ERM

STR Consulting

Schuster Consulting Group

Materiality Assessment Outcomes

Final Report
May 2024

National Farmers Federation | Australian Agricultural Sustainability Framework

Australian Government
Department of Agriculture, Fisheries and Forestry

Contents

1. Executive Summary

About this report

In 2023, the National Farmers Federation (NFF) engaged a consortium team of ERM, STR Consulting, and Schuster Consulting Group (ERM) to conduct a materiality assessment for Australian agriculture, to inform the ongoing development of the Australian Agricultural Sustainability Framework (AASF).

The materiality assessment aimed to show which topics (impacts, risks and opportunities) are of greatest significance to the Australian agriculture sector and to inform further sustainability efforts across the industry.

This report provides the outcomes of the materiality assessment and shows how these outcomes were determined. It also details the findings of the stakeholder and sector engagement and desktop analysis that was undertaken.

Background to the project is provided in section 1, followed by a methodology overview in section 2, and results of the materiality assessment in section 3. Detailed recommendations are provided in a separate Recommendations Report to NFF.

Background & Objectives

Background

The AASF is designed to be a platform for Australian agriculture to communicate its sustainability credentials to global investors and trading partners.

This materiality assessment will serve a critical purpose of helping NFF and other AASF owners to prioritise the most significant environmental, social, and governance (ESG) issues for Australian agriculture.

During the development of the 17 AASF Principles, the materiality of specific topics was implicitly considered. Additionally, the results of materiality assessments already completed by commodity initiatives such as beef, sheep, dairy, cotton and cane were taken into account.

To ensure transparency, robustness and relevance of the AASF Principles and Criteria, an explicit, fit-for-purpose materiality assessment is now required. This materiality assessment will provide important guidance about the further development and focus of the AASF.

Objectives

- Ensure completeness of the AASF Principles and Criteria and inform their relative priorities
- Support **process alignment** across all Australian Agriculture industries
- Support a set of **consistent topics** that reflect Australian Agriculture sustainability issues and economic, environmental and social risks and opportunities
- Contribute to sector-wide **consistency in communicating** materiality assessment results and sustainability credentials
- Enable **interoperability** between an Australian Agriculture Materiality Assessment and those performed by individual industries across a variety of commodities and regardless of size or growth stage
- Achieve a degree of **additionality** by creating outputs that support the ongoing evaluation, analysis and communication needs of all Australian Agriculture industries
- **Identify** opportunities to refine and adjust the AASF Principles and Criteria

About materiality assessments

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What is it?

A robust and credible process to determine what topics (impacts, risks and opportunities) are most important to an entity (business, industry or sector) and its stakeholders.

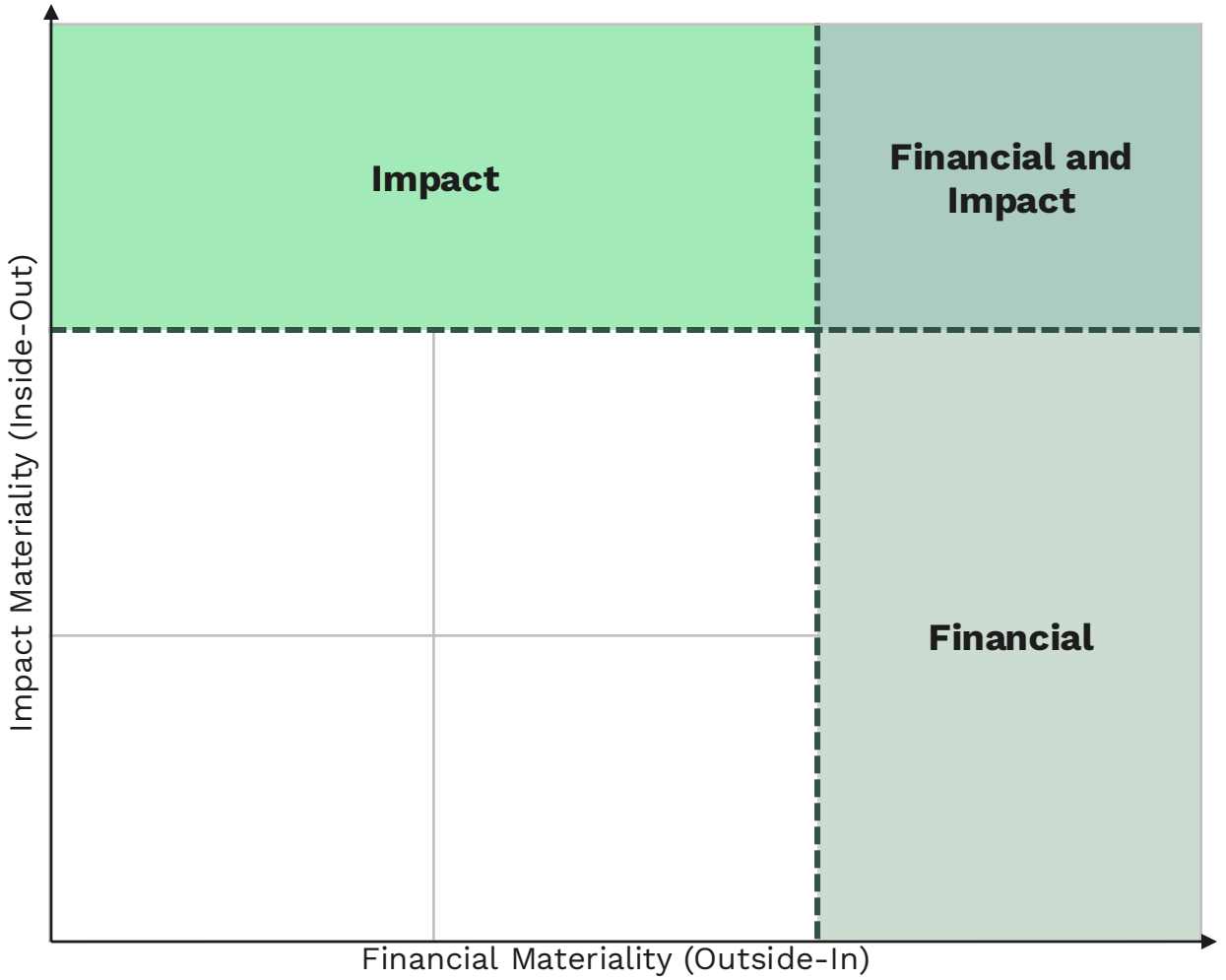
How is it used?

