit for sailing is distributed among several individuals and organisations, including the shipping management company, the exporter, the vessel owner, the Master and Maritime NZ (Ministry for Primary Industries, 2022b). To demonstrate a vessel is maintained well and fit for purpose, a current *Australian Certificate for the Carriage of Livestock (ACCL),* issued by the Australian Maritime Safety Authority (AMSA) under Marine Orders Part 43 (for vessels equipped for the permanent carriage of livestock), or an equivalent, acceptable to MPI, must be provided by the Master before sailing. This includes maintenance of fittings, fixtures, and objects that may come into contact with cattle, disinfection and disinsection (insecticides to eliminate insect vectors), record-keepings, and assurance that back-up systems are in place for feed, water, light and ventilation (Ministry for Primary Industries, 2022b).

Management at discharge

Between 2018 and 2019, welfare issues such as discharge delays, the use of unsafe vehicles for cattle transport, and non-compliant and rough handling of animals by inexperienced handlers were reported by independent observers on live export ships disembarking in China (Hing et al., 2021). In some instances, animals were not provided food or water during the discharge period due to there being no remaining fodder on board the ship (Hing et al., 2021).

Multiple instances of cattle mortalities at discharge have been reported, including euthanasia due to rejection by the importing country (e.g., inappropriate animals being unknowingly loaded onto the vessel), leg injuries or fractures, or being deemed unfit for discharge (Hing et al., 2021). There are also multiple reports of cattle being "smothered to death" during discharge (Hing et al., 2021).

Post-arrival report summaries are required for all live cattle exports from NZ, documenting mortalities occurring within the first 30 days of arrival. Summaries covering 2019 to 2023 are available on MPI's website and show 285 mortalities over that period. The Director-General of MPI may refuse the issue of an AWEC if there are any concerns regarding the post-arrival conditions for the exported animals or the manner in which the welfare of previously exported animals was attended to during the 30-day post-arrival period.

Other potential concerns

Additional stressors that may impact the welfare of animals on board live export vessels include handling by humans, changes in light intensity and photoperiod, motion sickness, exposure to high noise levels and unfamiliar environments. However, research on these factors during live export by sea is limited, with most research focusing on land transport and pre-slaughter handling (Appleby et al., 2008; Phillips & Santurtun, 2013).

2.7 The current situation regarding live export by sea from New Zealand

Live export by sea from NZ has been banned since 30 April 2023, following a two-year phase-out period. Following the ban, the newly elected National Government announced its intention to reinstate the trade, with stricter "gold-standard" animal welfare regulations. These gold standard regulations include only the use of custom-built ships for transporting of animals from NZ, along with the monitoring of animals during the voyage, at quarantine facilities, and during their transport to destination farms. The proposed regulations would also include the introduction of an importer licensing regime, requiring all importers to be certified by MPI, meeting specific animal welfare standards (Wright & Gibson, 2023)

An update from the Ministry for Primary Industries website dated 20 November 2024, states:

"The coalition government is progressing work to reinstate the export of livestock by sea for breeding purposes with strengthened animal welfare outcomes for the trade. Reinstating the trade will involve amendments to the Animal Welfare Act 1999 and new requirements on exporters to identify risks and manage the welfare of animals throughout the export journey.

As part of the work, the government is undertaking a targeted engagement with experts in the livestock export industry, and with key animal welfare advocates, to seek input on operational and technical details that will support high animal welfare outcomes throughout the export journey.

The public will have the opportunity to comment on legislative proposals when an amendment bill is considered by a select committee in 2025." (Ministry for Primary Industries, 2024b).

A press release from the Minister of Agriculture, Andrew Hoggard, also dated November 20th, 2024, stated that legislative changes introduced by the government to reinstate the trade, would aim to *"enhance oversight"* and *"strengthen requirements for exporters to identify risks and manage the welfare of livestock exported by sea."* These changes would involve amendments to the Animal Welfare Act 1999 "*to ensure exporters effectively manage animal welfare outcomes throughout the entire supply chain."* Additionally, Hoggard stated that *"the public will have an opportunity to comment on these proposals through the release of a discussion document next year."*

As of 1 January 2026, there has been no announcement regarding an upcoming public consultation on the trade.

Notably, as this thesis was being finalised, Andrew Hoggard announced that the ban on live export by sea would not be lifted during the current government term (this is discussed further on page 88).

2.7.1 Divided opinions amongst key stakeholders

The reinstatement of live export by sea in NZ has sparked considerable debate amongst key stakeholders, with divided opinions on both the ethical and economic implications of the trade. These stakeholders include industry representatives, exporters, farmers, veterinarians, animal advocates and the general public, each with differing views on the potential risks and benefits associated with the trade (Ministry for Primary Industries, 2020).

There have been only two reviews undertaken in NZ on the live export by sea trade, with only one of these including a public consultation open to submissions, the New Zealand Government's 2019 *Livestock Export Review*. During this review the majority of submissions supported a total ban on the trade. Generally, exporters and others involved in the industry opposed the ban, arguing that the trade significantly contributes to NZ's economy and is positive for the country's international reputation. Those in favour of the ban, including individuals and animal advocacy groups, argued that it was the only way to safeguard animal welfare and prevent any negative impact on NZ's reputation. These concerns centred around both the sea journey and the animal's arrival in the destination country. Additionally, veterinarians' views were divided, with some supporting the ban, while others opposed it, seeing the live export process as sufficient in protecting animal welfare (Ministry for Primary Industries, 2020).

Different stakeholder groups are likely to have varied opinions of the live export industry according to their own unique perspectives (Patricia A. Fleming et al., 2020), and this debate highlights the tension between economic interests and moral concerns, with both sides advocating for a solution that aligns with their values. The submissions themselves offer valuable insights into the concerns and opinions of those directly involved or impacted by the trade. However, there has been no systematic analysis of these submissions within an academic context, and there is a notable lack of literature exploring these diverse perspectives. This creates a significant gap in the understanding of the varying opinions and concerns surrounding live export by sea. Gaining a better understanding of these differing perspectives could allow for clearer messaging and enhanced communication between stakeholder groups (Patricia A. Fleming et al., 2020).

2.8 Conclusion and research objectives

Due to the lack of literature regarding animal welfare specific to NZ's live export trade, this review used research from other jurisdictions, most notably Australia. Given the shared use of vessels and some trade routes between the two countries, this research is highly applicable to the NZ trade. Furthermore, in regard to stakeholder opinions on the trade, there were a small number of studies from Australia, but no such research has been undertaken in NZ. Here there remains a significant gap in the understanding of the varying opinions and values of key stakeholders about the trade.

These perspectives have not been explored within the existing literature. Addressing this gap by gaining understanding around these different viewpoints is invaluable for informing more effective, well-rounded policies and regulations that will balance both economic and moral considerations surrounding the live export industry.

The objective of this research is to analyse the diverse perspectives of key stakeholders within the live export by sea trade, with the aim of gaining a deeper understanding of the perceptions and values that underpin their viewpoints.

This will be achieved by:

1. Thematic analysis of submissions made during the government's public consultation on the 2019 *Live Export Review*.
2. Conducting semi-structured interviews with selected stakeholders.

3.1 Methodology overview

This methodology chapter outlines the approach I used to investigate the perspectives, justifications, and underlying narratives of key stakeholders in relation to the live export of animals by sea from NZ. This research project was undertaken in two sequential phases. In the first phase, I conducted a thematic analysis of the public submissions received during the New Zealand Government's 2019 review of the live export trade. These submissions provided a broad overview of public and organisational perspectives, highlighting key themes, concerns and justifications related to the continuation, conditional continuation and discontinuation of the trade. The findings from this initial analysis of the public submissions informed the second phase of my research, which involved conducting semi-structured interviews with different stakeholders, including industry representatives, animal scientists and veterinarians. The themes I identified in the analysis of the public submissions were then used to guide the development of my interview questions. This allowed for a more in-depth exploration of the key issues, areas with shared views or differing opinions, and the potential reasoning behind the positions held by different stakeholders. This multi-phased approach allowed me to develop a comprehensive and layered understanding of the live export debate in NZ, by integrating the broad perspectives of the public and industry bodies (through the submissions) with the more detailed insights of experts and stakeholders involved in the trade (through the interviews).

3.2 Epistemological positioning

For this research project, I used an interpretivist epistemology, using qualitative methods to explore participants' views on the topic of live export by sea. Qualitative methods aim to study individuals' lived experiences and the meanings they construct from their own perspectives around those experiences (Kuczynski & Daly, 2003). To gain an understanding of the meaning of these experiences, one must interpret them through a process of meaning construction, clarifying the way in which they are embodied in the actions and the language of social actors (Schwandt, 1994). This allows for a focus on the way in which people interpret experiences, attach significance and create personal narratives to make sense of life events. It acknowledges that individuals' perspectives are shaped by their professional roles, personal backgrounds and broader social and political discourses.

Rather than pursuing objective truths with this research project, I aimed to explore the diverse perspectives of those involved in or impacted by live export. This approach enabled me to gain an understanding of the meaning of the issue from the participants' perspectives and to develop theories grounded in the patterns and themes that emerged from the data. To explore these meanings, I used a qualitative research design, combining thematic analysis of both the written submissions and semi-structured interviews. This approach suited the interpretation of the data within this research project as it allowed me to capture the variation and complexity of different individuals' experiences, opinions and perceptions on this multifaceted issue. As further described by Merriam and Tisdell (2016): "Qualitative researchers are interested in understanding how people interpret their experiences, how they construct their worlds, and what meaning they attribute to their experiences." When interpreting

interview data, a qualitative approach can be useful as it allows researchers to explore the variation in human experiences and perspectives surrounding a complex issue and the context in which participants form their views. As explained by Braun and Clarke (2006): "the most basic definition of qualitative research is that it uses words as data . . . collected and analysed in all sorts of ways."

3.3 Public submissions

3.3.1 Data collection

As part of my research into the social perceptions and justifications of stakeholders on the live export of animals by sea from NZ, a request was made to MPI for copies of submissions received during the public consultation on the Livestock Export review. This review was held over a nine-week period, from 18 November 2019 to 22 January 2020 and based on Discussion Paper No: 2019/10 *Livestock Export Review*, with the aim of gathering feedback on four proposed options to enhance NZ's reputation and improve the welfare of livestock being exported. The review focused on cattle, deer, goats and sheep, with four options presented for feedback: a total ban, a conditional ban, new regulations and continuous improvement (these options will be discussed in more detail in section 4.1 Overview of public submissions).

The public were invited to give feedback on some or all four options. This could be submitted via online survey through MPI's website, through email or post. The discussion document included suggested questions for submitters to help guide the structure of their submissions, though these were optional. In total 3,791 submissions were received. Of these submissions, 3,275 were made through a standardised form on the Save Animals From Exploitation (SAFE) campaigns website, all seeking a total ban on the trade. A further 440 were online survey responses using a template, consisting of limited variation and therefore minimal qualitative content. This left 76 distinct and individually written submissions from a range of individuals and stakeholders. As the focus of this study was to explore the reasoning and narratives surrounding live export, I chose to limit my dataset to the 76 unique, individually written submissions. I felt that these would offer more open-ended responses and a richer and more detailed set of data for analysis.

On the 21 May 2024, I submitted an email request to MPI, seeking access to the submissions under the Official Information Act 1982. My request was approved, and I received a private link via email to access copies of the 76 individual submissions for my analysis.

3.3.2 Data analysis

The purpose of the analysis of the submissions data was to identify key themes that reflected the main issues and perspectives on live export shared by the submitters. These themes would then serve as the foundation for shaping the questions for my stakeholder interviews. By doing this, I aimed to create a focused and relevant set of questions that would enable me to further explore these themes in

greater depth with the interview participants, hopefully providing a more comprehensive understanding of the topic.

To analyse the public submissions, I used the qualitative data analysis program NVivo. I encountered some challenges in the initial stages due to formatting issues with the submissions document, making it difficult to highlight words and sentences in NVivo for categorisation. This issue arose from the disclosure markings running across the background of the pages, which interfered with the software's ability to differentiate the background text from the foreground text. After reformatting the document, which took some time, I was then able to continue with my analysis. Another challenge was the redaction of key details from the submissions, which made it difficult for categorisation according to industry type or occupation of the submitter. Additionally, several submissions lacked a clear or explicit stance on the issue, adding more complexity to the process of categorisation and analysis.

After overcoming these challenges, I proceeded with my qualitative data analysis and was able to identify common themes running throughout the submissions and the different ways in which individuals or industry bodies approached these themes. I used thematic analysis, following the approach set out by Braun and Clarke (2006) in their research paper *"Using thematic analysis in psychology."* This paper provided guidelines for conducting a thematic analysis following a six-phase process:

Phase 1: Data familiarisation

In this phase I familiarised myself with the data set, which involved reading through all 76 individual submissions multiple times and getting to know the way in which the submissions were composed. As emphasised by Braun and Clarke (2006), I read the submissions in an active way and started to think about meanings and patterns that may be present within the data, and started to make a list of ideas around what I thought emerging themes may be.

Phase 2: Generating initial codes

The second phase involved generating my initial codes from the dataset. Initially, this proved difficult as the formats of the submissions varied. Some submitters chose to use the suggested questions provided by MPI to help guide their submissions, while others did not follow this structure. Additionally, some had designed their own set of questions, which they addressed within their submissions. As a result, the submissions varied significantly in both content and format, with some directly addressing the proposed questions and others taking a more unstructured approach. This lack of uniformity made it difficult to apply a consistent approach to coding and identifying themes, as the individual responses didn't always align in terms of which topics were addressed or the detail of information provided. Despite these challenges, I was able to identify emerging codes by focusing on recurring patterns and key concepts within the dataset. I aimed to capture the wide range of perspectives by looking for repeated words and ideas, using these to generate my initial codes and as a starting point for establishing my key themes.

Phase 3: Searching for themes

In the third phase, I began searching for potential themes by revisiting my initial codes and looking at how these codes related to one another. I then began organising these codes into groups that could be potential themes. In this initial stage, there were 22 themes identified, along with various subthemes.

Phase 4: Reviewing themes

In the fourth phase, the 22 themes were reviewed; some were removed as there was not enough supporting data to make them a key theme, and others were merged into a single theme. After the reviewing phase was complete, I was left with eight key themes from the dataset. With these key themes in mind, I then re-read all 76 submissions to ensure my themes were relevant and reflective of the dataset. This also allowed me to pick up any additional data that had been missed in my initial coding stages before my themes had been refined.

Phase 5: Defining and naming the themes

In the fifth phase, I revisited the themes, assigning names that reflected what each theme captured from the data. Following the approach outlined by Braun and Clarke (2006), I wrote a short caption that clearly illustrated the 'story' each theme was conveying. This process ensured that the themes were clearly defined and reflected the underlying messages within the data set.

Phase 6: Producing the interview questions

Lastly, the key themes identified within my analysis of the public submissions were used to inform the development of the questions for my stakeholder interviews. By aligning the interview questions with these key themes, I aimed to ensure that the questions were directly relevant to the concerns, perspectives and issues raised within the submissions. The key themes identified are discussed in more detail within the results section of my thesis.

3.4 Stakeholder interviews

3.4.1 Development of interview questions

Following the completion of the analysis of public submissions, a series of interview questions (see Appendix C) were developed based on the common themes and recurring ideas articulated by stakeholders within these submissions. The interview questions were specifically designed to help gather data related directly to my research questions and objectives. A set of eighteen core questions was prepared, with additional questions to include if time permitted within the approximate one-hour interview period. Each question was open-ended to encourage participants to share their perspectives

and personal experiences. Participants were informed they were under no obligation to answer all the questions if they did not wish to.

3.4.2 Human ethics approval

As the study involved interviewing human participants, obtaining ethics approval was a necessary requirement. The procedure for using human participants in research was followed as set out in Massey University's Code of Ethical Conduct for Research, Teaching & Evaluations Involving Human Participants. On the 11th of October 2024, my supervisors and I met via Zoom with an independent expert as part of the peer review process to discuss the potential ethical implications of the research project. The independent expert was provided with the in-house ethics document, which outlined the methodology and potential ethical issues identified by my supervisory team. This meeting lasted for approximately an hour.

During the meeting, the main ethical concerns discussed were maintaining the anonymity of interview participants and the security of the data collected. The primary ethical concern of the research project was ensuring anonymity for participants who wished to remain unidentified; this also included their workplaces. It was determined that, given the small number of individuals working within the different sectors of the industry, anonymity could not be 100% guaranteed. However, it was concluded that the research project presented a low risk to participants, and it was unanimously agreed to continue through the low-risk notification pathway. An online ethics application form was submitted on 17 October 2024 and was approved.

3.4.3 Informed consent

Each participant was provided with an information sheet (see Appendix A) and a consent form (see Appendix B) prior to their interview. The information sheet provided all key details about the study, including the interview structure, main discussion topics, estimated duration, and how the data would be used in the future. Details about the choice of remaining anonymous were provided, including how the data collected would be kept confidential and secure. It also clarified the fact that participants were not required to answer any questions they felt uncomfortable with.

Consent forms were provided to all participants, which were dated and signed to confirm full consent to proceed with the interview and permission for the use of the data collected in my research assignment. It was also reiterated that participants had the option to remain anonymous if they wished, with a pseudonym used to ensure anonymity.

3.4.4 Privacy and confidentiality

All collected data was stored within a secure, password-protected cloud platform accessible only through my own personal login. No data was stored on a desktop computer. I was the sole individual accessing the data throughout the research project. The names and details of all participants, including

pseudonyms used, were stored in separate documents from the interview data. In line with Massey University protocols, all data will be destroyed five years from the date of collection.

Initially, I planned to give each participant the choice of whether they wished to remain anonymous or not, with the option of having a pseudonym to protect their identity. However, as the number of interviewees was small, I made the decision to keep all participants' identities anonymous for uniformity across the dataset. This also included not disclosing information about participants' current or previous places of work, to ensure their identities were not exposed.

3.4.5 Research setting

This study was undertaken both in person and online via Zoom. All in-person meetings were undertaken during business hours and in non-isolated locations to ensure my safety. When meeting at participants' workplaces, I made sure to sign in and out on a visitors' register. Zoom meetings were undertaken from home using my personal computer and with headphones to ensure any conversations could not be overheard by others living at my residence. Participants were informed before recording started and again when the recording was stopped.

3.4.6 Selection of participants and data collection

To identify potential interview candidates, I formed a list of different key stakeholders and professions within the live export industry. I wanted to include a diverse range of participants that would represent a variety of perspectives on live export. Through discussion with my supervisors, purposive sampling was used to form a list of suitable candidates to invite to participate in the research project. This list was then refined, drawing on their knowledge of the sector and existing professional contacts. Several of the individuals were known to my supervisors through their prior engagement with industry networks, public commentary on the issue, or involvement in regulatory or advocacy roles.

I searched for contact details using publicly available sources, including industry websites and professional platforms such as LinkedIn. All potential participants were initially approached via email. Participation was entirely voluntary, with no pressure or coercion applied, and individuals were free to decline involvement in the research project.

Data collection took place between December 2024 and March 2025. A total of 13 stakeholders were contacted via email and invited to participate in a semi-structured interview. Of these, eight responded and subsequently participated in an interview. In-person interviews were recorded using a simple voice recorder app and transcribed using online transcription service TurboScribe. All Zoom meetings were recorded within the Zoom app, with video and audio files available after the meeting concluded. As Zoom does not have an isolated audio file option, video files were deleted after each interview, with only audio files kept for transcribing.

3.4.7 Data analysis

Once all interview audio files were transcribed, the resulting transcripts were uploaded into qualitative data analysis software NVivo. Uploaded transcripts were anonymised and labelled with assigned pseudonyms, with no participant names included. As with the public submissions, I followed the same six-phase process for thematic analysis set out by Braun and Clarke (2006) to identify the main themes and subsequent sub-themes running throughout the dataset.

The main themes I initially identified were not unexpected; they were themes pulled from my analysis of the live export review submissions, which were then used to design my interview questionnaire. This allowed me to address specific aspects of my research questions and guide the exploration of the key concepts I wanted to discuss with the participants. However, as my analysis progressed, I began to focus more closely on how participants framed conceptions of animal welfare in their narratives. Rather than simply mapping where participants stood on a "for or against" spectrum, my analysis paid attention to the underlying processes through which their perspectives were shaped. This involved considering how participants' values and experiences informed their positions on the issue. The themes that emerged from this analysis now form the basis for the chapters that follow.

This chapter presents the findings of the study, organised into two main sections. The first part reports the results of the thematic analysis of public submissions received during the 2019 government review of the trade organised into key themes. The second part presents the findings from the semi-structured stakeholder interviews, focusing on the value participants placed on animals, the main reasons they gave for their stance on the trade, and how they spoke about animal sentience.

4.1 Overview of public submissions

This section presents a thematic analysis of the 76 individual submissions received by MPI during the 2019 review of the live animal export trade in NZ. At the time of the review, the export of livestock (sheep, cattle, deer and goats) for breeding purposes was still legal and actively taking place. Thematic analysis was used to identify, analyse and report patterns found within the data, following the method outlined by Braun & Clarke (2006). It is important to note that as part of this review process, submitters were invited to provide feedback on four different options put forward by MPI for consideration, around the export of livestock. For reference, I will briefly outline these below:

Option one – total ban:

The prohibition of livestock exports entirely, either for all or specific species, or the restriction of certain aspects such as journey duration or mode of transport (sea or air).

Option two – conditional ban:

The requirement of approval from the Director-General of MPI before applying to export livestock. This could apply to all livestock exports or only specific types. If approved, exporters would need to apply for an AWEC[2] *(Animal Welfare Export Certificate).*

Option three – new regulations to enhance the export system:

Strengthening of the export system through regulations without imposing bans, focusing on areas beyond the AWEC process, specifically: independent voyage monitors and an exporter registration scheme.

Option four – continuous improvement:

Most initiatives under this option require no formal rule changes. Key enhancements include the removal of livestock from existing AWEC exemptions, introducing an Export Destination Approval Process, and a new operational policy.[3]

[2] Information on the AWEC process can be found under section *2.5.2 National regulation.*

[3] Information on a proposed Export Destination Approval Process and new operational policy can be found in MPI's *Livestock Export Review: MPI Discussion Paper No: 2019/10* (Ministry for Primary Industries, 2019a).

For the purposes of this overview, submissions selecting option one (a total ban) are classified as supporting a ban, while those selecting options two, three, or four (conditional ban, new regulations, or continuous improvement) are classified as opposing a ban.

4.1.1 Key themes

All 76 individual submissions specifically addressed live export by sea, leading to the identification of eight recurring main themes in my thematic analysis. In this chapter I will present each theme in turn, supported by direct quotations from the submissions to illustrate key points, demonstrating how both those in support and those in opposition to a ban on live export by sea drew on these ideas to justify their respective positions and arguments, and different ways these ideas were operationalised by those holding different views on continuing the practice.

Note that any quotes used in this section will not be attributed due to personal details being removed from the submission documents for privacy protection under sections 9(2)(a) and 9(2)(b)(ii) of the Official Information Act 1982. All quotes can be assumed to have come directly from the submissions themselves, which are available upon request directly from MPI.

