The Asia Protein Buyers 100

An Assessment of Responsible and Sustainable Sourcing

10 June 2024

ARE
ASIA RESEARCH
& ENGAGEMENT

Asia Research & Engagement (ARE)

Creating change through investor-backed engagement.

ARE's pioneering approach fills an engagement gap by bringing leading investors into dialogue with Asian-listed companies to address sustainable development challenges. We support the business case for sustainability and help companies align with investor priorities. Our high-quality independent research, robust investor network, and engagement expertise, provide corporate leaders and financial decision makers with insights leading to concrete action.

Our work focuses on thematic priorities to promote a sustainable and compassionate Asia. Our current programs and goals are:

- Energy Transition: Credible transition pathways in alignment with the Paris Agreement.
- Protein Transition: Transition pathways working towards our investor-aligned 2030 vision.

Founded in 2013, ARE is headquartered in Singapore with an additional office in Beijing. ARE's Protein Programme is expanding to India in 2024.

About Asia Protein Transition Platform

ARE launched the Asia Protein Transition Platform in December 2022, in collaboration with five founding investors representing USD3 trillion in assets. The platform has set a 2030 vision and goals for protein transition in Asia, along with investor expected disclosures for companies to move towards more responsible and sustainable proteins.

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Table of Contents

Executive Summary

Current Landscape

The global food system's reliance on intensive animal production causes tremendous environmental and social harm, from deforestation and biodiversity loss to pollution, inequality, and public health issues. By one estimate, feeding humanity causes more than USD10 trillion in environmental damage a year. The path to a sustainable food system requires buyers and producers to work together to serve consumers with nutritious, lower impact, and tasty foods.

This report focuses on the efforts of Asia's listed food buyers to transition to responsible and sustainable proteins. It reviews public disclosure from 100 companies to understand their sustainability strategy, targets, standards, systems and performance in their protein procurement. Overall, we find awareness and action by the companies remains at a low level: the overall average score is only 9% and no companies make it into our top two assessment tiers. However, the improved recognition of the issues and resulting actions demonstrates progress, when compared to a simpler benchmark we published in 2022.

We identify and describe 10 Asian companies as Evolving Strategically for achieving scores between 25% and 50% on our assessment. We set out case studies for three of these.

Despite the progress, Asia's food buyers have yet to fully confront the social and environmental impacts and dependencies of their supply chains. Forward-thinking buyers are investing to develop a deeper knowledge of their value chains and the competitive potential in responsible and sustainable supply chains. This helps companies to identify and mitigate risks, and to better understand and relate to their customers.

This report aims to help all stakeholders, particularly Asia's food buyers and their investors, to understand the current landscape and forge forward towards a sustainable food system.

Asia Protein Buyers 100 Assessment

ARE's Asia Protein Transition Platform (The Platform) collaborates with leading investors, engaging Asian food companies and seeking a transition to responsible and sustainable proteins by 2030. ARE has evaluated 100 listed Asian food companies on their procurement of protein products resulting in the Asia Protein Buyers 100. We plan to update this assessment biennially for investors, banks, and companies to help them accelerate responsible and sustainable sourcing. We assessed market leaders from across the food industry—manufacturing to restaurants, retailers to hotels—and from Asia's top economies, with a combined market capitalisation of more than USD563 billion.

We evaluated each buyer on 40 indicators across 10 sustainability themes, derived from The Platform's expected disclosures, assessing publicly available data, and offering individual consultation. We then grouped the companies into tiers based on their overall scores (See Figure 1).

Figure 1: *Protein buyers assessed in this report and their respective tiers*

Tier 1 Driving Transformation	Tier 2 Advancing Steadily	Tier 3 Evolving Strategically	Tier 4 Developing Efforts	Tier 5 Showing Awareness	Tier 6 At the Starting Blocks
0	0	10	22	24	44
		Mengniu (CH)	CafedeCoral (CH)	Dali (CH)	Anjoy (CH)
		Yili (CH)	DiaryFarm (CH)	Shangri-La (CH)	BetterLife (CH)
		Meiji (JP)	FarmMartTw (TW)	Isetan (JP)	Delisi (CH)
		NHFoods (JP)	Haidilao (CH)	MOS (JP)	Hongqi (CH)
		Nichirei (JP)	SunArt (CH)	BGFRetail (KR)	Huazhu (CH)
		Seven&iJP (JP)	Uni-Pres (TW)	Emart (KR)	Huifa (CH)
		CPAll (TH)	WHGroup (CH)	FastFood (ID)	Jiajiayue (CH)
		CPFoods (TH)	YumChina (CH)	MBA (ID)	Juewei (CH)
		Minor (TH)	Aeon (JP)	AeonMY (MY)	Langham (CH)
		ThaiUnion (TH)	Kewpie (JP)	BerjayaFood (MY)	Quanjude (CH)
			Lawson (JP)	DutchLady (MY)	Sanjiang (CH)
			Skylark (JP)	Genting (MY)	Xlabuxiabu (CH)
			CJCheil (KR)	QLRes(MY)	Yonghui (CH)
			LotteShop (KR)	Seven&iMY (MY)	ZhouHeiYa (CH)
			LotteWell (KR)	ShengSiong (SG)	KFCJP (JP)
			F&N (SG)	Jollibee (PH)	KobeBussan (JP)
			CenturyPacific (PH)	SMFB (PH)	McdJP (JP)
			Vinamilk (VN)	MKRes (TH)	Yamazaki (JP)
			CentralPlaza (TH)	Britannia (IN)	Zensho (JP)
			Oishi (TH)	McdIN (IN)	DongwonFB (KR)
			Jubilant (IN)	MrsBector (IN)	GSRetail (KR)
			UnileverIN (IN)	NestleIN (IN)	Orion (KR)
				ParagMilk (IN)	Shilla (KR)
				Sapphire (IN)	SPCSamlip (KR)
					Amart (ID)
					Hero (ID)
					NipponIndo (ID)
					UltraJaya (ID)
					NestleMY (MY)
					QAF (SG)
					Puregold (PH)
					Robinsons (PH)
					Seven&iPH (PH)
					SMIC (PH)
					URC (PH)
					Masan (VN)
					MinhPhu (VN)
					NamVIet (VN)
					VinhHoan (VN)
					PresBake (TH)
					Devyani (IN)
					DMart (IN)
					Dodia (IN)
					RBA (IN)

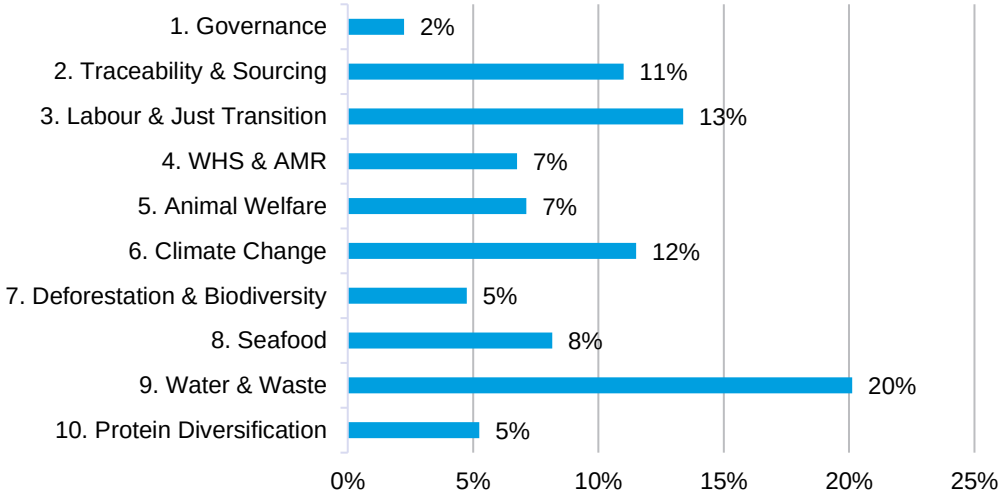
Note: Company names are abbreviated for ease of use. Find the list of full company names in the Annex.

General Findings

While protein buyers have made notable progress since our original Baseline Benchmark report in 2022, the average overall score is only 9%, with no buyer achieving a 50% score. The higher-scoring companies are primarily from China, Hong Kong, Taiwan, Japan, and Thailand, with half of Thailand's assessed companies ranking in the top 10. Companies scored best on Water & Waste (food waste) and poorest in Governance. Gaps between high-scoring and low-scoring companies are widest on Animal Welfare, Climate Change, Labour, and Traceability & Sourcing.

The low overall scores reflect low awareness or prioritisation of sustainability risks and/or the lack of performance data. On the other hand, some companies shine in specific areas, with progressive policies or time-based commitments to end caged confinement systems for egg laying hens or to reach zero deforestation in supply chains.

Figure 2: *Average scores of all 100 companies by theme*



Key Findings

- **Labour & Just Transition**: average score of 13%. While 23 companies have supplier codes of conduct that include protein and core labour principles, only two demonstrate due diligence of labour in their supply chains.

- **Responsible Antibiotic Use:** average score of 3%. While 41 companies report on their direct Workplace Health and Safety (WHS), there is low recognition of the supply chain risks of Antimicrobial Resistance (AMR) from routine overuse of antibiotics on farm animals. Only one company has a policy to avoid routine preventive antibiotic use.

- **Animal Welfare:** average score of 7%. Eight companies have developed Animal Welfare policies, yet only one company's policy aligns towards the Farm Animal Responsible Minimum Standards (FARMS). Asian companies are increasingly phasing out cage confinement for egg-laying hens, with three setting deadlines to go cage-free.

- **Climate Change:** average score of 12%. While 13 use emissions-reporting frameworks, many companies remain hesitant to tackle indirect emissions in their supply chains and do not include them in their net-zero commitments. Only four have integrated protein sourcing into their net-zero strategies and two have had their targets validated by the Science Based Target Initiative (SBTi) to ensure alignment with the Paris Agreement.

- **Deforestation & Biodiversity:** average score of 5%. 26 companies acknowledge the risk of deforestation in their supply chains, but only two have set zero-deforestation deadlines in their sourcing of animal feed, animal protein and palm oil.

- **Protein Diversification:** average score of 5%. Asia's food companies are increasingly diversifying protein sources, with 33 offering alternative proteins for sale. Two have set targets to generate greater sales from the growing flexitarian consumer segment.

Recommendations

Asia's protein buyers urgently need to boost efforts to reduce sustainability risks in their supply chains. This will protect and create value for themselves, investors, and lenders. We recommend:

- Protein buyers develop and implement policies or commitments that:
  - Strengthen governance around protein sustainability, including protein as part of an integrated sustainability strategy.
  - Strengthen traceability, transparency, and labour due diligence.
  - Set clear principles for responsible antibiotic use.
  - Enhance animal welfare aligned towards FARMS, starting with cage-free systems for egg and pork production.
  - Commit to zero-deforestation by 2030 to help reduce emissions and preserve biodiversity.
  - Source seafood sustainably with independent verification.
  - Diversify further into alternative proteins, setting sales targets.

- Companies develop clear targets and policies by 2025, that they communicate to suppliers, investors, and other financiers.

- Buyers, suppliers, investors, and financiers collaborate to accelerate a responsible and sustainable protein transition in Asia by 2030.

To clean up supply chains and meet global targets on climate and nature, Asian companies must develop strategies and targets by 2025 that set a course to achieve meaningful change by 2030. The Asia Protein Transition Platform offers peer review and guidance to companies considering their sustainability strategy, commitments, and support for developing tailored policies and plans to protect and create value in their sourcing and supply chains. Together, buyers, and suppliers, investors, and financiers can collaborate to accelerate Asia's transition pathway for responsible and sustainable protein.

Introduction

Global Policy and Market Signals

There is a large and growing body of scientific evidence documenting the serious environmental and social impact of the intensive animal production underpinning our food supply. Governments are seeking to address these through global policy frameworks and new regulation, while private sector leaders are also taking steps with strategies that include policies, commitments, and product innovation.

The food system, specifically intensive animal production, is the leading cause of biodiversity loss, among other major impacts.

The United Nations Environment Programme (UNEP), for example, described in 2021 how the food system entrenches inequality, undermines food security, wastes and contaminates land, water, and other natural resources, and fosters disease and antibiotic-resistant bacteria.[1] The UNEP and Chatham House have published research demonstrating that the global food system is the leading cause of biodiversity loss and deforestation.[2] The UNEP's 2023 report "What's Cooking?" cites further research on how intensive livestock production and cropping to produce animal feed damage soil, pollute the air, and contaminate water with fertilisers and pesticides.[3]

And destroys USD10tn of value according to FSEC.

The Food System Economics Commission (FSEC), which comprises experts on agriculture, health, natural resources, nutrition, and the economics of climate change, has put a dollar figure to this problem. The food system, it warned in a report published earlier this year, causes more than USD10 trillion in damage annually in terms of lost biodiversity and environmental destruction, as well as hunger, malnutrition, and obesity. "In short," the FSEC stated, "our food systems are destroying more value than they create."[4]

COP 26 saw 140 countries sign up to address forests and land use.

In 2021, at the 26th Conference of the Parties to the United Nations Framework Convention on Climate Change in Glasgow, Scotland, more than 140 countries signed the "Glasgow Leaders' Declaration on Forests and Land Use." COP26's declaration pledged by 2030 to "implement and, if necessary, redesign agricultural policies and programmes to incentivise sustainable agriculture, promote food security, and benefit the environment."[5] At the 2022 UN Global Biodiversity Conference in Montreal, more than 190 nations agreed on a "Kunming-Montreal Global Biodiversity Framework" that, among its four goals and 23 targets, pledges to conserve 30% of global terrestrial and marine areas by 2030.

COP 28 added food systems to the climate agenda for the first time.

The growing international attention to this Issue culminated at COP28 in Dubai last December with food included for the first time on the formal agenda and more than 130 countries signing the 2023 Emirates Declaration on Sustainable Agriculture. Among other things, signatories pledged to:

> *Maximize the climate and environmental benefits—while containing and reducing harmful impacts—associated with agriculture and food systems by conserving, protecting, and restoring land and natural ecosystems, enhancing soil health, and biodiversity, and shifting from higher greenhouse gas-emitting practices to more sustainable production and consumption approaches…* (COP28UAE, UAE Declaration on Sustainable Agriculture, Resilient Food Systems, and Climate Action)[6]

UNEP points to two necessary elements to reach a sustainable food system: shifting to more sustainable diets and moving to more sustainable food production.

Livestock production is the most unsustainable part of the food system.

The most unsustainable part of the food system is the conventional production of animal protein: meat, dairy, eggs, and seafood. A University of Illinois study found that global greenhouse gas emissions from animal-based foods are responsible for almost 60% of all food system emissions and are overall twice those of plant-based foods.[7] Other research notes that livestock production uses more land, water, animals, and antibiotics than any other industry and spreads infectious disease and antibiotic resistance.

Asia's business-as-usual for animal protein production emits over 63 billion tCO_2e more than climate safety.

In our July 2023 report "Charting Asia's Protein Transition" we modelled decarbonisation at 10 large Asian markets identifying the major actions needed to shift the business-as-usual pathway which emitted 63 billion tCO_2e more than the climate safe pathway by 2060. The interventions include removing deforestation from feed supply (part of sustainable production) among other emission mitigation, and the diversification to alternative proteins—known as "novel proteins" in China and "smart proteins" in India. Alternative proteins include innovations of plant-based, fermentation-derived, or cultivated (cell-based) proteins.

To shift protein sources, consumers need affordable, tasty options.

There has been significant global growth in alternative proteins over the past decade, and growth continues in Europe and Asia. In a watershed development, European supermarket chain Lidl last year committed to equalise prices for animal meat and its own brand of plant-based meats at its 3,250 stores in Germany to facilitate a shift among customers to healthier, more sustainable diets.[8] Consumers will only shift to responsible, sustainable proteins if companies offer them affordable and attractive sustainable alternatives.

320 publicly listed companies pledged to adopt TNFD in 2024.

There has also been corporate progress on assessing biodiversity impacts. This year, 320 publicly listed companies representing USD4 trillion in market capitalisation, as well as 100 financial institutions managing USD14 trillion in combined assets, pledged to adopt the Taskforce for Nature-related Financial Disclosures' (TNFD) recommendations. These provide a framework for identifying and managing nature-related risks and opportunities.[9] From Asia, there has been a strong representation among Japanese companies to adopt TNFD recommendations. This will drive increasing focus and attention on high impact supply chains, including animal proteins.

88% of investors say sustainability data is as important as financial data.

A recent survey of investors found that 92% agreed that sustainability data Is important for assessing a company's long-term financial outlook, with 88% saying such data should be treated with the same rigour as financial data.[10] Global investors are increasingly combining forces to firmly encourage companies to take action on sustainability.