To identify priority areas for action within a sustainability or industry-wide strategy.

To inform public facing communication, disclosures and reporting, including investor information.

Why is it important?

Multiple stakeholders, including investors and trading partners, are interested in the sustainability performance of industry and are increasingly seeking reliable information. This includes information on the most material topics, the process by which those topics are determined and prioritised and how they are used to inform strategy.



Key findings

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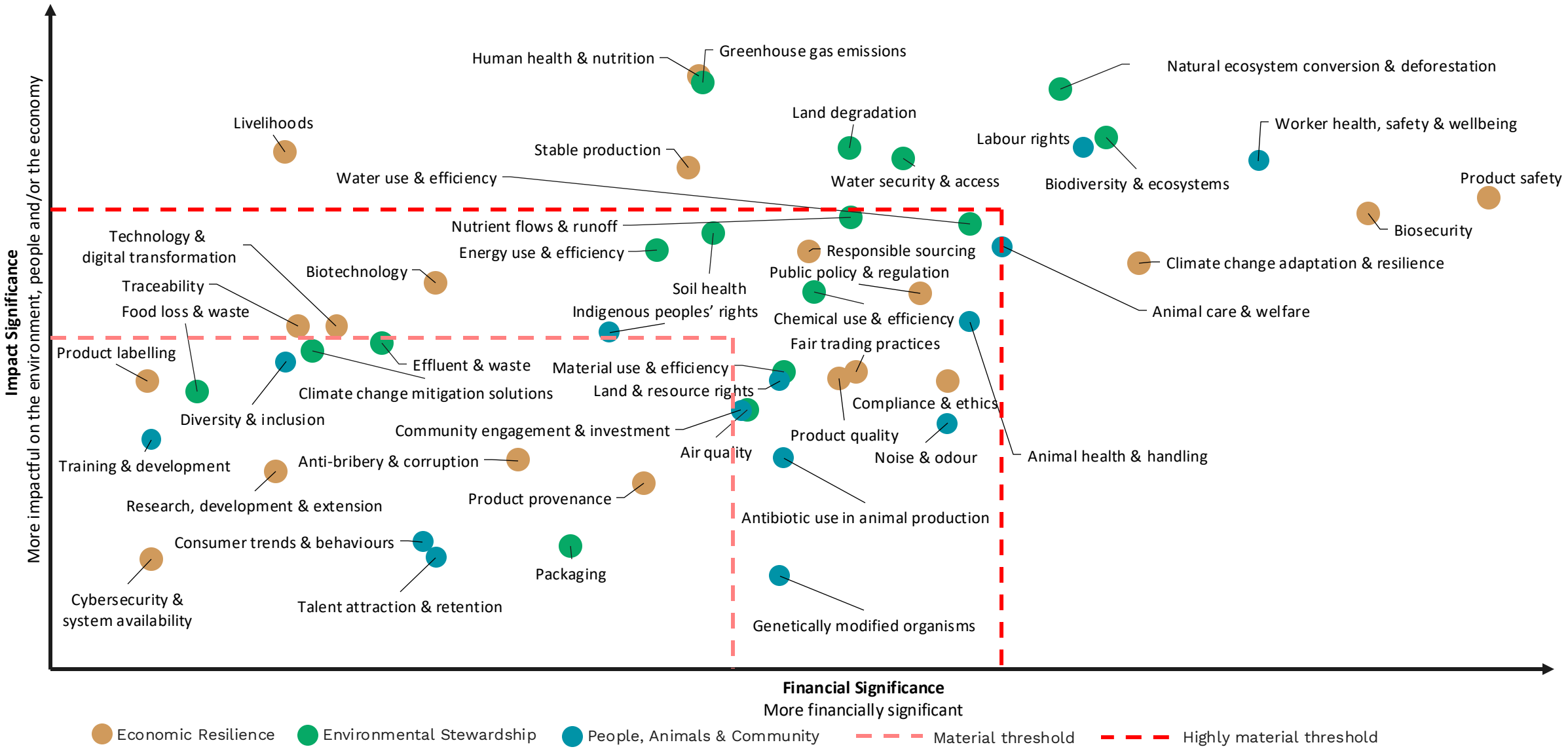
Overview

The Australian agricultural sector's *topic universe* comprises 50 topics.

- ❑ For a topic to be classified as ***material***, it must have met or exceeded the 'material' scoring threshold determined by the AASF for either the financial or impact dimensions.
- ❑ For a topic to be classified as ***highly material***, it must have met or exceeded the 'highly material' scoring threshold determined by the AASF for either the financial or impact dimensions.

- ➢ **37 topics** (74%) were assessed as ***material*** **for the Australian agriculture sector.**
  - **14 topics** (28%) were assessed as ***highly material*.**
- ➢ 12 topics within the Environmental Stewardship theme are assessed as *material*.
  - Five of those 12 Environmental Stewardship topics are assessed as *highly material*.
- ➢ 10 topics within the People, Animals and Community theme are assessed as *material*.
  - Three of those 10 People, Animals and Community topics are assessed as *highly material.*
- ➢ 15 topics within the Economic Resilience theme are assessed as material.
  - Six of those 15 Economic Resilience topics are assessed as *highly material.*

Materiality matrix



Prioritised topics by AASF theme

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Of the 50 topics in the Australian agricultural sector's topic universe, 13 topics have been assessed as ***important***, 23 topics as ***material*** and 14 topics as ***highly material***.