The eight main themes identified within the dataset:

1. On-ship welfare
2. Mortality rates
3. Post-arrival management and welfare
4. Transparency of the industry
5. Food security and international obligations
6. New Zealand's reputation
7. Economic benefits and impacts
8. Genetic material

Note that these themes are not presented in order of frequency. The most mentioned themes were NZ's reputation and the economic benefits and impacts of the trade, followed by post-arrival management and welfare, then on-ship welfare. It is also worth noting that all of these themes were outlined in MPI's discussion paper released prior to the review, indicating that submitters were responding to issues that had already been identified and framed by the government. While not all contributors addressed every theme, the submissions generally engaged with the key issues introduced in the review documentation.

Theme 1: On-ship welfare (animal welfare during the voyage)

Submitters in support of a ban raised a wide range of concerns in relation to the welfare of animals during the voyage. They argued that welfare can be compromised not only from physical injury, illness or disease, but also from psychological stressors, ship infrastructure and design, and the prolonged duration and isolation associated with long-distance sea travel. These concerns were often described as interconnected, with individual welfare issues interacting and compounding one another.

These submitters highlighted how conditions on board live export vessels can directly compromise the physical welfare of the animals on board, pointing to factors such as heat stress, overcrowding, inadequate ventilation, and poor hygiene, leading to injury, illness and disease, and in some cases, death:

> *The unnatural diet, rough seas, high stocking densities and heat stress all have a negative effect on live exported animals, with some suffering injuries and others dying on board. Other welfare issues that have been reported… include shy feeders (before and during transport), [and] contamination of feed areas with faeces, urine and disease.*
>
> *The temperature inside the ship is difficult to regulate as heat is generated by the livestock and the ship's engines, which is often combined with a high ambient temperature, making heat stress a common and serious problem on export vessels.*

One submission explicitly drew on academic literature to support their position, stating, "*transportation of livestock animals by sea is profoundly linked with animal welfare compromise, particularly in regard to poor environmental conditions, high stocking densities, high temperatures and damaging ammonia concentrations (Phillips, 2008).*"

In addition to the physical health impacts, submitters in support of the ban raised concerns about the psychological welfare of animals during sea transport. They highlighted the mental and behavioural impacts associated with the change in environment, unfamiliar surroundings, and the unpredictable motion of the vessel:

> *Transporting animals involves changes to their whole environment. They are moved from familiar areas and encounter strange materials, smells, sights, sounds and vibrations; they are handled differently and mixed with unfamiliar animals; they are subjected to changes in temperature and air movement; …possibly hurt or injured; and …restricted in space, feed and water.*
>
> *Cattle… are unable to predict all of the movements of the ship… especially when it is near to shore where the wave motion is complex. There is scientific evidence of stress to these animals caused by high seas, as well as evidence of motion sickness.*

There were also concerns raised by those in support of the ban about the length of the sea journey and the risks this posed to animal welfare. They argued that during prolonged voyages, animals may be exposed to extreme fluctuations in temperature and humidity, as well as variable and often unpredictable climatic conditions. One submission noted that "*vessels can encounter hazardous seas and extreme changes of temperature and humidity, particularly during long journeys from the southern to the northern hemisphere.*"

Another submission further emphasised this point:

> *Some of the suffering that is inherent in long journeys worldwide could be prevented by substantially reducing journey times… however, given NZ's geographical location with its export to other countries involving sea or air journeys this is not possible, practical or actionable.*

These submitters also expressed concerns about the isolated nature of vessels during live export and the limited capacity for effective emergency response in the event of unforeseen circumstances. These concerns included potential failures of ship infrastructure, unexpected detours and voyage delays, as well as the limited ability to carry sufficient additional feed and water that may be required if journeys were unexpectedly extended. They emphasised the significant and potentially compounding welfare consequences such events would have for animals on board:

> *Examples of shipboard failures may include: the ventilation system breaking down with no backup generator; vessels being unavoidably detoured or delayed; crew becoming ill and unable to tend appropriately to the animals' needs or those of the sick or injured animals; food and water sources being insufficient for a change in journey length and/or becoming spoiled enroute; or voyages taking the animals through extreme weather events including cyclones."*

> *…emergency responses and contingency plans are inherently limited during live export… It would be extremely difficult to effectively respond to situations such as a vessel capsizing or unexpected delays when animals are in transit. Delays may impact on food and water availability, hygiene and waste disposal, behavioural needs, and cause additional unnecessary stress to the animals due to increasing length of the journey. The animal welfare impact in such emergency situations is likely to be severe.*

Conversely, not all submitters agreed that welfare risks are inherent on live export ships, with some who were opposed to the ban arguing that the regulatory and monitoring systems in place are of a high standard, ensuring acceptable animal welfare outcomes. They expressed confidence in the competence of stockpersons and crew on board the ships, arguing that animals are adequately managed and monitored throughout the voyage. One submission stated that "*the ships they travel on are of a high standard. The welfare on these ships is high. The stockmen that travel with them are also skilled."* Another submission further supported this point, stating, "*exports by sea are accompanied and managed by experienced stockpersons and in many cases veterinarians who provide expert oversight of the animals; and are assisted by the ship's crew in day-to-day animal management."*

These submitters also pointed to low rates of illness and mortality as evidence of strong animal welfare standards and effective management practices during transit:

> *The cattle that are exported in NZ have the highest of welfare standards throughout the export process. Sick animals are treated quickly. We have not seen higher rates of illness or death in export animals than on any other farm.*

> *The conditions and facilities on board modern live export vessels already meet extremely high standards regarding animal welfare, including fresh air circulation, ad-lib access to food, water, very clean conditions and strict volume density levels. Stringent control and monitoring processes are already in place and the actual statistics regarding animal health and mortality must be considered and understood. The current livestock export control system is not broken.*

In summary, animal welfare concerns on live export vessels were a major theme across many submissions, with supporters of the ban arguing that welfare risks are significant and difficult to manage at sea. Conversely, submitters opposed to the ban maintained that current regulations and

vessel standards are sufficient to ensure acceptable welfare outcomes, pointing to animal health and mortality data to support their position.

Theme 2: Mortality rates

At the time of this public consultation, live export by sea was still legal and actively taking place, with mortality rates being the primary animal welfare indicator used to assess and regulate the industry. The use of mortality rates as a welfare measure was used by both supporters and opponents of a ban to justify their positions on the trade.

Those supporting a ban emphasised the inappropriateness of using mortality as a measure of animal welfare during transport. This view reflects the idea that animals can experience very poor welfare and still survive the journey, including suffering of psychological, not physical origin. In addition, it is noted that mortality reflects the extreme end of suffering and thus only the most egregious welfare compromise. One submission stated:

> *…mortality rates alone are not an accurate measure when it comes to assessing the welfare of animals being transported. Those that die on an export journey are at the most extreme end on a scale of suffering; unfortunately, a huge percentage of animals suffer from pain, injury, disease and severe distress during long distance transportation, but their conditions might not result in death.*

Another submission similarly argued that *"assessing animal welfare by reference to mortality rates is an extremely blunt welfare metric, which is entirely unable to detect and measure any adverse impacts on animal welfare that do not result in mortality."*

Furthermore, there were submitters in both support of, and opposition to a ban calling for additional welfare markers to be measured, alongside mortality, for a clearer overall picture of the welfare of animals on board:

> *Mortality is a very blunt indicator of poor welfare. Mammals rarely transition from healthy to dead naturally, illness, disease and injury is generally the middle step in varying severities. Morbidity (illness) monitoring and recording is crucial to understand the full health implications involved and endured in this trade.*

Another submitter emphasised that *"during the journey – mortality is a poor indicator of animal welfare; a more useful indicator of animal welfare (reflecting in-voyage nutrition) would be body weight gain/loss for the longer duration consignments…"*

In contrast to this viewpoint, there were some submitters opposing a ban that interpreted the same mortality rates in a different manner, viewing them as a reflection of the industry's high animal welfare standards. They point to the consistently low mortality numbers, highlighting how strong animal welfare practices and regulatory systems are onboard live export ships, seeing this as a valid reason to continue with the trade:

We believe the incredibly low mortality rate on routine cattle shipments as stated in the review at 0.035 percent is a strong and much validated measurement that the shipping process has continually improved to the point where everyone can have confidence in the process.

Since 2008, average mortality rates for live animal shipments have dropped to an average of 0.14 percent. For cattle, expected mortality rates are 0.035%, or one animal death per 3000 animals exported. This could drop even further with constant reviews, research and understanding of animal health.

In summary, mortality rates were used in some way to justify their views by both those in support of and opposed to a ban on the trade. Those in opposition often pointed to consistently low mortality figures as evidence of effective animal welfare management practices and high welfare standards on board. In contrast, those in support viewed mortality as a poor indicator of welfare state meaning that low mortality rates did not reflect acceptable welfare, failing to capture the non-fatal injuries and psychological stress that the animals may have experienced on board. This theme highlighted the way in which the value of different statistics, such as mortality percentages, can be perceived differently and used to justify positions on the practice.

Theme 3: Post arrival management and welfare

The management and welfare of NZ livestock once in the destination countries was another key theme amongst submitters. This not only included management through the production cycle, but also their eventual slaughter.

The lack of transparency (this is further explored under *Theme 7: Transparency of the industry)* and oversight once animals leave NZ's jurisdiction, where they have no protection under NZ's animal welfare laws and regulations, was raised as a significant concern amongst some submitters in support of a ban, who placed a key emphasis on animal welfare:

In NZ, we recognise all animals are sentient and have laws and regulations for how they ought to be treated… Sending our animals offshore allows these rules to be undermined, with no mechanisms for protecting the animals once they arrive in the destination country. This is a big risk to our animals' welfare and undermines several core principles of our Animal Welfare Act 1999.

The government of this country cannot ensure that exported livestock are treated or slaughtered humanely once they have left our shores because our regulations do not have legal effect in foreign jurisdictions. The export of livestock to other countries with lower welfare standards does not reflect the expectations of the NZ public.

This was contradicted by some submitters in opposition to the ban, pointing out that NZ's loss of jurisdiction over exported animals in destination countries does not mean the animals will experience bad welfare:

It is generally accepted that once animals arrive in the country of destination, all NZ based parties including the exporter and indeed government lose control over the stock. However, it

is both arrogant and mis-informed to automatically pre-suppose that this results in a lower welfare outcome for the livestock concerned.

All livestock exporters and importers, have a considerable investment to ensure a successful outcome is achieved for the animals exported… This applies to their health, productivity, welfare, longevity and breeding potential. The final owners of the imported animals also have a considerable investment in animals' welfare and the implications of having these animals breeding and producing in their farming businesses and communities.

Concerns also related to the welfare standards and regulations in destination countries, specifically that animals were being exported to countries with animal welfare standards below those in NZ. Many submitters, including those involved in the live export industry, expressed the need for welfare standards in destination countries to be aligned with those in NZ:

…there is often an irreconcilable inconsistency with the welfare protections afforded to animals under NZ law and the welfare requirements in countries that animals are exported to. For example, the majority of our live cattle exports go to China, a country that has minimal animal welfare legislation.

Another submission emphasised that "*[organisation name] would like to see a situation where the welfare of animals sent to international destinations is aligned with the regulations and expectations of [sic] animals within our own borders."*

The variation in welfare standards with international trading partners was seen as a major flaw of the current system, with submitters both in support of and in opposition to a ban calling for stricter international agreements, or regulations that would place conditions on importing countries, though this would be challenging:

NZ's regulatory regime sets standards for animal welfare that represent the minimum legal requirements for the care and welfare of animals. There is an inherent disconnect with the live export regime which provides for the participation of these same animals… being subjected to a different regulatory regime that does not meet our minimum welfare standards.

To ensure that the welfare of the animals is safeguarded in countries where we have no jurisdiction, NZ should also limit export of live animals to countries that have welfare standards that meet or exceed our own. [Organisation name] understands that for many reasons, including international trade rules, deciding which countries these are and administering such a system is likely to prove exceedingly difficult.

…the standards within the country that is receiving the livestock are the biggest opportunity for improvement. While NZ legislation cannot bind other countries, NZ regulations could impose as conditions for granting a live export licence for each specific shipment.

It was felt by some submitters in opposition to a ban that this kind of approach could also work to raise animal welfare standards in importing countries. One submission stated *"while NZ has an active and successful role within the trade, it has the opportunity to set the standards on a global scale in animal welfare practices and should be actively doing so."*

Conversely, there were submitters opposing the ban who emphasised the fact that most destination countries are members of the *World Organisation for Animal Health (WOAH, previously Office International des Epizooties, OIE)* and therefore are required to adhere to internationally recognised guidelines. This viewpoint implies that countries without specific national or regional animal welfare laws or regulations, or with standards lower than NZ's, must still adhere to the WOAH's standards, and this should be sufficient assurance that animals will be treated well – and in accordance with global expectations for animal welfare. Therefore, these submitters argue that the lack of animal welfare laws is destination countries should not cause significant concern. One submitter explained:

> *The internal transportation, farming and end of life disposition of animals is managed by importing countries under their standards. While importing countries may not have regulated animal welfare standards equivalent to those in NZ, most countries are members of the World Organisation for Animal Health (OIE) which has guidelines for the transportation and slaughter of livestock that can be implemented in member countries.*

Another submission similarly noted that "*although the importing countries may not have regulated animal health and welfare standards equivalent to NZ standards, most are members of the OIE, which has guidelines for the transport and slaughter of livestock in OIE member countries."*

However, this viewpoint was contested by a submission in support of the ban:

> *The World Organisation for Animal Health (OIE) is the agency responsible for setting standards on public and animal health and has a role in creating rules for animal welfare. But it is not responsible for ensuring that these rules are adhered to or for punishing anyone who transgresses – that is still down to individual governments.*

In addition to concerns about different animal welfare standards in destination countries, concerns were also raised around a lack of transparency and independent verification within the production chain in destination countries, with no verification or system to account for what happens to animals once they leave quarantine facilities 30 days after arrival. For submitters both in support of and in opposition to the ban, the inability to track animals once exported represents a fundamental gap in the accountability of the NZ government around the practice, and undermines any assurances made about the welfare of animals within the industry:

> *Currently exporters are required to provide voyage reports, and 30 days post-arrival reports for livestock exported by sea requiring an Animal Welfare Export Certificate (AWEC). In the AWEC application process, exporters are required to provide information about husbandry and welfare practices on farms of destination, transport and end of life... These currently represent the only assurance that the NZ Government receives in respect of the possible animal welfare outcomes for the animals… after they have departed from NZ. None of the information is independently verified.*
>
> *The AWEC consideration should take into account the entire life of the animal in the destination country, including slaughter. It is not clear why this is currently limited to 30 days post-arrival, particularly when it is known that some animals currently exported from NZ will experience an inhumane death.*

Related to this, multiple submissions from both those in support of, and opposition to a ban called for enhanced post-arrival reporting. This suggests that many submitters feel the current approach of self-reporting by exporters themselves is not ideal and may be biased with commercially driven incentives:

> *The current reporting regime primarily relies on post arrival reporting from the exporter for data on compliance with the AWEC and Act. MPI now also requires reporting on conditions of animals 30 days after their arrival at destination. Reliance on self-reporting by those with commercially driven interests can foreseeably result in inaccurate and or incomplete reporting. Exporters are aware that their compliance record will be taken into account for any future export applications. This conflict of interest… incentivises underreporting of incidents and breaches.*

Another submission noted that "*some controls on the post-arrival period exist but they are inadequate to provide the assurances the NZ Government requires."*

There were also suggestions from both sides for the introduction of a "post-arrival management plan" and extending the 30-day post-arrival reporting requirement for more assurances that exported animals are being well taken care of:

> *[Organisation name] supports the inclusion of post-arrival management plans and 30- and 90-day post-arrival reports reflecting the implementation of the management plan. We believe this will generate the best possible outcomes for animals when they arrive in the importing country.*
>
> *Post-arrival reports only cover a maximum of 30 days at present; [organisation name] advocates that the welfare, condition and fate of the animals for a minimum of 12 months after arrival in the destination country should be included in the reports as this will lead to greater transparency and increased public confidence in the system. Ideally, lifetime reporting would be implemented.*

Conversely, a submitter in opposition to the ban highlighted that the absence of long-term post-arrival monitoring in destination countries does not mean animals are subject to mistreatment or poor welfare outcomes, and that the practicality of trying to enforce an extended monitoring system would potentially be too great:

> *It is simply not practicable to enforce lifetime, individual traceability and reporting as a means to monitor animal wellbeing. It is also valuable to note no other country in the world, including NZ and Australia, makes this requirement – not even within domestically-held herds.*

Concerns about post-arrival management, monitoring and welfare extended to end-of-life practices, with submitters from both sides mentioning the lack of information available about eventual slaughter processes at the end of the production cycle. Some expressed unease about the possibility animals may be subject to slaughter practices that fall well below NZ's animal welfare standards. One submitter explained, "*another issue is animals may be kept in, or slaughtered, under conditions illegal in NZ. What we are lacking is further knowledge of the welfare of our animals within the farming and slaughter processes of the destination countries.*"

In addition, whilst animals were officially exported from NZ only for breeding purposes at the time of consultation, it was questioned whether this was always adhered to, with submitters in support of a ban expressing scepticism about whether some animals may be slaughtered soon after arrival. One submitter noted that "*loose regulation and a failure to monitor animals after they reach their overseas destinations mean that animals approved for export as breeding animals, can end up being exported for slaughter.*"

Another submission expanded on this concern:

> *The loophole of breeder animal export is not without the risk of opportunists simply labelling some animals as 'breeder' only to sell them to slaughter upon arrival. Systems of follow-up are required to ensure NZ is not dragged into disrepute unnecessarily and potentially regularly.*

In summary, post-arrival management and welfare of NZ livestock emerged as a key concern for submitters supporting a variety of future options to the trade. The loss of oversight or control over exported animals was acknowledged by both sides, as was the lack of transparency regarding animal welfare standards in destination countries. In addition, there were submissions supporting the ban that questioned whether livestock intended for breeding purposes may be redirected for slaughter. This highlighted their concerns about the lack of independence in reporting and possible conflict of interest for exporters. Conversely, other submitters opposing the ban were reassured by the fact that destination countries, even those lacking animal welfare laws or with lower standards, are still expected to operate under the guidelines set by the World Organisation for Animal Health. For these individuals, adherence to WOAH standards was seen as sufficient in addressing any animal welfare concerns.

Theme 4: Transparency of the industry

A reoccurring concern among many submitters in support of a ban was the perceived lack of transparency within the live export industry. These submitters felt several key areas required greater oversight and more accessible, publicly available information. The perceived absence of openness and limited access to information about the practice, including lack of reporting, were viewed as a significant barrier to public trust, with the industry seen as operating "behind closed doors." For some submitters, this lack of transparency further justified their support for a complete ban on the practice. One submitter stated, "*unless the public is properly informed about what is going on, they will suspect they are being denied from the truth. This does and will continue to result in petitions, investigations and exposure of wrongdoing.*"

Another submitter emphasised that *"transparency is almost a dirty word within the live export trade. Exporters hate it, importers hate it. They deny truths, block, delete and change the truth when in their best interests. This is a very 'closed' business.*"

Submitters both supporting and opposing the ban expressed concerns about the limited availability of clear, consistent, and independently verified information, including regarding the fate of exported animals after their arrival in destination countries (this issue was also discussed in *Theme 3: Post arrival management and welfare*). These submitters also called for improved reporting on animal welfare outcomes, with some advocating for independent assessments to be carried out, as well as greater

transparency around how the MPI responds to breaches committed by export companies. One submitter noted that "*there is a significant lack of transparency in respect of animal welfare breaches in live export, the outcomes they result in, and ultimately, how such outcomes are assessed and responded to by MPI.*" Another submitter observed that "*it appears the exporter (and their staff) is made totally responsible for the welfare of the animals, and the reporting of performance/outcomes – without any audit/verification of the accuracy of the information they provide.*"

A further submitter emphasised:

> *…there is extremely limited transparency regarding animals' experiences during international voyages, nor any robust transparency after arrival in the destination country. This is particularly concerning as it appears the exporter is entirely responsible for all performance reporting after loading – with no apparent mechanism for information provided by the exporter to be verified/audited… by MPI or other independent parties.*

Some submitters opposing a ban recognised there was room for improvement and saw the potential benefits of enhanced public transparency and improved reporting systems, both for the reputation of their own businesses and for strengthening public trust in the live export sector. One submitter noted that *"improving the robustness, transparency and reputation of NZ live exports will undoubtably provide further opportunities for our livestock broking business."* Another submitter added that "*exporters need to work hard on gaining better access to their customer's dairy operations so we can better alleviate the public's animal welfare concerns.*"

In summary, this theme highlights a desire for greater transparency and independent reporting or verification of information within the live export industry. The lack of transparency and independence has led to low trust from those outside the industry and growing public scepticism around the trade and its ability to protect the welfare of exported animals. It was acknowledged by both sides that greater transparency and more publicly available information would positively reinforce the industry's standing, as well as improve animal welfare outcomes.

Theme 5: Food security and international obligations

Several submitters opposed to the ban highlighted the role of live animal exports in contributing to global food security, particularly in developing countries that rely on imported livestock to supplement agricultural systems and meet growing food demands. These submitters framed live export not only as a trade issue, but also a humanitarian one, pointing to NZ's position as a responsible trader, helping less advanced countries strengthen their food production systems. These submitters emphasised NZ's international obligation and ethical responsibility to support less well-off nations, using this viewpoint to justify their position that live animal exports should continue. One submitter stated that *"we should celebrate the support that NZ is providing to developing countries and especially to our assistance to meet the increasing demand for food security and safety as the world population and urbanisation continue to grow."*

Another submitter explained:

> *…nations such as China do not have sufficient pasture and grazing land upon which to breed the number of cattle required to feed their populations. They do, however, require fresh products produced in-country and have a strong desire to maintain a national cattle herd for food security, biosecurity and other social reasons. This is where the import of livestock which have been bred in other nations provides an effective and safe solution.*

Conversely, other submitters were also in support of helping overseas countries with food security, but suggested alternative methods to sending live animals, such as sending genetic material or helping through education and the building of infrastructure. It was suggested these methods would help developing countries to build up and maintain their own animal production systems, removing their reliance on live animal exports from other countries as well as improving the welfare of their animals in the process. One submitter suggested that *"NZ should invest in helping developing countries to develop better farming practices and better animal welfare practices and transition immediately to a complete ban on live exports."* Another submitter suggested helping developing countries *"build the infrastructure for the transport of meat, carcasses and genetic material instead of animals. Helping developing nations set up the infrastructure to maintain their own production is far more sustainable for those countries and is more animal friendly."*

International obligations in the form of trade agreements were mentioned in multiple submissions and were used as a key reason to justify continuation of the live export trade. One submitter noted that *"operating in compliance with international obligations is also essential. Live animal exports are an important component of some of NZ's trade agreements."*

Another submitter expressed concern:

> *[Organisation name] is also very concerned that a draconian total ban on livestock export that [sic] could be viewed as international protectionism and may consequently cause some trade retaliation or at least loss of preferred status in bilateral trade agreements.*

However, it was noted by a supporter of the ban that NZ does not appear to be obligated to send live animals to its trading partners overseas and should not allow trade agreements to compromise animal welfare:

> *No evidence has been presented to [organisation name] verbally or in any document from the NZ Government, that a ban on live export is non-complaint with NZ's international obligations. It is not appropriate for animal welfare to be compromised in the name of trade agreements.*

In summary, NZ's responsibilities to contribute to food security in other parts of the world were used to justify the need to continue exporting live animals. Submitters supporting a ban on live export proposed alternative approaches to supporting foreign countries in the development of long-term food security, focusing on ways in which they could be helped to build their own self-sufficient agricultural systems rather than relying on the ongoing import of live animals.