Regulators are also acting, with authorities in the European Union and the United States moving to mandate standardised disclosure of supply-chain sustainability risks. Next year, companies with significant sales in Europe will have to start complying with the EU Corporate Sustainability Responsibility Directive's (CSRD) requirement on disclosure of human rights and environmental issues.[11] Asian jurisdictions—including China, India, and South Korea—are developing similar regulations of their own.

Protein Transition and Material Issues

Protein Transition includes responsible animal protein production and more sustainable proteins.

ARE launched the Asia Protein Transition Platform in December 2022 to better coordinate our ongoing work bringing companies and investors together to address sustainability challenges in food supply. We define Protein Transition to include both responsible animal proteins production and a substantial increase in more sustainable proteins.

The Asia Protein Transition Platform provides a toolkit for disclosure guidance.

The Platform hosts a manual explaining the collective 2030 vision for this Protein Transition, sets out goals that players can adopt across the food system, and provides detailed disclosure guidance with a self-assessment toolkit that Asian food businesses can use. We crafted these tools with leading institutional investors managing a combined USD3 trillion in assets. The detailed disclosure guidance covers 40 items across 10 key themes that would support a better food system—the Expected Disclosures. In creating these tools, we cross-referenced sustainability frameworks, such as the UN's Sustainable Development Goals (SDGs).[12]

In this report, we use the Expected Disclosures as the basis for the assessment to produce The Asia Protein Buyers 100. Figure 3 lists the themes with a description and cross-references each to specific SDGs.

Figure 3: *Platform themes, issues, and relevant Sustainable Development Goals*

#	Theme	Issues & Management	Relevant 2030 SDGs
1	Governance	Oversight of sustainability which requires experienced/ trained directors; an integrated protein strategy that increasingly drives responsible capital allocation.	2, 12 & supports others
2	Traceability & Sourcing	Traceability systems, which should be digital to allow analysis and seamless tracking; minimum sourcing standards for protein; compliance assessments; and systems to manage non-compliance and performance improvement.	3, 12 & supports others
3	Labour & Just Transition	Ethical recruitment and standards for workers along supply chains; due diligence and performance management; strategy for a just protein transition for labour and communities.	5,8,12,13
4	Work Health and Safety (WHS) & Antimicrobial Resistance (AMR)	Worker health and safety along the supply chain, prevention and annual incident data. Sourcing principles for responsible use of antibiotics in animal protein supply chains.	3
5	Animal Welfare	Animal welfare policies and standards, cage-free commitments, performance reporting, and robust independent certification.	2,3,6,12, 13,15
6	Climate Change	Near and long-term emissions reduction targets (including Scope 1,2,3 emissions), with verification. Integrated climate mitigation/protein sourcing strategy. Reporting aligned to TCFD or via CDP with supplier transparency.	7,9,12,13
7	Deforestation & Biodiversity	Assessment of nature related dependencies and impacts through sourcing feed or protein products. Time-based zero deforestation commitment (or similar). Performance disclosure against commitment.	12,15
8	Seafood	Strategy for sustainable seafood sourcing including phasing out key dependencies on overfished fisheries. Plan for certification either to a high standard or through adoption of Fisheries or Aquaculture Improvement Programmes. Progress reporting against plan and targets.	12,14,15

9	Water & Waste	Management of water and wastes. Use of circular systems, targets and performance reporting for supply chain wastes, pollution, packaging, food waste, soil preservation, and water efficiency. Avoidance of supply chains with water scarcity.	3,6,12,15
10	Protein Diversification	Protein diversification integrated into sustainability and business strategy, with investment in innovation. Plant-based protein targets to stimulate sales.	2,3,7,9, 12,13,14, 15

*(*ARE and Investor 2030 Protein Transition vision and goals, 2022)*

About The Asia Protein Buyers 100

We assess 100 listed Asian food buyer companies, across 10 protein sustainability themes.

To provide companies, their shareholders, and financial institutions with a balanced reference for responsible and sustainable protein sourcing, ARE assessed 100 Asian food companies' procurement of protein products and rated them on their progress across the 10 themes outlined in Figure 3. The companies include many of the region's largest manufacturers, retailers, restaurants, and hotels. The result is the Asia Protein Buyers 100. This builds on the work of our original assessment of sustainable protein sourcing policies in 2022, "Responsible Protein Sourcing in Asia: Baseline Benchmark."

We plan to update the Asia Protein Buyers 100 every two years. Our hope is that it will generate peer interest among companies and stimulating progress over time. We also intend for the report to provide investors and lenders with a tool to help engage companies and allocate capital more responsibly.

Methodology

Scope and Spread

China, Hong Kong, and Taiwan represent more than a quarter of the buyers.

We selected the 100 buyers from Asia's 10 largest economies and stock exchanges, based on both their stock market capitalisation and their position in their main market.[13] While in our original, 2022 report we evaluated 158 companies, we rounded to 100 as the basis for biennial assessment.

Geographic Markets

For this report, we added companies from two markets that weren't included in our 2022 report: India and Vietnam. Companies from China, Hong Kong, and Taiwan represent more than a quarter of buyers surveyed (See Figure 4). Companies from Japan and South Korea collectively account for another quarter. Southeast Asia constitutes a significant, but smaller, portion. Some smaller Asian markets have only a handful of listed food companies. Vietnam, for example, has five. The Philippines and Thailand, have eight each. India, the most populous nation, has 12 companies included.

Figure 4: *Distribution of protein buyers, by listing market*

Market	Code	Buyers
China	CH	13
Japan	JP	15
India	IN	12
Hong Kong	HK	11
South Korea	KR	10
Philippines	PH	8
Thailand	TH	8
Malaysia	MY	7
Indonesia	ID	6
Vietnam	VN	5
Singapore	SG	3
Taiwan	TW	2

Sectors

Manufacturing is the largest market sector.

The companies we assessed operate in various sectors of the protein buyer industry. Manufacturers have the largest representation, followed by retailers, and restaurants, with hotels comprising the smallest group (See Figure 4).

Figure 5: *Distribution of protein buyers across sectors*

Sector	Includes	Buyers included*
Manufacturing	Meat, seafood, dairy, confectionary, and other products	42
Retail	Convenience stores, supermarkets, hypermarkets, and department stores	29
Restaurants	Quick service restaurants (QSR), other restaurant chains, cafés, bars, and other eating places	22
Hotels	Catering provided by hotels, and other restaurants within the hotel	7

Note: Listed companies active in multiple sectors are counted based on their performance within their core business to avoid double counting.

Market Capitalisation

The combined market cap exceeded USD563 billion.

The collective market capitalisation of the 100 protein buyers we assessed exceeded USD563 billion as of end-June 2023.

Market caps ranged from USD200 million to USD10 billion.

The smallest company had a market capitalisation exceeding USD200 million. Half of the companies had a market capitalisation of between USD200 million and USD2 billion, while 15 companies were valued by the market at more than USD10 billion (Figure 6).

Figure 6: *Distribution of assessed protein buyers, by market capitalisation*

Company Size	Definition	Buyers
Small-Cap	USD200 million to USD2 billion	50
Mid-Cap	USD2 billion to USD10 billion	35
Large-Cap	Above USD10 billion	15

Scoring and Tiers

We assessed buyers on 40 indicators against publicly available disclosure.

ARE assessed each buyer on 40 indicators encompassing 10 themes, as listed in Figure 3 and Annex 3. We gathered information using publicly disclosed data from their sustainability or annual reports for fiscal 2021-2022, or from company websites. We supplemented this with any further information provided when we reviewed any feedback.

Companies were able to review and discuss their assessment.

Aside from the India-listed companies, we advised companies of the Platform launch and expected disclosures and gave them the opportunity to review their assessment during a three-week consultation period. Additionally, ARE and the Platform's investors have engaged directly with some key companies over the past two years to convey investor priorities and strengthen their protein sustainability. However, we based scores only on publicly available information.

We adapted our scoring framework from our Expected Disclosures and Self-Assessment Questionnaire, both of which are available for download on our website. After evaluating each company, we gave them a full point (1.0), half of a point (0.5), or zero points (0) for each of the 40 indicators.[14]

The maximum score for most companies, therefore, is 40 points for 40 indicators. However, if a company isn't involved in seafood sourcing, we removed the four indicators related to seafood sourcing from its score, reducing its maximum to 36 points for 36 indicators. We then express each company's actual score as a comparable percentage of their maximum possible score.

Once we determined each company's percentage score, we allocated it to one of six tiers (See Figure 6). Our hope is that companies will progress into higher tiers in future assessments as they advance and develop more integrated sustainability strategies, policies, targets, and especially performance reporting.

Figure 7: *Descriptions and score ranges for each tier*

Tiers		Summary Description	Score Ranges
1.	Driving Transformation	Leading the industry with comprehensive strategies and robust implementation throughout their protein supply chain, setting high standards for others to follow	≥ 75%
2.	Advancing Steadily	Implementing comprehensive strategies for responsible and sustainable protein sourcing, actively working to further implementation and evidence progress	≥ 50%, < 75%
3.	Evolving Strategically	Developing long-term strategies for responsible and sustainable protein sourcing, with a need to further refine strategies and begin implementation	≥ 25%, < 50%

4.	Developing Efforts	Taking initiatives towards responsible protein sourcing but lacking long-term strategies supported by policies and targets	≥ 10%, < 25%
5.	Showing Awareness	Beginning to recognise sustainability concerns in protein sourcing but not yet taking proactive steps towards positive impact	≥ 5%, < 10%
6.	At the Starting Blocks	Largely unaware of the sustainability risks and opportunities within their protein sourcing	< 5%

Results

This assessment evaluates the progress of Asia's protein buyers at this stage of their shift towards responsible and sustainable protein. In addition to identifying notable trends, we highlight several emerging regional leaders and indicate some instances where companies have benefited from collaborative engagement with ARE's Protein Transition Platform investors.

With a mean score of only 9% the majority of buyers are only beginning to address protein sourcing.

While the companies we assess have made considerable headway in certain areas, gaps persist in others. Moreover, new opportunities are emerging for buyers to support and collaborate with suppliers, as well as to offer incentives to suppliers that comply with responsible policies or standards—assisting them to comply or remediate to buy.

Overall Performance

The mean score for all 100 buyers was just 9%, with a median score of 6%.

Tier Allocations

The highest scoring companies only reach Tier 3: Evolving Strategically…

No companies scored high enough to be allocated into Tiers 1 or 2. The top 10 performers in our assessment only scored well enough to earn places in Tier 3, with a minimum overall score requirement of 25%. The highest overall score attained by an individual company is 46%, setting it apart from the pack, but still below the threshold for Tier 2. Twenty-two buyers scored into Tier 4, 24 into Tier 5, and 44 into Tier 6 (Figure 8).

Figure 8: *Number of buyers and the average scores for each tier*

Tier		Number of Buyers	Average Score
1.	Driving Transformation	-	-
2.	Advancing Steadily	-	-
3.	Evolving Strategically	10	31%
4.	Developing Efforts	22	16%
5.	Showing Awareness	24	7%
6.	The Uninitiated	44	1%
Asia Protein Buyers 100		**100**	**9%**

… but there is overarching steady progress from our 2022 report.

It is disheartening that none of the 100 protein buyers achieved a passing score (i.e., above 50%). But there has been significant progress since the publication of our 2022 Baseline Benchmark report. At that time, there was little acknowledgement among Asia's protein buyers of responsible antibiotic usage, animal welfare, or sustainable

seafood sourcing, and virtually no awareness of the link between animal feed and deforestation. We also see increasing potential for some companies to move up to Tier 1 and 2.

High Scores

The higher performing companies are from China, Japan and Thailand.

The 10 higher scorers in our assessment in Tier 3 with scores between 25% and 50% are predominantly from China, Japan, and Thailand (Figure 9). Fifty percent of Thai companies we assessed rank in the top 10.

Figure 9: *The top 10 protein buyers (listed alphabetically by market)*

Company Name	Market	Sector
China Mengniu Dairy Co., Ltd.	CH	Manufacturer
Inner Mongolia Yili Industrial Group Co., Ltd.	CH	Manufacturer
Meiji Holdings Co., Ltd.	JP	Manufacturer
NH Foods Limited	JP	Manufacturer
Nichirei Corporation	JP	Manufacturer
Seven & I Holdings Co., Ltd.	JP	Retailer
CP ALL Public Company Limited	TH	Retailer
Charoen Pokphand Foods Public Co. Ltd.	TH	Manufacturer
Minor International Public Co., Ltd.	TH	Hotel
Thai Union Group Public Company Limited	TH	Manufacturer

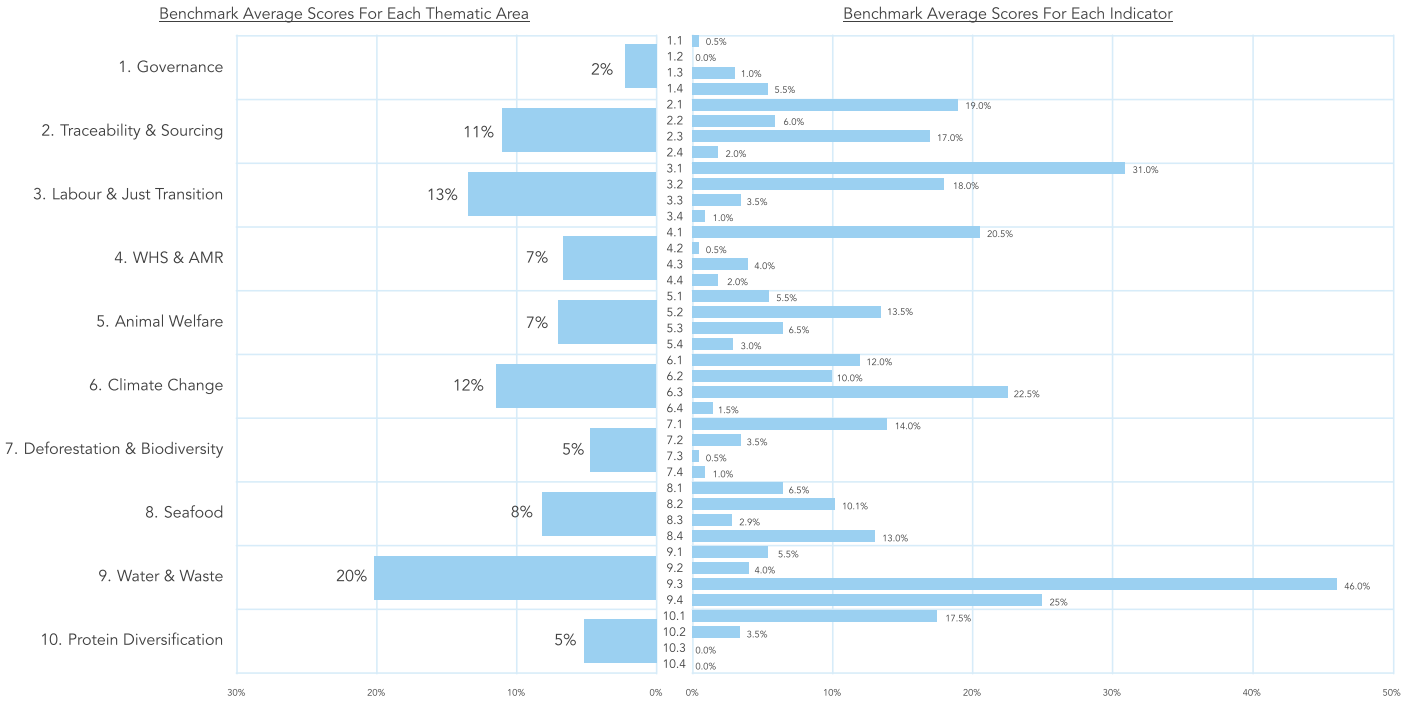
Indeed, companies we assessed from Thailand had the highest average score of the 10 geographic markets. Companies from Japan had the second-highest average score with four (out of 15) companies scoring well enough to make Tier 3. Caution is due when comparing market-level averages, however, as differences in the samples size, as well as sector and size of companies can affect comparability.

Thematic Variations

Water & Waste is the highest scoring theme, as companies tackle food waste.

Companies' average scores vary widely across our 10 themes (Figure 10). They perform best in Water & Waste, with an average score of 20%—mostly thanks to their efforts to reduce their own food waste. They are poorest in Governance, particularly for the specific topic of governance around protein sustainability which has an average score of 2%.