	Environmental Stewardship	People, Animals & Community	Economic Resilience
	Agricultural practices reduce GHG emissions, protect, maintain & improve environmental assets and preserve natural capital.	*The agricultural industry nurtures the wellbeing of its people, animals and communities*	*The agricultural industry upholds fair and ethical practices, transparent arrangements and compliance with laws*
Highly Material (14 topics)	Five ***highly material*** environmental stewardship topics: ➢ Biodiversity & ecosystems ➢ Greenhouse gas emissions ➢ Land degradation ➢ Natural ecosystem conversion & deforestation ➢ Water security & access	The three ***highly material*** topics comprising: ➢ Animal care & welfare ➢ Labour rights, practices & working conditions ➢ Worker health, safety and wellbeing	The six ***highly material*** topics comprise: ➢ Biosecurity ➢ Climate change adaptation & resilience ➢ Human health & nutrition ➢ Livelihoods ➢ Product safety ➢ Stable production
Material (23 topics)	Seven ***material*** environmental stewardship topics: ➢ Air quality ➢ Chemical use & efficiency ➢ Energy use & efficiency ➢ Material use & efficiency ➢ Nutrient flows & runoff ➢ Soil health ➢ Water use & efficiency	Seven ***material*** people, animals & community topics: ➢ Animal health & handling ➢ Antibiotic use in animal production ➢ Community engagement & investment ➢ Genetically modified organisms ➢ Indigenous peoples' rights ➢ Land & resource rights ➢ Noise & odour	Nine ***material*** economic resilience topics: ➢ Biotechnology ➢ Compliance & ethics ➢ Fair trading practices ➢ Food security ➢ Product quality ➢ Public policy & regulation ➢ Responsible sourcing ➢ Traceability ➢ Technology & digital transformation
Important (13 topics)	Four ***important*** environmental stewardship topics: ➢ Climate change mitigation solutions ➢ Effluent & waste ➢ Food loss & waste ➢ Packaging	Four ***important*** people, animals & community topics: ➢ Consumer trends & behaviours ➢ Diversity & inclusion ➢ Talent attraction & retention ➢ Training & development	Five ***important*** economic resilience topics: ➢ Anti-bribery & corruption ➢ Cybersecurity & system availability ➢ Product labelling ➢ Product provenance ➢ Research, development & extension
TOTAL	*16 topics*	*14 topics*	*20 topics*

Applying the results of the AASF Materiality Assessment

These applications are further set out in a Recommendations Report issued to the NFF.

1. **Guide** the further development of the AASF, including its structure and priorities for action and reporting.

2. **Inform** the proportionate effort and focus of Australian Agriculture's responses to topics in line with their relative financial and impact significance.

3. **Support** other agriculture stakeholders' own materiality assessments from direct use of the topic universe (list and definitions) through to comparison and validation of results.

2. Assessment Methodology

Identifying impacts, dependencies, risks and opportunities

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The Australian agricultural sector materiality assessment methodology comprised a double materiality assessment that harmonises leading materiality standards into order to identify sector impacts, dependencies, risks and opportunities.

FINANCIAL MATERIALITY

The financial impacts, risks and opportunities the Australian agriculture sector faces as a result of their dependence on the environment and society.

The Australian agricultural sector's dependencies on the environment and society

The environment and society's impacts on the Australian agricultural sector

Primary audience: Investors

IMPACT MATERIALITY

The actual and potential impacts of the Australian agriculture sector on the environment and society over the short-, medium and long-term.

The Australian agricultural sector's impact on the environment and society can be financially material

The Australian agricultural sector's impact on the environment and society

Primary audience: Consumers, Civil Society, Employees, Investors

ISSB: IFRS S1 Standard and Integrated Reporting Framework

GRI 3: Material Topics 2021

Corporate Reporting Sustainability Directive - European Sustainability Reporting Standards (ESRS)

Materiality assessment methodology

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The methodology to determine material sustainability topics, harmonises AA1000 Accountability Principles, GRI's Material Topics Standard guidance, the IFRS General Requirements for Disclosure of Sustainability-related Financial Information and the ESRS Implementation Guidance for a Materiality Assessment. Refer to Appendix A for further details on the assessment methodology and Appendix B for a summary of results from desktop analysis and stakeholder engagement in Step 1.

Step 1.

Understanding the Australian Agricultural Sectors' context

Agricultural sector analysis:
- ✓ Activities and business relationships
- ✓ Legal and regulatory landscape
- ✓ Media reports
- ✓ Peer analysis
- ✓ Sector-specific benchmarks
- ✓ Trends, headwinds and tailwinds

Stakeholders mapping and engagement

Incorporating AA1000 and ESRS guidance

Step 2.

Identification of the actual and potential impacts, risks and opportunities related to sustainability topics

Sustainability impacts, risks, opportunities and topics to be identified following top-down and bottom-up approaches.

Considerations will be given to the current use of sustainability disclosures in reporting standards as well as inputs from a multi-stakeholder consultation process.

Incorporating GRI and ESRS guidance

Step 3.

Assessment and determination of the significance of impacts, risks and opportunities related to sustainability topics

Double materiality assessment of:
- ✓ Impact materiality
- ✓ Financial materiality

Consolidation of the outcome of the impact and financial materiality dimensions.

Incorporating GRI, IFRS & ESRS guidance

Step 4.

Integrating material sustainability topics into the Australian Agricultural Sustainability Framework

- Description of the processes to identify and assess material impacts, risks and opportunities.
- Material impacts, risks and opportunities (aggregated as topics) and their interaction with Australian agricultural sector strategy and business models.