Theme 6: New Zealand's reputation

New Zealand's international reputation was used to justify arguments both for and against the continuation of live export by sea and is clearly a key factor influencing perceptions of the live export

industry. The word "reputation" was mentioned nearly 300 times within the 76 submissions. Interestingly, almost twice as many submissions referencing it came from opponents of the ban as from supporters.

Submitters advocating for a total ban offered a range of justifications that were tied to NZ's international reputation. Numerous submissions raised concerns that by continuing the trade, any problems arising within the sector – particularly those related to animal welfare – had the potential to damage the way in which NZ is viewed both within the country, and overseas, potentially tarnishing the country's image as a global leader in animal welfare standards:

> *The only way to ensure animal welfare standards are met and NZ's reputation isn't at risk is to go with option one; a total ban on live export… would ensure that these animals' welfare is protected under NZ's laws.*
>
> *Animals are sentient beings that need protection, sending them on long transports undermines this principle and any animal welfare laws set in place in NZ. It also undermines the reputation of NZ as a forerunner on animal welfare.*

Furthermore, some submitters supporting the implementation of a ban argued that it could positively influence how NZ is seen internationally, positioning the country as a global leader in animal welfare and potentially encouraging overseas consumers to purchase NZ products. In turn, this could generate positive economic outcomes. One submitter argued:

> *The selection of Option One [a total ban] protects NZ's reputation as a leader in animal welfare worldwide and enables our country to develop its production and export of animal products from animals that are ethically farmed and slaughtered in our country.*

Another submitter noted that *"NZ's international standing would be greatly enhanced by it being able to assert that it is the first country in the world to ban livestock exports. This improved reputation would bring with it flow-on economic benefits."*

Submitters opposing the ban also offered a range of justifications related to protecting and promoting NZ's reputation. Some submitters argued that the live export trade enables NZ to share its high-quality livestock genetics overseas, contributing to international food security, therefore having a positive effect on the country's reputation:

> *Continuing exports can only enhance NZs reputation internationally, by ensuring live exports are continued and regulated to the highest standards of animal welfare, so NZ is seen as a world leader. A ban is such a cop-out.*
>
> *NZ has developed an excellent reputation as an exporter of live animals because NZ has been able to successfully comply with importing countries requirements and provide high quality livestock and genetics to support the food security of importing countries over many years.*

There was particular focus on the Chinese market, with concerns that either a full ban or regulatory restrictions or requirements on future live exports may have negative effects on NZ's trade reputation, and the lucrative trade of other goods in that country:

> *…we are advised by customers that it would be reputationally harmful to NZ to, in effect, say to China, Japan or any other nation though trade prohibition that NZ did not trust a fellow OIE signatory nation to meet existing OIE commitments on animal welfare*.
>
> *The relationship with China is vital for our economy. Banning livestock exports sends the message that NZ believes they do not farm well. This message has an impact on all who trade with China – such as timber, beef and milk product exporters.*

Furthermore, there were some submitters who were opposed to a full ban on the trade, supporting options 2, 3 & 4 – conditional ban, new regulations and continuous improvement to protect the country's international reputation. Many supported a combination of options 3 & 4, with some providing suggestions to improve the current system, such as an exporter registration system based on prior performance and a full animal welfare assessment of the export process. One submitter explained that *"the implementation of new standards and then continuous improvement will give a more sustainable live export industry that meets the objective of improving animal welfare and safeguarding NZ's reputation as an ethical exporter internationally and domestically."*

> *[Organisation name] strongly supports a combined regulation strategy to effectively and efficiently ensure the welfare of livestock being exported from NZ, thereby protecting NZ's domestic and international reputation. Invoking both option three (new regulation), and option four (continuous improvement) through a Performance-Based Exporter Registration – is the most sustainable way forward.*

In summary, NZ's international reputation emerged as a significant consideration in many submissions, reflecting the importance many individuals and organisations place on how the country is perceived globally and the other activities that reputation might limit, permit, open up or maintain. Importantly, national reputation was used to justify opposing positions: some submitters viewed NZ's involvement in the live export trade as a means of enhancing its international reputation, while others argued that it only diminishes the country's reputation. Some submitters opposing a total or conditional ban expressed the view that reputational damage associated with banning live export could have direct impacts on international trade agreements and therefore affect economic outcomes for the country.

The way this theme is discussed differs between those calling for a ban and those wanting the trade to continue largely as it was. Each group frames concerns about NZ's reputation differently, with those in favour of a ban, or of improvements to the trade, emphasising the country's image in relation to animal welfare, while those in support of the trade highlight issues such as trade access, international expectations, and economic interests.

Theme 7: Economic benefits and impacts

The live export trade has the potential to bring additional revenue into NZ from overseas; therefore, it was not surprising that the economic benefits and impacts were a central argument used to justify positions on both sides of the live export debate.

Significant concerns were raised by those opposing the ban about the potential impact on farmers and wider rural communities, including those involved in additional services provided to farms engaging in

live export, and how they would cope without the extra income generated by the trade. This income was described as often working as a buffer to get through difficult financial times. One submitter explained:

> *…the selling of export animals to exporters instead of for replacements to other farmers, or for slaughter, is a valuable option, often selling at a premium. This is especially true in times when animal values are trending downward, in time of drought and feed shortage, or other industry retrenchment.*

Another submitter further supported this point stating that *"livestock export contributes an important revenue stream to thousands of NZ farmers, and its removal could have economic disadvantages, not only to the farming sector, but the wider rural economy and even NZ's trade position."*

Conversely, there were those in support of a ban who believe the income live export brings into NZ is of little significance, only benefiting a small number of farmers. Some also talked about the potential long-term negative financial consequences for the country. One submitter stated:

> *Livestock exports involve a small number of farmers and others… making a small amount of money from this trade and thereby jeopardising the incomes of a very large number of farmers and others involved in NZ's broader export trade.*

Another submitter added that "*live export… has a detrimental effect on the local meat-processing industry, affecting jobs and the economy. It makes no economic sense to continue with the live-export trade when a high-value alternative exists."*

Furthermore, some supporters of a ban were also concerned about the possible long-term financial implications of sending dairy cows overseas from NZ, and particularly to countries such as China, a main buyer of NZ's milk powder and dairy products. Concerns were raised about the potential financial consequences if China were to achieve self-sufficiency and no longer require the importation of dairy products from NZ. One submitter noted that *"providing breeding stock directly reduces NZ's future export earnings as countries no longer need to import animal products from this country."* Another submitter added that *"there is no economic rationale for livestock exports from NZ – in fact, such exports are financially harmful as providing other countries with breeding stock means they will not in future need to import animal products from NZ."*

This argument was refuted by some of those opposing the ban, claiming that importing countries have large enough populations to still require the importation of NZ dairy products alongside the supply of breeding cattle for their domestic dairy herds:

> *…we are aware of comments made that if NZ supports the dairy and farming capacity of overseas nations, it may lose markets for our animal products. This is both false and dangerous. The global population is 7 billion people with China accounting for nearly 1.4 billion… extremely large populations which require large quantities of primary produce to meet food security requirements. These requirements far outstrip any self- sufficiency gains which may be made through the relatively small numbers of livestock imported from NZ. There will always be demand for in-country fresh dairy products as well as imported products, and if NZ declines to supply livestock herd supplementation… China… will source livestock from countries other than NZ.*

In summary, economic considerations featured prominently in many of the submissions, with justifications presented from both those in support of, and in opposition to the ban. Opponents of the ban placed emphasis on its economic value to farmers and rural communities, arguing that live export provides a vital income stream, especially in hard financial times. Conversely, those in support of the ban noted that by continuing the trade, key buyers of NZ dairy products, such as China, may become self-sufficient and reduce their reliance on our dairy exports, leading to long-term financial consequences for farmers in NZ. Interestingly, this highlights the difficulties of weighing short-term economic gains with long-term economic benefits, with some submitters focusing on immediate financial returns and others more focused on the potential impacts live export may have on future trading.

Theme 8: Genetic material (semen & embryos)

This theme centred on the export of genetic material, specifically the possibility of trade in semen and embryos, as opposed to live animals. There was a range of justifications made on this basis from both sides of the live export debate.

Submissions from those in support of the ban advocated for the export of genetic material as a more humane alternative to exporting live animals. This was seen as a means for NZ to continue contributing to food security in countries that rely on imported stock to meet domestic food demand, while also avoiding welfare risks associated with sea transport:

> *The options available to replace live sea exports are many and provide a much higher animal welfare outcome with an enormously reduced risk to reputation… Animal genetic material could and should replace live animal exports 100%. The export of embryos, semen and the expertise to best use such methods of animal husbandry should be the goal for all exporting countries, especially NZ.*
>
> *[Organisation name] advocates that the government instead focuses on supporting and developing businesses in NZ that produce animal genetics for export. The transportation of embryos and semen… offshore is a sustainable and ethical way to ensure that the genetic stock of livestock in other countries is sufficiently improved.*

This perspective was contested by some submitters opposed to the ban, who argued that some export destinations may lack sufficient land to sustain domestic breeding programs for livestock and may have limited availability of suitable recipient animals for embryo transfer:

> *Export of animal genetics would not be a substitute for livestock exports in key NZ customer nations such as China given the core market demand is for livestock breeding and backgrounding… As land is the commodity in short supply from China's perspective, export of genetic material for breeding and backgrounding of cattle… is not a substitute.*
>
> *Embryonic exports currently do not meet the overseas importers need to: - have the quality breeding stock to receive the embryos, nor - meet their production requirements to have lactating cattle readily available, nor - meet their need for larger quantities of stock to meet population demand.*

Submitters from both sides raised ethical objections around the use of artificial breeding techniques required to provide genetic material to other countries. One submitter noted that *"there are also animal welfare concerns associated with artificial insemination and embryo implantation, and these may be exacerbated in countries with little experience in these areas."* Another further explained "*it is also worth noting that embryo collection may involve significant surgical procedures undertaken on the donor animal, which should be considered as part of the overall welfare outcomes."*

Additionally, some submitters from both sides also favoured the exportation of semen alone – rather than semen and embryos – to ensure any resulting offspring would get 50% of their genetic makeup from local livestock populations in the destination country. This would ensure resulting offspring would be better suited to local environmental conditions, leading to improved welfare outcomes. One submitter noted the following:

> *Where embryos are exported there remains risk that the genetics may not be suited to the environment, so [organisation name] prefers that germplasm export is only done with semen, so 50% of the genetic input is from animals that are suited to the environment.*

Another submitter added that *"exporting semen may slow the rate of genetic gain, but there could be additional benefits in that the progeny arising from use of this semen may be more suited to the local environment of the destination country."*

The submissions acknowledged that there are animal welfare concerns arising from both the export of live animals *and* the export of genetic material. Those in favour of exporting genetic material highlighted its potential to reduce animal welfare impacts by way of avoiding sea transport of live animals, whilst still maintaining NZ's obligations or desires to support improvement of livestock in other countries. While those against exporting genetic material pointed to its limitations, such as insufficient land and suitable animals, arguing that it is not a viable option. Submitters from both sides voiced concerns about the animal welfare implications for animals involved in donating and receiving embryos, as well as the rapid rates of genetic gain associated with this method.

4.2 Overview of stakeholder interviews

While my analysis of the public submissions revealed a diverse range of arguments used by submitters to justify their positions and arguments on the trade being banned, in the second phase of this research I used more in-depth participant interviews to explore how eight different stakeholders justified their positions. By analysing these narratives, I was able to gain a deeper understanding of the underlying values and more strategic reasons shaping their support or opposition to the trade. All names used in the following section are pseudonyms assigned to protect participant anonymity.

Note: For clarity, the second phase of this research refers to participants as being "in support of" or "opposed to" live export by sea. In contrast, the first phase – the analysis of public submissions – refers to submitters as supporting or opposing a ban on the trade, reflecting the language used in the government review, which asked submitters to comment on policy options relating to a potential ban.

4.2.1 Value placed on animals

The key reasons behind each participant's stance on live export by sea tended to fall into one of two broad categories: intrinsic in nature, with a focus on animal well-being, or instrumental in nature, with a focus on some form of human benefit. These categories are not fixed or mutually exclusive; rather, they are analytical tools used to interpret the interviews by focusing on the types of language participants drew on and using this as a lens to understand their positions on live export by sea.

The term *intrinsic*, can be defined as the recognition that something has "intrinsic worth" or "inherent worth" – that is, the broad concept that something has value *in and of itself*, often represented as a sense of moral duty towards its care or respect (Arias-Arévalo et al., 2017; Zimmerman & Bradley, 2002). In relation to animals, it is the recognition that they have innate value, outside of any value that they may hold for humans (Zimmerman & Bradley, 2002), and the sense of moral duty to ensure their well-being for their own sake, not merely for human benefit.

Instrumental value can be described as the worth something is given as a *means to achieve an end* – either a desire or goal (Allaby & Park, 2013), and how well or poorly it functions as an instrument in achieving this desire or goal (Bernstein, 2001). Something that has instrumental value is considered *valuable* to the *valuer* (Justus et al., 2009) – in this case humans. When applied to animals, their instrumental value might arise through their direct provision of products, labour and companionship, as well as their indirect contributions to economic stability and rural livelihoods (Forkman, 2013). Instrumental value is always conditional and fluctuates based on the shifting desirability of the end it supports, and the availability of an alternative means that may achieve the end result more efficiently (Sandler, 2012). Instrumental value placed on something as a means to an end, is often measured in monetary terms (Arias-Arévalo et al., 2017).

By examining the underlying values that appeared to shape and explain each participant's attitude towards, and moral position on live export by sea, I was able to identify whether their reasoning was grounded in intrinsic or instrumental values. When categorising participants, I coded references to animal care or animal suffering as intrinsic, whereas references to economic outcomes or reputational impacts were coded as instrumental. For some participants, one perspective was more dominant in their narrative than the other. Others often combined both ways of talking, acknowledging the value of animals for their own sake while also framing their worth in terms of economic gain or questioning their use when it was thought not to be economically viable

Table 1 summarises each participant's stance on live export by sea, the main reasons that emerged from their interview to justify that stance and the values that those main reasons reflected. While it might be easy to assume that all concern for animal welfare is intrinsic in nature, this was not always the case; some participants clearly discussed animal welfare in ways that reflected instrumental motivations. Five distinct groups of participants emerged, based on both their pro or anti stance toward live export by sea and the key animal-related values expressed during their interviews. The largest group consisted of participants who were opposed to live export and demonstrated a mix of both intrinsic and instrumental values of animals (three participants). This was followed by those who were opposed to live export with intrinsic values only (two participants). The remaining three groups

consisted of one participant each: those in support with instrumental values only, or with both instrumental and intrinsic values, and those opposed with instrumental values only.

Table 1

Summary of participants' stance on live export by sea, the main reasons given to support that stance and the values reflected in their reasoning.

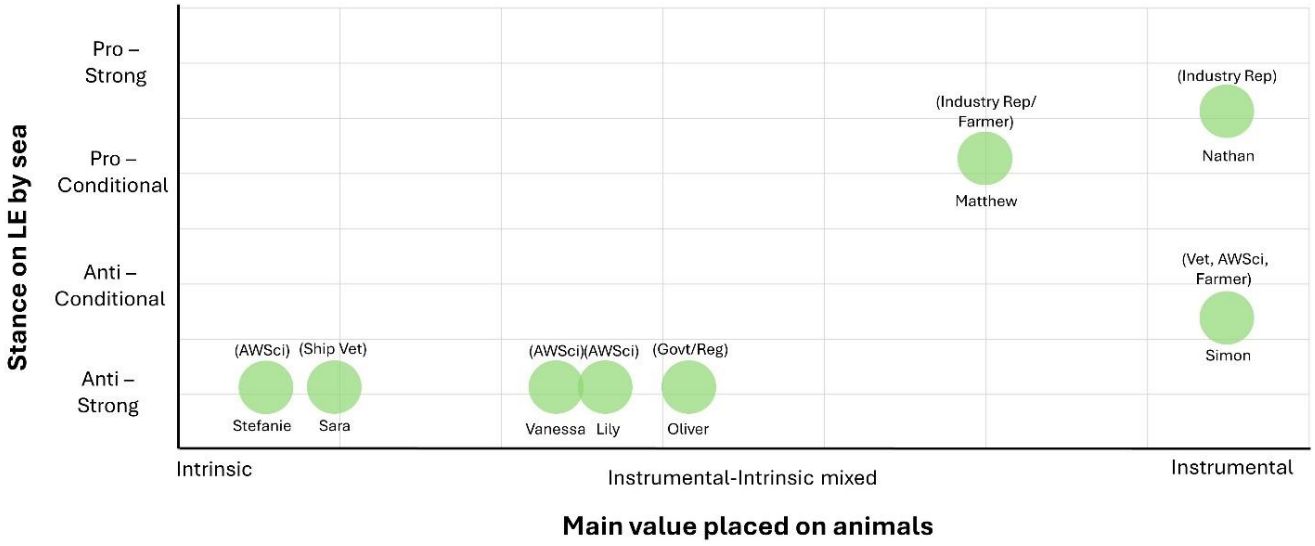
STANCE ON LIVE EXPORT AND KEY ANIMAL-RELATED VALUES	PARTICIPANT	MAIN REASONS GIVEN	VALUES REFLECTED
Pro instrumental	Nathan	supporting global food security	instrumental
		extra income for NZ farmers	instrumental
		refusing trade is a risk to NZ's agricultural industry	instrumental
Pro intrinsic & instrumental	Matthew	live export is a more humane than calves going on the bobby truck	instrumental/intrinsic
		extra income for NZ farmers	instrumental
		improved regulations on ships will ensure good welfare outcomes	instrumental/intrinsic
Anti instrumental	Simon	livestock export is not economically viable	instrumental
		reputation for bad welfare outcomes is a risk to NZ's agricultural industry	instrumental
Anti intrinsic & instrumental	Oliver	inadequate regulatory oversight of animal welfare on board ships	intrinsic
		reputation for bad welfare outcomes is a risk to NZ's agricultural industry	instrumental
	Vanessa	animal welfare compromise during live export by sea not justifiable	intrinsic
		reputation for bad welfare outcomes is a risk to NZ's agricultural industry	instrumental
	Lily	animal welfare compromise during live export by sea not justifiable	intrinsic
		live export not economically significant	instrumental
Anti intrinsic	Stefanie	animal welfare compromise during live export by sea not justifiable	intrinsic
		lack of regulatory oversight outside of NZ	intrinsic
	Sara	animal welfare compromise during live export by sea not justifiable	intrinsic
		alternative methods to sending live animals are available	intrinsic

Figure 1 highlights how different values placed on animals relate to people's position on live export by sea. Participants were also classified as "conditional" where their responses indicated openness to change under certain conditions. When visualised this way, there doesn't appear to be a clear divide between those who are in support of ("pro") and those who are opposed to ("anti") the trade. However, the data show a clear clustering at opposing corners; a larger cluster in the lower-left (intrinsic value/anti-strong) and a smaller cluster in the upper-right (instrumental value/pro). Additionally, there are two outliers (instrumental value/anti and mixed/anti-strong).

While all intrinsic valuers aligned with an anti-strong stance, instrumental valuers did not align consistently with a particular position on the trade. This suggests that holding an instrumental value of animals does not reliably predict support for live export by sea. The following section provides a detailed discussion of each participant's position on the trade, highlighting the key reasons that underpin their stance and how these reflect their underlying values toward animals.

Figure 1

Eight participants' stance on live export by sea, main occupations and the main value that they placed on animals.



Note. LE = Livestock Export

4.2.2 Main reasons given for stance on live export by sea from New Zealand

This subsection examines the key reasons identified in the participant interviews underpinning positions on live export by sea from NZ, addressing each reason individually and considering the value placed on animals that these reasons suggest.

Supporting global food security

Nathan was the only participant who emphasised the importance of supporting international food security, framing it as a key justification for the reinstatement of the live animal export trade from NZ. He described supporting food security as a *"sort of natural goal"* of his, and outlined the part that live export would play in NZ helping less well-off countries feed their populations:

> *We want a live export trade that I think should continue to occur for reasons that go to food security in places like Indonesia, [who are] coming out of poverty and want to have a school lunch programme which involves a glass of fresh milk. We don't export fresh milk, so we need to perhaps do what we've done for China - who are 20 years now in front of Indonesia in terms of establishing their own dairy sector.*

Nathan also suggested that people in more affluent nations may not fully grasp the realities of food shortages and their implications in other parts of the world. He referred to conditions such as human stunting, which is uncommon in NZ:

> *…and that's the situation that we don't talk about either, because we don't know about it, it doesn't exist in this country... dealing with a problem like human stunting through enabling Indonesia to feed itself, to me, is a pretty important thing for us to do as a country.*

He argued that the lack of food shortages and subsequent health conditions in countries like NZ gives individuals the privilege of being able to prioritise concerns about animals during live export, as *"we have the luxury of being able to feed ourselves adequately."* He framed this as a type of moral dilemma whereby those in more privileged countries can afford to make more ethical decisions, while those struggling with poverty may not have the same option.

By framing live export as an important trade for NZ to be a part of, Nathan constructed a narrative in which the country has a moral obligation to assist less well-off nations. These comments indicate that he believes concern for animals may only be important once human needs are met first, with his focus on ensuring food security for less well-off nations, indicating an instrumental value of animals.

Extra income for NZ farmers

Both Nathan and Matthew, industry representatives, stressed the importance of live export for farmer income in the country. They both expressed strong support for NZ farmers and emphasised the financial benefits live export provides not only to farmers, but also to broader rural communities, using this as a main reason for supporting the trade.

Nathan explained how the extra income benefits some farmers and contributes to the local economy:

> *it does mean that certain farmers get a lot of extra cash in their pocket… they can pay down loans and avoid interest rates… spend a bit of money in the local community, go out for a meal, buy a tractor, do all of those things that are important from an economic perspective. So, that four or five hundred million dollars per annum means a lot.*

Here, Nathan emphasises the financial benefits of the trade, such as debt reduction, increased local spending and purchasing farming equipment, as key incentives for its reinstatement. He also defends farmers and livestock producers, expressing frustration that government regulations have made it difficult for them to earn a living and contribute to the country's economy:

> *…last year, Minister Hoggard… declared the war on farmers was over in this country, and I think that goes to water… land use… the Resource Management Act… to a number of reforms, which have made it difficult to get the job done out there. I see the other side of it… as a Kiwi who likes to swim in a river, I get it, absolutely. But… at the end of the day, we've got to feed ourselves, we've got to earn some money somehow. And until we come up with some better ideas, our way of earning money is essentially selling milk and meat abroad.*

In this argument, Nathan frames animals as an important economic resource, with the sale of animal products in the overseas market essential for New Zealanders' economic survival. Interestingly, Nathan also acknowledges environmental concerns but again frames these as secondary to economic and human interests.