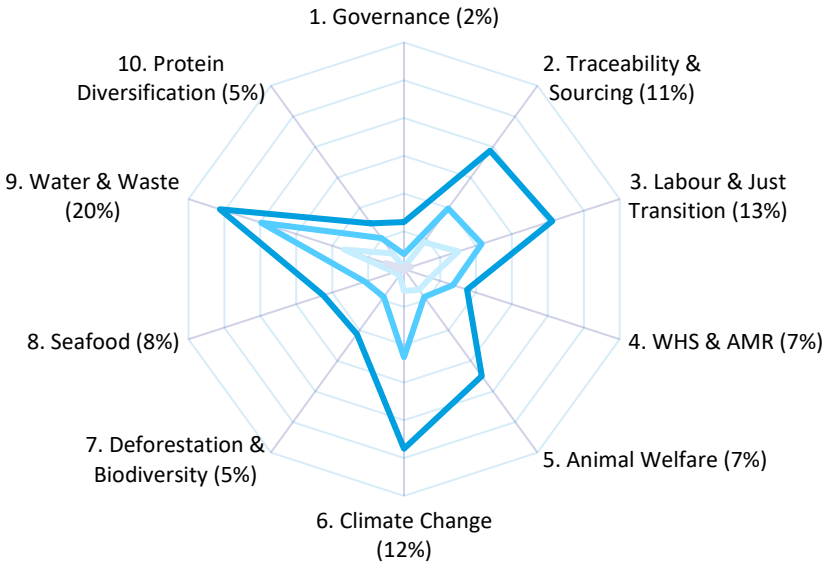
Figure 10: *Average score of all 100 protein buyers, by theme and indicator*



Note: The maximum possible score for each theme and indicator is 100%.

Companies in different tiers, while varying in overall performance, exhibit similar thematic strengths and weaknesses, which is depicted in the radar graph below (Figure 11).

Figure 11: *Average score of companies in each tier, across the 10 themes.*



Note: The percentages in brackets represent the average score of all 100 companies for each theme.

Other higher scoring themes are Climate Change, Labour, and Traceability and Sourcing.

Tier 3 companies notably outperform their lower-scoring peers. The performance gaps are widest in four areas: Animal Welfare, Climate Change, Labour, and Traceability & Sourcing.

Figure 12: *Outperformance by Tier 3 over Tier 4, by theme*

Theme	Tier 3	Tier 4	Gap (% points) *
Governance	13%	4%	9
Traceability & Sourcing	39%	20%	19
Labour & Just Transition	41%	22%	20
WHS & AMR	18%	14%	4
Animal Welfare	34%	9%	25
Climate Change	48%	23%	24
Deforestation & Biodiversity	21%	9%	12
Seafood	23%	11%	11
Water & Waste	51%	40%	11
Protein Diversification	14%	10%	4
Overall	**31%**	**17%**	**15**

** Values are rounded to the nearest whole number.*

Animal Welfare and Climate Change issues show the biggest gaps between Tier 3 and Tier 4 companies.

The difference in average scores between Tier 3 and Tier 4 of 24 percentage points (pp) for Climate Change and 25pp for Animal Welfare stands out as the starkest difference, far wider than the 15pp difference in overall scores (Figure 12). Similarly, the gap in scores for Traceability and Standards (19pp), and for Labour and Just Transition (20pp), demonstrates just how widely companies differ in terms of their disclosures around these themes

Thematic Performance

The following section details the assessment findings by theme and component indicators. The findings enable readers to assess more detailed performance, progress, and gaps. For themes of key priority to our Platform investors, we have added information on the implications and context in Asia to help companies consider priorities and next steps. For more interpretation and overarching aspects and trends, refer to the Discussion section.

Governance

Protein sourcing includes a range of complex topics and the shift to responsible and sustainable supply chains makes this more challenging. This can require changing the focus of supplier relations from a competitive, price-based model to a relationship-oriented model that creates more certainty allowing suppliers to invest in new systems and requirements. Ultimately, this is only possible when corporate leaders and boards oversee business strategies with an understanding and vision for sustainable food.

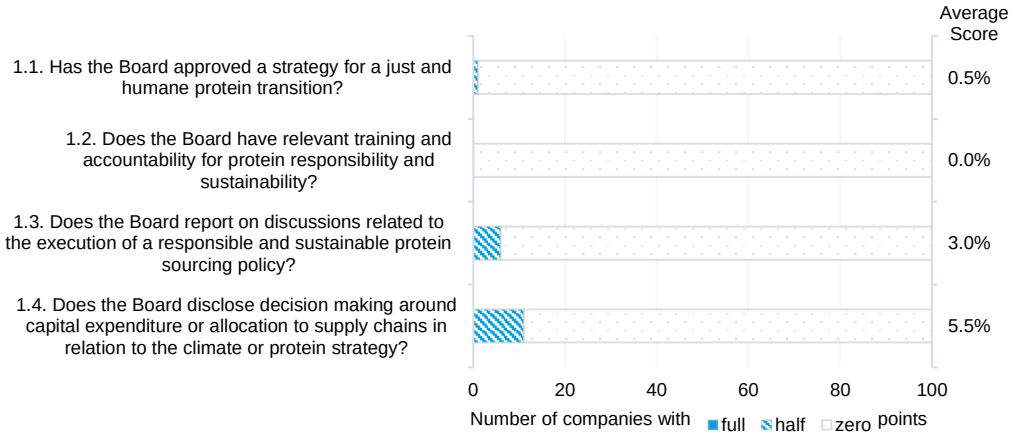
Results

With an average of 2%, governance factors need attention.

The average score for indicators on Governance related to protein sustainability is 2%, with some emerging disclosure around decision making on capital allocation (Figure 13). This suggests boards do not have a vision for a sustainable food system.

The questions first review whether the company shows an awareness of material risks and strategic opportunities for a just and humane protein transition (1.1). Similarly, board members should be informed to enable oversight of sustainable sourcing policy (1.3). Diligent boards should ensure management has put an integrated sustainability strategy in place and then oversee compliance with sourcing policies and other risk mitigation measures. Boards can set a longer-term strategic vision, which can provide guidance for short and mid-term strategy development, major capital investment and protein diversification (1.4). Training of board directors on major aspects of protein sustainability can support the above governance.

Figure 13: *Governance responses, by indicator*



No companies disclosed board-level training or expertise on the material sustainability themes we have identified (1.2), a significant gap. Companies might be under-reporting the training or protein sustainability expertise of their board members. Where that's the case, we encourage companies to improve disclosure to boost investor confidence in the board's ability to manage sustainability risks. In most cases, more training on sustainability in protein supply chains would support better decision making.

Traceability & Sourcing

Digital traceability is a foundation for sustainability claims.

Traceability is the foundation for supply chain sustainability efforts. Without knowing where the product is from, it is not possible to verify sustainability claims. Food companies typically develop traceability systems to address food safety risks. For instance, if a product is contaminated then the company will need to urgently identify where it has come from and recall the affected products.

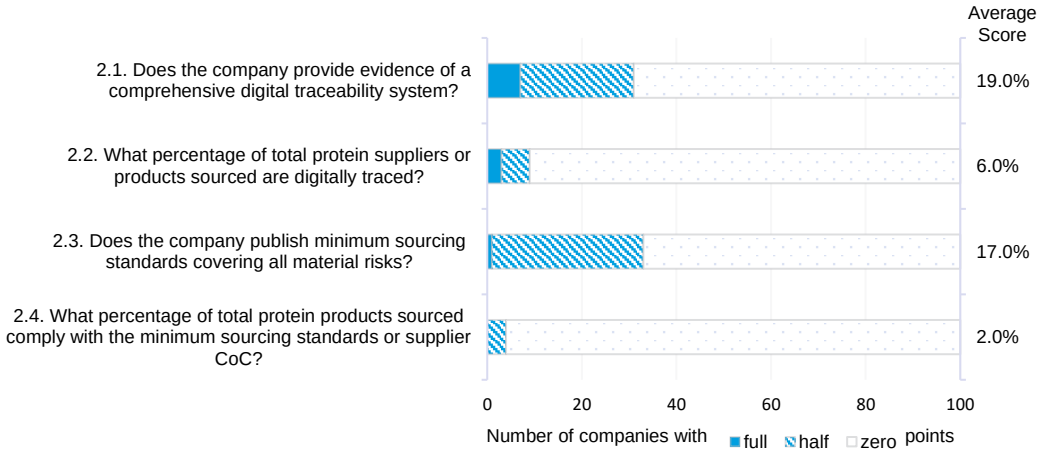
This theme also considers sourcing disclosure reviewing the breadth of issues covered and the proportion of product subject to sourcing codes of conduct.

Results

24 companies have some level of traceability with only 7 using digital systems.

The average score for indicators on Traceability and Sourcing related to protein is 11%, with a higher component score of 19% emerging on digital traceability (Figure 14). There were 24 companies that refer to some level of traceability, but only seven companies provided evidence of a digital traceability systems for sourcing protein (2.1). Of the seven with a comprehensive system for digital traceability, six provide details on the percentage of protein products that are digitally traced (2.2).

Figure 14: *Traceability & Sourcing responses, by indicator*



30 companies have minimum sourcing standards, but none show % compliance.

The results for minimum sourcing standards paint a similar picture. While over 30 companies have published some minimum sourcing standards, only one company has standards that cover all the Protein Transition Platform's 10 themes (indicator 2.3). No companies provide the percentage of protein they source that complies with their own minimum sourcing standards (2.4).

Labour & Just Transition

Transparent and ethical recruitment, good working conditions, and sound management of people in supply chains are fundamental to assuring continuity and consistency of supply, and the resilience of the workforce and supply chain.

Due diligence legislation is fast becoming mandatory, for exporters.

Food companies wishing to sell into international markets must comply with relevant laws on labour, modern slavery, and due diligence, as well as with international principles and the expectations of investors and customers. Australia, the EU, and the U.S already have mandatory legal requirements for due diligence of labour conditions along supply chains to address such issues.[15] South Korea is also considering due diligence legislation that, if adopted, would create the first mandatory requirements in Asia.[16] Companies that fail to meet the necessary standards and verifications have, in some cases, been barred from trading.

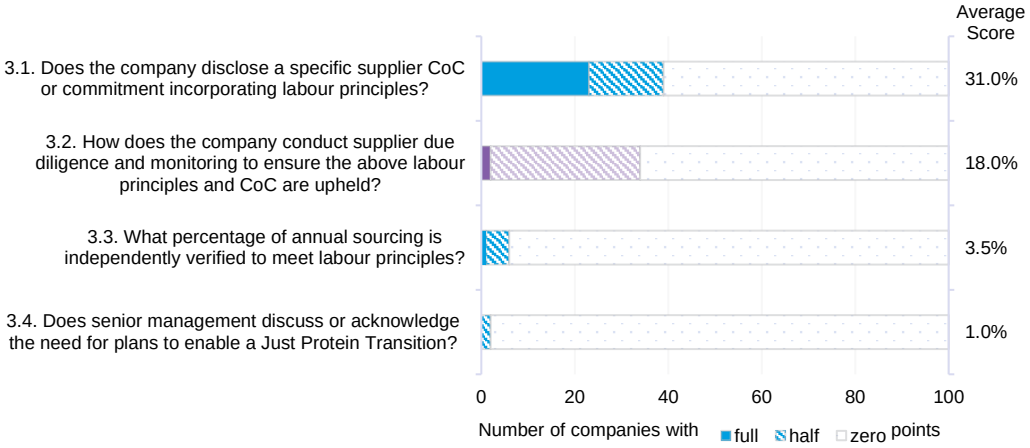
While investors expect companies to adopt an ethical and sustainable code of conduct (CoC), including for sourcing protein, they also increasingly want details about how companies audit suppliers to ensure they comply—and what steps they take with suppliers that don't.

Making a just transition means considering and improving social dimensions as companies source more responsible and sustainable protein. Doing this requires that sourcing companies engage, empower, and support suppliers to consult, enable, and upskill their workforce as they transition.[17]

Results

The average score for indicators on the Labour & Just Transition theme is 13%, surpassing the overall average score of 9%. Performance varies significantly across the four indicators in this theme (Figure 15).

Figure 15: *Labour & Just Transition responses, by indicator*



Note: Purple bar represents an indicator identified as a priority by Platform investors.

23 companies had a public code of conduct with labour principles.

Encouragingly, 23 companies have included core labour principles in either a published supplier CoC or public company commitment. This is an important demonstration of their intent to improve labour practices in their supply chains (3.1). Despite this, few companies have demonstrated robust due diligence for monitoring suppliers' adherence to these labour principles (3.2). Moreover, only two companies independently verify supplier performance in this area (3.3). Senior managements and sustainability strategies have not so far engaged with just transition considerations (3.4).

Antimicrobial Resistance & Worker Health and Safety

Antibiotic overuse in livestock creates risks of antibiotic residues and resistance.

Each use of antibiotics can risk the development of resistant bacteria. Antibiotics are just one form of antimicrobials. The animal protein sector uses roughly 75% of all antibiotics produced.[18] Asia is the largest maker of antibiotics, and animal farming in Asia is one of the largest consumers of them.

Sick animals must be treated. The main issue now in the industry, however, is that antibiotics are mass administered to healthy animals as a routine preventative or prophylactic measure. The underlying reason is because animals are immunologically stressed in such confined, overcrowded and barren conditions and may become sick in alarming numbers. The other issue is the use of antibiotics for growth promotion, involving long-term use of low doses to accelerate weight gain.

The World Health Organisation (WHO) is clear that use of antibiotics for growth promotion must be prohibited and the routine, prophylactic use of antibiotics in healthy animals should be stopped to prevent the spread of antibiotic resistance. WHO advises that antibiotics should be reserved for treatment of sick animals or, if diagnosed, in that herd, flock, or fish population.[19] This is essential to help prevent antimicrobial resistance (AMR) that can spread resistant bacteria from farms and farm animals to workers, consumers and the wider population, as well as to the environment and wildlife.

Investors seek responsible antibiotic use and phase out of routine prophylactic use.

The Platform's Investors believe food companies should acknowledge the issue of AMR and engage suppliers to resolve conditions leading to excess antibiotic use, such as highly stressful farming conditions, cages and other poor animal welfare. They also believe food companies should set clear principles for responsible antibiotic use,

including prohibiting use for growth promotion and avoiding routine or mass prophylactic use of antibiotics.

Results

The average score for WHS and AMR was 7%, and 3% for AMR related indicators only.

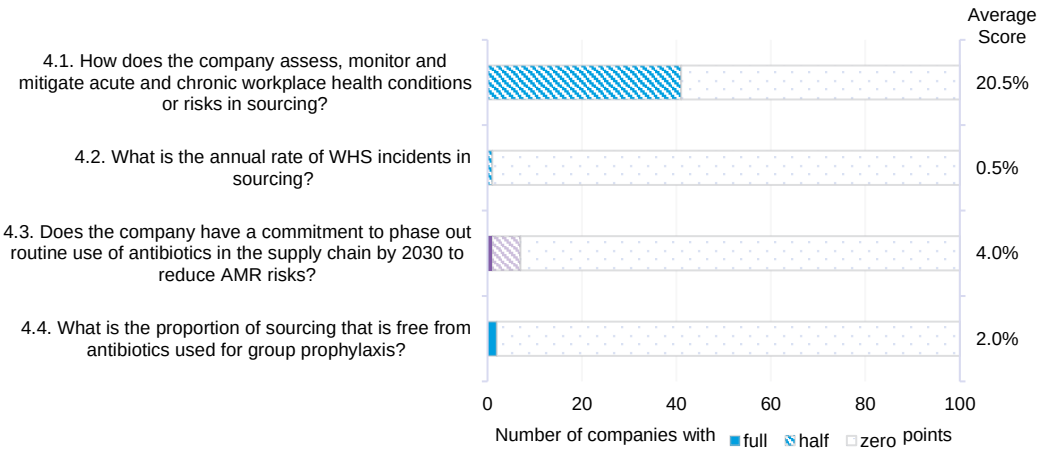
The average score for indicators on Workplace Health and Safety (WHS) and AMR theme is 7% (and 3% for AMR related indicators only). While these areas may be interrelated along the supply chain, there is variable disclosure (Figure 16).

Many companies acknowledge direct WHS risks to staff (Figure 16). However, few consider WHS risks to workers upstream in the supply chain. None have developed a rigorous system for assessing or mitigating these risks (4.1). Only one company makes disclosures, albeit limited, on the rate of WHS incidents at their protein suppliers (4.2).

Few companies disclosed AMR as a sourcing or supply chain risk.

Our assessment found low overall recognition of AMR as a risk and a lack of urgency around the need for responsible antibiotic use. Companies usually have addressed concerns about the potential of antibiotic residues ending up in food products, but not the systemic risk of AMR from the overuse of antibiotics in animal production.

Figure 16: *AMR & WHS responses, by indicator*



Note: Purple bar represents an indicator identified as a priority by Platform investors.

Only one seeks to avoid prophylactic use in its supply chain.