Incorporating ESRS guidance

Amendments to the AASF Principles and Criteria Scaffold

3. Materiality Assessment Results

Key findings

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Overview

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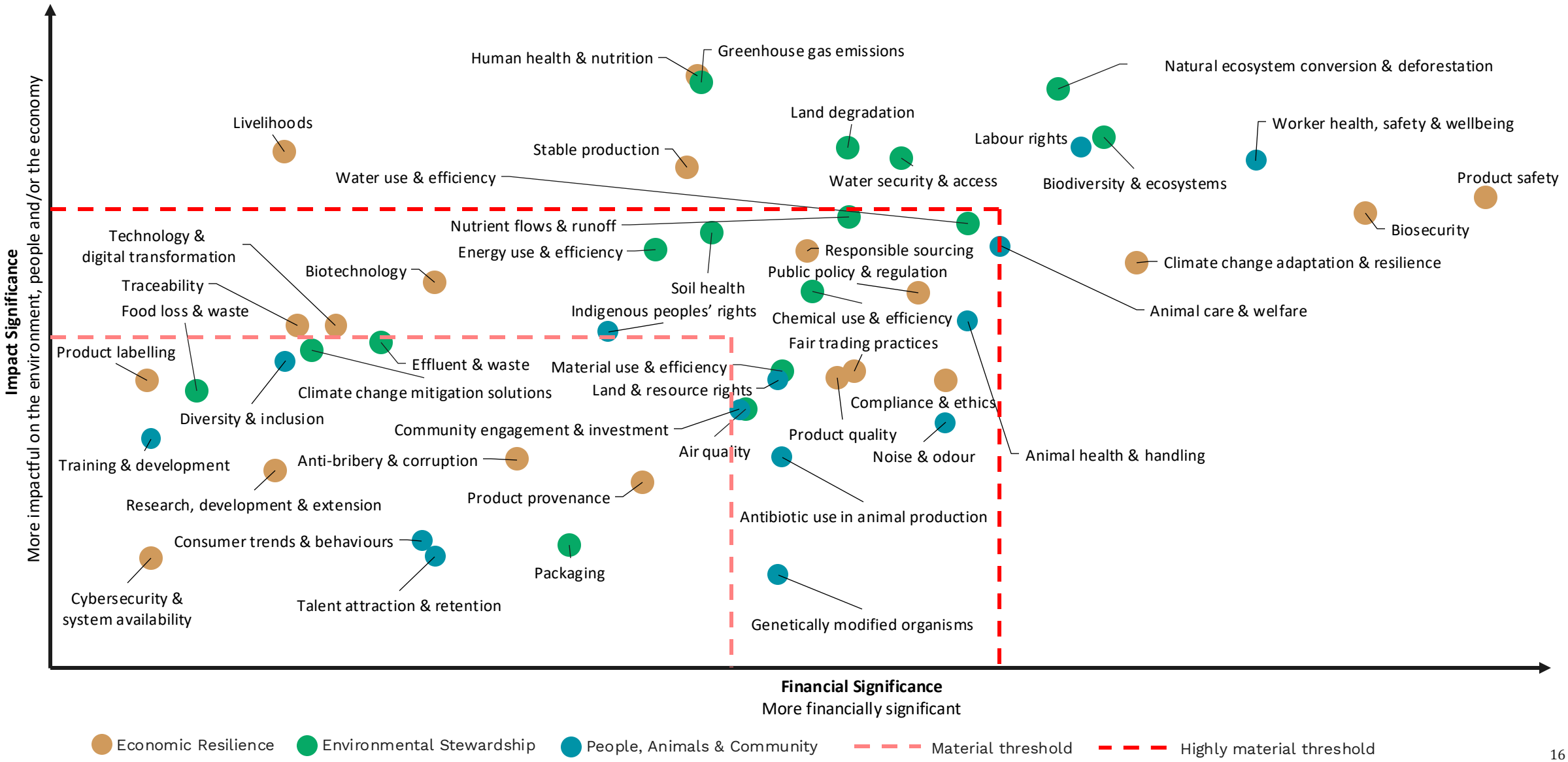
  - Three of those 10 People, Animals and Community topics are assessed as *highly material.*
- ➢ 15 topics within the Economic Resilience theme are assessed as material.
  - Six of those 15 Economic Resilience topics are assessed as *highly material.*

Detailed results are provided in Appendix C and topic definitions and scopes are detailed in Appendix D.

Materiality matrix



Materiality matrix

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Topics scores grouped into significance zones – *Important*, *Material*, *Highly Material*

IMPACT SIGNIFICANCE	Important	Material	Highly Material
Highly Material	• Greenhouse gas emissions • Human health & nutrition • Livelihoods • Stable production	• Animal care & welfare • Land degradation • Water security & access	• Biodiversity & ecosystems • Labour rights, practices & working conditions • Natural ecosystem conversion & deforestation • Product safety • Worker health, safety and wellbeing
Material	• Biotechnology • Energy use & efficiency • Food security • Indigenous people's rights • Soil health • Traceability • Technology & digital transformation	• Animal health & handling • Chemical use & efficiency • Nutrient flows & runoff • Public policy & regulation • Responsible sourcing • Water use & efficiency	• Biosecurity • Climate change adaptation & resilience
Important	• Anti-bribery & corruption • Climate change mitigation solutions • Consumer trends & behaviours • Cybersecurity & system availability • Diversity & inclusion • Effluent & waste • Food loss & waste • Packaging • Product labelling • Product provenance • Research, development & extension • Talent attraction & retention • Training & development	• Air quality • Antibiotic use in animal production • Community engagement & investment • Compliance & ethics • Fair trading practices • Genetically modified organisms • Land & resource rights • Material use & efficiency • Noise & odour • Product quality	

FINANCIAL SIGNIFICANCE

Materiality Assessment: Final Report

Top scores

The overall top five ranked topics for impact significance and financial significance.

IMPACT SIGNIFICANCE – Top five ranked topics (overall)	
Rank	Topic
1.	Human health & nutrition
2.	Greenhouse gas emissions
3.	Natural ecosystem conversion & deforestation
4.	Biodiversity & ecosystems
=5.	Labour rights, practices & working conditions
=5.	Land degradation

FINANCIAL SIGNIFICANCE – Top five ranked topics (overall)	
Rank	Topic
1.	Product safety
2.	Biosecurity
3.	Worker health, safety & wellbeing
4.	Climate change adaptation & resilience
5.	Biodiversity & ecosystems

The top five ranked topics per dimension, per theme. Note not all topics qualify as ***material***.

IMPACT SIGNIFICANCE – Top five ranked topics (per theme)			
Rank	Environmental Stewardship	People, Animals & Community	Economic Resilience
1	Greenhouse gas emissions	Labour rights, practices & working conditions	Human health & nutrition
2	Natural ecosystem conversion & deforestation	Worker health, safety & wellbeing	Livelihoods
3	Biodiversity & ecosystems	Animal care & welfare	Stable production
4	Land degradation	Animal health & handling	Product safety
5	Water security & access	Indigenous people's rights	Biosecurity

FINANCIAL SIGNIFICANCE – Top five ranked topics (per theme)			
Rank	Environmental Stewardship	People, Animals & Community	Economic Resilience
1	Biodiversity & ecosystems	Worker health, safety & wellbeing	Product safety
2	Natural ecosystem conversion & deforestation	Labour rights, practices & working conditions	Biosecurity
3	Water use & efficiency	Animal care & welfare	Climate change adaptation & resilience
4	Water security & access	Animal health & handling	Compliance & ethics
5	Nutrient flows & runoff	Noise & odour	Public policy & regulation

Topic materiality and rankings

Environmental Stewardship

Eleven topics have been determined as ***material*** within the Environmental Stewardship theme; with seven topics material across both impact and financial dimensions.