Like Nathan, Matthew emphasised the economic value that live export brings to NZ farmers and rural communities, referring to it as *"a pressure relief valve."* He continued, "*I don't know how many [people] genuinely understand that they indirectly benefit from live export…"* He argued that this broader benefit occurs *"through the decreased supply of animals effectively, and therefore higher prices… for their domestically sold stock."* In his view, when animals are not exported, the resulting surplus increases domestic supply, causing stock prices to fall, reducing farmers' returns:

> *I talked about that 'relief valve'… being able to send surplus stock overseas. So that [the ban] would mean we would be in lesser shape to actually ride through any sort of droughts… there's less room to do that. We'll probably see more fluctuations in terms of stock prices as well... and obviously there's the lower returns to the farmers.*

He stated that a range of professional sectors involved in the live export trade rely on the additional income it generates:

> *If you look at all the quarantine facilities, the graziers, the vet practices… there were plenty that actually were quite reliant on the live export industry for all of the quarantine stuff and the pregnancy scanning and all that. So, there was a lot of money that actually flowed into rural communities as a result of that.*

Overall, framing the argument around providing additional income to NZ farmers positions animals in relation to human benefit. Nathan highlights increased local spending and the importance of international trade as his key justifications, while Matthew focuses on increased financial stability for farmers and higher domestic stock prices. These reasonings reflects an instrumental value of animals,

in which the economic gains for farmers and rural communities are used as a key justification for the practice.

Refusing trade is a risk to NZ's agricultural industry

Nathan voiced concerns about the effects the ban on live export could have on international trade relations, referring to the ban as an *"appalling piece of decision making from a trade policy standpoint."* He emphasised the *"bigger picture implications"* the ban could have on the country's agricultural sector, with overseas trading partners potentially reducing their trade with NZ or shifting their preference toward other exporting nations. He further described the ban as *"baseless and emotive,"* arguing that it is *"inconsistent with international conventions,"* and *"inconsistent with our obligations as a member of the World Trade Organisation."* He also noted that its legitimacy could potentially be challenged by overseas countries through the World Trade Organisation Disputes Tribunal, thereby questioning the overall validity of the ban.

This perspective focuses on international trade relations and the potential impact that refusing to export live animals could have on NZ's other export opportunities and market access. It reflects an instrumental value of animals, linking animals' significance to the role they play in maintaining international trade. Nathan's concern centred on how the ban could weaken NZ's competitiveness in key markets and strain existing trade partnerships, therefore negatively affecting the export of NZ goods and leading to broader economic consequences.

Reputation for bad welfare outcomes is a risk to New Zealand's agricultural industry

Three participants expressed concern that negative animal welfare outcomes associated with live export by sea could damage NZ's international reputation and affect how the country is perceived overseas.

Simon voiced concerns that any media reports of poor animal welfare related to the trade, even those not involving NZ, could reflect badly on the country, possibly affecting international sales of agricultural exports, particularly dairy products:

> *Anybody in the media can show really quite horrific footage of cattle being shipped, it's there… so this is going to reflect badly. It might not be NZ cattle, it might not be NZ ships, it might have nothing to do with NZ, but it will be on there, this is what happens when you ship cattle. And it will reflect very badly on this country and… very badly on our number one industry, which is making milk.*

When discussing the potential repercussions of the trade, Simon emphasised that he believes it will be *"negative for the country,"* and pointed out the likelihood of broader consequences affecting other sectors, stating, *"[its] not just about agriculture, negative for the country is like tourism… it's about everything."*

Similarly, Oliver expressed concerns, explaining that it wasn't until he spoke with individuals directly involved in the live export industry that he began to see *"the real risks to our reputation,"* which could potentially lead to wider economic consequences for the country:

> *Given that we're selling our products into discerning markets where people have options… if we are blacklisted for whatever reason – bobby calf abuse, transportation on trucks, or transportation by sea, then that puts our economy at risk.*

He stressed the importance of maintaining high animal welfare standards, pointing out that any negative publicity involving animal welfare *"probably doesn't ruin our reputation once, but a continuation of that certainly undermines the value of our story."* He emphasised NZ's strong reputation in the market as having, "*the very best of animal welfare… of food safety systems… of biosecurity systems,"* adding that any instances of bad welfare will reflect badly and *"kind of makes a mockery of it."*

Vanessa also echoed these concerns, highlighting the potential harm poor welfare outcomes could cause to NZ's trade reputation. She noted that there is *"international concern"* about the country's plans to reinstate the trade:

> *I think the decision to work on repealing the ban… seems very regressive… this is the first time I'm aware of in NZ's history that we're changing legislation to reduce animal welfare… I think we have relationships with many different countries based on our reputation and the reputation of our agriculture sector… which is viewed quite favourably overseas… I think potentially this could do harm to that.*

She also stated that she doesn't view live export as *"particularly valuable,"* describing it instead as "*a fraction of the value"* of NZ's wider agricultural sector. Vanessa believes that the risk it poses to the country's reputation, *"negate any short-term benefits… to a few individuals who choose to participate,"* and that banning the trade safeguards those farmers who choose not to participate due to making *"choices based on welfare."*

The concerns raised by these participants reflect an instrumental view of animals, focusing on how poor animal welfare outcomes could damage the country's trade reputation and, in turn, its economic interests. They believe that upholding the ban to protect NZ's reputation is justified, prioritising the long-term sustainability of the agricultural industry, rather than individual farmer profit or short-term gains. In this view, animals are valued for the role they play in sustaining market access and trade relationships, with concerns around the potential impact on farmer income and the broader agricultural sector.

Live export is more humane than calves going on the bobby truck

It should be noted at the outset that this perspective applies only to cows exported for dairy, as bobby calves are not present in the beef industry.

Matthew placed value on the live export trade providing an alternative use for surplus calves (female bobby calves) by growing and exporting them as dairy heifers, instead of sending them for slaughter

at a few days old. He saw moral value in giving the calves a chance at a longer life within a production system. On his own farm, Matthew chooses to raise surplus calves, instead of sending them for slaughter as bobbies:

> *It's not to look down on people that do, that's just an ethical choice that people make and it's something that we have been able to… not do. And we actually have managed to generate a reasonably profitable system through rearing these calves. When live export was legal, we exported a reasonable number of surplus heifers.*

He acknowledges the need to breed calves to sustain milk production but notes that he has *"never been comfortable"* with the idea of sending calves for slaughter. He explains that exporting calves enables them to become a "*higher value animal that leads a longer life*," rather than a lower-value calf *"that goes on the bobby truck at four days old"* for slaughter:

> *Because ultimately… the same number of… calves are born in NZ each year, we've only got so much pastoral land to graze and finish these cattle. The other option is effectively they go on the bobby truck. So, it is kind of choosing between dying at four days old, and leading a life of two, three… seven, eight years, whatever it is, right.*

Reflecting on the first few years of the ban, Matthew discusses how farmers have had to adapt their practices, noting that those who would normally export surplus calves instead had to send them for slaughter. He highlights the challenges he believes farmers faced in navigating the ban and its consequences, explaining that *"In the first couple of years after the ban in particular, farmers initially responded by bobbying replacement heifers, surplus replacement heifers that would normally have been reared to go to China."*

While these comments suggest that Matthew places value on the animals living longer lives, perhaps recognising they have an innate preference to stay alive; it is unclear whether he values this for the animals' own sake or for the human benefits that result from it. Although he frames raising calves for export rather than sending them for slaughter as an *"ethical choice,"* implying that animals have intrinsic worth beyond their usefulness to humans, his reasoning also appears at least partially instrumental. This is evident in the way he discusses his thoughts about the trade and his economic considerations, such as costs, profits, and the financial benefits associated with exporting heifers, as factors in his decision-making:

> *The higher cost of the journey, the less chances of anything going wrong, right? But you also have this balance the other way that if you have too high a cost, it's unprofitable to do it and we can get back to where we are, where it doesn't happen and a whole lot of calves get bobbied, right?*

Matthew justifies live export by saying it gives calves a chance at a longer life but also highlights the financial returns on surplus calves, a human benefit of the trade. This reflects an interesting binary framing of the argument, in which he presents only two options for surplus calves – either they are sent on the bobby truck for slaughter at an early age or they are raised to heifer age and exported overseas. This justification makes live export appear as if it is the morally better choice of the only two possible options, without presenting any alternative solutions. Within this argument Matthew is also

drawing attention to an ethically questionable side of the dairy industry, highlighting an alternative use for surplus calves that seems more acceptable than sending them for slaughter.

Improved regulations on ships will ensure good welfare outcomes

Matthew firmly supported reinstating the trade with strengthened regulations, indicating that he believes this will greatly improve animal welfare and resolve many of the negative welfare outcomes previously seen in the industry. He argued that *"…there's that duty of care, to make sure that there's a very, very good chance that there won't be any issues,"* and believes there was plenty of opportunity to improve welfare outcomes before the ban came into place. He stated that many commonly cited welfare problems on live export ships look to be *"a result of overstocking,"* and could "*easily"* be addressed *"through regulation*," helping to "*safeguard or mitigate the adverse outcomes"* for animals.

In the past, Matthew admitted that at times there have been *"reasonable animal welfare issues,"* but for the vast majority of voyages *"there were very few welfare issues at all."* He believes the focus should be on understanding *"what went wrong"* in problematic voyages and again spoke about *"putting regulation in place to avoid that"* in future:

> *I guess the broader picture here is let's work out why there have been some bad outcomes… knowing that there have actually been some really good voyages… and work at how we can better replicate the… good outcomes.*

He argued that too much focus has been placed on the previous regulations instead of considering what future regulations could achieve. He described the ban as *"very premature,"* imposed before looking into new regulations, and believes there is *"room to really explore"* whether animal welfare can be consistently managed well during the sea journey.

Matthew argued that with improved regulations, NZ has the potential to become a global leader in animal welfare within live export, which would have a positive influence on the country's international reputation:

> *...we've got an opportunity to be a leader within this, either in terms of banning it or in terms of doing it really well. Either way, there's the ability for it to impact upon how we're seen, I guess, for the positive.*

Overall, Matthew linked improved regulations to positive benefits for both exported animals and NZ's international reputation. He argued that improving regulatory standards would not only safeguard animal welfare, describing this as a *"duty of care,"* but also position NZ as a leader in the trade and enhance how the country is perceived globally.

Although there is an element of intrinsic value reflected in this reasoning, particularly with his focus on better animal welfare outcomes, these concerns seem largely tied to using animal welfare as a means to achieve broader trade and industry outcomes. Therefore, I feel this perspective reflects a predominantly instrumental valuation of animals, where the primary focus is on human benefit, with enhanced animal welfare as a secondary outcome.

Inadequate regulatory oversight of animal welfare on board ships

In contrast to the view expressed by Matthew, who believes that reinstating the trade with strengthened regulations will improve animal welfare and resolve past issues, Oliver contends that enforcing and monitoring regulations on board live export ships is extremely challenging.

As someone who has been involved in the regulatory side of the industry, Oliver believes that oversight on board live export vessels is inadequate to assure good welfare outcomes. When discussing the use of mortality rates as a measure of animal welfare, he spoke about the inadequate reporting he experienced firsthand:

> *It's a pretty crude measure, and when I investigated and inquired more into the practices on the boats where there wasn't necessarily a vet, none of the injuries were kind of recorded and we had very little information from… post voyage circumstances even in the short term.*

Oliver repeatedly expressed frustration about his own experiences of what he considered to be a lack of effective monitoring on board the ships. He described the oversight as *"kind of free range,"* with missing veterinary staff, poor record keeping, and *"pretty pathetic"* reports coming back from the ships. He also referred to the recording of onboard mortalities as a *"grey area."* In his view, the oversight was insufficient to ensure good welfare outcomes:

> *…for us to continue to do it and just have our fingers crossed with some adjustments – which actually had been made to the trade, around the standards – [which] were really hard to guarantee and implement in terms of vets, vet checking, vet reports, daily feedback, all of that stuff… in spite of our best attempts, I was not convinced that our oversight was adequate enough.*

Oliver argued that the welfare of animals on live export vessels cannot be guaranteed and lacked confidence that any new regulations could be effectively enforced or monitored during the voyages.

Stefanie, an animal welfare scientist, had comments that closely aligned with Oliver's concerns. She expressed strong opposition to the sea journey, highlighting *"animal welfare issues"* she believes cannot be resolved "*even with whatever regulations they think they can put in place.*" In her view the high standards of animal welfare the government have *"flippantly"* talked about implementing on the ships is not only *"not possible,"* but also *"not possible to monitor… properly."*

These views reflect an intrinsic valuation of animals, focusing on the potential welfare risks they may face, beyond any benefits they may provide to humans.

Live export is not economically significant

Contrary to the viewpoint that live export as an important source of income for NZ farmers and the economy, there were other participants who believed that the income generated by the trade was insignificant. Both Lily and Simon took this stance, stating that the economic benefits generated by the trade are minimal, and therefore not significant enough to justify its reinstatement and risk reputational damage to the country.

Lily, an animal welfare scientist, argued that live export is no longer necessary or valuable as a major source of income for NZ farmers, and that the businesses involved are minor contributors to the national economy:

> *I think we had the balance tipped where it's not needed as a significant sole source of income for NZ farmers…. and the actual industry groups… the businesses that are involved in it are not a significant contributor to NZ overall.*

Simon reiterated that view, describing the income from the trade as *"minor, minuscule,"* and that "*we still have the animals... we [can] sell them off some other way."* However, his view is conditional, stating that he could reconsider his position if the prices farmers received for live exported heifers were higher:

> *...last year the Chinese produced more milk than they needed for themselves, which is very significant for us, for our milk powder trade particularly… they don't actually need heifers like they needed them 10 years ago, and they're not going to pay for that. So economically, I don't think it's worthwhile. That's the first reason I would object to it. If we were going to get really big prices for our heifers, I might think differently.*

Lily also raised concerns about how much of the revenue from live export actually benefits the country rather than *"Australian owned export companies,"* further questioning the transparency of the industry and the viability of the trade. By raising doubts about where the financial gains are going, Lily is challenging the narrative that live export significantly supports the NZ economy, a rationale commonly used by others to justify reinstatement of the trade:

> *…so, there'll be this small percentage of them [farmers benefiting from live export], but otherwise… it's the export companies, and so then we have to question… where does the money go from those companies and are they based in NZ or not?*

In these arguments, Lily and Simon both frame animals in terms of their economic value. Claims of minimal financial returns and narrow distribution of the profits lead them to question its actual economic contribution, making its reinstatement difficult to justify. Unlike Lily, Simon stated that he might reconsider his position if the economic gains were greater. Lily also expressed concern about who benefits from the trade and which country receives the profits, concerns that Simon did not express.

These comments reflect an instrumental perspective of animals' value, framing animals in terms of their potential to provide economic benefits within the live export trade, rather than being valued for their own sake. This perspective aligns with Lily's stated utilitarian approach, emphasising her belief that the trade's minimal economic returns do not justify the welfare risks to the animals.

Animal welfare compromise during live export by sea not justifiable

Four participants expressed opposition to the reinstatement of the trade, citing concerns about the welfare of the animals during the voyage. For these participants, animal welfare problems outweighed any potential economic or industry benefits associated with the reinstatement of the trade.

Throughout her interview, Vanessa, an animal welfare scientist, repeatedly emphasised the welfare challenges animals face on live export vessels. She felt that ensuring good welfare in such an environment would be *"very challenging,"* adding, *"I don't believe it is possible to have good welfare on a live export vessel."* She argued that the *"suffering is inherent"* and questioned why the trade would be reinstated when viable alternatives already exist:

> *I don't believe there is good justification for live export of livestock animals. I think there are perfectly viable alternatives… sending semen straws or oocytes… these practical alternatives already exist… this is something that is already done.*

She describes the challenge of caring for animals on board the ships as *"almost insurmountable,"* and her repeated use of absolute terms such as *"inherent," "insurmountable,"* and *"no good justification,"* present a strong uncompromising stance. The use of these terms signals a moral boundary, indicating she believes suffering is a defining feature of live export by sea, rather than a problem that can be addressed through regulatory changes:

> *I think the conditions that animals are kept on… it is not possible to fully protect their welfare in those conditions. So dairy cattle in terms of even something as basic as lying, we know that… [they] will avoid wet lying surfaces. On board that live export vessel, it quickly becomes like most surfaces are coated in faeces.*

She highlighted the conditions the animals are subjected to on live export ships, expressing particular concern over their inability to access dry, comfortable bedding. Challenging the notion that such circumstances could ever be considered consistent with good welfare, she explained:

> *It is not possible for them to find dry bedding to lie down on. And you'll have seen images of cows with what's known as a faecal coat… you… cannot look at a cow fully covered in faeces and tell me that their environment is good welfare.*

Vanessa cites the welfare risks animals face on board the ships as a key reason for her opposition to the practice, making it clear that she values animal wellbeing for its own sake, rather than in relation to any human benefit.

Lily, an animal welfare scientist, also repeatedly emphasised concerns about poor animal welfare on board live export ships, referring to its reinstatement as a *"backward step,"* and describing it as a practice that *"harms animals."* She notes that her views on animal use are shaped by a utilitarian ethic, and stresses her belief that bringing back the live export trade would result in greater overall harm to animals, reversing any progress NZ has made in animal welfare:

> *…I take quite a utilitarian view about the use of animals… basically, if you don't have to do something or… something that causes harm, then you shouldn't do it. So, my number one reason is I don't agree that it's necessary for NZ to take part in that practice.*

She was particularly concerned about the length of time animals spend on board the ships and expressed concerns regarding the challenges of ensuring adequate care for animals that are confined for such long periods of time:

> *What concerns me is… how they're maintained throughout the length of the journey… presumably their needs change as they go, because they've been held in confinement for longer, they start to get tired, they can get disease issues… It's about how those things are handled… and I'm not sure they are well handled. They won't be all the time… how can they be? …there's only so much you can do on a ship.*

The belief that the risks of live export outweigh any potential human benefits sits at the core of Lily's position. She applied this view not only to the animals' time on board the ships but to the entire live export process:

> *So that's my overall perspective… there's enough harm caused to the animals… or risk of harm… that on balance to me means it shouldn't happen. And that's right from the animals being held before export, transported to the boat, loaded on the boat, travelling on the boat, offloading, travelling at the other end, their life… and their slaughter…*

Lily's comments support her self-described utilitarian viewpoint, as she sees the overall harms of live export as unavoidable and disproportionate to any human benefit. For her, the welfare risks present at every stage of the process are too great to justify the practice being reinstated.

Stefanie, also an animal welfare scientist, believes the logistical challenges of live export make it impossible to ensure the wellbeing of the animals on board can be adequately safeguarded, therefore viewing the trade as fundamentally unacceptable:

> *To be honest, I don't think it's possible. You could say… that they're well fed, they have dry comfortable bedding, they have an appropriate stocking density, and they have an ability to walk around, exercise – which is not possible. But I don't think logistically it's possible to have high animal welfare standards on a ship.*

The restrictive on-board conditions were a key concern for Stefanie, citing requirements under the Animal Welfare Act that animals *"need to have the freedom to move."* She explained that *"you can't expect them to stand for 20 days without the ability to move around,"* and references photos of animals on board the ships in dirty conditions, describing this as *"unacceptable."* She questions how good conditions on board could possibly be maintained, or ever get to a point where they could be described as *"gold standard,"* as promised by the government when proposing the trade be reinstated:

> *…logistically, even if they're trying really hard, how can they really maintain those conditions? There's so many limitations on a ship and only so many staff to be changing bedding and caring for the animals… I just think because it's such a long journey… I don't think it's possible to have high, high gold standard welfare on board. And it's also impossible to monitor it.*

Sara also strongly opposed the trade and, like the other three participants, expressed deep concerns about the risks to animal welfare during the sea journey. Throughout the interview, she drew on her extensive firsthand experience as a veterinarian working on board live export vessels, highlighting several specific factors that, in her view, contribute to poor animal welfare and mortalities during the transit.

She talked about the dangers of transporting animals on ships, describing the practice as "*just an unnecessary risk in this time and day*." She noted that the likelihood of something going wrong is high,

given that the average age of the ships left in service *"would be 40 years old now,"* adding that she had "*seen brand new ships breakdown."* She explained how any disruption to the sea journey could result in severe implications for the animals on board:

> *…ships have more risk of a component breaking down, be it the ventilation or the steering… the water production… these things do fail and can be catastrophic… and there's no real emergency plan to get these animals off… there's nowhere for them to go. We just have to watch the ship go down.*

Sara's concerns about the welfare of the animals on board live export ships stem from negative animal welfare outcomes she has witnessed firsthand, some of which have resulted in mortalities. This included animals with unusually high respiratory rates, which she describes as a clear indicator of compromised welfare:

> *…the average cow respiratory rate of 18 to 25… depending on what the temperature is, and these are animals that are resting on these ships… so, doing nothing… and I was getting respiratory rates regularly of 80 to 120. If an animal's breathing five times what it should be breathing, that's a problem. That's an immediate animal welfare indicator.*

She stated that *"90% of mortalities were from respiratory disease… and heat stress"* and described how often animals with subclinical respiratory disease could succumb to heat stress, leading to sickness and death. She also referred to other causes of mortality, stating that *"10%... are actually from leg injuries"* and explained how these types of injuries don't always get picked up as the animals are in such a dirty, crowded environment it is hard to see their legs clearly, leading to subsequent infections and mortalities.

Sara described the conditions on board the ships as an *"accumulating depth of sewage,"* stating that cows "*generally don't choose to lie down in a big sewage pit*." She spoke about the animals become *"exhausted"* as the journey progresses, so reluctantly "*they just lie down in it. But they're not happy about it."*

Overall, Sara believes that the system is fundamentally incapable of protecting animal welfare. She referred to the mortalities that occur, even with animals that *"are supposed to be the cream of the cream,"* after being subjected to strict selection protocols, and cared for by a crew *"only there to look after these animals,"* in *"an industrial industry that has a vet on site all the time"*:

> *They've gone through enormous selection protocols before leaving the farm… they go to the feedlot preparation area, where they're… looked after, fed properly, vaccinated, checked, culled if they don't meet a certain parameter. So, you've had multiple times… vets… inspectors… government agencies, legislation, selecting these animals till you just get this prime product. And if they're dying? How would the tail end of the mob have gone?*

She argued that, given the amount of money involved in the industry, animal deaths should not occur. She summed this up by stating, "*there's something going wrong, and that is the fact that the animal[s] shouldn't be there because it's not an animal environment."* This statement reflects Sara's broader belief that the conditions on live export ships are fundamentally incompatible with maintaining acceptable welfare standards.

Overall, these four participants identified a range of factors they believe lead to compromised animal welfare during live export by sea. They each viewed animal wellbeing as important in its own right, independent of any human benefit, reflecting an intrinsic valuation of animals. They highlighted various welfare risks the animals face throughout the sea journey and emphasised the vulnerability of animals once they are at sea. Consequently, these four participants all concluded that the trade cannot be justified, given the fundamental value they place on animal wellbeing, and their belief that there is no acceptable justification for reinstating the trade and exposing the animals to such risks.