Only one company has a responsible antibiotic policy (4.3) that seeks to avoid prophylactic antibiotic use in its supply chain. Using antibiotics for growth promotion is already banned in that company's market, as it is in many Asian jurisdictions. Emerging standouts on AMR risk included China Mengniu Dairy (see case study below) and the India-based franchisee Jubilant Foods.

The Imperative to Manage AMR in Animal Husbandry

Antibiotic residues are linked to excessive routine antibiotic use.

The main society-wide concern is that the spread of antimicrobial resistance reduces the efficacy of antibiotics to address diseases for humans. However, this development is also risking the ability to treat sick animals. Companies also face direct risks where there are antibiotic residues that contaminate meat, which is part of broader food safety management and related to overuse of antibiotics in farming. The routine or excessive use of antibiotics during an animal's life is also what generates antibiotic resistant bacteria (otherwise known as "superbugs") in and beyond farms. The solution is better management of antimicrobials in the supply chain, and resolution of the underlying low welfare standards.

In Asia 90% of antibiotics fed to intensively farmed animals are for non-therapeutic use.

Higher preventive use of antibiotics in low- and middle-income countries raises the risk of AMR.[20]
One million people die annually from AMR pathogens, according to a 2023 report by World Animal Protection, a quarter of them in South Asia, where 90% of antibiotics administered (to farm animals) are for non-therapeutic treatment.[21] Globally, 84% of antibiotics administered on intensive farms are not used to treat sick animals, but are instead administered to healthy livestock to prevent disease from cramped confinement, or used as a food supplement to accelerate weight gain for maximum profits.

Poultry, pig, dairy and aquaculture all use large amounts of antibiotics prophylactically.

The economic and trade implications are substantial. concerns about overuse of antibiotics and AMR, for example, could endanger India's roughly USD5 billion annual shrimp export business.[22] A recent FAO study confirmed widespread antibiotic resistance on India poultry and aquaculture farms.[23] High antibiotic use has also been reported in both fish and shrimp production in Vietnam.[24] And, routine prophylactic use of antibiotics in pigs and dairy is common in Asia.

The recent ASEAN One Health Declaration provides a clear policy signal.

The EU has taken a lead on AMR regulation, prohibiting routine prophylactic use of antibiotics on European farms, and banning imports of meat, dairy, eggs, or seafood that have been raised using antibiotics to promote growth. Last year, the Association of Southeast Asian Nations (ASEAN) issued a Leaders' Declaration on One Health Initiative at the 42nd ASEAN summit in Indonesia.[25] The initiative seeks to enhance collaboration, coordination, communication and multisectoral approaches to reducing the risk of AMR and animal-derived disease.

While it imposes no requirements, the ASEAN declaration provides a clear policy signal for the region's buyers and their suppliers on the need to reduce excessive and irresponsible antibiotic use in supply chains. Investors anticipate that policy and regulation will soon follow requiring corporate change and helping to correct market failure. Protein buyers need to urgently establish standards for suppliers on responsible antibiotic use to protect workers and consumers, and further secure food safety.

Animal Welfare

Higher welfare standards result in safer, higher-quality food, happier workers, and satisfied customers.

Better housing, management and slaughter systems also help improve animal health and productivity, resulting in safer, higher-quality food, happier workers and, ultimately, more satisfied customers. Improving animal welfare—whether adopting cage-free systems for hens and sows (pregnant or nursing pigs), non-surgical castration, pre-slaughter stunning or lower-density stocking—has a variety of other benefits such as reducing emissions, improving meat and fish quality, improving animal immunity, and reducing feeding costs. Better animal welfare, means healthier animals, requiring fewer antibiotics and so lowers the risk of AMR. Companies with higher animal welfare also reduce the risk that concerned consumers shun their products. Companies and banks can also avoid stranded assets in the form of outdated cages and other low welfare systems, fast also becoming a physical and transition climate risk, given the increasing temperatures, and risk of heat stress impacts.

The Platform recommends FARMS international standards.

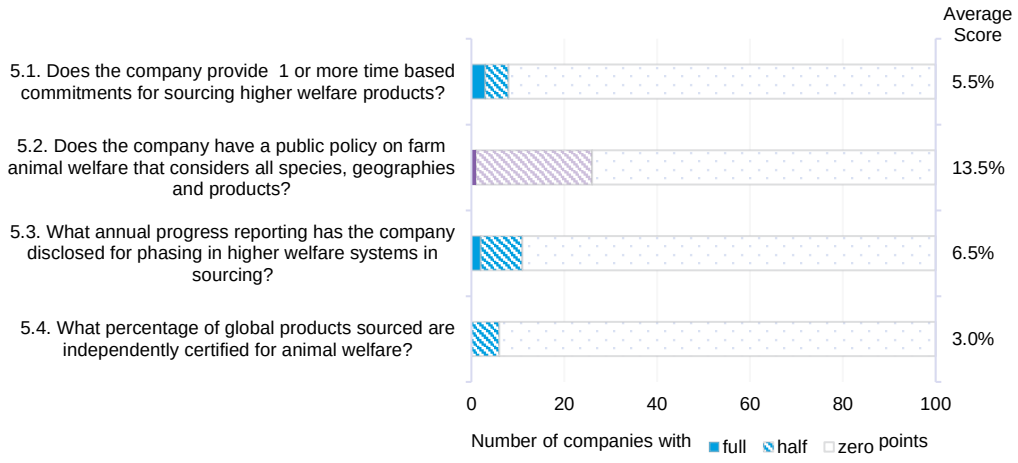
The Platform recommends that companies commit to phasing out cages and publishing a policy aligned with the Farm Animal Responsible Minimum Standards (FARMS), while engaging their suppliers.[26] ARE can help companies and banks seeking support and guidance for implementing such standards, policy or commitments.

Results

Eight companies publish animal welfare policies.

The average score for indicators on animal welfare is 7%, with progress on time-based commitments and policies (Figure 17). Eight companies have adopted animal welfare policies (5.2). Companies' rationales for adopting animal welfare policies range widely, from finding new consumer segments to genuine concern for the intrinsic value of improving animals' well-being. Only one company, China Mengniu Dairy, has a policy aligned towards FARMS (see case study). Most other policies are very basic and do not appear to include clear provisions for supplier implementation or monitoring.

Figure 17: *Animal welfare responses, by indicator*



Note: Purple bar represents an indicator identified as a priority by Platform investors.

Asian food companies are increasingly committing to phasing out caged confinement, barren, and overcrowded animal housing, and some mutilations such as teeth and tail shortening (5.3).

3 buyers set deadlines for phasing out caged gestation sow systems or sourcing eggs from caged hens.

Three buyers have set deadlines for phasing out caged sow systems or for sourcing eggs from caged hens (5.1). One of them is Japanese farming and food-processing conglomerate NH Foods, which committed in 2021 to phasing out gestation crates for pigs by 2030.[27] Another is Philippine fast-food multinational Jollibee Food Corp., which pledged in 2023 to phase out buying eggs from caged hens globally by 2035.[28] Both these companies made commitments after campaigns raised awareness of caged farming conditions with the public. Thai conglomerate Charoen Pokphand Foods (CPF) was already phasing out both gestation crates for pigs and increasing cage-free hen housing and so far, has not been subject to such public campaigns.

Companies can build trust on implementation through progress reporting and obtaining robust, independent certification of their animal welfare (5.4). This is crucial for ensuring transparency, accountability, and credible progress on commitments to higher animal welfare. Independent certification can also enable access to sustainability-linked loans, differentiated labelling, and consumer trust.

Beyond Confinement Systems

Animal welfare policies can provide a clear signal to suppliers.

Caged confinement systems are brutal conditions for creatures, whether cages for egg-laying hens, gestation or nursing crates for pregnant pigs or individual crates for dairy calves. As awareness grows in the Asian region, consumers increasingly choose higher welfare options where they are available and especially where they are affordable. Food businesses operating in premium market segments, such as high-end hotels, see higher welfare as consistent with their brands. Yet many of our engagements find that companies do not have enough high welfare supply.

Nearly 300 companies in Asia have committed to cage-free eggs.

Almost 300 companies operating in Asia have committed to cage-free eggs, often with an implementation deadline of 2025, according to Chicken Watch.[29] Sinergia Animal's annual "Cage-Free Tracker" survey of cage-free commitments at 120 companies in Asia, concluded last November that 56 had succeeded in going completely cage-free, while another 20 had reported progress towards doing so.[30]

In China, corporate demand for cage-free eggs exceeds supply.

As a result, corporate commitment-related demand globally—and in China—for cage-free eggs already exceeds production, providing a compelling incentive for the region's suppliers to overcome concerns about the profitability of going cage-free.[31] Lower domestic supply and premium perceptions among consumers mean cage-free eggs can often command higher prices. Cage-free egg producers should also be able to qualify for sustainability-linked loans with lower interest rates, as offered by a Singapore bank, and pending elsewhere in the region.[32]

Buyer contracts for cage-free eggs help increase supplier confidence.

However, buyers need to step up to meet willing producers. Egg farmers across six Asian nations have been surveyed to convey their challenges, motivations, and opportunities for cage-free systems, identifying securing buyer contracts as key. Not all cage-free systems are more expensive, underlying the slow but gradual shift to avoid caged mother pigs in the region. However, this also needs more retailer support to ask, accelerate and pass through the benefits to business customers and consumers. The more buyers commit to cage-

free and develop animal welfare policies, the more confidence suppliers will have to follow their example. Companies that have developed initial animal welfare policies have the opportunity to clarify and strengthen them for implementation, ensuring they are well-aligned towards FARMS and helping to futureproof reputation.

Cage-free sow systems can be more productive and less costly.

Buyers wishing to increase high welfare supply can take further steps on contractual terms to derisk suppliers and support their investment in higher welfare facilities. Capacity building would help operators invest in cage-free and run them optimally to reduce costs. In fact, some systems, particularly group housing for mother pigs, can even be cheaper and more productive than the cage systems they replace.[33] We are increasingly supporting food buyers to link with suppliers as part of establishing animal welfare policies.

Climate Change

Producing animal protein generates almost 17% of global GHG emissions.

Producing animal protein generates almost 17% of global GHG emissions, with feed production and livestock manure accounting for most of those emissions.[34] Companies adopting strategies to reduce GHGs and achieve net-zero emissions, therefore, need to account for all the GHG esmissions in their supply chain: not just those they generate, but also those produced by their suppliers. These indirect emissions, known as Scope 3 emissions (as distinguished from the Scope 1 emissions companies directly emit, or the Scope 2 emissions created producing the power they consume) represent the majority of the GHGs emitted along the protein supply chain.

For buyers, most emissions come from the supply chain, Scope 3.

Leading global retailers are increasingly adopting plans to reduce the indirect, Scope 3 emissions generated by their suppliers. To validate their emissions reduction targets and pathways, companies are increasingly employing the SBTi process. Last June, SBTi updated its FLAG guidance with new implementation timelines that better enable food companies to set emissions reduction targets aligned with the Paris Agreement goal of keeping global warming within 1.5°C.[35]

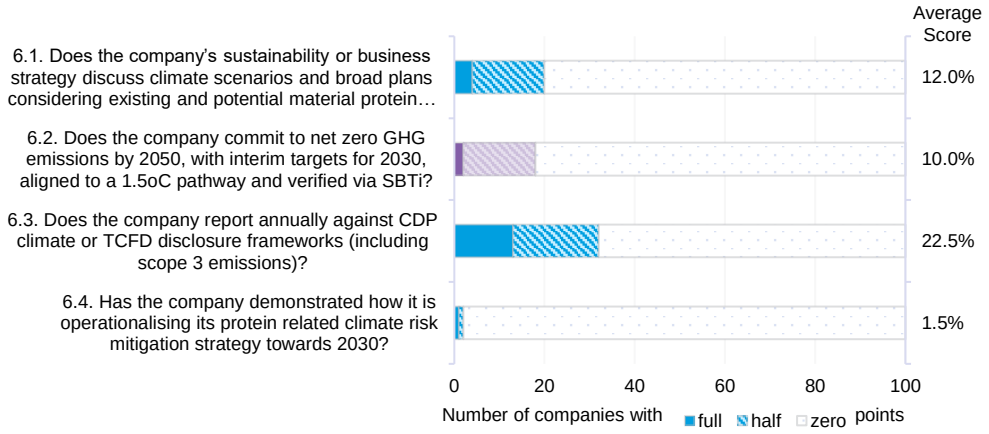
Companies are also increasingly using recognised emissions-reporting frameworks such as the Carbon Disclosure Project (CDP Climate) and the Task Force on Climate-related Financial Disclosures (TCFD). This marks an important shift towards greater transparency and accountability. However, companies can report via these frameworks without setting a near- or long-term emissions reduction target, nor including Scope 3 emissions in their climate mitigation strategy, which generally misses the majority of emissions.

Results

The scope of disclosure varies significantly between companies.

The research shows Asian food companies have begun to disclose greenhouse gas emissions, though the scope and implementation is only emerging for protein supply chains. The average score for indicators on climate change is 12%, with varying performance in relation to protein sustainability strategies and supply chains (Figure 18).

Figure 18: *Climate Change responses, by indicator*



Note: Purple bar represents an indicator identified as a priority by Platform investors.

13 companies report their emissions using CDP and/or TCFD frameworks…

Thirteen companies report their emissions using CDP and/or TCFD frameworks (6.3). But only four have an integrated climate strategy that includes protein sourcing (6.1). Several companies have not included Scope 3 emissions in their net-zero commitments and only two companies have obtained SBTi validation of their emissions reduction targets to give them credibility (6.2).

…but only 4 companies have an integrated climate strategy that

Standouts in this area include Thai Union Group, one of the world's largest seafood manufacturing companies, and fast-food giant Yum China Holdings, owner of KFC and Pizza Hut in China. Yum China has committed to both near- and long-term Scope 3 emissions reduction targets, and had its near-term targets validated by SBTi. China dairy company Inner Mongolia Yili Industrial, has submitted both near-and long-term Scope 3 emissions reduction targets for validation. CPF has also submitted its emissions targets to SBTi.

Towards Scope 3 Emissions Management

There was a wide disparity of scores between Tier 3 and Tier 4 on this topic. Many Tier 4 companies express reluctance to acknowledge their indirect (or Scope 3) emissions from animal protein production. Some cite the difficulty of accounting for even direct emissions, saying they lack the capacity or expertise to go further.

But as the Tier 3 companies demonstrate, it is possible to surmount these challenges and commit to reducing absolute emissions, both direct and indirect. Some companies engage expert consultants; others focus their efforts on areas where they can make the greatest reductions.

Leading companies have committed to reduce Scope 3 emissions.

One area that companies can dramatically cut Scope 3 emissions is through eliminating deforestation in their supply chain—especially the deforestation caused producing high-risk commodities such as beef, animal feed soy, and palm products. Another quick way to slash Scope 3 emissions is to substitute animal proteins with alternative proteins at scale over time, as we detailed in "Charting Asia's Protein Transition."

We expect that more companies will start targeting Scope 3 emissions as national and international climate commitments, growing consumer awareness, and increasing regulations making disclosure mandatory overcome reservations about complexity and cost. Shareholders also want more transparent, detailed disclosure on how companies appraise their physical and transition risks and what steps they are taking to mitigate them.

Deforestation & Biodiversity

Asian meat production and consumption is driving global deforestation.

Asia's production and consumption of animal protein are major drivers of tropical deforestation and biodiversity loss. Feeding the region's hunger for meat requires increasing amounts of animal feed and the raw materials to grow it, as well as the increasing construction of more intensive farms. There are multiple commodity supply chains associated with deforestation including palm oil and meal, soybean and maize for animal feed, beef cattle raising, and the timber or wood-fibre used in packaging.

Investors want companies to eliminate deforestation in their supply chains.

Platform investors prioritise deforestation and biodiversity risks, looking for companies to set deadlines for eliminating deforestation and land use change in their supply chains. Investors increasingly factor corporate failure to address biodiversity issues as a voting matter at company annual general meetings.