	Topic	Impact materiality	Financial materiality
Environmental Stewardship	*Air quality*	○	●
	Biodiversity & ecosystems	●	●
	Chemical use & efficiency	●	●
	Climate change mitigation solutions	○	○
	Effluent & waste	○	○
	Energy use & efficiency	●	○
	Food loss & waste	○	○
	Greenhouse gas emissions	●	○
	Land degradation	●	●
	Material use & efficiency	○	●
	Natural ecosystem conversion & deforestation	●	●
	Nutrient flows & runoff	●	●
	Packaging	○	○
	Soil health	●	○
	Water security & access	●	●
	Water use & efficiency	●	●

KEY: Important | *Material in one dimension* | **Material across both dimensions**

	RANKING: Impact significance (for Environmental Stewardship theme)		RANKING: Financial significance (for Environmental Stewardship theme)	
Environmental Stewardship	1	Greenhouse gas emissions	1	Biodiversity & ecosystems
	2	Natural ecosystem conversion & deforestation	2	Natural ecosystem conversion & deforestation
	3	Biodiversity & ecosystems	3	Water use & efficiency
	4	Land degradation	4	Water security & access
	5	Water security & access	5	Nutrient flows & runoff
	6	Nutrient flows & runoff	6	Land degradation
	7	Water use & efficiency	7	Chemical use & efficiency
	8	Soil health	8	Material use & efficiency
	9	Energy use & efficiency	9	Air quality
	10	Chemical use & efficiency	10	Soil health
	11	Effluent & waste	11	Greenhouse gas emissions
	12	Climate change mitigation solutions	12	Energy use & efficiency
	13	Material use & efficiency	13	Packaging
	14	Food loss & waste	14	Effluent & waste
	15	Air quality	15	Climate change mitigation solutions
	16	Packaging	16	Food loss & waste

Topic materiality and rankings

People, Animals & Community

Ten topics have been determined as ***material*** within the People, Animals & Community theme; with four topics material across both impact and financial dimensions.

	Topic	Impact materiality	Financial materiality
People, Animals & Community	**Animal care & welfare**	●	●
	Animal health & handling	●	●
	Antibiotic use in animal production	○	●
	Community engagement & investment	○	●
	Consumer trends & behaviours	○	○
	Diversity & inclusion	○	○
	Genetically modified organisms	○	●
	Indigenous peoples' rights	●	○
	Labour rights, practices & working conditions	●	●
	Land & resource rights	○	●
	Noise & odour	○	●
	Talent attraction & retention	○	○
	Training & development	○	○
	Worker health, safety & wellbeing	●	●

	RANKING: Impact significance (for People, Animals & Community theme)		RANKING: Financial significance (for People, Animals & Community theme)	
People, Animals & Community	1	Labour rights, practices & working conditions	1	Worker health, safety & wellbeing
	2	Worker health, safety & wellbeing	2	Labour rights, practices & working conditions
	3	Animal care & welfare	3	Animal care & welfare
	4	Animal health & handling	4	Animal health & handling
	5	Indigenous peoples' rights	5	Noise & odour
	6	Diversity & inclusion	6	Antibiotic use in animal production
	7	Land & resource rights	=8	Land & resource rights
	8	Community engagement & investment	=8	Genetically modified organisms
	9	Noise & odour	9	Community engagement & investment
	10	Training & development	10	Indigenous peoples' rights
	11	Antibiotic use in animal production	11	Talent attraction & retention
	12	Consumer trends & behaviours	12	Consumer trends & behaviours
	13	Talent attraction & retention	13	Diversity & inclusion
	14	Genetically modified organisms	14	Training & development

KEY: Important | *Material in one dimension* | **Material across both dimensions**

Topic materiality and rankings

Economic Resilience

Fifteen topics have been determined as ***material*** within the Economic Resilience theme; with five topics material across both impact and financial dimensions.

	Topic	Impact materiality	Financial materiality
Economic Resilience	Anti-bribery & corruption	○	○
	Biosecurity	●	●
	Biotechnology	●	○
	Climate change adaptation & resilience	●	●
	Compliance & ethics	○	●
	Cybersecurity & system availability	○	○
	Fair trading practices	○	●
	Food security	●	○
	Human health & nutrition	●	○
	Livelihoods	●	○
	Product labelling	○	○
	Product provenance	○	○
	Product quality	○	●
	Product safety	●	●
	Public policy & regulation	●	●
	Research, development & extension	○	○
	Responsible sourcing	●	●
	Stable production	●	○
	Traceability	●	○
	Technology & digital transformation	●	○

KEY: Important | *Material in one dimension* | **Material across both dimensions**

	RANKING: Impact significance (for Economic Resilience theme)		RANKING: Financial significance (for Economic Resilience theme)	
Economic Resilience	1	Human health & nutrition	1	Product safety
	2	Livelihoods	2	Biosecurity
	3	Stable production	3	Climate change adaptation & resilience
	4	Product safety	4	Compliance & ethics
	5	Biosecurity	5	Public policy & regulation
	6	Food security	6	Fair trading practices
	7	Responsible sourcing	7	Product quality
	8	Climate change adaptation & resilience	8	Responsible sourcing
	9	Biotechnology	9	Human health & nutrition
	10	Public policy & regulation	10	Stable production
	=12	Technology & digital transformation	11	Product provenance
	=12	Traceability	12	Anti-bribery & corruption
	13	Fair trading practices	13	Biotechnology
	14	Product quality	14	Technology & digital transformation
	15	Product labelling	15	Traceability
	16	Compliance & ethics	16	Livelihoods
	17	Anti-bribery & corruption	17	Research, development & extension
	18	Research, development & extension	18	Cybersecurity & system availability
	19	Product provenance	19	Product labelling
	20	Cybersecurity & system availability	20	Food security

Applying the results of the AASF Materiality Assessment

The results of the AASF Materiality Assessment can be used to guide, inform and support a range of uses as described below. These applications are further set out in a Recommendations Report issued to the NFF.

1. **Guide** the further development of the AASF, including its structure and priorities for action and reporting.

2. **Inform** the proportionate effort and focus of Australian Agriculture's responses to topics in line with their relative financial and impact significance.

3. **Support** other agriculture stakeholders' own materiality assessments from direct use of the topic universe (list and definitions) through to comparison and validation of results.