Lack of regulatory oversight outside of New Zealand

Stefanie expressed concern about the export of animals to countries with lower welfare standards than those in NZ, noting that she feels, *"equally the same"* about this issue as she does about the welfare of animals on board the ships. She describes this as, "*unacceptable and unnecessary"* and believes that it contradicts the high animal welfare standards NZ claims to have:

> *We shouldn't be sending them. They shouldn't be crossing international lines. Once they're out of our jurisdiction, we don't have any control. How can we stand, hand on heart and go, 'we have the best animal welfare standards' …and then say, 'but it's okay, we can send [them] somewhere that has no animal welfare standards?'*

Stefanie is also uncomfortable about what she believes is a *"lack of jurisdiction and oversight"* once the animals reach their overseas destinations, particularly due to the lack of information available around what happens to the animals, and where they ultimately go. She referred to MPI's assurances of improved reporting during quarantine periods as nothing more than *"box ticking,"* and expressed concern that there are *"still a lot of issues"* regarding the reporting of welfare outcomes once the animals arrive:

> *…what do we know about those [quarantine] facilities and the training of the people? MPI might be getting some piece of paper that ticks, ticks, ticks that so many of them are still alive. I know they were trying to improve that reporting, but have they? And how? How much have they improved it and really, what impact is it having on welfare or is it just again, box ticking?*

She referred to the government Minister's comments about his plans to establish contracts with importing countries to ensure good animal welfare standards, stating that she does not believe this is realistically possible, and that it could impact international trade:

> *…that is not possible. We can't do that. I mean, that can also have an impact on trade agreements. Cause it's like… why are you questioning us? Why are you saying we don't have good animal welfare? So, you're reducing your trust in your trade partners… So that's again, just promises he can't make."*

Stefanie expressed scepticism about the government's ability to enforce animal welfare standards in other countries through trade agreements, suggesting that she believes global trade interests and market access are likely to take priority over animal welfare. She repeatedly stated that such enforcement is "*not possible,"* showing a belief that the government's claims are unrealistic and unlikely to be implemented.

This viewpoint frames animals as having an intrinsic value, with Stefanie's concerns centred on the lack of laws and regulations to protect the welfare of exported animals in destination countries. Although she alluded instrumental value with her mention of the possible effects on trade partnerships, this was framed within her broader concern for animal welfare, reinforcing her belief that animals have inherent value.

Alternative methods to sending live animals are available

Sara is a strong advocate for alternative methods to live animal export, and supports options that avoid the risks that she believes long sea journeys pose to animal welfare, arguing the practice is *"just so unnecessary,"* and emphasising the availability of alternative methods:

> *…if you think what the logistics for transporting goods… in maybe the sixties when it [live export] sort of first started and kicked off… we weren't doing stuff like sending big vats of liquid nitrogen with semen straws... We can do that now; we've got fast refrigerated transport… I think we've come a long way.*

She highlighted the fact that there are many alternative methods available for supplying other countries with animal products. She believes live export *"had its day before we had refrigerated transport"* and no longer has a place in the modern world. She suggested that *"milk solids, or even just milk"* could be sent to those countries wanting dairy products, as well as *"embryos and semen"* as an alternative to live animals.

Overall, Sara believes that the trade is no longer necessary, given the availability of alternatives. This reflects an intrinsic valuation of animals, in that she believes they deserve moral consideration for their own sake, instead of putting their welfare at risk on long sea journeys.

4.2.3 How participants spoke about sentience

Participants were not directly asked about the concept of sentience, defined as the capacity for animals to perceive positive and negative feelings, emotions and sensations, and to have individual experiences that matter to them (Mellor, 2019). Instead, a range of questions were used to explore their thoughts about animal welfare, and what they believed "good welfare" entailed, both in general terms and within the context of live export by sea. The concept of sentience is central to modern understandings of animal welfare (Browning & Veit, 2022); therefore, exploring participants' perspectives on welfare was expected to reveal their position on sentience, at least concerning cattle.

Among the eight participants, only four explicitly used the term sentience (Table 2). Interestingly, the term was used substantially more often – in some cases up to five times more frequently – by those who were pro live export than by those who were opposed to the practice. Therefore, I wanted to explore how participants engaged with the concept, both through direct references to the term and through contextual language that indicated their perspective on animal sentience and its relevance to their consideration of exported animals' welfare.

Table 2

Participant stances on live export (section 4.2.2) and the number of times sentience was mentioned in their interviews.

Participant	Stance	Number of times *sentience* used
Matthew	Pro	6
Nathan	Pro	6
Vanessa	Anti	2
Oliver	Anti	1
Lily	Anti	0
Sara	Anti	0
Simon	Anti	0
Stefanie	Anti	0

In this section I will be examining how participants engaged with the concept of sentience, focusing on both their explicit use of the term itself (including related terms such as "sentient") and their use of language implying recognition of animals' subjective experiences. Examining both direct terminology and the use of supporting language allows for a more multifaceted analysis of how the concept of sentience was understood, mobilised, or overlooked within participant interviews.

Frequent acknowledgement of animals' mental experiences, no use of the term "sentience"

There were several participants who used language that reflected an understanding of animals' subjective mental experiences, yet who never explicitly used the term *sentience.* Lily, Sara and Stefanie all referred to behaviours or situations in ways that suggested recognition of an animal's positive and negative affective experiences.

Lily

Lily, an animal welfare scientist, consistently used language throughout her interview that implied an understanding of animal sentience. Even though she never used the term itself, the concept of sentience was clearly reflected in her views and opinions. For example, when asked about her views on animal welfare, she emphasised the importance of considering how an animal feels, explaining that to her, animal welfare means, *"how the animal feels about its life, the universe and everything."* She expressed the view that we *"should be considering what everyone else experiences"* including the experiences of animals. She described good animal welfare as not only *"when an animal is thriving"* but also when an animal *"feels it's thriving… has all its needs met and it's able to do things that it enjoys doing."*

These views demonstrate that Lily privileges animals' emotional experiences and believes this plays a central role in how their welfare is understood and managed. She emphasised that animals should be able to live a good life and have opportunities for positive experiences. Her consistent use of language

focused on how animals *feel* and their capacity to experience different emotional states suggest that, even though the terminology was absent, she understands animals to be sentient beings.

Sara

Like Lily, Sara did not mention the term sentience at all. When asked what animal welfare meant to her, she described good welfare as an animal that is *"fit, healthy, and to an extent… happy"* and *"not living in a state of fear, stress and pain."* Given her extensive experience as a veterinarian on live export ships, it is perhaps unsurprising that Sara had a strong focus on the physical welfare of the animals, frequently referring to injuries that can occur, and linking these to the associated pain and discomfort. By framing these concerns in terms of the animals' negative subjective experiences, Sara reveals the importance of sentience to her understanding of animal welfare.

She also discussed the mental experiences of the animals during the sea journey, describing them as *"not happy"* about having to lie down in unsuitable bedding once they become exhausted from standing for days on end. She explains that while the animals may appear *"perky"* at the start of the voyage, this is due to *"a level of fear and stress that they're in, a heightened level."*

Overall, Sara's focus was mainly on the physical causes of compromised animal welfare, particularly in relation to injuries and stress. However, she emphasised the animals' discomfort, pain, fatigue, and fear due to their physical state and environment, highlighting their capacity for subjective mental experiences. Even though Sara does not use the term sentience directly, her use of language indicates that she recognises an animal's capacity to feel and suffer, viewing this as a significant concern in the context of live export.

Stefanie

Stefanie, an animal welfare scientist like Lily, never mentioned the term sentience. She placed significant emphasis on the importance of animals having agency, that is, the opportunity to engage in behaviours that are self-generated and motivated by positive affective experiences (Littlewood et al., 2023). When describing good animal welfare, Stefanie talked about animals having the freedom and space to do *"what they want to do,"* and the opportunity to make choices about how they spend their time. Stefanie's emphasis on animals having the freedom and agency to make choices aligns closely with the Five Domains Model for Welfare Assessment, which identifies these factors as key determinants for promoting positive mental experiences (Littlewood et al., 2023). When animals lack these opportunities, negative experiences and compromised well-being can arise (Weary, 2019). By highlighting the importance of agency, she acknowledges that animals have internal states, such as preferences, motivations, and feelings, that can guide their behaviours, which is a key aspect of sentience.

Furthermore, when asked what she considered a "gold standard" of animal welfare on a live export ship, Stefanie referred to similar key aspects, *"that the animals have all their needs met, physiologically, behaviourally, health-wise and there's a level of autonomy."* Here she again highlights

the importance of animals having the ability to make choices about different aspects of their lives, which is directly tied to an animal's subjective experiences and emotional well-being.

Although these three participants did not explicitly use the word sentience within their interview responses, they all indicated a recognition that animals are capable of subjective experiences. Their focuses varied: Lily emphasised the way an animal perceives and feels about its life; Sara was focused on an animal's capacity to have negative mental experiences like pain and discomfort; and Stefanie highlighted the importance of animals having the ability to pursue actions that matter to them. These perspectives demonstrate an underlying recognition that an animal's welfare is influenced by its subjective experiences. Thus, the concept of sentience was embedded in the way that these individuals talked about animals, even if they did not use the exact term to express that point of view. These three participants were from animal welfare science or veterinary backgrounds, and all were strongly opposed to live export by sea, drawing on either some or only intrinsic reasons in explaining their opposition to the trade.

Frequent acknowledgement of animals' mental experiences, rare use of the term "sentience"

Vanessa

Vanessa, who shared a similar background to Lily, Sara and Stefanie and some of the same reasons for opposing live export based on the intrinsic value of animals, expressed similar views but also used the term sentience twice during her interview. She also drew on other language that emphasised animals' mental and emotional experiences, reinforcing the importance of sentience to animal welfare.

When asked about animal welfare, she stated that *"animal welfare to me – sentience is inherent in that, how the animal feels about it,"* suggesting that her views on animal welfare are not just about physical wellbeing, she associates animal welfare directly with animal sentience. Describing sentience as *"inherent"* suggests that she sees it as an essential, non-negotiable characteristic of animal welfare, that almost goes without saying.

Like Stefanie, Vanessa also mentioned *"agency and control"* multiple times, expressing that *"opportunities for a choice"* are *"critical to animal welfare."* She described cattle as *"a social species"* and *"very intelligent,"* indicating she believes they have the ability to think beyond basic instincts and are capable of complex social lives, both of which are indicative of sentience. She also highlighted the *"importance of companions"* to cattle, describing the stress associated with *"separating them from preferred partners"* as *"quite profound,"* recognising the negative emotional impact such experiences may have on them.

She spoke about how understanding of animal welfare has shifted over time from simply minimising harms to *"actually giving animals positive experiences,"* indicating she places value on how an animal experiences its life, and stating that she believes our duty of care for animals goes *"beyond minimising suffering."* She also mentioned the government's decision to enshrine sentience into the Animal Welfare Act, describing it as *"world leading"* and *"an impressive step forward,"* further reinforcing how central sentience is to animal welfare.

Overall, Vanessa appears to place a high moral value on how animals *feel,* with her views on animal welfare prioritising their mental well-being. By recognising that animals have internal emotional states, and the ability to feel and suffer, she demonstrates a clear understanding of sentience.

Occasional acknowledgement of animals' mental experiences, frequent use of the term "sentience"

Nathan

Nathan, an industry representative referred to sentience six times throughout his interview, framing it as a core concept underpinning his view on animal welfare. He also repeatedly linked sentience with the Five Freedoms framework, positioning it as a foundational aspect in assuring good welfare outcomes:

> *…good animal welfare starts with that acceptance of sentience and the Five Freedoms and delivers comprehensively on each of those Five Freedoms. So, it's about taking care of animal's needs from that perspective, whether it be fresh water… sufficient food, the ability to lie down on a ship – plenty of space to do that, for example.*

He clearly indicated that he believes recognising sentience is important and further stated that *"…you can't measure animal welfare just by the absence or the rates of disease or morbidity and mortality… you've got to acknowledge that animals are sentient…"* He explained that welfare should be judged based on enabling animals to *"not only be free of injury and disease, but to have a great pain-free and happy existence."*

Nathan mentioned potential plans within live export to allow cattle to travel on the ships *"with their friends they've socialised with"* so they can *"enjoy… a less stressful journey,"* indicating an awareness of the capacity for cattle to form social bonds and experience stress during transport. He also acknowledged high stocking densities on live export vessels, and how they can lead to *"adverse animal welfare outcomes."* At the same time, he noted that financial returns to farmers are largely determined by stocking density on board the vessels, describing them as a "*pretty big determinant of the cost effectiveness of a voyage"* and adding that *"obviously, the more you pack in there, the better the return for farmers."* He described an *"optimal"* stocking density as *"somewhere in the middle… one that allows cows to lie down and ruminate… if post feeding and if the weather gets a bit rough."* These comments illustrate an interesting balance between recognition of sentience and how that recognition might operate within a commercial environment, where animal welfare must be weighed against profitability.

Nathan further reinforced the importance of recognising sentience when asked directly about the use of mortality rates as a welfare measure. He described them as a *"limited"* indicator and argued that the Five Freedoms *"really go into sentience and really deliver… animal welfare outcomes that New Zealander's can be proud of, and obviously that are commercially valuable as well."* In these comments, Nathan again mentioned sentience as a foundational concept in evaluating the welfare of animals, indicating he believes animal welfare should include not just physical health, but the mental and emotional state of animals. However, these comments may also suggest a misunderstanding of the Five Freedom's core concepts, as they are grounded in the prior assumption that animals are sentient, and do not explicitly address sentience as a concept. As with his comments about stocking densities,

he also highlights an industry-focused perspective linking recognition of sentience with commercial benefit, instrumentalising animals' value.

Overall, Nathan repeatedly emphasised the importance of recognising sentience as a foundational concept in evaluating welfare, indicating that he believes animal welfare should include animals' mental and emotional states as well as physical health. He referred to ensuring good welfare within the trade through measures such as providing fresh water and sufficient food, avoiding injury and disease, lower stocking densities and socially grouping animals. He also mentioned both positive and negative emotional states, suggesting an awareness that welfare is influenced by an animal's subjective experience of its environment and treatment. However, while he occasionally used feeling-based language, it is less clear whether this reflects an in-depth understanding of animal sentience as a conceptual framework, particularly given the lack of clarity regarding his interpretation of the Five Freedoms. Taken together, this may indicate that his repeated use of the term sentience functions partly as a moral discourse that aligns his position with contemporary welfare language, potentially strengthening his credibility in discussions about the trade.

Rare acknowledgement of animals' mental experiences, frequent use of the term "sentience"

Matthew

Like Nathan, Matthew, who is also an industry representative, used the term sentience six times in total, noticeably more than those participants opposed to live export. Matthew did link the concept of sentience with an animal's ability to have positive emotional experiences, stating that "*increasingly it is also more about sentience, so not just the whole - are you producing well or growing well and not dying… but are you actually enjoying the experience?"* However, this is one of only a few examples within the interview where he references the affective state of animals.

In considering dairy cow welfare more generally, he placed emphasis on treating animals well so that they produce well, pointing out that if there is a *"cow comfort issue"* production levels will drop. Further, he stated that cows will not produce well, *"unless they're actually enjoying life,"* framing this as a *"strong enough argument"* for ensuring good welfare. As this focus is economically driven, it may not necessarily be because he believes the animal's subjective experience matters, but more as a practical motivation to keep animals stress free so they perform better, with the benefit then being more profit. Here the focus is less on the animal's mental state or ability to *feel,* and more on its functional output.

Within our discussions, Matthew gave an example of what he believes to represent recognition of the importance of sentience on farms overseas, where calves are typically kept in individual hutches to prevent disease transmission:

> *So, on one hand, they are really healthy, growing well. On the other hand, from a sentience point of view, they're not able to exhibit normal herd behaviour… So [for the] first 14 days they're in their own little hutch… then after that, they have to go into sort of community housing where they've got four or five calves together. And so, it's a great example of balancing welfare with sentience.*

Although Matthew does refer to sentience here, the example given does not make sense in relation to the common usage of the term. His example implies that he understands welfare to equate to the animal's physical or health status and sentience to cover other, non-physical aspects of an animal's state. It also indicates that he doesn't understand welfare state to be a property of animals that *are* sentient, that is, sentience is considered to be a pre-requisite to having affective experiences and thus a state of welfare.

Exhibiting normal herd behaviour would fall under the fourth domain of the Five Domains framework, behavioral interactions, and could lead to affective experiences arising in sentient animals such as cattle. Matthew's lack of explicit reference to the affective states associated with normal herd behaviour does not necessarily mean he views these as unimportant, but that he doesn't appreciate how welfare is holistically understood.

This interpretation is further supported by his response when asked about the use of mortality rates as a welfare measure on live export ships:

> *it's one measure, right? But it's not an entire measure of animal welfare, like I said, you've got to look at a whole lot of injuries… that could occur and then you've also got to look at the sentient side of things as well.*

Here, Matthew again appears to separate the physical dimensions of welfare, reflected in his references to *'injuries,'* and *'the sentient side of things.'* This framing suggests that he associates sentience with the non-physical aspects of welfare, rather than recognising sentience as the foundation upon which physical and psychological harms become welfare concerns. While this may indicate some confusion around the concept of sentience, it also demonstrates that Matthew does have an awareness that animals may experience negative states during the live export process, even if they are not physically harmed.

Overall, Matthew does acknowledge both *welfare* and *sentience* but not as distinct concepts, and the inconsistent use of the term throughout the interview may suggest a limited understanding of its core meaning. In the context of the topics explored in the interview, this may reflect a lack of clarity regarding its relevance to live animal export by sea. It is also possible that his repeated use of the term may stem from an awareness that recognition of animal sentience is now central to scientific and even public animal welfare discourse, which may have encouraged him to use language that would be expected in such discussions, even though it is not used coherently.

Rare acknowledgement of animals' mental experiences, rare use of the term "sentience"

Finally, there were two participants who rarely mentioned the term sentience, nor did they incorporate much language implying recognition of sentience into their responses.

Oliver

Oliver referenced sentience once throughout his interview, explaining that growing up on a farm, *"sentience wasn't something that I ever knew of."* He acknowledged that what is acceptable in terms of the way animals are treated has changed over time, and that we must be *"prepared to adjust,"*

describing animal welfare as *"an evolving science"* and *"an evolution of knowledge and understanding."*

When asked where he believes his understanding of animal welfare came from, Oliver referred to his upbringing around farmed animals, where he developed an *"understanding of animal care – as in animal health… but it kind of didn't move into the one of welfare."* He also commented on farmers, suggesting that while he believes they prioritise *"good animal care and health,"* welfare is *"probably not highest on their agenda."* These statements suggest that Oliver recognises welfare as more than, or distinct from, good health and appropriate care, but he doesn't give any indication of what this distinction might entail. This indicates that he may have a limited understanding of sentience and its relevance to animal welfare, possibly seeing it as a byproduct of proper care, rather than recognising it as a distinct concept involving animals' emotional and mental experiences.

Across the interview, Oliver did not use any direct language describing positive or negative emotional experiences of animals. His one mention of the word sentience indicates that he recognises it as a significant term when referring to animal welfare, which may reflect his professional experience within regulatory frameworks, but whether he has an in-depth understanding of this concept is unclear. He seems to frame the absence of negative welfare outcomes as sufficient recognition of sentience, without directly referencing animals' mental or emotional experiences. Throughout the rest of the interview there is no direct evidence to fully support an understanding of the term.

Simon

Like Oliver, Simon used little terminology relating to the emotional experiences of animals. Nor did he mention the term sentience at all throughout his interview. This is interesting considering his background in veterinary and animal welfare science, and his experience in farming.

Simon expressed concern about the inadequacy of the environment on-ship but did not tie this concern to the consequences for the animals being kept there for a long period of time, in terms of their likely mental experiences. Having been onboard an empty ship, he reflected on what he observed:

> *…it looked very like nothing, just pens, and I thought – they're going to be in there for six weeks or whatever it is. I didn't think much of it really, I suppose. But I don't think it could be any better. That's just the way it is.*

He described the environment as *"barren,"* stating that what makes it problematic is the fact that the animals are *"going to be there for a long time."* He further explained, *"if it was days, I wouldn't think so much… but this is weeks… and it [the ship] was in as good a state as it was going to be. Didn't impress me, no."* This concern suggests an awareness of the potential for animals to experience negative states such as boredom during their time onboard the ships, but this reasoning was never made explicit.

In comparing sea transport with air transport, Simon noted that racehorses flown between countries still perform successfully, suggesting that *"they can't really have suffered very much negative experience."* This is the only instance when Simon referred to the emotional experiences animals may

have. It indicates that he does acknowledge animals' subjective experiences and reinforces his view that long journeys via sea are not ideal for animal welfare. However, this perspective also downplays the possibility that animals transported by air may still experience negative states such as stress, discomfort, or fear. This indicates a strong emphasis on the animal's physical state when evaluating its welfare and less importance put on its emotional experiences.

While Simon used very little explicit sentience-related terminology, his tone and descriptions suggest that he may be considering the subjective experiences of the animals, indicating recognition of sentience even though he didn't use the term directly. However, there was some inconsistency in Simon's narrative as he implied concern about the negative experiences of animals during long journeys but conflicted this with lack of concern about negative experiences when physical performance was good. This may reflect an inconsistent engagement with sentience, in which recognition of animals' subjective experiences is present, but not consistently applied.

Overall, Oliver and Simon both used limited language indicating recognition of animals' subjective experiences. Oliver explicitly used the term sentience only once, while Simon did not use it at all. Interestingly, both participants have backgrounds in farming and offered either all or some instrumental reasoning for their opposition to the live export trade.

Collectively, this analysis shows that participants varied in how they expressed and engaged with the concept of sentience. Some participants relied heavily on the term itself but provided limited or unclear supporting language about animals' affective experiences or states; these participants were all supportive of live export. Others described the subjective experiences of animals without explicitly mentioning sentience, and all of these participants were opposed to the trade. One further participant who opposed live export used the term directly while also drawing on supporting language, while two others used minimal supporting language and rarely or never mentioned sentience. This variation suggests that sentience might be a concept individuals understand but find hard to put into precise terms.

5.1 Introduction

This study set out to investigate the perspectives held by various stakeholders regarding live export by sea from NZ, focusing on how these views were justified and the underlying narratives, beliefs, and values that shape and sustain them. In doing so, it addresses a noticeable gap in the social research on live export by sea and contributes to the limited research examining how contested agricultural practices are framed and legitimised in public policy discussions.

Analysis of the public submissions from the government review identified eight recurring justificatory themes used to support positions both for and against the trade. Some themes reflected shared concerns among both supporters and opponents of the trade, while others revealed a clear divide in perspectives. This indicates that the debate is not completely polarised, and that areas of common ground can be identified.

Shared concerns centred primarily on the post-arrival welfare of exported animals. This included concerns around: welfare regulations and standards falling below those in NZ, lack of transparency around animal welfare reporting, lack of independent verification throughout the production chain, and slaughter practices and regulations in the destination country. This also included suggestions from some respondents to implement post-arrival management plans and extend the 30-day welfare reporting period beyond quarantine. Welfare concerns were also shared regarding the use of genetic material instead of live animals, with a focus on the potential welfare implications of artificial breeding techniques in destination countries.

Notably, submitters who supported the continuation of live export did not express the same level of concern regarding animal welfare during the voyage as opponents of the trade, for whom this was the most concerning aspect of the live export process. This suggests that supporters are more confident in the adequacy of onboard welfare standards and regulatory safeguards, and their main welfare concerns lie in post-arrival management and slaughter practices. This highlights a divergence in how welfare risks are perceived across different stages of the live export chain, where harm is more likely to occur, and differing levels of confidence in the industry's ability to mitigate these risks.