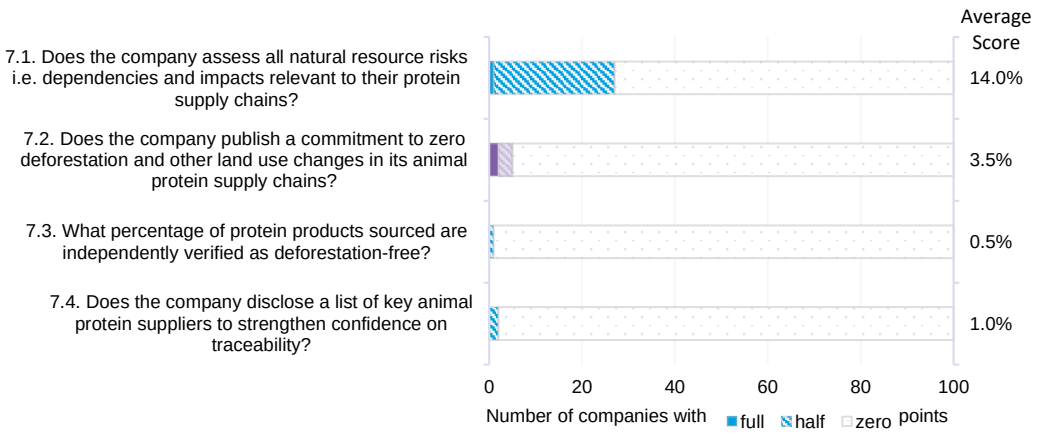
This can also help reduce supply chain emissions and strengthen traceability.

Deforestation is also linked with greenhouse gas emissions, and adopting a deadline for eliminating deforestation also helps companies with transition planning and decarbonization targets. Zero deforestations timelines build confidence among investors and customers—and send an important message to suppliers. Suppliers in turn, can engage feed companies or source feed or product using credible certification schemes. The result is a more transparent and resilient supply chain that relies less on finite and complex natural resources.

Results

The average score for indicators on deforestation and biodiversity is 5%, with varying performance in relation to protein supply chains on this major investor priority (Figure 19).

Figure 19: *Deforestation & Biodiversity responses, by indicator*



Note: Purple bar represents an indicator identified as a priority by Platform investors.

Companies often acknowledge the issue of deforestation in palm oil supply chains, but they do not consider risks in protein sourcing, such as clearing of forests to grow soy for beef grazing and animal feed. This assessment reveals a low level of awareness or acknowledgement remains, but some progress from our 2022 report, which found no companies acknowledged deforestation risks linked to sourcing of animal proteins.

China Mengniu has adopted a "forest protection policy" with zero deforestation by 2030.

While 26 companies have started assessing their impact and dependence on nature (7.1), only two have adopted full and firm deadlines for eliminating deforestation (7.2): China Mengniu Dairy has adopted a "forest protection policy" that commits to zero deforestation by 2030; CPF and Thai Union have also adopted 2030 for eliminating deforestation in their supply chains, albeit Thai Union receives partial points as their commitment does not include soybean meal for all business units/supply chains.

Meiji Group has a soybean sourcing policy, but not yet a deforestation deadline.

Japanese food and pharmaceutical company Meiji Group has developed a soybean sourcing policy but has not yet set a deadline for eliminating deforestation. While no companies yet disclose a percentage of deforestation-free sourcing or supply chains (7.3), CPF and China Mengniu Dairy have begun to liaise with major feed suppliers (see case studies below). Inner Mongolia Yili Industrial Dairy is the first Chinese company to join the Round Table for Responsible Soy (RTRS).

Regulatory Winds

The EU Deforestation regulation is soon in effect for operations and imports.

Regulators are increasingly taking action to address biodiversity risks and especially deforestation. There are two broad forms: disclosure-based regulation from capital market regulators and industry regulation can apply to operations and to supply chains.

The industry regulators will have a direct effect. For instance, in December 2024, a new EU Deforestation Regulation will go into force, prohibiting imports of agricultural raw materials and products that cannot be verified as deforestation-free from 2020. This will create a stronger impetus for supply chain management for commodities and products with links to forest areas.

There are new rules by the Chinese exchanges for disclosure of ecosystem / biodiversity risks.

The capital market regulation comes in the form of mandatory disclosures, often adapting from the TCFD framework for emissions and climate impact. The EU has already incorporated parts of the TNFD standards into its Corporate Sustainability Responsibility Directive.

In February, China's stock exchanges proposed new rules requiring the largest listed companies in 2025 to start filing sustainability reports that include not only emissions but also assess and disclose ecosystem and nature risks. Companies must report on a double materiality basis, i.e. the environmental and social impact they exert and how that impact could affect their business financially or otherwise.[36] The Singapore exchange is also supporting TNFD and encouraging nature risk disclosure.

Investors launched Nature Action 100.

These efforts dovetail with and support investor actions. At the UN Global Biodiversity Conference in Montreal that in 2022 produced the Kunming-Montreal Global Biodiversity Framework, a group of over 200 investors launched Nature Action 100, an initiative focusing on listed

companies, to persuade them and others to reverse nature loss by 2030 and do more to preserve nature and biodiversity.[37]

Asia's protein buyers need to work with suppliers to gain a clearer understanding of their deforestation and biodiversity risks so they can devise plans to mitigate them with more responsible sourcing. We have worked to help companies understand how reducing deforestation in their supply chain helps reduce their Scope 3 emissions, particularly by setting a deadline commitment, engaging suppliers to avoid deforestation via certified sourcing and reducing their dependence on soybean meal, beef and other animal proteins from South America.

Seafood

Both wild-caught and farmed seafood come with considerations– overfishing vs. chemical use and land clearance.

The main division in the seafood industry is between wild-caught and farmed seafood. Each process has multiple overlapping considerations. The major consideration for wild-caught is whether the fisheries are overfished or rapidly declining, in which case catch levels will dwindle and biodiversity is threatened. The volume of farmed seafood has overtaken wild-caught. However, farming brings its own issues including chemical and antibiotic use, land clearance for farms and feed, and even pressure on wild fish populations where these are used as food.

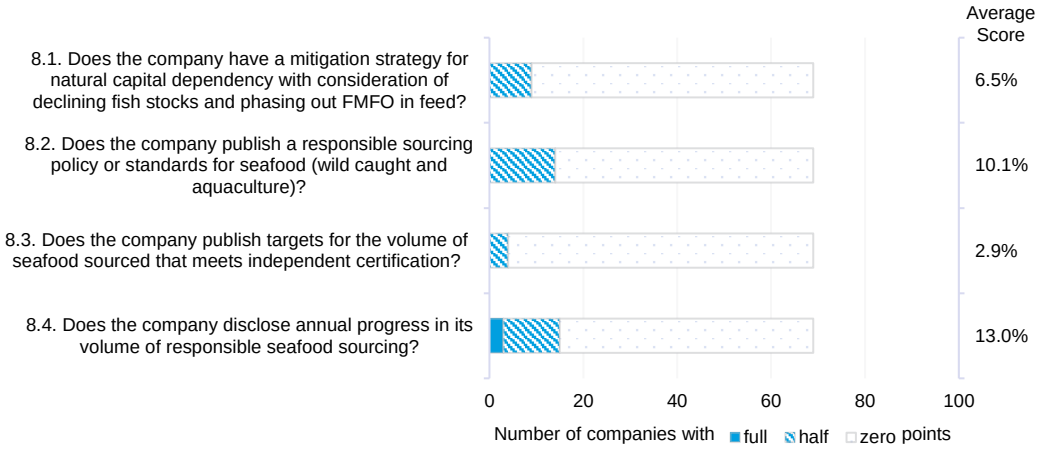
The average score across 89 companies sourcing seafood is 8%.

Certification is a major tool used to assess and provide verified claims for seafood sustainability. The leading certification bodies are Marine Stewardship Council (MSC) or the Aquaculture Stewardship Council (ASC). Other schemes include Friends of the Sea. A challenge in Asia is that the MSC and ASC standards are high, and suppliers often need technical expertise and potentially additional capital even before they can start the qualification process. However, buyers should have minimum standards even where there is an uncertain path to certification. For a range of companies leading specifically on seafood, see the case study below and companies that are part of the Ocean Disclosure Project.

Results

Sixty-nine of the Asian Protein Buyers 100 are involved in sourcing and selling seafood.[38] The average thematic score for seafood indicators is 8%, indicating there is still plenty of room for improvement on this more long-standing business risk in Asia (Figure 20).

Figure 20: *Seafood responses, by indicator*



Out of 69 assessed buyers, only 15 offer products certified by major schemes.

When it comes to sustainability, only 15 companies offer products certified by the major certification schemes. Only three of those companies provide details on what proportion of their seafood is certified (8.4), while only three express any intention to increase their sourcing of seafood that meets certification or to set targets (8.3).

Only 3 seek to increase sourcing of certified seafood.

The results showed that while 14 companies have some standards for responsible seafood sourcing, none of them has a comprehensive policy (8.2). Also, it appears that fewer companies were eager to acknowledge their dependencies as compared to their impacts (8.1).

Water & Waste

Plastic waste is a priority for markets like Thailand.

Asian consumers have woken up to the plastic tsunami. This has become a core feature of sustainability efforts in some markets, such as Thailand, where the government is strengthening policy to address the issue and regulated in others, like the Philippines. Leading companies should be taking steps to reduce the burden of plastic waste across the lifecycle of their products.

Waste and pollution along animal protein supply chains is a major concern.

Food waste is also another direct and visual concern to buyers. However, waste incurred along the animal production supply chain were a key aspect of the assessment. From fertiliser and pesticide use, manure and processing waste, pollution is a major concern with animal protein supply chains.

Water scarcity and indirect water use is a concern for business and investors.

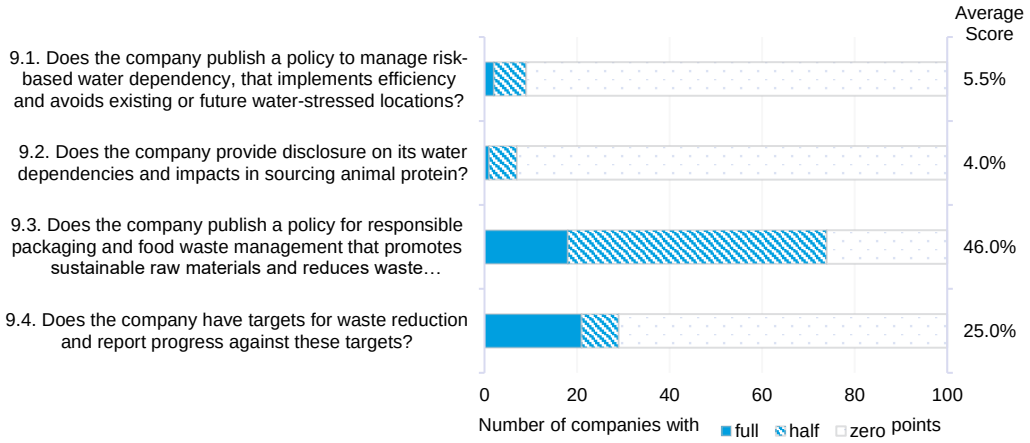
Food companies and their suppliers are major users of water, which can be a point of contention with local communities and competing industries. Direct water use disclosure is certainly increasing; however acknowledgement of indirect water use along the animal production supply chain is less evident. Water supplies may also be or become scarce relative to local demand, for many reasons. There may be multiple causes including changing weather patterns due to droughts, changes in usage patterns upstream such as new dams, or simply because the company or local communities grow and use more water. Water scarcity is of increasing concern to investors, particularly in relation to siting new facilities and where companies fail to adequately assess their direct and indirect water needs, they may need to pay higher costs or face reputational issues if water issues appear in the media.

Results

Water & Waste had the highest average score of any theme at 20%.

The average score in the water and waste theme is 20%, the highest among the 10 themes. Individual company scores, however, vary widely within this theme, with some scoring higher on indicators related to waste (in particular direct food waste) than on those concerning water (Figure 21) scarcity or waste produced along the supply chain.

Figure 21: *Water & Waste responses, by indicator*



21 companies have set targets for reducing waste.

Eighteen companies have comprehensive policies for managing their packaging and/or food waste (9.3), and 21 have set targets for reducing waste and publish reports on their progress (9.4). Food companies likely score higher in this area because food waste is an issue over which they have more direct control, as opposed to other problems that are manifested largely upstream among their suppliers during animal protein production.

Most overlook water-related issues in their supply chains.

Conversely, most companies overlook water-related dependencies in their protein supply chains. Indeed, very few companies disclose these or have policies to manage water risks, particularly water scarcity, which is an increasing investor priority.

Protein Diversification

Alternative proteins can reduce negative environmental impacts, enhance food security…

Diversifying into alternative proteins and then scaling up over time, can help alleviate many of the sustainability challenges protein businesses face. Alternative proteins produce much lower GHG emissions, require significantly less land or water, use no live animals or antibiotics, and yield no animal waste.[39] Alternative proteins have the potential to provide greater food security than animal protein, particularly to countries that face land shortages as they race to feed rapidly growing populations and/or meet increasing rising middle-class demand for protein.

…address regional interest in meat reduction (flexitarians) …

Consumers are also receptive. A study of consumers in six Southeast Asian nations published earlier this year by the GFI found that, while Southeast Asians don't want to give up meat, they do want to diversify into more products that combine plant-based and animal meat.[40] A poll of Thai consumers published last December by sustainable food advocacy group Madre Brava found that two-thirds of respondents intend to eat less meat, largely by switching to plant-based protein.[41]

…and open new market segments.

Protein diversification can open new consumer segments and export markets, too. Manufacturers can diversify with relative ease into plant-based proteins with existing equipment and know-how. For example, Century Pacific Foods, a Filipino protein manufacturer, has entered more than 10 new overseas markets with its UnMeat™ range since 2021. Sales and proportion of stock keeping units are growing year on year, and it is now developing shelf-stable, low-cost products for the domestic retail market.

Better marketing can cultivate higher demand for meat alternatives.

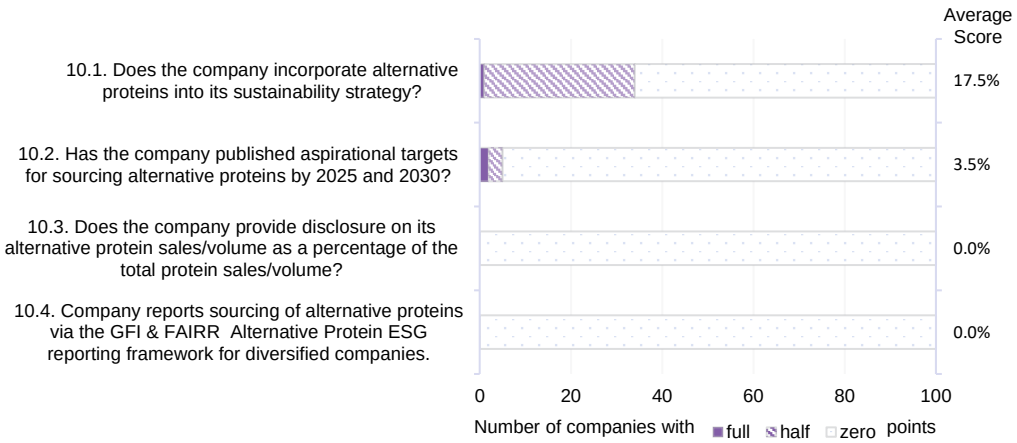
Retailers and restaurants can cultivate higher sales and demand among mainstream consumers with more active marketing and menus, expanded offerings, improved labelling, product placement near meat products, and more active instore promotion to existing and new flexitarians.

Results

33 companies now offer plant-based products.

The average score for protein diversification indicators is 5%, companies testing the water strategically (Figure 22). We identified 33 companies offering at least one plant-based product. While we did not assess this theme in 2022, we did baseline offerings and note any sales targets internally, early 2022. In addition, we know from our engagement with companies, and the changes in menus and supermarket offerings, that Asia's food companies have increased the availability of plant-based products.

Figure 22: *Protein Diversification responses, by indicator*



Note: Purple bar represents an indicator identified as a priority by Platform investors.

Only CPF integrates low-carbon plant-based products into their 2030 sustainability strategy.

There was only one company, CPF, that integrates "low carbon" products (including plant-based products) into its 2030 sustainability strategy (10.1). The low level of target setting suggests the companies are still testing demand, rather than recognising the social, environmental and strategic imperative of increasing alternative proteins. A few companies have taken the step of setting interim and long-term targets for sourcing and sales, which can create greater focus and innovation. A few companies have taken this step (10.2).

Companies should disclose sales data and promote marketing of alternative proteins as a total of all protein sales (10.3) which we are seeing emerge with some European retailers. A framework provided by the Good Food Institute (GFI) and the Farm Animal Investment Risk & Return Initiative can provide valuable guidance for detailed disclosure of alternative proteins (10.4).

33% of companies offer a plant-based protein product.

We see progress with 33 companies now offering plant-based or other alternative proteins. Additionally, some now manufacture plant-based proteins or invest in cultivated proteins or hybrid products. Among the companies at the forefront in this area are Thai Union and South Korean food manufacturer CJ Cheiljedang are among the companies at the forefront in this area. Both have reported considerable investment in alternative proteins and set targets for their retail sales of plant-based proteins. Another is Chinese hypermarket operator Sun Art Retail Ltd, with 485 hypermarkets and 19 superstores plus minimarts. It has introduced plant-based meat products in all its stores in China. Publishing a sales or volume target can further drive their sales ambition.