Appendix A

ASSESSMENT METHODOLOGY

Topic Assessment scoring approach and thresholds

TOPICS

Dimension	Assessment 1			Assessment 2		Assessment score	Material Threshold[1]	Highly Material Threshold[2]
Financial	**F-1. DEPENDENCIES** Dependencies on natural, human, social and manufactured resources can be sources of *financial risks and/or opportunities* and can trigger financial or other value creation effects. Dependencies are expressed and assessed against four sector capitals derived from the FAO assessment of Agri-Food systems comprising: • Natural Capital • Human Capital • Social & Relational Capital • Produced Capital Capitals are 'stocks of value' that are affects or transformed by the activities and outputs of the Australian agricultural sector. Each sustainability topic is assessed against its *primary* dependency.	Contribution to financial significance score	**20%**	+	**F-2. VALUE CREATION EFFECTS** Assessment of the Australian agricultural sector's *value creation effects* generated from *risks and/or opportunities* over the short-, medium- and long-term. Value creation effects are defined under the Integrated Reporting Framework as: • Financial effects • Strategic effects • Operational effects • Reputational effects • Regulatory effects Each sustainability topic is scored for its triggering or expected triggering of value creation effects. Each effect is scored resulting in a final amalgamated score.	Contribution to financial significance score	**80%**	**TOPIC FINANCIAL SIGNIFICANCE SCORE OUT OF 100**	**60**	**70**
Impact	**I-1. IMPACTS** An assessment of the Australian agricultural sector's *actual* and *potential*, *positive* and *negative* impacts on: • the environment; • people (including human rights); and • the economy, over the short, medium- and long-term. The severity of a topic's impact is assessed based on its scale, scope, attribution and irremediable character. While for positive impacts, irremediable character is not a consideration. Each topic is scored separately for its impact on the environment, people, and economy to produce a final aggregate impact score.	Contribution to impact significance score	**50%**	+	**I-2. STAKEHOLDERS** An assessment of stakeholder concern, interest in, and the extent to which stakeholders' behaviour towards the Australian agricultural sector is affected by how well sustainability topics are managed. Assessed stakeholders for the Australia agricultural sector comprise: • Governments, regulators and trade representatives • Farmers, farmer organisations and growers • Industry bodies and Research & Development Corporations (including academics, researches and consultants) • Post farm-gate supply chain and multinational customers (including manufacturers/processors, exporters, food services and retailers) • Investors, financiers and asset managers • Input suppliers, NGOs and civil society organisations Each topic is score separately across affected stakeholder groups to produce a final aggregate stakeholder score.	Contribution to impact significance score	**50%**	**TOPIC IMPACT SIGNIFICANCE SCORE OUT OF 100**	**60**	**70**

[1] For a topic to be classified as material, it must have scored 60 or above across one or both of the financial and/or impact dimensions.
[2] For a topic to be classified as highly material, it must have scored above 70 across one or both of the financial and/or impact dimensions.

Qualitative approach to financial materiality

Determination of risk & opportunity assessment model

Agreed definitions of risks & opportunities

For this assessment of financial materiality ***risks*** are defined as:

"the possibility of loss, harm, or negative consequences for the Australian agricultural sector occurring due to uncertain events or circumstances. Encompasses the potential for adverse outcomes that may impact the Australian agricultural sector's strategic objectives, interests, and the operations and assets of sector participants."

For this assessment of financial materiality ***opportunities*** are defined as:

"favourable conditions or situations for the Australian agricultural sector that present the potential for growth, innovation or positive outcomes. They represent potential avenues for advancement, value creation, performance improvement or strategic advantage for the sector."

Risks and opportunities are those relating to the topic that can be represented as the potential losses/benefits of a single event, potential annual losses/benefits over a short-term time horizon or summarised as losses/benefits over extended time horizons.

Classification of risks & opportunities

For this financial materiality assessment of the whole of Australian agriculture, consideration is given predominantly to ***inherent risks and opportunities*** or sector risks and opportunities without any controls. The materiality assessment is focussed on demonstrating the industry's awareness and understanding of the topics that matter to the industry and its stakeholders. ***Residual risks and opportunities*** where controls are applied – predominantly at the level of sector participants – can be considered when utilising the results of the materiality assessment through enterprise risk management frameworks and strategy development processes.

Consideration is given to sector strategies and industry-level frameworks.

Financial materiality assessment model parameters

The parameters for the financial materiality assessment of the Australian agricultural sector comprise:

- **Financial assessments** comprising:
  - **Assessment F-1:** an assessment of dependency on value creation capitals as sources of risks and/or opportunities; and
  - **Assessment F-2:** an assessment of value creation effects – including financial effects.
- **Assessment contributions** of each financial assessment to the total financial significance score. The assessment contributions for the Australian agriculture sector are set at 20% for the dependency assessment and 80% for the value creation effects assessment.
- **Assessment weights** are distributed across the Australian agricultural sector's value creation effects based on their relative sector-wide influence. A 50% weighting was equally assigned to *reputational* and *regulatory effects* and 50% weighting was equally assigned across *financial*, *strategic*, and *operational effects*.
- **Assessment scales** expressed as a ranking or score from one to five and defined qualitatively. Includes a logarithmic scoring calibration whereby movement up through the rankings represents an increasingly greater effect than the score before.
- **Assessment factors** or the assessment components that define value creation effects which are comprised of *financial effects*, *strategic effects*, *operational effects*, *reputational effects*, and *regulatory effects*. The assessment factors for financial materiality are defined on slides that follow.
- **Materiality thresholds** are currently set at a score of 60 or above out of 100 across for both *financial* and *impact* materiality dimensions.

Assessment scales for financial materiality

Financial significance scoring approach

SCORE	F-1: DEPENDENCIES	F-2: VALUE CREATION EFFECTS	
	Assessment of sources of financial risks or opportunities Natural capital Produced capital Human capital Social & relational capital	Assessment of likelihood of occurrence and potential magnitude of the financial/value creation effects Probability	➢ Financial effects ➢ Strategic effects ➢ Operational effects ➢ Reputational effects ➢ Regulatory effects
1	**Minimum dependency** - Minimum requirement for access to resources - Minimum concern for quality of resources - Minimum reliability on relationships with resource owners	**Minimum Likelihood** *Event will almost never occur*	**Insignificant** *No measurable loss or benefit* (A% or less)[1]
2	**Low dependency** - Low requirement for access to resources - Low concern for quality of resources - Low reliability on relationships with resource owners	**Low Likelihood** *Event will seldom occur*	**Limited** *Limited loss or benefit* (Between A and B%)[1]
3	**Medium dependency** - Medium requirement for access to resources - Medium concern for quality of resources - Medium reliability on relationships with resource owners	**Medium Likelihood** *Event will sometimes occur*	**Moderate** *Moderate loss or benefit* (Between B and C%)[1]
4	**High dependency** - High requirement for access to resources - High concern for quality of resources - High reliability on relationships with resource owners	**High Likelihood** *Event will frequently occur*	**Extensive** *Extensive loss or benefit* (Between C and D%)[1]
5	**Maximum dependency** - Maximum requirement for access to resources - Maximum concern for quality of resources - Maximum reliability on relationships with resource owners	**Maximum Likelihood** *Event is certain or almost certain to occur*	**Significant** *Significant loss or benefit* (D% or greater)[1]

[1] Value creation effect parameters and threshold percentages can be calibrated for future materiality assessments of the Australian agricultural sector.