In contrast, themes that revealed clear divisions between supporters and opponents of the trade reflected concerns including: international food security, trade agreement obligations, economic benefits and impacts, and NZ's international reputation. These divisions reflect how supporters and opponents evaluate and prioritise competing considerations, with opponents giving primacy to animal welfare and suggesting alternatives to live animal export, while supporters placed greater weight on economic and strategic interests and perceived live export as necessary to fulfil these objectives. This divide reflects differences in the underlying values that shape what individuals prioritise, explaining why consensus is difficult to achieve and why some areas like post arrival welfare reveal common ground, while others, such as trade and strategic obligations, remain divisive.

When the stakeholder interviews were used to gain deeper insight into the themes identified in the submissions, the same areas of agreement and disagreement were observed, and a more in-depth

understanding emerged of the underlying reasons for these perspectives and the broader narratives shaping these positions, including the value participants placed on animals. From the interview data, three themes emerged as particularly influential in shaping stakeholder narratives. In the following section, these themes are discussed in detail, situating them within existing literature and exploring what may be driving these perspectives.

5.2 New Zealand's international reputation

The thematic analysis of submissions indicated that NZ's international reputation was an important concern for both supporters and opponents of the live export trade. Further exploration of this theme through stakeholder interviews revealed that interviewees invoked reputation in markedly different ways. Although both groups raised concerns about reputational risk, they drew on distinct narratives with different underlying values and implications. This indicates that reputation in the live export debate is not a single concept but is constructed around fundamentally different views of what counts as reputational harm or benefit.

Those opposed to the trade emphasised that negative animal welfare outcomes could damage NZ's reputation for high levels of animal welfare, affecting sales of the country's products in overseas markets. They therefore viewed a ban on live export as reputationally protective or enhancing. In contrast, supporters framed reputation in terms of NZ's credibility as a trading partner, arguing that a ban would undermine international trust and damage trade relationships. Together, these perspectives demonstrate that two distinct forms of national reputation are at play in the live export debate: animal welfare standards and reliable trade partnerships.

Concerns in relation to animal welfare standards have been shown to negatively influence consumer purchasing behaviour (Alonso et al., 2020; Tsakiridou et al., 2010). However, studies tend to focus on consumer preferences for welfare-friendly products rather than on how a country's reputation for animal welfare may affect overseas demand for its exported goods. Nevertheless, there is some evidence that negative animal welfare associations may place products at a disadvantage in consumer markets, particularly in countries where consumers place high importance on animal welfare.

Equally, the effects of reputation on bilateral trade agreements are supported by the literature, with improvements in reputation associated with increased exports (Dimitrova et al., 2017). Furthermore, the ways in which a country's reputation can reduce or provoke uncertainty and thus stimulate or discourage export varies (Dimitrova et al., 2017). Changing practices, such as the banning of live exports, may be perceived by trading partners as introducing uncertainty regarding NZ's reliability as a supplier. This perceived uncertainty could reduce trust, potentially impeding bilateral trade.

However, there appears to be no academic literature examining the effects that a ban on live export by sea may have on trade relationships. Nonetheless, a 2022 report suggested that NZ's trade relationship with China could be adversely affected by a ban, potentially resulting in a negative relationship cost; reducing NZ's access to other export markets, and prompting China to source other agricultural products from alternative suppliers (Austrex, 2022). Media reporting further indicates that a Chinese state-owned enterprise has urged NZ to reconsider the current ban, citing potential implications for bilateral trade relations (Sachdeva, 2022). This evidence suggests that reputational

improvements can act as a key channel for increasing the export of a country's goods; however, as my study shows, perceptions of what is seen as reputationally enhancing vary among stakeholders, reflecting different values, priorities, and attitudes.

The focus on reputation highlights a shared underlying value across stakeholder groups regarding the country's international standing. However, the meaning of this value varies. For some, reputational legitimacy is grounded in moral responsibility, whether framed through animal welfare or international food security; for others, it is defined by the country's reliability as a trading partner. In this way, concerns about NZ's international reputation act as a common narrative for contrasting positions on the trade, with disagreement around which actions best fulfil the shared goal of maintaining a favourable international standing.

This is consistent with other studies showing that reputation is not directly observable but instead emerges through stakeholders' interpretations of an entity's actions, communication, and perceived intent (Vlašić & Langer, 2012). As a result, the same activity can generate very different reputational assessments among stakeholder groups, even in response to the same practice (Vlašić & Langer, 2012). The literature also highlights the importance of maintaining favourable national reputations, with an increasing number of governments viewing reputation as an important asset in competing for trade, tourism, and inward investment crucial to long-term success (Passow et al., 2005). However, as I found, what constitutes a "favourable" reputation varies according to the values and priorities of different stakeholders. Recognising reputation as a shared but variable concern highlights the importance of examining the differing values underpinning stakeholder claims.

Policy documents provide a limited framing of reputation, often using vague language and lacking a clear, unified account of what it entails. MPI's guidance document for the export of cattle by sea references NZ's reputation as *"a responsible exporter of animals and products made from animals"* (Ministry for Primary Industries, 2022b). In contrast, MPI's discussion document for the 2019 review of the trade states that *"the aim of the review is to improve the welfare of livestock being exported, and protect NZ's reputation"* (Ministry for Primary Industries, 2019a). Additionally, MPI's animal welfare strategy document describes NZ's reputation as a *"reputation for integrity: NZ's animal welfare practices add value to our exports and contribute to our reputation as a responsible agricultural producer"* (Ministry for Primary Industries, 2013).

Each of these descriptions reflects only a partial framing of reputation. None captures the two distinct forms identified in this study: reputation for high animal welfare standards and reputation as a reliable trade partner. This indicates that policy framings do not fully reflect the ways in which NZ's reputation is understood and contested by various stakeholders. Terms such as "responsible" and "integrity" are vague and open to interpretation, as stakeholders prioritising different reputational concerns may hold different views on what it means to be a responsible exporter, or to operate with integrity.

This vagueness in policy framing suggests important considerations for future policy design. Concepts of reputation need to be more clearly defined if future policy is to address the full spectrum of reputational values held by stakeholders. Any meaningful definitions should encompass both animal welfare and trade dimensions to reflect the range of concerns identified by stakeholders. Doing so may enhance inclusiveness and stakeholder engagement, while also improving transparency and perceived legitimacy of policy decision-making in a highly contested trade such as live export by sea.

Recognising that stakeholders value different forms of reputation may also help reduce the polarisation evident in debates over live export by sea. Acknowledging that concerns about reputation are shared, even if grounded in different values, may create space for finding common ground, fostering a greater mutual understanding between stakeholder groups (Fisher & Ury, 1981; Yousef, 2014). In turn, this may help shift the debate away from an "us versus them" framing towards a deeper understanding of the values underpinning different positions, with the potential to reduce conflict and support more constructive engagement (Fisher & Ury, 1981).

5.3 Animal Welfare

In contrast to reputation, the importance of animal welfare was less contested in principle, with many submissions and interview participants acknowledging the potential for animals to experience harm. Concerns regarding negative welfare implications of sending animals on ships were a major theme of those opposed to the trade. Conversely, those in support mainly focused on animal welfare in the context of post-arrival conditions and standards.

A key point of divergence appeared to lie in the level of risk to animal welfare deemed acceptable. Opponents generally held the view that live export by sea cannot be undertaken without unacceptable levels of risk or compromise to animal welfare. In contrast, supporters acknowledged the existence of welfare risks but believed these could be managed to an acceptable level either through existing regulatory frameworks or, more commonly, through further improvements to these regulatory systems. When these were explored further in the interviews, it became apparent that perceptions of acceptable risk to animals were closely linked to the value attributed to them.

Value of animals

Participants I identified as attributing intrinsic value to animals were all strongly opposed to the trade and regarded the level of welfare risk involved as unacceptable. In contrast, participants identified as attributing mainly instrumental value to animals were prepared to accept a degree of risk, provided that the benefits, such as economic gain, food security, or reputational advantage, were considered sufficient to justify it. This suggests that intrinsic valuations of animals tend to align with opposition to the trade, whereas instrumental valuations do not necessarily translate into support, as other considerations also influence people's positions.

These findings offer insight into how different groups may respond if features of the debate were to change. Intrinsic valuers' opposition to the trade appeared principled rather than conditional, making shifts in their position unlikely; their concerns lay in moral considerations of how animals experience their own lives. In contrast, instrumental valuers expressed more conditional support or opposition, which appeared to be influenced by changing circumstances. Factors such as changes in welfare standards, profitability, or perceived risk could shift their position either towards stronger support for, or increased opposition to, the trade. This finding is consistent with literature on moral conviction, which demonstrates that attitudes grounded in moral values tend to be resistant to change, and less open to compromise (Skitka et al., 2021). This may help explain why opposition grounded in intrinsic

valuations of animals appeared principled rather than conditional, whereas more instrumental positions appeared to be responsive to changing circumstances.

This understanding is relevant to the likely acceptance of the government's proposed "gold standard" of animal welfare, which appears to have rested on the assumption that raising welfare standards would mitigate public concern. While this would likely be effective for those privileging instrumental values of animals and whose position was conditional, it would fail to have the desired effect on those for whom animals' intrinsic value is most important.

Sentience

The emphasis put on animal sentience among interview participants – reflected by the use of "feeling" words, concepts or language describing or prioritising animals' mental experiences – did not always correlate with the use of the term "sentience". Some participants who used little or no language acknowledging animals' mental experiences relied heavily on the word itself, while others who described the mental experiences of animals rarely or never used the term.

Additionally, the term was mentioned much more frequently by participants who supported live export than by those opposed to the trade, although they were not directly asked about the concept. These findings contrasted with expectations, as discussions of sentience are commonly associated with arguments against the trade based on animal welfare grounds (Ministry for Primary Industries, 2020). This pattern suggests that, for some participants, use of the term may have operated as a rhetorical marker, signalling moral positioning without necessarily reflecting understanding or concern for animals' mental experiences (Claborn, 2024). To interpret these findings further, I will draw on the concept of "buzzwords."

Sentience as a 'buzzword'

Buzzwords are terms mobilised to signal awareness of, or alignment with, particular values or debates; they often remain ambiguous as their meaning can be interpreted in multiple ways (Cornwall & Eade, 2010; Schnable et al., 2021). Buzzwords can shape the way issues are perceived, signal moral values, and evoke emotional responses (Claborn, 2024). Frequently used within policy, their ambiguity allows different groups of people to attach their own ideas or agendas to the same term, while simultaneously creating space for debate (Cornwall & Eade, 2010). Perhaps relevant to the current topic, buzzwords can be used opportunistically, as favourable terms that appeal to certain groups of people or organisations to gain credibility (Schnable et al., 2021). Viewed through this framework, "sentience" appeared to operate in this way for two interview participants, Matthew and, to a lesser extent, Nathan. While both frequently mentioned the term, Matthew rarely used any other language or concepts relating to animals' mental experiences, whereas Nathan offered only occasional acknowledgement of them. In both cases, the term may have signalled moral awareness without any meaningful commitment to animals' subjective experiences. This aligns with previous findings describing how buzzwords can shape the way issues are perceived and mobilised to signal moral values (Claborn, 2024).

As Matthew and Nathan are both industry representatives, the term may have been used to reflect alignment with government policy and appeal to public expectations. In this way, the use of the term may help maintain professional credibility with both industry stakeholders and wider public audiences, illustrating how buzzwords can operate both strategically and symbolically in practice. Use of the term sentience in this manner may also reflect the way in which animals' mental experiences are typically framed within the agricultural industries represented by Matthew and Nathan, where such experiences may not be fully understood or relevant to everyday discourse. This is evident in industry documentation, where references to sentience can be made in a manner that misrepresents the concept and what it entails. For example, a Live Export NZ document describes *"positive sentience"* for cattle onboard ships as a best-practice mandate. Here, the term is used incorrectly, as sentience refers to the capacity for subjective experiences, while positive and negative distinctions relate to the nature of those experiences. Its use in this manner further illustrates how the concept can be invoked without clear or precise engagement with, or understanding of, its meaning. In either case, the term may be operating as a buzzword, carrying moral and professional weight without requiring meaningful engagement.

Furthermore, Matthew's interview gave the impression that he framed welfare as relating to animals' physical health, and sentience as relating to other non-physical aspects of their state. N. Beausoleil (personal communication, 18 December 2025) notes that this perspective aligns with prior observations among individuals with farming backgrounds, for whom the use of sentience typically refers to the non-physical aspects of welfare (or Domain Four of the Five Domains), rather than to animals' capacity for mental experiences relevant to their welfare (Mellor, 2019).

Conversely, participants such as Lily, Sara, Stefanie, and Vanessa rarely or never mentioned the term sentience but described animals' subjective experiences, implying recognition of the concept. Their responses indicate an understanding or prioritisation of animals' emotional and psychological lives without explicitly using the term itself. This suggests an authentic focus on animals' experiences, which may be shaped by their professional backgrounds. Lily, Stefanie and Vanessa are animal welfare scientists, and Sara is a veterinarian. Notably, they are all female, which may also influence the way they discussed animals' emotional experiences. This interpretation is consistent with previous research suggesting females tend to emotionally engage more strongly with animals than males and are more likely to attribute emotional and psychological experiences to certain animals, including cows (Cornish et al., 2018). This may help explain why the women in this study were all opposed to live export by sea, as previous research suggests they place greater emphasis on animals' emotional experiences and are more likely to sympathise with the potential suffering they associate with the practice (Knight et al., 2004).

A third pattern emerged: Oliver and Simon used minimal language relating to animal sentience and rarely mentioned the term itself. These participants may have a limited understanding of the concept or may be less inclined to mention or acknowledge it in their discussions about animal welfare. Given their backgrounds as a veterinarian with animal welfare expertise and an individual with experience in regulatory and governmental oversight of live export, lack of understanding seems less likely. Rather, this could reflect a more practical or functional view of animals, focused on their care and management with less emphasis on their emotional experiences. Both Oliver and Simon have farming backgrounds and experience, which may also contribute to the lack of sentience-reflective language, as the emphasis tends to be on physical care and productivity, rather than emotional well-

being. This interpretation is supported by prior studies, which conclude that farmers tend to view animal welfare primarily in instrumental terms, focusing more on animal performance and health, and less on their emotional states (Buddle et al., 2021; Hötzel et al., 2025; Yang et al., 2024).

5.4 Transparency of the industry

Transparency emerged as a significant theme across both the submissions and the interviews, from supporters and opponents, reflecting the theme's many intertwined components. Participants from both perspectives identified a lack of accessible, credible information, or perceived gaps in existing information, as a key barrier to public trust, highlighting the central role transparency plays in shaping social licence. More specifically, for those opposed to the trade, limited transparency reinforced scepticism about industry practices and regulatory oversight, contributing to doubts about whether animal welfare risks could be adequately managed and incidents truthfully reported. In contrast, supporters of the trade believed greater transparency was needed to rebuild and maintain public trust, counter common misconceptions about the industry, and demonstrate compliance with industry standards.

However, research suggests that transparency alone is insufficient to establish trustworthiness; it merely places information in the public domain, often to meet certain incentives or expected standards (O'Neill & Bardrick, 2015). Such information can often be difficult to access, interpret, or evaluate, particularly for individuals with limited time or subject-specific knowledge (O'Neill & Bardrick, 2015). Thus, simply making information publicly available is therefore unlikely to be sufficient to establish trust or demonstrate genuine trustworthiness.

Meaningful communication instead requires organisational cultures that clearly define expectations, support ethical practice, and enable consistent accountability in decision-making and outcomes (O'Neill & Bardrick, 2015). In this sense, trust is grounded in perceptions of trustworthiness, rather than being solely based on transparency, and must be earned through the demonstration of credible approaches, behaviours, and outcomes (Stronge et al., 2024). Consistent with this, trust is widely recognised as a fundamental component of social licence to operate (Gulliver et al., 2018). While transparency has been identified as an important element of achieving social licence (Edwards & Trafford, 2016), other studies report mixed findings regarding whether transparency, particularly in government contexts, has any measurable effect on levels of public trust (Cucciniello et al., 2017).

Within the context of live export by sea, these features take on significance across several areas. Concerns about transparency and accountability were raised in relation to animal welfare during ship transport, oversight mechanisms, trade agreements between governments, and animal welfare standards in destination countries, including slaughter standards and practices. These concerns may be further reinforced by a number of high-profile failures within the live export industry, which have drawn attention to the risks associated with animal welfare and shortcomings in regulatory oversight. Where information is not easily available, stakeholders may struggle to assess whether their expectations are being met, which in turn reinforces broader concerns about trust and legitimacy within the live export trade. The following sections briefly discuss each of these concerns.

Animal welfare monitoring and reporting

Concerns regarding the availability of information about daily animal care and welfare during ship voyages were especially prominent, reflecting previous findings that highlight ongoing difficulties in obtaining information about animal welfare outcomes at sea (P. A. Fleming, S. L. Wickham, A. Barnes, et al., 2020; Hing et al., 2021). These concerns were compounded by the perceived lack of independent monitoring and reporting, both on board the vessels and during the quarantine period in destination countries. Interview participants expressed unease about potential conflicts of interest, whereby oversight of animal welfare was conducted by workers associated with exporters. Similar concerns regarding the lack of independent reporting have been documented in previous studies (Foster & Overall, 2014; Hing et al., 2021), with an Australian stakeholder survey finding strong support for the use of independent welfare inspectors across the live export supply chain (P. A. Fleming, S. L. Wickham, A. Barnes, et al., 2020).

While concerns regarding the lack of independent welfare monitoring on live export vessels are well documented, concerns relating to destination country quarantine periods appear to be largely absent from existing studies. This highlights an area where further research could be undertaken. Consistent with previous research (P. A. Fleming, S. L. Wickham, E. Dunston-Clarke, et al., 2020), my findings indicate that if live export were to be reinstated, developing comprehensive measures across the entire live export supply chain to assess animal welfare, and making information gathered by independent agents available both to those involved in the trade and to the public, is central to enhancing transparency and, in turn, public trust. Unlike domestic animal supply chains, where there is some degree of independent monitoring and accountability, even if the resulting information is not fully public, live export involves animals being predominantly "out of sight," and largely beyond the control of stakeholders, which can heighten uncertainty and concerns.

Slaughter practices

The lack of information regarding slaughter practices in China, NZ's major live export trading partner, was also concerning to both supporters and opposers of the trade. Animal welfare at slaughter was viewed as an integral part of the overall welfare implications of the trade. There are notable differences in how animal welfare is regulated in the two countries, with no single legal animal welfare framework in China (Sinclair et al., 2020). In addition, pre-slaughter stunning, designed to render animals unconscious before slaughter, is not commonly practised in China (Sinclair et al., 2019) while in NZ it is mandatory (Ministry for Primary Industries, 2018b). This difference in regulatory frameworks might help explain stakeholder concerns regarding the lack of transparency around slaughter practices in China.

Although NZ exported livestock by sea solely for breeding purposes prior to the ban, it was recognised that these animals would ultimately be slaughtered at the end of their productive lives. Therefore, the importance of information on slaughter practices in destination countries cannot be overlooked, as the absence of such information may lead to assumptions of worst-case scenarios. This is supported by literature suggesting that limited knowledge of animal welfare standards in China may contribute to perceptions that animal cruelty is commonplace (Sinclair et al., 2020).

Trade agreements

Opponents of the trade also pointed to limited transparency surrounding trade agreements and NZ's obligations to its trading partners in relation to the possible implications of withdrawing from the live export trade. These concerns highlight the importance of transparency and suggest a need for clarification around the international legal framework that governs the live export of animals between countries.

NZ and China are both members of the World Trade Organization (WTO) and are bound by the General Agreement on Tariffs and Trade 1994 (GATT 1994) (World Trade Organization, 1994). The two countries also have a bilateral regional trade agreement, the New Zealand-China Free Trade Agreement (NZCFTA), which operates within the WTO framework. NZ's ability to export live animals to China operates within these frameworks, which govern trade in goods, including live animals. Neither the GATT nor the NZCFTA contains an explicit legal obligation for NZ to export live animals to China. Article XX of the GATT contains exceptions that allow countries to restrict trade for certain reasons, including measures *"necessary to protect human, animal or plant life or health"* (World Trade Organization, 1994). This provision could be interpreted to justify restrictions or bans on live export where animal welfare is linked to risks to animal life or health, or to exclude welfare-based concerns that are not directly animal health-related (such as stress, fear and anxiety, or expression of natural behaviours). Therefore, depending on how the argument is framed, this provision may be used either to support bans or restrictions on live export, or to argue that they are unjustified.

Participants' concerns suggest that the details and implications of such trade agreements are not widely understood, particularly in relation to how policy decisions based on animal welfare may affect trade commitments. A review of the available literature suggests there is little to no readily available information on how live export trade commitments are negotiated or enforced. This lack of clarity appears to contribute to the uncertainty about whether NZ can restrict or withdraw from the trade without potential legal, diplomatic or economic consequences.

This discussion reflects my own interpretation of the relevant legal framework and is not intended as a conclusive legal analysis. Further research is needed to clarify the legalities surrounding this issue.

Uncertainty about the purpose of live export

Finally, participant comments suggest that concerns about transparency discussed above may be compounded by a lack of clarity regarding the fundamental purpose of exporting breeding animals to China by sea. Specifically, there was uncertainty among those who opposed the trade about why the export of live animals is considered necessary, what alternative options have been considered, and, importantly, why these alternatives are not considered viable. This may make it difficult for stakeholders to evaluate whether the trade is justified. Without clear and consistent explanations, stakeholders may fill in these information gaps with speculation, which in turn can undermine trust and reinforce a lack of credibility within the industry.

Proposed alternatives to the export by sea of live dairy and beef cows for breeding include export of dairy or meat products or of genetic material such as semen or fertilised embryos or sending the

animals by air. Although alternatives are frequently discussed, there are conflicting and inconsistent explanations given by the industry and supporters of the trade about why these options are not viable.

When the purpose of an activity is unclear due to lack of information, stakeholders are more likely to question its legitimacy and resist its continuation, especially when potential negative welfare outcomes for animals are perceived as avoidable. This is because social license to operate is built from the individual perceptions of stakeholders, based on information that is available to them (Stuart et al., 2023), and therefore is closely linked to perceptions of legitimacy (Bowles et al., 2019). Addressing this requires clearer and consistent communication regarding the purpose of the trade, including transparent explanations of why the export of live animals is considered necessary and why alternative options may not be viable.

This section has discussed the study's main findings, focusing on the three most influential themes thought to shape stakeholder narratives and perspectives, and related them to existing literature, highlighting both consistencies and divergences with previous research. By doing so, I have contextualised the study's findings within the broader body of knowledge, providing a clearer understanding of how these themes shape stakeholder perspectives, and provided a foundation for further investigation. The following section addresses the study's limitations and offers suggestions for future research.

5.5 Limitations of the study

While this research provides valuable insights into stakeholders' perspectives on live animal export from NZ by sea, it is important to acknowledge several limitations when interpreting its findings.

First, the small sample size (n = 8) may restrict the extent to which the results can be generalised beyond the participants involved. However, the study was not intended to provide broad generalisations, but rather to offer in depth insights into stakeholder perspectives. This focused approach allowed for a deeper understanding of the complexities within the specific group studied, a goal that I believe was effectively achieved. Future research with larger sample sizes may help confirm these findings and explore their applicability to a broader population.