Thai Union, CJ Cheiljedang, and Sun Art are among regional leaders.

Emerging Asian Leaders: Case Studies

Some companies stood out in our assessment for their notable advancements towards responsible and sustainable protein sourcing. These emerging leaders have made efforts to understand sustainability risks in their supply chains, set out strategies and targets for reducing them, and developed communication channels to update the public, investors, and their suppliers. In this section, we highlight three of these companies and their approaches that distinguish them from their competitors. Confidence, consultation, and collaboration along the value chain are hallmarks of their approaches, as they test and scale pathways to change. Their sustainability is also a competitive advantage and a selling point to customers, consumers, and investors.

Charoen Pokphand Foods (CPF)

CPF's 2030 sustainability strategy focuses on Food Security, Self-Sufficient Society, and Balance of Nature…

CPF, a regional manufacturer (and producer), released its 2030 sustainability strategy, setting 21 quantitative targets, in 2021.[42] Overseen by a steering committee that reports to CPF's executive committee and its board, the strategy has three main goals—Food Security, Self-Sufficient Society, and Balance of Nature—that focus on responsible sourcing and marketing, animal welfare, human rights, water, waste, deforestation, and climate. To help enable the strategy, it has adopted a "sustainable food" target of generating 40% of CPF's total global sales from sustainable food, including "low-carbon products."

…including science-based targets for Scope 1, 2, and 3 emission reduction.

CPF developed its strategy in collaboration with key stakeholders, benchmarking its existing sustainability approach against global peers' and defining its material risks. The strategy includes 2030 science-based targets for reducing Scope 1, 2, and 3 emissions, and for making its raw materials both 100% traceable and 100% deforestation-free.

The company has used an incremental approach to setting targets in some areas and has already achieved its stated goals, such as for reducing water use and for increasing adoption of cage-free eggs in Thailand. For human rights, CPF aims to conduct due diligence on human rights in high-risk operations every three years.

Innovations include a blockchain soy tracing solution and satellite mapping of deforestation.

The company has been publishing regular updates and reports on its progress. Last year, one of its subsidiaries signed a memorandum of understanding with U.S.-listed agri-business Bunge to develop blockchain solutions for tracing Brazilian soy exported to Asia to ensure it is deforestation-free.[43] Earlier this year, the same subsidiary signed

an MoU with French agricultural commodities company Louis Dreyfus to pilot the use of satellite mapping to monitor supply chains for deforestation in real-time.[44] These efforts will help CPF to both achieve its own deforestation targets, and better manage compliance such as with EU Deforestation Regulation.

Low-carbon, plant-based products are integrated into their offerings.

CPF uses the concept of "low-carbon products" as part of its carbon footprint reduction. These efforts include its own "Meat Zero" brand of plant-based meat. However, CPF has applied this concept of "low-carbon" to their meat products, which is controversial as meats still have a high footprint compared to their nutritional value.

CPF can build on these foundations in various ways. A stronger sense of aspiration with objective setting that goes beyond an incremental approach is more likely to result in breakthrough innovations. In terms of reporting, as with many companies that operate across multiple geographies and business lines, it is hard to understand the baselines or scope of targets. It can help to set targets and performance with reference to total global production, sales, or growth.

In setting upgraded or additional targets, two areas stand out with CPF. First, is to set a time-based target to phase out prophylactic antibiotic use. The company has also invested in a range of alternative proteins.[45] Setting an aspirational sales, revenue or ideally a proportional protein target to help drive expansion and promotion of alternative meats would focus innovation and also help CPF reach its emission-reduction target.

China Mengniu Dairy

China Mengniu released the first Forest Protection Policy in the Greater China market after our engagement.

China Mengniu Dairy is China's second-largest dairy company in terms of market share and market capitalisation. China Mengniu had notable firsts for the China market when it released its Forest Protection Policy[46] in April 2023 and its Animal Welfare Policy[47] in January 2024.

China Mengniu released its Forest Protection Policy following collective engagement with our Platform investors. The policy includes a deadline for achieving zero-deforestation in its supply chain, including sourcing of timber, palm oil, and soybean meal for feeding cows. The policy aligns with some actions set out by the Accountability Framework, a roadmap published in 2019 by a collective group of environmental organisations to address deforestation and other sustainability issues in supply chains.

The company signed an MoU to source soy certified as deforestation-free.

This commitment sets a precedent in China and Asia for a major dairy company. The company has taken further actions, including signing an MoU with China's COFCO International, a major shareholder and supplier, to source soy certified as deforestation-free from Brazil.[48]

The new welfare policy aligns to FARMs and also takes steps on responsible antibiotic use.

China Mengniu subsequently sought to address animal welfare, starting with a public policy to help signal to suppliers, investors and other stakeholders. ARE worked with Platform investors and the company, providing a series of recommendations and review on their draft policy on dairy animal welfare, emphasising the link with reduced antibiotic use, AMR, and better animal welfare.

The resulting policy aligns with most FARMS dairy standards. It includes detailed provisions for the company's own farms and its suppliers, across feeding, housing, health, enabling normal cow behaviour with exercise yards and enrichment, and good

management, with zero tolerance for intentional mistreatment of animals. It also aims to "limit the use of antibiotics to the treatment of animal diseases and refrain from prophylactic and other uses."

China Mengniu's animal welfare policy meets a Platform investor expectation, and sets a high-water mark in China and the rest of Asia, aligning towards FARMS international standards. Once implemented and FARMS assessed, the company's new standard could enable relevant products to ultimately hold the Certified Humane logo, attracting further consumer confidence.[49]

Thai Union Group

Thai Union pledged USD200 million to implement its ambitious sustainability strategy.

Thai Union Group published SeaChange 2030, its new sustainability strategy, in July 2023 along with a pledge to allocate the equivalent of its net profits in 2022 (roughly USD200 million) to implement it.[50] This replaces and upgrades the company's original SeaChange® sustainability strategy launched in 2016.

The new ambitious strategy has 11 quantitative goals across multiple themes. These include biodiversity and critical ecosystems, climate, labour, packaging, waste, and responsible sourcing of fish. The SBTi validated decarbonisation targets cover Scope 1, 2, and 3 with a reduction of 42% by 2030 and net zero by 2050.

Thai Union has taken multiple steps to underpin these commitments. For instance, in line with its commitment to Responsible Aquaculture, it worked with the Aquaculture Stewardship Council to launch its Aquaculture Improvement Project (AIP) in September 2023. The aim of the project is to provide a credible pathway that supports producers to achieve ASC certification. Currently, ASC is too high a bar for many shrimp producers. The AIP allows Thai Union to work on action plans, tracking, and verification in a newly standardised way.[51]

Recent sustainable financing requires the company to meet emissions targets and improve its shrimp farm sustainability.

The company has also adopted a target of using sustainable finance for 75% of its long-term borrowing by 2025. In line with this, Thai Union secured a THB11.5 billion (USD333 million), syndicated, sustainability-linked loan in late 2023 from a group of Asian banks. The loan conditions include staying on track to meet its emissions targets and improving sustainability at its shrimp farms.[52]

Thai Union has now included aquatic animal health and welfare as one of its material risks. The next logical step is to update its animal welfare policy to include aquatic animals and align it towards FARMS responsible minimum standards for farmed fish and terrestrial species.[53]

The company can also go further on alternative seafood. Thai Union launched two plant-based alternative tuna products in the Netherlands under its John West brand. It has also launched OMG Meat in Thailand and is working with The Ish Company in the US.[54] As governments in multiple markets start to introduce plant-based action plans, there is greater potential to develop new products generating revenue and supporting SeaChange 2030 targets.[55]

The Way Forward

With an average of 9% and no company scoring more than 50% in this assessment of major players, highlights that Asia's food industry has a way to go to address the sustainability challenges inherent in today's food system. This means companies, investors, and consumers will face growing risks as the effects of climate change, deforestation, AMR and other issues impact society. These will create a drag on economic productivity and cause disruption, including to the food system. So what can will urgently catalyse change before risks crystallise?

Any solution will require collaboration between policy makers, regulators, financial institutions and industry. But food buyers can take steps now. They can build greater awareness of sustainability issues and consider how to structure relations with suppliers to work towards a positive vision for food, particularly for protein sourcing and supply chains with their high impact and dependencies.

We suggest that Asian protein buyers internalise three overarching messages to help them on the journey towards a more responsible industry and sustainable business:

1. Integrate food sustainability into business strategy, do not leave it as an add on.
2. Acknowledge indirect risks and address challenges with a supply chain approach, with strategic support for suppliers.
3. Build organisational awareness of sustainability themes and how they interconnect, first acting on win-win outcomes

An integrated strategy for achieving protein sustainability by 2030 and beyond inherently enables value protection and creation. Businesses position themselves for changing market dynamics, such as new regulations or the acceleration of consumer interest in sustainable products.

For food buyers, there are two foundations. The first is ensuring that business leaders, at both senior management and board level, go through a learning journey to deepen understanding of responsible and sustainable sourcing, and understand the relevance, risks and opportunities for their business. With this understanding, leaders can adopt a positive vision for their future, protein sourcing and shore up supply. Execution also requires investment, with dedicated sustainability committees, and roles, staffed with trained professionals given a clear mandate from senior management.

The second foundation is traceability systems. Underpinning sustainability and business risk management are traceability and quality standards. Despite a general emphasis on food safety, Asia's food companies have relatively low levels of product traceability. Collaborating with suppliers and taking a full supply chain approach is increasingly required, as is greater transparency via disclosure. Efforts will be rewarded with greater investor, consumer, and regulatory confidence.

The vision and business strategy should integrate all the themes and opportunities asserted in this report, particularly climate, protein sourcing, and increasingly protein diversification. Plant-based protein demand and sales are proportionally low at present, but there is recent evidence of consumer support for the right products. The need to integrate alternative proteins at scale into a climate/protein transition pathway over time, is well supported scientifically and aligns with UN goals for more sustainable production and consumption.

The vision and strategy must also include assessing and addressing both direct and indirect risks. Asian buyers have been reluctant to consider their indirect risks which may seem complex, beyond their control or costly, preferring to focus on their direct risks and impacts first. However, disruption and dependencies on supply chains and their sustainability are increasingly apparent.

Companies will need to anticipate emerging requirements for due diligence along supply chains from fertiliser to feed, and from farm to fork. Regulators are raising the bar for companies with rules requiring disclosure on key supply chain risks such as GHG emissions, labour rights, antimicrobial resistance, and deforestation. Regulation in the EU and the US will apply to both operations and to imports. Examples are emerging in Asia with proposed rules in China and South Korea requiring companies to disclose supply chain risks, and India's regulator has recently expanded the scope of its disclosure requirements to include the largest corporates and their value chains.

Buyers may consider the return on investment and effective leverage points when deciding where to focus or scale. For example, working to eliminate deforestation in supply chains, will more greatly impact emission reduction in key markets, than accounting for staff transport emissions. Similarly, working to improve animal welfare and reduce excessive use of antibiotics along the supply chain can prevent the harm to reputation and the costs of incidents such as antibiotic contamination or images flooding social media from low welfare farms. Companies are encouraged to set strategic targets and commitments by 2025, to enable meaningful execution towards 2030.

Recommendations

These are our top recommendations for Asian protein buyers.

1. **Governance:** Boards should be trained and equipped to identify key protein risks and steer companies towards sustainability. A company's medium- and long-term strategy should empower senior managers to develop sustainability plans and give them appropriate resources.
   Tip: Link KPIs for senior executives to achieving sustainability targets.

2. **Traceability & Sourcing:** Companies should make a greater proportion of the proteins they source traceable and report more transparently on their monitoring. Not only does this help ensure food safety, quality, and provenance, it also underpins sustainability.
   Tip: Investors appreciate quantitative progress reports and transparency.

3. **Labour & Just Transition:** Companies should conduct more rigorous due diligence of at least high-risk suppliers to make sure they uphold labour standards and human rights. Transparent reporting on non-compliance and prompt resolution are key to investor confidence. Companies should consider a Just Transition as they make the protein transition.
   Tip: Investors are realistic and value solid processes and mechanisms to resolve non-compliance.

4. **Antimicrobial Resistance:** Buyers should engage their suppliers to assess and resolve underlying risks and set policies by 2025 on avoiding prophylactic use of antibiotics, reserving them for only sick animals.
   Tip: AMR is an increasing risk to food safety and of increasing concern to investors.

5. **Animal Welfare:** By 2025 companies should adopt policies improving animal welfare or set deadlines for committing to the FARMS Responsible Minimum Standards. Doing this lowers the need for antibiotics and can help them earn independent certifications that boost their image among consumers.
   Tip: Investors value policies that signal positive direction and commitments to eliminate the worst practices.

6. **Climate:** To futureproof themselves against new regulations, buyers should set targets for reducing both direct and indirect (Scope 3) emissions and have them independently validated. Implementing such climate-related strategies will simultaneously help reduce deforestation.
   Tip: Investors value efforts to estimate Scope 3 emissions, even if accounting for them cannot be perfect.

7. **Deforestation & Biodiversity:** Companies should assess the risk of deforestation posed by sourcing raw materials, particularly soy and palm oil, and commit by 2025 to becoming deforestation-free by 2030. Achieving that will require liaising with suppliers and collaborating with commodity traders. Successful companies, though, can win certification that they are deforestation-free, which in turn can boost the confidence of investors and lenders.
   Tip: Investors look for companies to adopt deadlines for achieving these commitments.

8. **Seafood:** Protein buyers should review their seafood sourcing and adopt best-practice measures, aiming to obtain independent certification that they source seafood sustainably.
   Tip: Seafood sourcing is a good place to start assessing biodiversity risks.

9. **Water & Waste:** Companies should expand efforts to reduce waste of food and water to include their suppliers. Companies should support suppliers' efforts to reduce all forms of waste.
   Tip: Ask your suppliers what they are doing to reduce waste and reduce their use of water and chemicals.

10. **Protein Diversification:** Retailers, restaurants, and hotels can promote plant-based proteins by offering more varieties and placing them more prominently.
    Tip: Investors look for companies to set initial targets for diversification and to encourage consumers to adopt healthier and more sustainable, flexitarian diets.

Companies should not miss the opportunity this year to strengthen their journey to sustainability. Now is the time to develop strategies and targets by 2025 that set a course to achieve meaningful change by 2030. The Asia Protein Transition Platform offers peer review and guidance to companies considering integrated strategies, goals, time-bound commitments and support for developing tailored policies and plans to reduce risks, and protect and create value in their sourcing and sustainability. Together, buyers and suppliers, investors and financiers can help Asia achieve a responsible and sustainable protein transition.