Financial Materiality: Financial effects

*Assessment factors for the **financial effects** of sustainability topics on the Australian agricultural sector.*

	1	**Access to financial capital and services**	***The ability of the sector to conveniently and affordably obtain the financial capital and services required to invest and manage financial risk.*** This includes services such as banking, credit, insurance, investments and payment systems. Access to financial services is essential for the economic participation, wealth accumulation and financial stability of sector participants, and encompasses factors such as physical access to banking, the affordability of services, the availability of appropriate products, and financial literacy.
	2	**Cash flow**	***The maintenance of working capital to manage day to day finances effectively and resilience to against unexpected expenses.*** It represents the net amount of working capital (e.g. cash) generated or consumed by the operations, investments and financing activities of sector participants. Cash flow analysis is crucial for assessing the financial health of sector participants, planning for future expenses and making informed decisions about investments, borrowing, and operating activities.
	3	**Cost of capital**	***The overall expense, expressed as a percentage, that sector participants are incurring to fund their operations through various sources of financing such as equity, debt, or retained earnings.*** It represents the return that investors require for providing funds to sector participants. A crucial metric used in financial analysis and investment decision-making, as it influences the investment decisions, capital structure and overall financial performance of sector participants. It encompasses the cost of equity (required rate of return) and the cost of debt (interest rate on borrowed funds), weighted by the respective proportions in the capital structures of sector participants. Management of the cost of capital is essential for maximising shareholder value and profitability.
	4	**Financial performance**	***The assessment of sector participant success in generating profits and creating value for its stakeholders over a specific period.*** It involves analysing financial metrics and indicators such as revenue, net income, earning per share, return on investment, and cash flow. Evaluating the financial performance of sector participants helps stakeholders who make financial decisions, including investors, analysts, and management, to gauge the profitability, efficiency, liquidity, solvency, and overall financial health of sector participants. Measures of financial performance help stakeholders to make informed decisions regarding investment, lending, strategic planning, and resource allocation. Strong financial performance is essential for sector participants to sustain growth, attract investment, and ensure long-term viability in the marketplace.
	5	**Financial position**	***The overall health and status of the financial resources, obligations, and ownership equity of sector participants at a specific point in time.*** It encompasses assets (what sector participants own), liabilities (what sector participants owe), and equity (the residual interest of the owners). The financial position of sector participants is represented in its balance sheet, which provides an overview of its assets, liabilities and equity at a given moment. Allows stakeholders to assess the ability of sector participants to meet their short-term and long-term obligations, its liquidity, solvency, and overall financial stability. A strong financial position indicates the ability of sector participants to cover liabilities, pursue growth, and weather economic challenges, while a weak position may raise concerns about meeting obligations and sustaining operations.

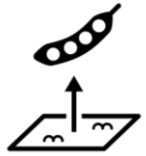
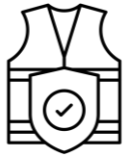
Financial Materiality: Strategic effects

*Assessment factors for the **strategic effects** of sustainability topics on the Australian agricultural sector.*

	1 **Barriers to entry and market access**	***The obstacles or conditions that make it difficult for sector participants to enter a particular market and compete effectively.*** These barriers can take various forms, such as high initial investments costs, economies of scale enjoyed by incumbents, and access to distribution channels. It includes trade barriers such as tariffs, quotas, and non-tariff barriers (e.g., regulatory requirements, certification standards), as well as cultural, legal and logical challenges. Barriers to entry and market access can hinder the international trade and investment, limiting the opportunities of sector participants to expand into new markets and restricting consumer choice. Barriers to entry limit global competition, allowing established participants to maintain their market power and profitability. Addressing market access involves negotiation and collaboration between governments and sector stakeholders to reduce barriers, facilitate market entry and participation.
	2 **Business model**	***The framework or structure outlining how sector participants create, deliver and capture value.*** It describes the rationale of how sector participants operate and generate revenue. It encompasses the value proposition, target customer segments, revenue streams, cost structure, key activities, resources, partnerships, and distribution channels of sector participants. The business model of sector participants provides the blueprint for sustainable growth and profitability, guiding decision-making and resource allocation.
	3 **Organisational plans, strategy or objectives**	***The components guiding sector participants towards their goals. These elements help align efforts, allocate resources efficiently, and measure progress.*** Organisational plans outline the overall direction and priorities of an organisation, typically covering long-term goals and the broad strategies to achieve them. The strategies of sector participants refer to the approach or plan of action design to achieve specific objectives. It involves making choices about resource allocation, market participation, differentiation, and responses to the external environment. Objectives are specific, measurable targets that support the organisation's goals and strategies. Risks and opportunities may necessitate adjustment to the organisational plans, strategies and objectives of sector participants by reshaping strategic priorities and resource allocation decisions,
	4 **Sustainability plans, strategy or objectives**	***Aimed at integrating environmental, social and governance considerations into organisations with the goal of achieving long-term sustainability.*** Sustainability plans outline the overarching vision, goals and approaches that organisations adopt to promote sustainability across its operations. Sustainability strategy refers to the specific approaches and actions that an organisation will undertake to advance sustainability goals. Sustainability objectives are specific, measurable targets that an organisation aims to achieve to drive progress towards its sustainability goals. Risks and opportunities may influence the development, implementation, and effectiveness of sustainability plans, strategies and objectives of sector participants.