While the aim of the study was to capture a range of stakeholder perspectives, the sample was not fully representative of all stakeholder groups. A key limitation was the absence of farmers who had directly participated in live export by sea and could therefore speak from first-hand experience. Despite repeated efforts to recruit such participants, the contentious nature of the topic appeared to limit willingness to participate, with potential participants either not responding or disengaging after initial contact. Furthermore, time constraints associated with the thesis timeline prevented further pursuit of this avenue. As a result, certain first-hand perspectives from farmers are not represented in the data. Future research could seek to engage directly with farmers who have participated in live export to gain their first-hand accounts and explore their experiences. This could be particularly valuable for understanding the industry's practices from the perspectives of those who have actively participated in the trade.

Additionally, the distribution of participant viewpoints within the sample was uneven, with a greater number of participants expressing opposition to live export (n = 6) compared with those in support (n = 2). This imbalance may have influenced which narratives and justifications are most strongly reflected in the findings. Future studies could aim for a more balanced sample, with more equal representation of both pro and anti stakeholders to better capture the full spectrum of perspectives on live export by sea.

Finally, the study used a mixed methods approach, drawing on submissions from the government's live export review to inform the development of the interview questions. While these submissions provided a valuable foundation for designing the questionnaire, the framing of the government's associated discussion document used by some submitters may have shaped the issues raised in the submissions, which in turn influenced the direction of the interviews. This introduces the possibility that the study reflects, to some extent, the governmental perspective on the issue. To address this, future research could consider a wider variety of sources when developing interview questions, including independent reports or studies with perspectives from international stakeholders, to establish a broader baseline for the study that extends beyond the governmental framing.

5.6 Policy implications

The findings of this study have several important implications for policy surrounding live export by sea, particularly in relation to regulatory clarity, transparency, and animal welfare. Consideration of these implications is especially relevant in the context of any potential reinstatement of the trade. However, as this study suggests, regardless of any regulatory improvements or policy changes, reinstatement is likely to remain unacceptable to some stakeholders. As such, while it may be challenging for policy to accommodate differing perspectives, this research identifies several key considerations that should be addressed if reinstatement were to proceed.

Clarify legal position

Proactive steps should be taken by the government to clarify its legal position on live export by sea, particularly in relation to international agreements such as those with the World Trade Organisation (WTO) and the New Zealand-China Free Trade Agreement (NZCFTA). An honest and open discussion about the role live export plays within international trade agreements is crucial, including consideration of the viability of alternatives to exporting live animals. A transparent policy approach that openly addresses the implications of restricting or withdrawing from the trade is necessary to provide clarity for stakeholders.

Improve transparency

This study highlights a considerable gap in public knowledge regarding live export by sea from NZ, indicating a need to improve transparency across all aspects of the trade. Government and industry bodies should ensure that critical information, such as trade agreements, animal welfare reports,

methods of welfare assessment, and details about exporters and destination countries, is made both accessible and understandable to the public. This would allow for greater accountability and help build public trust. Additionally, stakeholders should have the opportunity to be actively involved in discussions about what information should be made transparent, ensuring that public concerns are considered when determining what information should be shared.

Welfare standards on ships

Improving animal welfare during ship transport is another key policy area. This study suggests that government should introduce enhanced welfare standards for animals on live export vessels, with an emphasis on more comprehensive reporting of welfare conditions. Previous welfare assessments have focused on mortality rates; however, if the trade were to be reinstated, additional welfare measures should be used to ensure a broader and more accurate picture of on-board welfare. Government should consider mandating independent observers on all vessels to monitor and report conditions, ensuring adherence to welfare standards while also improving transparency. Furthermore, a public consultation process should be undertaken, allowing animal welfare experts and other interested stakeholders the opportunity to participate in establishing the criteria for acceptable welfare standards on live export vessels.

Destination country monitoring and reporting

Extending the scope of monitoring and reporting on the welfare of exported animals in destination countries is another crucial policy implication. Independent monitoring should be established to assess and report on conditions in receiving countries, including welfare standards and slaughter procedures. Making this information publicly available would ensure greater accountability across the entire supply chain, from export to slaughter. In turn, this would help address concerns about practices in countries where animal welfare laws fall below those in NZ.

5.7 Policy update

As this thesis was being finalised, the New Zealand Government announced that plans to reinstate the live export by sea trade would not progress during the current parliamentary term. In the months leading up to this announcement, the policy debate had remained relatively quiet, with little public progress or formal updates on the government's earlier commitment to overturn the ban. However, on 10 March 2026, Associate Agriculture Minister Andrew Hoggard announced that the government have been unable to reach an agreement to proceed with reinstating the trade, describing it as *"a highly contentious area",* one where *"we needed to get everyone on board to take it forward and we haven't achieved that at this stage"* (Collins, 2026).

The government's inability to secure cabinet consensus underscores a central argument of this thesis: debates over live export by sea are structured through competing justificatory narratives that make agreement difficult to achieve. These debates are not simply about improving welfare standards or

access to information but reflect fundamentally different values regarding what matters in the context of live export, helping to explain why this area remains highly contentious.

The media coverage surrounding this announcement also reflects several of the narratives identified in this research. The government announcement highlighted the economic value of the trade and the difficulty of achieving political consensus, noting that some farmers would be disappointed by the decision not to reinstate it. In contrast, responses from animal advocacy organisations emphasised animal welfare, public legitimacy, and NZ's international standing, with the SPCA highlighting the inherent cruelty of the industry and describing the announcement as *"a win for animals, the general public, and for NZ's international reputation"* (SPCA, 2026).

References

Allaby, M., & Park, C. (2013). *A dictionary of environment and conservation*. Oxford University Press.

Alonso, M. E., González-Montaña, J. R., & Lomillos, J. M. (2020). Consumers' concerns and perceptions of farm animal welfare. *Animals*, *10*(3), 385. https://doi.org/https://doi.org/10.3390/ani10030385

Anonymous. (2001). Lamb deaths crackdown. *The Dominion*.

Apatov, E., Fabling, R., Jaffe, A. B., Morris, M., & Thirkettle, M. (2015). Agricultural productivity in New Zealand: First estimates from the Longitudinal Business Database. *Available at SSRN 2660522*. https://doi.org/https://dx.doi.org/10.2139/ssrn.2660522

Appleby, M. C., Cussen, V. A., Garcés, L., Grandin, T., Lambert, L. A., & Turner, J. (2008). *Long distance transport and welfare of farm animals*. CABI. https://doi.org/https://doi.org/10.1079/9781845934033.0000

Arias-Arévalo, P., Martín-López, B., & Gómez-Baggethun, E. (2017). Exploring intrinsic, instrumental, and relational values for sustainable management of social-ecological systems. *Ecology and Society*, *22*(4). https://doi.org/https://doi.org/10.5751/ES-09812-220443

Austrex. (2022). *Wellbeing Analysis of the Ban on Livestock Exports* https://www.tdb.co.nz/wp-content/uploads/2022/08/TDB-Advisory-Infometrics-Austrex-Wellbeing-Analysis-of-Livestock-Export-Ban-22.pdf

Banney, S., Henderson, A., & Caston, K. (2009). *Management of Bedding during the Livestock Export Process* https://www.mla.com.au/contentassets/2846c255a6954cf68a1337265e075744/w.liv.0254_final_report.pdf

Beatty, D., Barnes, A., Taylor, E., Pethick, D., McCarthy, M., & Maloney, S. (2006). Physiological responses of Bos taurus and Bos indicus cattle to prolonged, continuous heat and humidity. *Journal of animal science*, *84*(4), 972-985. https://doi.org/https://doi.org/10.2527/2006.844972x

Berman, A., Folman, Y., Kaim, M., Mamen, M., Herz, Z., Wolfenson, D., Arieli, A., & Graber, Y. (1985). Upper critical temperatures and forced ventilation effects for high-yielding dairy cows in a subtropical climate. *Journal of Dairy Science*, *68*(6), 1488-1495. https://doi.org/https://doi.org/10.3168/jds.S0022-0302(85)80987-5

Bernstein, M. (2001). Intrinsic value. *Philosophical Studies: An International Journal for Philosophy in the Analytic Tradition*, *102*(3), 329-343.

Blackshaw, J. K., & Blackshaw, A. W. (1994). Heat stress in cattle and the effect of shade on production and behaviour: a review. *Australian Journal of Experimental Agriculture*, *34*(2), 285-295. https://doi.org/https://doi.org/10.1071/EA9940285

Blattner, C. E. (2019). The Recognition of Animal Sentience by the Law. *Journal of Animal Ethics*, *9*(2), 121-136. https://doi.org/10.5406/janimalethics.9.2.0121

Bowles, P., MacPhail, F., & Tetreault, D. (2019). Social licence versus procedural justice: Competing narratives of (Il)legitimacy at the San Xavier mine, Mexico. *Resources Policy*, *61*, 157-165. https://doi.org/https://doi.org/10.1016/j.resourpol.2019.02.005

Boyer, S. (2015). Millions of live animals exported from NZ. https://www.stuff.co.nz/business/farming/70496128/millions-of-live-animals-exported-from-nz

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, *3*(2), 77-101-101. https://doi.org/10.1191/1478088706qp063oa

Broom, D. M., Hagen, K., van den Bos, R., & de Cock Buning, T. (2011). A history of animal welfare science. *Acta Biotheoretica*, *59*(2), 121-137. https://doi.org/10.1007/s10441-011-9123-3

Browning, H., & Birch, J. (2022). Animal sentience. *Philosophy compass*, *17*(5), e12822. https://doi.org/https://doi.org/10.1111/phc3.12822
Browning, H., & Veit, W. (2022). The sentience shift in animal research. *The New Bioethics*, *28*(4), 299-314. https://doi.org/https://doi.org/10.1080/20502877.2022.2077681
Buddle, E. A., Bray, H. J., & Ankeny, R. A. (2021). "Of course we care!": A qualitative exploration of Australian livestock producers' understandings of farm animal welfare issues. *Journal of Rural Studies*, *83*, 50-59. https://doi.org/https://doi.org/10.1016/j.jrurstud.2021.02.024
Carenzi, C., & Verga, M. (2009). Animal welfare: review of the scientific concept and definition. *Italian Journal of Animal Science*, *8*(sup1), 21-30. https://doi.org/https://doi.org/10.4081/ijas.2009.s1.21
Chapman, D. F., & MacMillan, K. L. (2000). Challenges facing animal production in Australia and New Zealand. *Asian-Australasian Journal of Animal Sciences*, *13*(SUPPL. A), 21-29.
Claborn, K. (2024). Exploring the Spread, Use, and Impact of Buzzwords on Decision Making in Conservation: A Mixed Methods Approach.
Colditz, I. G., Ferguson, D. M., Collins, T., Matthews, L. R., & Hemsworth, P. H. (2014). A Prototype Tool to Enable Farmers to Measure and Improve the Welfare Performance of the Farm Animal Enterprise: The Unified Field Index. *Animals*, *4*(3), 446-462. https://doi.org/https://doi.org/10.3390/ani4030446
Collins, B. (2026). 'Will be disappointment': Live export ban won't be overturned this term. https://www.1news.co.nz/2026/03/10/will-be-disappointment-live-export-ban-wont-be-overturned-this-term/
Collins, T., Hampton, J., & Barnes, A. (2018). *Literature review of scientific research relating to animal health and welfare in livestock exports* (Murdoch University, Perth, Western Australia, Issue. https://www.agriculture.gov.au/sites/default/files/sitecollectiondocuments/animal/independent-literature-review.pdf
Cornish, A., Wilson, B., Raubenheimer, D., & McGreevy, P. (2018). Demographics regarding belief in non-human animal sentience and emotional empathy with animals: a pilot study among attendees of an animal welfare symposium. *Animals*, *8*(10), 174. https://doi.org/https://doi.org/10.3390/ani8100174
Cornwall, A., & Eade, D. (2010). *Deconstructing development discourse: Buzzwords and fuzzwords*. Oxfam GB. https://doi.org/https://doi.org/10.1080/09614520701469302
Costa, N., Accioly, J., & Cake, M. (2003). Determining critical atmospheric ammonia levels for cattle, sheep and goats-a literature review. . *Brisbane: Meat & Livestock Australia Ltd*.
Cucciniello, M., Porumbescu, G. A., & Grimmelikhuijsen, S. (2017). 25 years of transparency research: Evidence and future directions. *Public administration review*, *77*(1), 32-44. https://doi.org/https://doi.org/10.1111/puar.12685
Department of Agriculture, F. a. F. (2024). *Australian Standards for the Export of Livestock 3.3*. Australian Government Retrieved from https://www.agriculture.gov.au/sites/default/files/documents/ASEL-version-3.3.pdf
Didham, R. K., Denmead, L. H., & Deakin, E. L. (2012). Riches to rags: the ecological consequences of land use intensification in New Zealand. *Land use intensification: effects on agriculture, biodiversity and ecological processes. CSIRO Publishing*, 73-83. https://doi.org/https://doi.org/10.1071/978064310408210.73.84.2012.10
Dimitrova, B. V., Korschun, D., & Yotov, Y. V. (2017). When and how country reputation stimulates export volume. *International Marketing Review*, *34*(3), 377-402. https://doi.org/10.1108/IMR-10-2015-0211
Drummond, J. G., Curtis, S. E., Lewis, J. M., Hinds, F. C., & Simon, J. (1976). Exposure of lambs to atmospheric ammonia. *J. Anim. Sci.;(United States)*, *42*(5). https://doi.org/https://doi.org/10.2460/ajvr.1978.39.02.211

Edwards, P., & Trafford, S. (2016). Social licence in New Zealand—what is it? *Journal of the Royal Society of New Zealand*, *46*(3-4), 165-180. https://doi.org/https://doi.org/10.1080/03036758.2016.1186702

Fisher, A. D., Colditz, I. G., Lee, C., & Ferguson, D. M. (2009). The influence of land transport on animal welfare in extensive farming systems. *Journal of Veterinary Behavior*, *4*(4), 157-162. https://doi.org/https://doi.org/10.1016/j.jveb.2009.03.002

Fisher, A. D., Matthews, L. R., & Pearce, P. V. (1999). The effects of long haul transport on pregnant, non-lactating dairy cows. *New Zealand Veterinary Journal*, *47*(5), 161-166. https://doi.org/10.1080/00480169.1999.36136

Fisher, R., & Ury, W. (1981). Getting to Yes: Negotiating an agreement without giving in.

Fitzgerald, T., Norton, B. W., Elliott, R., Podlich, H., & Svendsen, O. L. (2000). The influence of long-term supplementation with biotin on the prevention of lameness in pasture fed dairy cows. *Journal of Dairy Science*, *83*(2), 338-344. https://doi.org/https://doi.org/10.3168/jds.S0022-0302(00)74884-3

Fleming, P. A., Wickham, S. L., Barnes, A., Miller, D. W., & Collins, T. (2020). Varying opinions about animal welfare in the australian live export industry: A survey. *Animals*, *10*(10), 1-19, Article 1864. https://doi.org/10.3390/ani10101864

Fleming, P. A., Wickham, S. L., Barnes, A. L., Miller, D. W., & Collins, T. (2020). Varying Opinions about Animal Welfare in the Australian Live Export Industry: A Survey. *Animals (2076-2615)*, *10*(10), 1864-1864. https://doi.org/10.3390/ani10101864

Fleming, P. A., Wickham, S. L., Dunston-Clarke, E., Willis, R. S., Barnes, A., Miller, D. W., & Collins, T. (2020). Review of Livestock Welfare Indicators Relevant for the Australian Live Export Industry. *Animals (2076-2615)*, *10*(7), 1236. https://doi.org/10.3390/ani10071236

Forkman, B. (2013). *Animal Welfare in Animal Agriculture: Husbandry, Stewardship, and Sustainability in Animal Production* (Vol. 22). Cambridge University Press. https://doi.org/https://doi.org/10.1017/S0962728600005157

Foster, S. F., & Overall, K. L. (2014). The welfare of Australian livestock transported by sea. *Veterinary Journal*, *200*(2), 205-209. https://doi.org/10.1016/j.tvjl.2014.03.016

Fraser, D., Webster, A. J. F., & Main, D. C. J. (2003, 2003/01/01/2003). Assessing animal welfare at the farm and group level: the interplay of science and values. Animal Welfare, Wheathampstead, UK.

Gibbs, R. M. (2023). *The influence of stereotypic behaviour on non-experts' perception of the mental experiences of zoo-housed animals* [Master's thesis, Massey University]. https://mro.massey.ac.nz/items/ee467cf4-6a27-4ab0-95ba-e989961fdf5d

Granwal, L. (2024). *Gross domestic product (GDP) of the agriculture, forestry, and fishing industry in New Zealand from 2018 to 2023*. Retrieved 14 October from https://www.statista.com/statistics/1026489/new-zealand-agriculture-forestry-fishing-industry-gross-domestic-product/

Green, T. C., & Mellor, D. J. (2011). Extending ideas about animal welfare assessment to include 'quality of life'and related concepts. *New Zealand Veterinary Journal*, *59*(6), 263-271. https://doi.org/https://doi.org/10.1080/00480169.2011.610283

Gulliver, P., Jonas, M., Fanslow, J., McIntosh, T., & Waayer, D. (2018). Surveys, social licence and the Integrated Data Infrastructure. *Aotearoa New Zealand Social Work*, *30*, 57. https://doi.org/10.11157/anzswj-vol30iss3id481

Hall, S. J. G., & Bradshaw, R. H. (1998). Welfare Aspects of the Transport by Road of Sheep and Pigs. *Journal of Applied Animal Welfare Science*, *1*(3), 235-254. https://doi.org/10.1207/s15327604jaws0103_4

Heron, M. (2020). *Review into the Maritime Safety Information Requirements for the Export of Livestock by Sea*. https://www.mpi.govt.nz/dmsdocument/42511-Review-into-the-Maritime-Safety-Information-Requirements-for-the-Export-of-Livestock-by-Sea/

Hing, S., Foster, S., & Evans, D. (2021). Animal Welfare Risks in Live Cattle Export from Australia to China by Sea. *Animals*, *11*(10), 2862-2862. https://doi.org/10.3390/ani11102862

Hötzel, M. J., Nogueira, L. B., Hargreaves-Méndez, M. J., & Stadnick, E. C. P. (2025). Farmers' attitudes toward animal welfare. *Animal Frontiers*, *15*(2), 12-20. https://doi.org/https://doi.org/10.1093/af/vfae049

Iremonger, M. (2024). *What's the Beef? Opportunities for Beef on Dairy in New Zealand*. https://www.nuffieldscholar.org/search/iremonger

James, V. (2016). Recognising animal sentience: Including minimum standards for opportunities to display normal patterns of behaviour in codes of welfare in New Zealand.

Justus, J., Colyvan, M., Regan, H., & Maguire, L. (2009). Buying into conservation: intrinsic versus instrumental value. *Trends in ecology & evolution*, *24*(4), 187-191. https://doi.org/https://doi.org/10.1016/j.tree.2008.11.011

Kells, N. J. (2022). Review: The Five Domains model and promoting positive welfare in pigs. *animal*, *16*, 100378. https://doi.org/https://doi.org/10.1016/j.animal.2021.100378

Knight, S., Vrij, A., Cherryman, J., & Nunkoosing, K. (2004). Attitudes towards animal use and belief in animal mind. *Anthrozoös*, *17*(1), 43-62. https://doi.org/10.2752/089279304786991945

Kristensen, H. H., & Wathes, C. M. (2000). Ammonia and poultry welfare: a review. *World's Poultry Science Journal*, *56*(3), 235-245. https://doi.org/https://doi.org/10.1079/WPS20000018

Kuczynski, L., & Daly, K. (2003). Qualitative methods for inductive (Theory-Generating). *Handbook of dynamics in parent–child relations*, 373-392.

Kumar, S., Choudhary, S., Kumar, R., Kumar, A., Pal, P., & Mahajan, K. (2019). Animal sentience and welfare: An overview. *International Journal of Current Microbiology and Applied Sciences*, *8*(8), 635-644. https://doi.org/https://doi.org/10.20546/ijcmas.2019.808.074

Lee, S. M., Kim, J. Y., & Kim, E. J. (2012). Effects of stocking density or group size on intake, growth, and meat quality of Hanwoo steers (Bos taurus coreanae). *Asian-Australasian Journal of Animal Sciences*, *25*(11), 1553. https://doi.org/https://doi.org/10.5713/ajas.2012.12254

Littlewood, K. E., & Beausoleil, N. J. (2021). Two Domains to Five: Advancing Veterinary Duty of Care to Fulfil Public Expectations of Animal Welfare Expertise. *Animals (Basel)*, *11*(12). https://doi.org/10.3390/ani11123504

Littlewood, K. E., Heslop, M. V., & Cobb, M. L. (2023). The agency domain and behavioral interactions: assessing positive animal welfare using the Five Domains Model. *Frontiers in Veterinary Science*, *10*, 1284869. https://doi.org/https://doi.org/10.3389/fvets.2023.1284869

MacLeod, C. J., & Moller, H. (2006). Intensification and diversification of New Zealand agriculture since 1960: An evaluation of current indicators of land use change. *Agriculture, ecosystems & environment*, *115*(1), 201-218. https://doi.org/https://doi.org/10.1016/j.agee.2006.01.003

MAMIC Pty Ltd. (2001). *Investigation of the ventilation efficacy on livestock vessels*. https://www.mla.com.au/research-and-development/reports/2001/investigation-of-the-ventilation-efficacy-on-livestock-vessels/

Mayes, B. T., Dundon, S. G., Cowley, F. C., Norman, L.-E. K., Morton, J. M., & Tait, L. A. (2025). Stocking density in intensive housing and the implications for beef cattle behavior, stress physiology, and liveweight. *Journal of animal science*, *103*, skaf034. https://doi.org/https://doi.org/10.1093/jas/skaf034

McBride, E. A., & Baugh, S. (2022). Animal Welfare in Context: Historical, Scientific, Ethical, Moral and One Welfare Perspectives. In A. Vitale & S. Pollo (Eds.), *Human/Animal Relationships in Transformation: Scientific, Moral and Legal Perspectives* (pp. 119-147). Springer International Publishing. https://doi.org/10.1007/978-3-030-85277-1_7

Mellor, D., Patterson-Kane, E., & Stafford, K. J. (2009). *The sciences of animal welfare*. John Wiley & Sons.

Mellor, D. J. (2017). Operational Details of the Five Domains Model and Its Key Applications to the Assessment and Management of Animal Welfare. *Animals (Basel)*, *7*(8). https://doi.org/10.3390/ani7080060

Mellor, D. J. (2019). Welfare-aligned Sentience: Enhanced Capacities to Experience, Interact, Anticipate, Choose and Survive. *Animals*, *9*(7), 440. https://doi.org/https://doi.org/10.3390/ani9070440

Mellor, D. J., Beausoleil, N. J., Littlewood, K. E., McLean, A. N., McGreevy, P. D., Jones, B., & Wilkins, C. (2020). The 2020 Five Domains Model: Including Human-Animal Interactions in Assessments of Animal Welfare. *Animals (Basel)*, *10*(10). https://doi.org/10.3390/ani10101870

Merriam, S. B., & Tisdell, E. J. (2016). *Qualitative research : a guide to design and implementation / Sharan B. Merriam, Elizabeth J. Tisdell (Fourth edition)* (Fourth edition ed.). Jossey-Bass, a Wiley Brand.