Endnote

[1] UN Environment Programme, "9 ways food systems are failing humanity," Sept. 2021.
[2] UNEP, "Our global food system is the primary driver of biodiversity loss," Feb. 2021.
[3] UNEP, "What's Cooking?: An assessment of the potential impacts of selected novel alternatives to conventional animal products," 2023.
[4] Ruggeri Laderchi, C., et. al. "Global Policy Report: The Economics of the Food System Transformation," Food System Economics Commission, Jan. 2024.
[5] UK National Archives, "Glasgow Leaders' Declaration on Forests and Land Use," 2021.
[6] COP28UAE, UAE Declaration on Sustainable Agriculture, Resilient Food Systems, and Climate Action, 2023.
[7] Xu et al. Global greenhouse gas emissions from animal-based foods are twice those of plant-based foods. Nature Food, Sept 2021
[8] Lidl, "Gleichberechtigung auf dem Teller: Lidl in Deutschland gleicht die Preise für vegane Artikel der Eigenmarke Vemondo an," Nov. 2023.
[9] Taskforce on Nature-related Financial Disclosures, "320 companies and financial institutions to start TNFD nature-related corporate reporting," Jan. 2024.
[10] Segal, M. "90% of Investors Say CSRD, SEC Climate Reporting Rule Will Drive Better Investment Decisions: Workiva Survey," *ESG Today*, March 2024.
[11] European Commission, "Corporate sustainability reporting."
[12] Asia Research & Engagement, "ARE and Investor 2030 Protein Transition Vision and Goals: Via expected disclosures for responsible and sustainable proteins," Dec. 2022.
[13] See annex for further details on the spread of companies assessed.
[14] See annex for full list of assessment indicators and evaluation grades.
[15] Moss, C., "Supply Chain Due Diligence: New Regulations and What You Need to Do," *Supply Chain Management Review*, Sept. 2023; Jessica Giovanelli, "Modern slavery and the supply chain–from reporting on risks to destroying affected products," Moulis Legal, March 2023.
[16] Wijekoon, L., et. al., "South Korea Proposes Mandatory Human Rights Due Diligence Obligations on Employers," Littler, Jan. 2024.
[17] Tribaldos, T. and Kortetmäki, T., "Just transition principles and criteria for food systems and beyond," *ScienceDirect*, Volume 43, June 2022, pp. 244-256; International Labour Organisation, "Just Transition Policy Brief: Sectoral Policies for a Just Transition towards Environmentally Sustainable Economies and Societies for All," Aug. 2022; Just Rural Transition, "Principles for Just Food System Transitions: Envisioning a more equitable and sustainable future–and an inclusive path to achieving it," April 2023; Wright, H. and Haszczyn, S., "Just Transition in Animal Agriculture: Implications, Risks and Opportunities," The FAIRR Initiative, Nov. 2022.
[18] Ritchie, H., "Three-quarters of antibiotics are used on animals. Here's why that's a major problem," World Economic Forum, Nov. 2017.
[19] World Health Organization, "Stop using antibiotics in healthy animals to prevent the spread of antibiotic resistance," Nov. 2017.
[20] Samtiya, M., et. al., " Antimicrobial Resistance in the Food Chain: Trends, Mechanisms, Pathways, and Possible Regulation Strategies," Oct. 2022 and Founou, L., Founou, R., and Essack, S., "Antimicrobial resistance in the farm-to-plate continuum: more than a food safety issue," March 2021, both in National Library of Medicine (U.S.); and Sagar, P., et. al., "The role of food chain in antimicrobial resistance spread and One Health approach to reduce risks," *ScienceDirect*, April 2023.
[21] World Animal Protection, "Global Public Health Cost of Antimicrobial Resistance Related to Antibiotic Use on

Factory Farms," April 2023.
[22] , B., "India's shrimp farms test antibiotic control," *Financial Times*, July 2022.
[23] Food and Agricultural Organization of the United Nations (FAO), "Surveillance data of the Indian Network for Fishery and Animal Antimicrobial Resistance (INFAAR)," March 2024.
[24] Luu, Q.H., et. al. "Antibiotics use in fish and shrimp farms in Vietnam," *ScienceDirect*, July 2021.
[25] Association of Southeast Asian Nations, "Asean Leaders' Declaration on One Health Initiative," May 2023.
[26] The FARMS initiative principles and standards. These are a collection of concise, species specific standards for companies and financial institutions, written in the format of the IFC Good Practice note (risks and mitigation) and available in several Asian languages.
[27] NH Foods, "Materiality Progress Report (FY2022)," June 2023.
[28] Jollibee Foods Corp., "Food: We Serve Food People Trust; Food Quality; Responsible Sourcing."
[29] Chicken Watch, "Progress Tracker."
[30] Sinergia Animal Cage-Free Tracker, "Cage-Free Tracker 2023 Edition, Asia," Nov. 2023.
[31] Gardner, V. "GCAW Highlights the Challenges of Sourcing Cage-Free Eggs," The Global Coalition for Animal Welfare, Feb. 2024; also Neo, P. "Clucking good: China's egg industry prepares to go cage-free as consumer demand surges," Food Navigator Asia, Oct. 2022.
[32] DBS Bank, "Chew's Agriculture signs Singapore's first SME sustainability-linked loan with DBS," May 2019.
[33] Humane Society International, The Business Case for Pre-implantation Group Housing of Sows. Nov 2023.
[34] Twine, R."Emissions from animal agriculture – 16.5% is the new minimum figure." Sustainability, 13(11), 2021
[35] The Science Based Targets initiative, "SBTi FLAG Project: New Implementation Timelines Announced," June 2023.
[36] KPMG, China Stock Exchanges Finalise Mandatory Sustainability Reporting Requirements. 2024.
[37] https://www.natureaction100.org/
[38] See Methodology. These 69 companies were assessed on the seafood indicators after seafood sourcing was identified as relevant to their business.
[39] Alternative proteins (aka 'novel proteins' in China, 'smart proteins' in India etc) are a range of plant-based, fermentation derived or cultivated (cell-based) proteins. These and traditional plant-based proteins offer a range of sustainability benefits, as shown by various technical assessments and Life Cycle Analyses. ARE also demonstrated in Charting Asia's Protein Transition report (2023) that a minimum percentage of alternative proteins will be required by 2060 for the ten largest Asian markets to meet SBTi FLAG adapted targets and contribute to the Paris Climate Goal.
[40] Good Food Institute APAC, "Decoding Demand: The appetite for alternative proteins in Southeast Asia," Feb. 2024.
[41] Media Brava, "Thailand: Audience Strategy Research – Protein Transition," Dec. 2023
[42] Charoen Pokphand Foods, "CPF and Sustainability," 2022.
[43] CPF, "Bunge and CP Foods Announce Collaboration to Develop Blockchain Solution for Sustainable Soy Traceability," Oct. 2023.
[44] CPF, "Bangkok Produce Merchandising and Louis Dreyfus Company Ink Collaboration to Utilize Satellite Mapping Solutions for Soy Traceability," Jan. 2024.
[45] CPF, "CPF launches plant-based 'MEAT ZERO,' eyeing to make it world's Top 3 alternative meat brand in 3-5 years," May 2021.

[46] China Mengniu Dairy, "Mengniu Forest Protection Policy," April 2023.
[47] China Mengniu, "Mengniu Animal Welfare Policy."
[48] COFCO International, "COFCO International and Mengniu Group sign MOU for first trade of 'deforestation-free' soybeans from Brazil to China," Nov. 2023.
[49] Certified Humane is an international, independent, science-based welfare certification body, with standards and assessors available in Chinese.
[50] Thai Union, "Thai Union Launches Seachange® 2030, Committing THB7.2 Billion (USD200 Million) to Advance Sustainability Goals," July 2023.
[51] Thai Union, "Thai Union and ASC announce collaboration on Aquaculture Improvement Project for shrimp," Sept. 2023.
[52] Thai Union, "Thai Union secures THB11.5 billion Sustainability-Linked Loan to underpin phase two of their Blue Finance program," Nov. 2023.
[53] FARMS Initiative, species specific Responsible Minimum Standards "RMS for Farmed Fish,"
[54] Racz, E. "'We've got a lot of work to do' – Thai Union's Jon Burton on efforts to build alternative-seafood business," *Just Food*, Nov. 2023.
[55]De Lorenzo, D., "How Denmark Made The Plant-Based Action Plan Possible," Forbes.com, Nov. 2023; Buxton, A., "Taiwan To Promote Plant-Based Foods Following New Climate Bill," *Plant Based News*, Jan. 2023; and De Lorenzo, D., "Dutch Government Agrees On Rules For Cultivated Meat And Seafood Tastings In The Netherlands," Forbes.com, July 2023.

Annex

1. List of companies assessed by tier allocations, with their respective full name, market, and sector

	Name Used in Report	Full Company Name	Ticker Symbol	Market	Sector
Tier 3	Mengniu	China Mengniu Dairy Co., Ltd.	2319-HK	CH	Manufacturer
	Yili	Inner Mongolia Yili Industrial Group Co., Ltd.	600887-CN	CH	Manufacturer
	Meiji	Meiji Holdings Co., Ltd.	2269-JP	JP	Manufacturer
	NHFoods	NH Foods Limited	2282-JP	JP	Manufacturer
	Nichirei	Nichirei Corporation	2871-JP	JP	Manufacturer
	Seven&iJP	Seven & I Holdings Co., Ltd.	3382-JP	JP	Retailer
	CPAll	CP ALL Public Company Limited	CPALL-TH	TH	Retailer
	CPFoods	Charoen Pokphand Foods Public Co. Ltd.	CPF-TH	TH	Manufacturer
	Minor	Minor International Public Co., Ltd.	MINT-TH	TH	Hotel
	ThaiUnion	Thai Union Group Public Company Limited	TU-TH	TH	Manufacturer
Tier 4	CafedeCoral	Cafe de Coral Holdings Ltd.	341-HK	CH	Restaurant
	DairyFarm	DFI Retail Group Holdings Limited	D01-SG	CH	Retailer
	FamMartTW	Taiwan FamilyMart Co., Ltd.	5903-TW	TW	Retailer
	Haidilao	Haidilao International Holding Ltd.	6862-HK	CH	Restaurant
	SunArt	Sun Art Retail Group Limited	6808-HK	CH	Retailer
	Uni-Pres	Uni-President Enterprises Corp.	1216-TW	TW	Retailer
	WHGroup	WH Group Ltd	288-HK	CH	Manufacturer
	YumChina	Yum China Holdings, Inc.	9987-HK	CH	Restaurant
	Aeon	AEON Co., Ltd.	8267-JP	JP	Retailer
	Kewpie	Kewpie Corporation	2809-JP	JP	Manufacturer
	Lawson	Lawson, Inc.	2651-JP	JP	Retailer
	Skylark	Skylark Holdings Co., Ltd.	3197-JP	JP	Restaurant
	CJCheil	CJ CheilJedang Corporation	097950-KR	KR	Manufacturer
	LotteShop	Lotte Shopping Co., Ltd	023530-KR	KR	Retailer
	LotteWell	Lotte Wellfood Co.,Ltd	280360-KR	KR	Manufacturer
	F&N	Fraser & Neave Ltd.	F99-SG	SG	Manufacturer
	CenturyPacific	Century Pacific Food, Inc.	CNPF-PH	PH	Manufacturer
	Vinamilk	Vietnam Dairy Products Corp.	VNM-VN	VN	Manufacturer
	CentralPlaza	Central Plaza Hotel Public Co. Ltd.	CENTEL-TH	TH	Hotel
	Oishi	Oishi Group Public Co. Ltd.	OISHI-TH	TH	Restaurant
	Jubilant	Jubilant Foodworks Limited	533155-IN	IN	Restaurant
	UnileverIN	Hindustan Unilever Limited	HINDUNILVR-NSE	IN	Manufacturer
Tier 5	Dali	Dali Foods Group Co., Ltd.	3799-HK	CH	Manufacturer
	Shangri-La	Shangri-La Asia Limited	69-HK	CH	Hotel
	Isetan	Isetan Mitsukoshi Holdings Ltd.	3099-JP	JP	Retailer
	MOS	MOS FOOD SERVICES, INC.	8153-JP	JP	Restaurant
	BGFRetail	BGF retail CO., LTD.	282330-KR	KR	Retailer
	Emart	E-MART Inc.	139480-KR	KR	Retailer
	FastFood	PT Fast Food Indonesia Tbk	FAST-ID	ID	Restaurant
	MBA	PT Map Boga Adiperkasa Tbk	MAPB-ID	ID	Restaurant

	AeonMY	AEON Co. (Malaysia) Bhd.	6599-MY	MY	Retailer
	BerjayaFood	Berjaya Food Bhd.	5196-MY	MY	Restaurant
	DutchLady	Dutch Lady Milk Industries Bhd.	3026-MY	MY	Manufacturer
	Genting	Genting Bhd.	3182-MY	MY	Hotel
	QLRes	QL Resources Bhd.	7084-MY	MY	Manufacturer
	Seven&iMY	7-Eleven Malaysia Holdings Bhd	5250-MY	MY	Retailer
	ShengSiong	Sheng Siong Group Ltd.	OV8-SG	SG	Retailer
	Jollibee	Jollibee Foods Corp.	JFC-PH	PH	Restaurant
	SMFB	San Miguel Food & Beverage, Inc.	FB-PH	PH	Manufacturer
	MKRes	MK Restaurant Group PCL	M-TH	TH	Restaurant
	Britannia	Britannia Industries Ltd	500825-IN	IN	Manufacturer
	McdIN	Westlife Foodworld Limited	505533-IN	IN	Restaurant
	MrsBector	Mrs. Bector's Food Specialities Ltd.	543253-IN	IN	Manufacturer
	NestleIN	Nestle India Ltd.	500790-IN	IN	Manufacturer
	ParagMilk	Parag Milk Foods Ltd	539889-IN	IN	Manufacturer
	Sapphire	Sapphire Foods India Ltd.	SAPPHIRE-NSE	IN	Restaurant
Tier 6	Anjoy	Anjoy Foods Group Co., Ltd.	603345-CN	CH	Manufacturer
	BetterLife	Better Life Commercial Chain Share Co., Ltd.	002251-CN	CH	Retailer
	Delisi	Shandong Delisi Food Co., Ltd.	002330-CN	CH	Manufacturer
	Hongqi	Chengdu Hongqi Chain Co., Ltd.	002697-CN	CH	Retailer
	Huazhu	H World Group Limited	1179-HK	CH	Hotel
	Huifa	Shandong Huifa Foodstuff Co., Ltd.	603536-CN	CH	Manufacturer
	Jiajiayue	Jiajiayue Group Co., Ltd.	603708-CN	CH	Retailer
	Juewei	Juewei Food Co., Ltd.	603517-CN	CH	Manufacturer
	Langham	Langham Hospitality Investments Ltd.	1270-HK	CH	Hotel
	Quanjude	China Quanjude (Group) Co., Ltd.	002186-CN	CH	Restaurant
	Sanjiang	Sanjiang Shopping Club Co., Ltd.	601116-CN	CH	Retailer
	Xiabuxiabu	Xiabuxiabu Catering Management (China) Hldgs Co.. Ltd	520-HK	CH	Restaurant
	Yonghui	Yonghui Superstores Co., Ltd.	601933-CN	CH	Retailer
	ZhouHeiYa	Zhou Hei Ya International Holdings Company Limited	1458-HK	CH	Restaurant
	KFCJP	KFC Holdings Japan. Limited	9873-JP	JP	Restaurant
	KobeBussan	Kobe Bussan Co., Ltd.	3038-JP	JP	Retailer
	McdJP	McDonald's Holdings Co. Ltd.	2702-JP	JP	Restaurant
	Yamazaki	Yamazaki Baking Co., Ltd.	2212-JP	JP	Manufacturer
	Zensho	Zensho Holdings Co., Ltd.	7550-JP	JP	Restaurant
	DongwonFB	Dongwon F & B Co., Ltd.	049770-KRX	KR	Manufacturer
	GSRetail	GS Retail Co., Ltd.	007070-KR	KR	Retailer
	Orion	ORION Corp. (Korea)	271560-KR	KR	Manufacturer
	Shilla	HOTEL SHILLA CO.,LTD	008770-KR	KR	Hotel
	SPCSamlip	SPC SAMLIP CO., LTD.	005610-KR	KR	Manufacturer
	Amart	PT Sumber Alfaria Trijaya	AMRT-ID	ID	Retailer
	Hero	PT Hero Supermarket Tbk	HERO-ID	ID	Retailer
	NipponIndo	PT Nippon Indosari Corpindo Tbk	ROTI-ID	ID	Manufacturer
	UltraJaya	PT Ultrajaya Milk Industry & Trading Co. Tbk	ULTJ-JKT	ID	Manufacturer
	NestleMY	Nestle (Malaysia) Bhd.	4707-MY	MY	Manufacturer

QAF	QAF Ltd.	Q01-SG	SG	Manufacturer
Puregold	Puregold Price Club Inc.	PGOLD-PH	PH	Retailer
Robinsons	Robinsons Retail Holdings, Inc.	RRHI-PH	PH	Retailer
Seven&iPH	Philippine Seven Corporation	SEVN-PH	PH	Retailer
SMIC	SM Investments Corporation	SM-PH	PH	Retailer
URC	Universal Robina Corp.	URC-PH	PH	Manufacturer
Masan	Masan Group Corporation	MSN-VN	VN	Manufacturer
MinhPhu	Minh Phu Seafood Group Corp.	MPC-VN	VN	Manufacturer
NamViet	Nam Viet Corp.	ANV-VN	VN	Manufacturer
VinhHoan	Vinh Hoan Corp	VHC-VN	VN	Manufacturer
PresBake	President Bakery Public Co., Ltd.	PB-TH	TH	Manufacturer
Devyani	Devyani International Ltd.	DEVYANI-NSE	IN	Restaurant
DMart	Avenue Supermarts Ltd.	540376-IN	IN	Retailer
Dodla	Dodla Diary Limited	543306-IN	IN	Manufacturer
RBA	Restaurant Brands Asia Limited	RBA-NSE	IN	Restaurant

2. Distribution of the 100 protein buyers across multiple dimensions

-	MCHT	JP+KR	SEA	IN	Total
Small-Cap	12	8	24	6	50
Mid-Cap	7	15	11	2	35
Large-Cap	7	2	2	4	15
Total	26	25	37	12	100

-	Manufacturer	Restaurant	Retailer	Hotel	Total
Small-Cap	19	14	15	2	50
Mid-Cap	18	6	7	4	35
Large-Cap	5	2	7	1	15
Total	42	22	29	7	100

-	MCHT	JP+KR	SEA	IN	Total
Manufacturer	8	10	18	6	42
Restaurant	6	5	6	5	22
Retailer	9	9	10	1	29
Hotel	3	1	3		7
Total	26	25	37	12	100

3. List of 40 assessment indicators across 10 themes and respective evaluation grades

Assessment Theme	#	Assessment Indicator	Evaluation Grades
1. Governance	1.1	Has the Board approved a strategy for a just and humane protein transition?	a. There is a strategy for a just and humane protein transition, aligned with the climate strategy, and targets for sustainable proteins. b. There is a strategy for a just and humane protein transition, but it is limited in terms of its climate alignment or lacking sustainable proteins targets. c. The company has announced plans to develop a strategy but has yet to publish one, or the company referred to a strategy that is not publicly available. d. No mention of a just and humane protein transition nor any plans to develop one.
	1.2	Does the Board have relevant training and accountability for protein responsibility and sustainability?	a. The Board has received relevant training in accountability for protein responsibility and sustainability. b. The Board does not receive training but a member of the Board has experience in protein responsibility and sustainability. c. The Board does not receive training but a member of the Board has experience in general sustainability. d. No evidence of Board training or expertise in sustainability.
	1.3	Does the Board report on discussions related to the execution of a responsible and sustainable protein sourcing policy?	a. There is a responsible and sustainable protein sourcing policy that is risk comprehensive, reviewed on a biennial basis, and reported on in relation to its execution. b. There is a responsible and sustainable protein sourcing policy that is risk comprehensive but not reviewed or reported on regularly. c. There is a responsible and sustainable protein sourcing policy that is limited. d. No mention of such a policy for protein sourcing.
	1.4	Does the Board disclose decision making around capital expenditure or allocation to supply chains in relation to the climate and/or protein strategy?	a. There is clear disclosure on decision marking around capital expenditure in relation to the climate and / or protein strategy. b. There is limited disclosure on decision making around capital expenditure in relation to a comprehensive climate and/or protein strategy. c. There is a comprehensive climate and/or protein strategy but no discussion on decision making around capital expenditure. d. No comprehensive climate or protein strategy.
2. Traceability & Sourcing	2.1	Does the company provide evidence of a comprehensive digital traceability system?	a. There is discussion on a digital traceability system that includes details on its scope. b. There is mention of a digital traceability system but disclosure is limited. c. There is no mention of a digital traceability system for protein products.
	2.2	What percentage of total protein suppliers or products sourced are digitally traced?	a. There is disclosure on the percentage of digital traceability, covering all protein types. b. There is disclosure on the percentage of digital traceability, but not for all protein types. c. There is no disclosure on the percentage of digital traceability for any protein type.
	2.3	Does the company publish minimum sourcing standards covering all material risks?	a. The company has published minimum sourcing standards, covering all material risks. b. The company has published minimum sourcing standards or guidelines, but does not cover all material risks. c. The company mentions internal sourcing standards or guidelines, but does not publish these standards or guidelines. d. No mention of such standards for protein sourcing.

	2.4	What percentage of total protein products sourced comply with the comprehensive minimum standards (or comprehensive CoC)?	a. There is disclosure on the percentage of protein products in compliance with minimum sourcing standards, covering all protein types. b. There is disclosure on the percentage of protein products in compliance with minimum sourcing standards, but not for all protein types. c. There is no disclosure on the percentage of protein products in compliance with minimum sourcing standards. d. No mention of such standards for protein sourcing.
3. Labour & Just Transition	3.1	Does the company disclose a specific supplier CoC and/or commitment incorporating labour principles?	a. The company has disclosed a specific supplier CoC incorporating these guiding principles. b. The company referred to these guiding principles for its supply chain but does not include this in its supplier CoC. c. The company has some discussion on labour issues but not on these guiding principles, or there is discussion on these guiding principles for its own staff but not for the supply chain. d. No mention of commitment to labour principles in protein sourcing.
	3.2	How does the company conduct supplier due diligence and monitoring to ensure the above labour principles and CoC are upheld?	a. There is disclosure on the specific mechanisms and processes for supplier due diligence and remediation of breaches, with frequency of monitoring and outcomes of breaches. b. There is disclosure on the specific mechanisms and processes for supplier due diligence and remediation of breaches, but no mention of the frequency of monitoring or outcomes of breaches. c. There is some discussion on supplier due diligence and monitoring but lacking details on specific mechanisms and processes. d. No mention of supplier due diligence and monitoring for labour issues in protein sourcing.
	3.3	What percentage of annual sourcing (by volume) is independently verified to meet labour principles?	a. There is disclosure on the percentage of protein products sourced in compliance with labour principles and independently verified. b. There is disclosure on the percentage of protein products sourced in compliance with labour principles, but not independently verified. c. There is no disclosure on the percentage of protein products sourced in compliance with labour principles. d. No mention of commitment to labour principles in protein sourcing.
	3.4	Does senior management discuss or acknowledge the need for plans to enable a Just Protein Transition?	a. There is acknowledgement of the need to enable a Just Protein Transition, with discussion of plans and evidence of social dialogue. b. There is acknowledgement of the need to enable a Just Protein Transition, with discussion of plans but without evidence of social dialogue. c. There is acknowledgement of the need to enable a Just Protein Transition, but lacking further details. d. No acknowledgement of the need to enable a Just Protein Transition.
4. WHS & AMR	4.1	How does the company assess, monitor and mitigate acute and chronic workplace health conditions or risks in sourcing?	a. There is disclosure on specific processes through which the company manages WHS risks in protein sourcing, across all WHS risks highlighted. b. There is disclosure on specific processes through which the company manages WHS risks in protein sourcing, but the scope is limited. c. There is acknowledgement of WHS risks in protein sourcing but no details on monitoring and mitigating. d. No mention of WHS risks in protein sourcing.
	4.2	What is the annual rate of WHS incidents in sourcing?	a. There is disclosure on the annual rate of WHS incidents in protein sourcing, across all WHS risks highlighted. b. There is disclosure on the annual rate of WHS incidents in protein sourcing for some but not all of the WHS risks highlighted.

			c. There is no disclosure on the annual rate of WHS incidents in protein sourcing.
	4.3	Does the company have a commitment to phase out routine use of antibiotics in the supply chain by 2030 to reduce AMR risks, specifically including:	a. The company has published a commitment to phase out routine use of antibiotics in protein sourcing by 2030, including all key details highlighted. b. The company has published a commitment to phase out routine use of antibiotics in protein sourcing by 2030, but lacks some of the key details highlighted. c. The company has published a policy or commitment to reduce routine use of antibiotics in protein sourcing to reduce AMR risks. d. No mention of antibiotics used for group prophylaxis protein sourcing and its AMR risks.
	4.4	What is the proportion of sourcing that is free from antibiotics used for group prophylaxis?	a. There is disclosure on the percentage of protein sourcing that is free from antibiotics used for group prophylaxis. b. There is no disclosure on the percentage of protein sourcing that is free from antibiotics used for group prophylaxis.
5. Animal Welfare	5.1	Does the company provide 1 or more time based commitments for sourcing higher welfare products?	a. The company has time-based targets for sourcing protein products from higher-welfare systems. b. There is some discussion or intent to commit to sourcing protein products from higher-welfare systems but no targets or timeline available. c. No mention of higher welfare systems in protein sourcing.
	5.2	Does the company have a public policy on farm animal welfare that considers all species, geographies and products?	a. The company has a publicly disclosed policy on farm animal welfare in protein sourcing that is aligned towards FARMS. b. The company has a publicly disclosed policy on farm animal welfare in protein sourcing, but not aligned towards FARMS. c. There is some discussion on farm animal welfare in protein sourcing or the company has a policy that is not publicly available. d. No mention of farm animal welfare in protein sourcing.
	5.3	What annual progress reporting has the company disclosed for phasing in higher welfare systems in sourcing?	a. There is disclosure on the percentage of protein products sourced from higher welfare systems. b. There was disclosure on some sourcing of higher welfare systems, but no quantification of volume. c. No mention of higher welfare systems in protein sourcing.
	5.4	What percentage of global products sourced are independently certified for animal welfare?	a. There is disclosure on the percentage of protein products sourced that are independently certified for animal welfare. b. There was discussion on independent certification for animal welfare (e.g. the specific certification body) but no disclosure on the percentage certified. c. No mention of independent certification for animal welfare in protein sourcing.
6. Climate Change	6.1	Does the company's sustainability or business strategy discuss climate scenarios and broad plans considering all material protein sourcing risks, dependencies and impacts now and aligned with a 1.5oC pathway?	a. There is discussion of climate risks in the company's strategy, with scenario analysis aligned with a 1.5oC pathway. b. There is discussion of climate risks in the company's strategy, but details are limited or scenario analysis is not aligned with a 1.5oC pathway. c. There is discussion of climate risks but without consideration of protein sourcing risks. d. No mention of climate risks or climate risks not identified as a material topic in protein sourcing.

	6.2	Does the company commit to net zero GHG emissions by 2050, with interim targets for 2030, aligned to a 1.5oC pathway and verified via SBTi?	a. The company commits to net zero GHG emissions by 2050, with interim targets for 2030, and aligned to a 1.5oC pathway verified via SBTi. b. The company commits to net zero GHG emissions by 2050, with interim targets for 2030, but long-term targets are not verified via SBTi. c. The company has a net zero commitment that covers Scope 3 emissions but lacks interim targets. d. The company has a net zero commitment that does not cover Scope 3 emissions. e. The company does not have a net zero commitment.
	6.3	Does the company report annually against CDP climate or TCFD disclosure frameworks (including scope 3 emissions)? Any challenges for reporting scope 3 emissions should also be noted.	a. The company reports annually through CDP Climate Change or TCFD guidance, and the reporting is disclosed publicly*. b. The company reports annually through CDP Climate Change but does not make its reports publicly available, or the company cites reference to TCFD guidance but does not explicitly report against TCFD guidance. c. No evidence of reporting against CDP Climate Change or TCFD guidance.
	6.4	Has the company demonstrated how it is operationalising its protein related climate risk mitigation strategy towards 2030?	a. There is discussion of mitigation activities undertaken and evidence of corresponding capital expenditure allocation, with clear details on results achieved. b. There is discussion of mitigation activities undertaken and evidence of corresponding capital expenditure allocation, without clear details on results achieved. c. There is some discussion of mitigation activities undertaken but without evidence of corresponding capital expenditure allocation. d. No mention of mitigation activities undertaken or evidence of capital expenditure allocation.
7. Deforestation & Biodiversity	7.1	Does the company assess all natural resource risks i.e. dependencies and impacts relevant to their *supply chain?	a. The company assesses all natural resource risks with identification of dependencies and impacts, covering all protein types. b. The company assesses natural resource risks with identification of dependencies and impacts, but does not cover all protein types. c. There is mention of natural resource risks but without identification of dependencies and impacts. d. No mention of natural resource risks for protein sourcing.
	7.2	Does the company publish a commitment to zero deforestation and other land use changes in its animal protein supply chains?	a. The company has published a commitment to zero deforestation and other land-use changes in all animal supply chains by 2030. b. The company has published a commitment to zero deforestation and other land-use changes in all animal supply chains, but is later than 2030. c. The company has published a commitment to zero deforestation and other land-use changes in some but not all animal supply chains. d. No mention of deforestation commitment or commitment does not include animal protein supply chains.
	7.3	What is the annual progress towards the above commitment – i.e. what percentage of protein products produced / sourced are independently verified or certified as deforestation-free?	a. There is disclosure on the percentage of protein products sourced in compliance with deforestation commitment and independently verified b. There is disclosure on the percentage of protein products sourced in compliance with deforestation commitment, but not independently verified. c. There is no disclosure on the percentage of protein products sourced in compliance with deforestation commitment. d. No mention of deforestation commitment for protein sourcing.

	7.4	Does the company disclose a list of key animal protein suppliers to strengthen confidence on traceability?	a. The company discloses a list of suppliers and the % of suppliers disclosed*. b. The company discloses some suppliers but does not provide the % of suppliers disclosed. c. No disclosure on key animal protein suppliers. *% as defined by number of suppliers or protein products sourced both acceptable.
8. Seafood	8.1	Does the company have a mitigation strategy with consideration of declining fish stocks and phasing out fish meal, fish oil (FMFO) in feed, as part of an overarching transitional strategy from natural capital dependency?	a. The company discloses a mitigation strategy with details on risk estimation and mitigation measures, considering declining fish stocks and/or dependencies on FMFO. b. The company has some discussion on mitigation of risks from declining fish stocks and/or dependencies on FMFO, but lacks clear details. c. The company has acknowledged risks from declining fish stocks and/or dependencies on FMFO. d. No mention of risks from declining fish stocks and/or dependencies on FMFO.
	8.2	Does the company publish a responsible sourcing policy or standards for seafood (wild caught and aquaculture)?	a. The company published a responsible sourcing policy or standards for seafood, including the details highlighted. b. The company published a responsible sourcing policy or standards for seafood but lacks some of the details highlighted. c. There is some discussion on responsible sourcing for seafood which mentions the details highlighted, but the company has not published a policy or specific. d. No mention of responsible seafood sourcing.
	8.3	Does the company publish targets for the global volume of seafood sourced that meets independent wild caught or aquaculture certification, or is in a Fisheries Improvement Programme (FIP)?	a. The company has published interim and 2030 targets for percentage of seafood sourced that meets independent certification or is in a FIP. b. The company has published some targets for percentage of seafood sourced that meets independent certification or is in a FIP, but the targets are vague and/or short-term. c. No mention of targets for responsible seafood sourcing.
	8.4	Does the company disclose annual progress for responsible seafood sourcing?	a. There is disclosure on the percentage of seafood sourced that meets independent certification or is in a FIP, with full details. b. There is disclosure on the percentage of seafood sourced that meets independent certification or is in a FIP., but lacks details by species, geography. c. There is some disclosure on certain species of seafood sourced that meets independent certification but lacks quantification. d. No mention of targets for responsible seafood sourcing.
9. Water & Waste	9.1	Does the company publish a policy to manage risk-based water dependency, that implements efficiency and avoids existing or future water-stressed locations?	a. The company has published a policy to manage water dependencies and impact in the protein supply chain, with consideration of water use efficiency and water scarcity risks. b. There is some discussion on management of water dependencies and impact in the protein supply chain, but no policy has been published. c. No mention of water dependencies and impact in the protein supply chain.
	9.2	Does the company provide disclosure on its water dependencies and impacts in sourcing animal protein?	a. There is clear disclosure on how much of the company's sourcing faces water risks, or specific details on the regions with high water stress. b. There is some discussion on how the company faces water dependencies in its sourcing, but no specific details. c. No mention of water dependencies and impact in the protein supply chain.
	9.3	Does the company publish a policy for responsible packaging and waste management, that identifies sustainable raw materials and minimises wastes, ensuring responsible handling of waste now and into the future?	a. The company has published a policy for responsible packaging and/or waste management. b. There is some discussion on responsible packaging and/or reducing packaging and food waste, but no policy published. c. No mention of responsible packaging and/or waste management.

	9.4	Does the company have targets for waste reduction and report progress against these targets?	a. The company has forward-looking targets for waste reduction and reports progress against these targets. b. The company has forward-looking targets for waste reduction, but does not report progress against these targets. c. There is disclosure on the percentage reduction of packaging and/or food waste, but no forward-looking targets. d. There is no disclosure on the percentage reduction of packaging and/or food waste.
10. Protein Diversification	10.1	Does the company incorporate alternative proteins into its sustainability strategy?	a. The company has incorporated alternative proteins into its business or sustainability strategy, with reference to diversification, growth, and replacement. b. The company has incorporated alternative proteins into its business or sustainability strategy, but without relevant context. c. The company has alternative protein offerings and/or mentioned alternative proteins but has not incorporated it into its business or sustainability strategy. d. No evidence of alternative protein offerings nor mention of alternative proteins.
	10.2	Has the company published aspirational targets for sourcing alternative proteins by 2025 and 2030?	a. The company has published targets for sourcing alternative proteins which are forward-looking and has a baseline for comparing progress. b. The company has published targets for sourcing alternative proteins but they are vague, not forward-looking and/or lack a baseline. c. No mention of targets for sourcing alternative proteins.
	10.3	Does the company provide disclosure on its alternative protein sales/volume as a percentage of the total protein sales/volume?	a. There is disclosure on alternative proteins as a % of total protein sales/volume. b. There is no disclosure on alternative proteins as a % of total protein sales/volume.
	10.4	Company reports sourcing of alternative proteins via the GFI & FAIRR Alternative Protein ESG reporting framework for diversified companies.	a. The company reports sourcing of alternative proteins against the GFI & FAIRR framework. b. There is some discussion or reference to the GFI & FAIRR framework, but the company did not report against the framework. c. No mention of the GFI & FAIRR framework.

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