Ministry for Primary Industries. (2013). *Animal Welfare Matters: New Zealand Animal Welfare Strategy*. Retrieved from https://www.mpi.govt.nz/dmsdocument/3963-Animal-Welfare-Matters-New-Zealand-Animal-Welfare-Strategy

Ministry for Primary Industries. (2017). *New Zealand Agriculture, A policy perspective* (978-1-77665-715-5). https://www.mpi.govt.nz/dmsdocument/27282-New-Zealand-Agriculture

Animal Welfare (Care and Procedures) Regulations 2018, (2018a). https://www.legislation.govt.nz/regulation/public/2018/0050/latest/whole.html

Ministry for Primary Industries. (2018b). *Code of Welfare: Commercial Slaughter*. Wellington: New Zealand Government Retrieved from https://www.mpi.govt.nz/dmsdocument/46018-Code-of-Welfare-Commercial-slaughter

Ministry for Primary Industries. (2018c). *Code of Welfare: Transport within New Zealand*. Wellington: New Zealand Government Retrieved from https://www.mpi.govt.nz/animals/animal-welfare/codes/all-animal-welfare-codes/transport-within-new-zealand/

Ministry for Primary Industries. (2019a). *Livestock Export Review, MPI Discussion Paper No: 2019/10*. www.mpi.govt.nz Retrieved from https://www.mpi.govt.nz/dmsdocument/38036-2019-Livestock-review-discussion-paper-for-consultation

Ministry for Primary Industries. (2019b). *Review of livestock exports*. www.mpi.govt.nz Retrieved from https://www.mpi.govt.nz/consultations/review-of-livestock-exports

Ministry for Primary Industries. (2020). *Livestock Export Review - Summary of submissions*. www.mpi.govt.nz: New Zealand Government Retrieved from https://www.mpi.govt.nz/dmsdocument/44992-Summary-of-submissions

Ministry for Primary Industries. (2022a). *Animal welfare legislation*. New Zealand Government. https://www.mpi.govt.nz/legal/legislation-standards-and-reviews/animal-welfare-legislation

Ministry for Primary Industries. (2022b). *Guidance Document: Livestock Export by Sea: Guidance for Cattle*. Retrieved from https://www.mpi.govt.nz/dmsdocument/911-Livestock-Export-by-Sea-Guidance-for-Cattle-/

Ministry for Primary Industries. (2023a). *Agriculture/Ahuwhenua Portfolio Briefing*. Briefings to incoming ministers from the Ministry for Primary Industries (MPI): New Zealand Government Retrieved from https://www.mpi.govt.nz/dmsdocument/60865-2023-Briefing-to-Incoming-Ministers-Agriculture

Ministry for Primary Industries. (2023b). *Voyage report summaries – live cattle exports*. https://www.mpi.govt.nz/export/animals/live-animal-and-germplasm-export-statistics-and-reports/

Ministry for Primary Industries. (2024). *Codes of animal welfare*. Ministry for Primary Industries. Retrieved 21 July 2024 from https://www.mpi.govt.nz/animals/animal-welfare/codes/all-animal-welfare-codes/#codes

Ministry for Primary Industries. (2025a). *Agricultural and horticultural statistics*. New Zealand Government. https://www.mpi.govt.nz/science/open-data-and-forecasting/agriculture

Ministry for Primary Industries. (2025b). *Animal Welfare Export Certificates*. New Zealand Government. https://www.mpi.govt.nz/export/animals/live-animals-including-livestock/requirement-documents-for-exporting-live-animals/animal-welfare-export-certificates
Ministry for Primary Industries. (2025c). *Situation and Outlook for Primary Industries: December 2025*. https://www.mpi.govt.nz/resources-and-forms/economic-intelligence/situation-and-outlook-for-primary-industries
Molloy, L. (1980). *Land alone endures: land use and the role of research*.
Moore, S. J., O'Dea, M. A., Perkins, N., Barnes, A., & O'Hara, A. J. (2014). Mortality of live export cattle on long-haul voyages: pathologic changes and pathogens. *Journal of Veterinary Diagnostic Investigation*, *26*(2), 252-265. https://doi.org/https://doi.org/10.1177/1040638714522465
Moore, S. J., O'Dea, M. A., Perkins, N., & O'Hara, A. J. (2015). Estimation of nasal shedding and seroprevalence of organisms known to be associated with bovine respiratory disease in Australian live export cattle. *Journal of Veterinary Diagnostic Investigation*, *27*(1), 6-17. https://doi.org/https://doi.org/10.1177/1040638714559741
Norris, R. T. (2005). Transport of animals by sea. *Revue scientifique et technique (International Office of Epizootics)*, *24*(2), 673-681.
NZ Rural Press Limited. (1990). *New Zealand Agriculture: a story of the past 150 years* (P. Cross, Ed.). John Tait.
O'Neill, O., & Bardrick, J. (2015). Trust, trustworthiness and transparency. *Brussels: European Foundation Centre*.
Parliamentary Counsel Office. (2024). *New Zealand Legislation*. New Zealand Government. Retrieved 21 July 2024 from https://www.legislation.govt.nz/aboutlegislation.aspx
Parliamentary Counsel Office. (2025). *Territorial Sea, Contiguous Zone, and Exclusive Economic Zone Act 1977*. New Zealand Government Retrieved from www.legislation.govt.nz
Passow, T., Fehlmann, R., & Grahlow, H. (2005). Country Reputation — From Measurement to Management: The Case of Liechtenstein. *Corporate Reputation Review*, *7*(4), 309-326. https://doi.org/10.1057/palgrave.crr.1540229
Peden, R. (2008). *Farming in the economy - Times of change, 1920 to 1950*. Retrieved 10 October from http://www.TeAra.govt.nz/en/farming-in-the-economy/page-6
Petherick, J. C., & Phillips, C. J. C. (2009). Space allowances for confined livestock and their determination from allometric principles. *APPLIED ANIMAL BEHAVIOUR SCIENCE*, *117*(1-2), 1-12. https://doi.org/10.1016/j.applanim.2008.09.008
Phillips, C. J. C. (2005). Ethical perspectives of the Australian live export trade. *Australian veterinary journal*, *83*(9), 558-562. https://doi.org/https://doi.org/10.1111/j.1751-0813.2005.tb13336.x
Phillips, C. J. C., & Santurtun, E. (2013). The welfare of livestock transported by ship. *Veterinary Journal*, *196*(3), 309-314. https://doi.org/10.1016/j.tvjl.2013.01.007
Pines, M. K., & Phillips, C. J. C. (2011). Accumulation of ammonia and other potentially noxious gases on live export shipments from Australia to the Middle East. *Journal of Environmental Monitoring*, *13*(10), 2798-2807. https://doi.org/https://doi.org/10.1039/C1EM10425J
Proctor, H. (2012). Animal Sentience: Where Are We and Where Are We Heading? *Animals*, *2*(4), 628-639. https://doi.org/https://doi.org/10.3390/ani2040628
Robertson, I., & Goldsworthy, D. (2022). Recognising and defining animal sentience in legislation: A framework for importing positive animal welfare through the five domains model. *Monash UL Rev.*, *48*, 244.
Sachdeva, S. (2022). *Chinese SOE pushes NZ for U-turn on live export ban*. https://newsroom.co.nz/2022/02/10/chinese-soe-pushes-nz-for-u-turn-on-live-export-ban/
Sandler, R. (2012). Intrinsic value. *Ecology, and conservation. Nature educational knowledge*, *3*(4).

Schnable, A., DeMattee, A., Sullivan Robinson, R., & Brass, J. N. (2021). International Development Buzzwords: Understanding Their Use among Donors, NGOs, and Academics. *Journal of Development Studies*, *57*(1), 26-44. https://doi.org/10.1080/00220388.2020.1790532

Schwandt, T. A. (1994). *Constructivist, interpretivist approaches to human inquiry*.

Segner, H., Sundh, H., Buchmann, K., Douxfils, J., Sundell, K. S., Mathieu, C., Ruane, N., Jutfelt, F., Toften, H., & Vaughan, L. (2012). Health of farmed fish: its relation to fish welfare and its utility as welfare indicator. *Fish Physiology and Biochemistry*, *38*(1), 85-105. https://doi.org/10.1007/s10695-011-9517-9

Sevi, A. (2009). Animal-based measures for welfare assessment. *Italian Journal of Animal Science*, *8*(sup2), 904-911. https://doi.org/https://doi.org/10.4081/ijas.2009.s2.904

Simpson, D. L. (2012). *Submission to ASEL review*

Sinclair, M., Idrus, Z., Burns, G. L., & Phillips, C. J. C. (2019). Livestock stakeholder willingness to embrace preslaughter stunning in key Asian countries. *Animals*, *9*(5), 224. https://doi.org/https://doi.org/10.3390/ani9050224

Sinclair, M., Zhang, Y., Descovich, K., & Phillips, C. J. C. (2020). Farm animal welfare science in China—A bibliometric review of Chinese literature. *Animals*, *10*(3), 540. https://doi.org/https://doi.org/10.3390/ani10030540

Skitka, L. J., Hanson, B. E., Morgan, G. S., & Wisneski, D. C. (2021). The psychology of moral conviction. *Annual Review of Psychology*, *72*(1), 347-366. https://doi.org/https://doi.org/10.1111/j.1751-9004.2010.00254.x

Smith, W., & Montgomery, H. (2004). Revolution or evolution? New Zealand agriculture since 1984. *GeoJournal*, *59*, 107-118.

SPCA. (2026). Victory for animals: Minister confirms plans to bring back live export have stalled. https://www.spca.nz/news-and-events/news-article/live-export-victory

Stats NZ. (2019). *At your service – the changing face of the economy*. New Zealand Government. Retrieved 12 September from https://www.stats.govt.nz/news/at-your-service-the-changing-face-of-the-economy/

Stats NZ. (2025a). *Agricultural production statistics: Year to June 2024 (final)* (Information releases, Issue. https://www.stats.govt.nz/information-releases/agricultural-production-statistics-year-to-june-2024-final/

Stats NZ. (2025b). *Meat exports reach $10 billion in the year ended October 2025*. https://www.stats.govt.nz/news/meat-exports-reach-10-billion-in-the-year-ended-october-2025/

Stringleman, H., & Scrimgeour, F. (2008). *Dairying and dairy products - Beginnings of New Zealand's dairy industry*. Retrieved 25 September from http://www.TeAra.govt.nz/en/dairying-and-dairy-products

Stronge, D. C., Kannemeyer, R. L., & Edwards, P. (2024). Building social licence to operate: A framework for gaining and maintaining meaningful, trustworthy relationships. *Resources Policy*, *89*, 104586. https://doi.org/https://doi.org/10.1016/j.resourpol.2023.104586

Stuart, A., Bond, A., Franco, A. M. A., Baker, J., Gerrard, C., Danino, V., & Jones, K. (2023). Conceptualising social licence to operate. *Resources Policy*, *85*, 103962. https://doi.org/https://doi.org/10.1016/j.resourpol.2023.103962

Tsakiridou, E., Tsakiridou, H., Mattas, K., & Arvaniti, E. (2010). Effects of animal welfare standards on consumers' food choices. *Food Economics–Acta Agricult Scand C*, *7*(2-4), 234-244. https://doi.org/https://doi.org/10.1080/16507541.2010.531949

Tudor, G., Accioly, J., Pethick, D., Costa, N., Taylor, E., & White, C. (2003). Decreasing shipboard ammonia levels by optimising the nutritional performance of cattle and the environment on ship during live export. *MLA and LiveCorp, Australia*.

Tully, P., & Carr, N. (2024). And the Winner Is - Anthropocentrism and Speciesism: Writing a History of Animals in New Zealand's Agricultural and Pastoral Events. *Leisure Sciences*, 1-19. https://doi.org/10.1080/01490400.2024.2393324

Vlašić, G., & Langer, J. (2012). Concept of reputation: different perspectives and robust empirical understandings. *Market-Tržište*, *24*(2), 219-244. https://doi.org/https://orcid.org/0000-0001-5690-930X

Von Keyserlingk, M., Rushen, J., de Passillé, A. M., & Weary, D. M. (2009). Invited review: The welfare of dairy cattle—Key concepts and the role of science. *Journal of Dairy Science*, *92*(9), 4101-4111. https://doi.org/https://doi.org/10.3168/jds.2009-2326

Weary, D. M. (2019). Suffering, agency, and the Bayesian mind. https://doi.org/https://doi.org/10.1079/9781786393401.0156

Willis, R. S., Dunston-Clarke, E., Keating, L. R., Fleming, P. A., Collins, T., & Van Eerdenburg, F. (2021). Australian Livestock Export Industry Workers' Attitudes toward Animal Welfare. *Animals (2076-2615)*, *11*(5), 1411. https://doi.org/10.3390/ani11051411

Worksafe. (2025). *Workplace exposure standards and biological exposure indices* 15). N. Z. Government. https://www.worksafe.govt.nz

World Organisation for Animal Health. (2018). *7.2 Transport of animals by sea* (Terrestrial Animal Health Code, Issue. https://www.woah.org/en/what-we-do/standards/codes-and-manuals/

World Trade Organization. (1994). *General Agreement on Tariffs and Trade 1994*. World Trade Organization Retrieved from https://www.wto.org/english/docs_e/legal_e/gatt94_e.htm

Wright, R., & Gibson, G. (2023). National MP Nicola Grigg defends controversial live animal export policy. https://www.stuff.co.nz/culture/350471434/newshub-nation-national-mp-nicola-grigg-defends-controversial-live-animal-export-policy

Yang, Q., Dwyer, C. M., Vigors, B., Zhao, R., & Langford, F. M. (2024). Animal welfare with Chinese characteristics: Chinese poultry producers' perceptions of, and attitudes towards, animal welfare. *PLoS ONE*, *19*(7), e0307061. https://doi.org/https://doi.org/10.1371/journal.pone.0307061

Yousef, N. M. (2014). Value Conflict: What It Is and How to Resolve It.

Zimmerman, M. J., & Bradley, B. (2002). Intrinsic vs. Extrinsic Value. *The Stanford Encyclopedia of Philosophy*.

Appendix A: Participant Information Sheet



Participant Information Sheet

Exploring New Zealand Perspectives on Live Animal Export

Who am I…
I am a master's student from Massey University studying towards a Master's in Animal Science. I am currently conducting a study to gain some insight into what shapes people's perspectives on the export of live animals from New Zealand by sea.

What this project is about…
The export of live animals by sea is a contentious topic in New Zealand at the present time, with the government looking to bring the trade back after a full ban was enacted in April 2023. The purpose of this project is to gain an understanding of what shapes people's views on the acceptability of live export and its value to New Zealand.

Why I want to have a chat with you…
As a stakeholder in the live export industry, I would like to invite you to take part in this research. I am interested in hearing your thoughts on various aspects of the live export industry. I would like to formally invite you to be a part of my research project by way of agreeing to participate in a semi-structured interview with me. You will have the choice to remain anonymous if you wish.

What happens if you choose to take part…
Taking part in this research project requires us meeting together, via Zoom or in-person (whichever you prefer), where we will discuss your perspectives on various parts of the live export industry. This will take the format of a semi-structured interview. This means that I will have a set of pre-determined open questions that we can discuss, giving us the freedom to explore your responses and you will have the opportunity to express your views on these or any related topics. This would be expected to take approximately one hour of your time and will be audio-recorded with your permission.

What I do with the information you provide…
I will be using the information from your interview, along with information gathered from other stakeholders who take part to identify key themes which will be discussed in my research paper. A summary of the data, including anonymous quotes, will be published in my thesis as part of the requirements for completing my Master's degree. It may also be published in an academic journal.
Information obtained from you will be kept confidential and secure on password-protected cloud storage. It will not be shared or sold on to third parties and will only be used for the purpose of my research and completion of my thesis. All data obtained for this research project will be destroyed after five years in line with Massey University protocols.

Your rights…
Participating in this project is **voluntary.** If you agree to participate, I will ask you to sign a consent form. After you have signed this form, you are free to withdraw from this research up to two weeks after our interview takes place. You will have the right to refuse to answer any questions I ask that make you feel uncomfortable.

All your personal information is **confidential**, and only the researchers will have access to your personal details. All your personal information will be stored securely. Any personal information (such as your name and organisation) and research data will be coded.

If you agree to be interviewed, it will be audio-recorded, and you will have the right to ask for the recorder to be turned off at any time. The audio and data files of your interview will only be available to the research team.

Your name will not be used unless you give me permission to do so. If you wish to remain anonymous, your privacy will be protected in research reports, publications and public presentations, by using a pseudonym and removing any information that could identify you.

What you get out of participating…
I hope that taking part in this research project will be an enjoyable experience by giving you the opportunity to express your thoughts and views on the live export trade in New Zealand. You will also receive a koha in the form of a grocery voucher as a thank you for your time. If you wish, a summary of the research findings will be provided to you upon completion of the project.

Please do not hesitate to contact the researcher or supervisor(s) if you have any questions regarding the research project.

Researchers

Charlotte Goldsworthy
Email: [redacted]
Phone: [redacted]

Prof Ngaio Beausoleil
Email: n.j.beausoleil@massey.ac.nz
Phone: (06) 951 8174

Dr Alice Beban
Email: a.beban@massey.ac.nz
Phone: +64 69516851

Dr Nikki Kells
Email: n.j.kells@massey.ac.nz
Phone: (06) 951 8291

This project has been evaluated by peer review and judged to be low risk. Consequently, it has not been reviewed by one of the university's human ethics committees. The researchers named in this document are responsible for the ethical conduct of this research.

If you have any concerns about the conduct of this research that you want to raise with someone other than the researchers please contact Professor Fiona Te Momo, Chairperson, Research Ethics: +6494140800 extension 43347; humanethics2@massey.ac.nz

Appendix B: Participant Consent Form



Participant Consent Form

Exploring New Zealand Perspectives on Live Animal Export

By signing this form, I acknowledge that:

- I have been informed about the research project and understand the nature of the study. I have had the opportunity to ask the researcher questions about the project, and they have been answered to my satisfaction.
- I understand that my participation is voluntary and that I can withdraw from the study up to two weeks after my interview.
- I agree to be audio recorded.
- Even though I agree to be recorded, I understand that I can ask for the recorder to be switched off at any time.
- I understand that my words may be used in future publications and that I will be provided with a pseudonym to ensure my confidentiality.
- I agree to take part in this research under the conditions outlined in the Participant Information Sheet.

Name (please print) ……

Contact details (for project contact purposes only)

……

……

Date …… Signature ……

Appendix C: Interview Questions

Note: The participants interviewed for this research all had prior knowledge of the live export industry and the events referenced in the interview questions. Brief contextual statements were included before some questions to ensure clarity and to frame the discussion consistently, rather than to provide new information to participants.

Before the interview questions began, participants were informed that any questions relating to live export by sea referred specifically to the New Zealand context.

Q1.
Can you tell me about your experience relating to the live export industry?

Q2.
What was it that got you into this role?

Q3.
What would you say that your overall feelings are about the practice of live export by sea?

Q4.
Have you been on a live export ship?

if yes...
What did you think about being on the ship? And how did it make you feel?

if no...
What do you know about live export ships and where did you learn about the ships from?

Participants were reminded about the ban on live export by sea from New Zealand that came into effect in April 2023.

Q5.
How has the ban impacted you personally and what impact has it had on the industry that you work in?

Q6.
How do you feel about New Zealand being the first country in the world to ban live export by sea?

Participants were reminded about the National party's promise to reinstate live export by sea in the lead up to the 2023 election.

Q7.
Why do you think they selected such a specific issue as a key platform for re-election?

Participants were informed that the next few questions would be related to animal welfare in general, not specifically in relation to animal welfare during live export by sea.

Q8.
What does animal welfare mean to you?

Q9.
How do you feel about animal welfare in general?

Q10.
Where do you think your understanding of animal welfare has come from?

Q11.
What things do you think have an influence on an animal's welfare?

Participants were reminded that up until the ban on live export by sea came into place, MPI used mortality rates (that is, the number of cow deaths per voyage), as an indication of how well the welfare of animals on board was being managed.

Q12.
What do you think about mortality rates being used as a measure for animal welfare?

Q13.
How would you describe good animal welfare?

Q14.
What do you think the barriers are to good animal welfare?

Q15.
What does good animal welfare on a live export ship look like?

Participants were reminded about the government's intentions to reinstate live export by sea with a proposed "gold standard" of animal welfare.

Q16.
What does the term "gold standard" mean to you, in general – not specifically in relation to live export by sea?

Q17.
What would you imagine the term "gold standard" means when used in relation to live export by sea?

Q18.
If money was no object, what would you do in terms of exporting live animals from New Zealand and why?

Q19.
Why do you think New Zealand exports live animals?

Q20.
In what ways do you think that live export affects New Zealand's reputation?

Q21.
How do you think live export affects or influences how other countries see New Zealand?

Participants were reminded about the Gulf Livestock 1 carrier that sank off the coast of Japan during a typhoon in September 2020, resulting in the deaths of approximately 6,000 cows and 41 of the 43 crew members on board.

Q22.
What do you think an animal welfare disaster, such as that which happened with the Gulf Livestock 1 carrier, does to New Zealand's international reputation? And why?

Q23.
How valuable do you think live export is to New Zealand's economy?

Q24.
Who do you think benefits from the income generated by live export?

Q25.
What effect do you think the live export ban continuing would have on New Zealand farmers?

Participants were reminded that some countries New Zealand has previously exported livestock to have animal welfare laws that fall well below domestic standards. An example was given of animals potentially being slaughtered in a manner that would not be legal in New Zealand.

Q26.
How do you feel about the practice of exporting livestock to countries with lower animal welfare standards than those required here in New Zealand?

Participants were reminded that as soon as animals on live export ships enter international waters, they are no longer protected by New Zealand animal welfare laws.

Q27.
What are your feelings about that?

Q28.
What do you think New Zealand's obligations are in regard to protecting its animals when they are sent overseas?

Participants were reminded about the minimum space allowance for a cow weighing 200kg is just under 1m^2 (0.99m^2), as per MPI's guidance document for cattle being exported by sea.

Q29.
What do you think about that amount of space?

Q30.
Why do you think cows need space on a live export ship?

Q31.
What do you think New Zealand's international obligations are in terms of helping other countries with food security for their growing populations?

Q32.
What role does the export of live animals play in this?

Q33.
What effect do you think providing one of our main buyers of dairy products with breeding dairy stock could have on the future of New Zealand's dairy exports?

Participants were informed the next questions were going to be about welfare, specifically on board live export ships.

Q34.
What do you think about the conditions that animals are kept in on board the live export ships?

Q35.
What do you think about the design of the ships and the way in which they are maintained?

Participants were informed that the next questions would be about genetics.

Q36.
Why do you think New Zealand doesn't export semen and embryos instead of live animals?

Q37.
What would need to change for semen and embryos to be seen as a viable option?

Participants were reminded that before the ban came into place, when exported animals arrived in China, there was a 30-day post arrival reporting requirement, and that during this time period the animals would most likely be in a quarantine facility before heading to their destination farms.

Q38.
What do you think about this time frame and the way in which animals are monitored after they reach their destination country?

Q39.
Is there anything else you would like to add or tell me before we finish?