Financial Materiality: Operational effects

*Assessment factors for the **operational effects** of sustainability topics on the Australian agricultural sector.*

	1 **Business activities that generate value**	***The activities that the Australian agricultural businesses engage in for the purpose of making profit and creating value.*** Business activities include operating, investing and financing activities. Operating activities relate directly to businesses providing its goods and services to market, provide most of a businesses' cash flow and have the greatest influence over profitability. Investing activities relate to the long-term use of cash, such as the buying or selling of assets and the gains and losses from investments. Financing activities include sources of cash from investors or banks, and the uses of cash paid to shareholders, such as payment of dividends or stock repurchases, and the repayment of loans.
	2 **Information requirements**	***The specific data, knowledge or insights needed to make informed decisions, solve problems, or achieve objectives effectively.*** Insufficient information or information asymmetry can lead to marketplace inefficiencies, such as the mispricing of goods or services, adverse selection whereby some sector participants make decisions that benefit themselves at the expense of other sector participants, moral hazard, whereby one sector participant takes risks knowing that other sector participants bear the consequences, and inefficient resource allocation across the sector. Access to information is a factor that determines the efficiency and effectiveness of business operations as well as sustainability opportunities.
	3 **Production efficiency**	***The ability of sector participants to produce goods or deliver services with the optimal utilisation of resources, minimising waste, and maximising outputs.*** It involves streamlining processes, improving productivity, and enhancing overall performance to achieve higher levels of output with the same or fewer inputs. Production efficiency is essential for sector participants to remain competitive, meet customer demand and achieve profitability. The Australian Bureau of Agricultural and Resource Economics and Sciences, defines *Total Factor Productivity* (TFP) as a measure of the efficiency with which inputs are combine to produce output in the agricultural and resource sectors.
	4 **Production volumes**	***The quantity of crops, livestock, or other agricultural products the sector and its participants produce within a specific period.*** A measure of the scale of operations of sector participants and representation of the total output achieved by sector participants during a given timeframe. These volumes provide a quantitative measure of the output produced by agricultural activities and are essential for assessing the overall productivity and performance of the agricultural sector.
	5 **Safety performance**	***How effectively the sector and its participants ensure the health, well-being, and protection of its stakeholders.*** It involves measures taken to prevent accidents, injuries, and occupational illnesses on farm and across other agricultural operating environments. It encompasses efforts to prevent accidents, injuries, and fatalities associated with agricultural activities such as operating machinery, handling livestock, and chemical use. Safety performance is evaluated based on incident rates, compliance with regulations, safety culture, risk management, and emergency preparedness.

Financial Materiality: Reputational effects

*Assessment factors for the **reputational effects** of sustainability topics on the Australian agricultural sector.*

	1 **Brand equity of Australian agricultural sector**	***The intangible value the Australian agricultural sector's brand holds in the eyes of its stakeholders, beyond its tangible assets or products.*** It encompasses the positive associations, perceptions and experiences that stakeholders have with the sector. Strong brand equity often leads to higher stakeholder loyalty, greater willingness to pay premium prices, and brand resilience against competition. The Australian agricultural sector's brand is built over time through consistent marketing efforts, quality products and services, positive stakeholder relationships and customer experiences, and effective marketing strategies.
	2 **Morale of sector participants**	***The overall outlook, satisfaction, and enthusiasm that Australian agricultural sector employees feel towards their work, workplace, and employer.*** It encompasses the attitudes, emotions, and sense of motivation in relation to job roles, colleagues, organisational culture, and management. High employee morale leads to increased productivity, better job performance, lower turnover rates, and a positive work environment. Conversely, low morale can result in decreased productivity, absenteeism, higher turnover, and a negative workplace atmosphere. It is influenced by factors such as effective communication, recognition, opportunities for growth, work-life balance, and organisational support.
	3 **Management impacts**	***The perception of sector participant leadership or management teams by internal and external stakeholders.*** It encompasses factors such as leadership style, integrity, transparency, decision-making effectiveness, and overall competence. A positive reputation for management often leads to increased trust from employees, investors, customers, and the broader community. It can result in improved employee morale, better financial performance, enhanced brand loyalty, and stronger relationships with stakeholders.Conversely, a negative reputation for management can erode trust, hinder employee engagement, lead to investor scepticism, and damage the organisation's brand and competitiveness.
	4 **Sector reputation, reputation of sector participants**	***The collective perception and image of the Australian agriculture sector and its participants among stakeholders.*** It reflects the overall trust, credibility, and esteem associated with the sector. A positive sector reputation often results from consistent delivery of high-quality products or services, adherence to ethical standards, innovation, and positive societal impact. Conversely, negative sector reputation may stem from scandals, unethical practices, poor product quality, or environmental concerns. Sector reputation plays a crucial role in influencing consumer behaviour, investor confidence, regulatory scrutiny, and overall competitiveness.
	5 **Social license to operate**	***The level of acceptance and approval granted by stakeholders to the Australian agricultural sector and its participants to conduct their operations.*** It extends beyond legal requirements and signifies that the activities of sector participants are perceived as socially responsible, environmentally sustainable, and aligned with the values and interests of the communities in which they operate. Social acceptance is crucial for the long-term viability and success of the business, as it helps mitigate risks related to public opposition, regulatory challenges, and reputational damage. Maintaining a social licence to operate requires ongoing engagement, transparent communication, and meaningful collaboration with stakeholders to address concerns, foster trust, and demonstrate commitments to responsible business practices.

Financial Materiality: Regulatory effects

*Assessment factors for the **regulatory effects** of sustainability topics on the Australian agricultural sector*

1	**Penalties and restrictions imposed by regulators**	***Punitive measures and limitations placed on sector participants, or industries for non-compliance with laws, regulations, or standards.*** Penalties may include fines, monetary sanctions, suspension or revocation of licenses, or legal action. Restrictions can involve limitations on certain activities, operations or behaviours until compliance is achieved. Penalties and restrictions serve as deterrents for sector participants against misconduct and encourage compliance with regulatory frameworks.

2	**Securing or renewing permits and licenses**	***Involves obtaining regulatory approvals from regulatory authorities to conduct specific activities or operate businesses legally.*** Permits and licenses needed for various purposes such as starting a new agricultural business, operating within the regulated Australian agricultural sector, or handling hazardous materials. Renewal processes often require updating information, demonstrating continued compliance with regulations, and paying renewal fees. Securing or renewing permits and licenses is essential for ensuring legal compliance, protecting public safety, and avoiding penalties or disruptions to operations.

3	**Agricultural policies in destination markets**	***The regulations, measures, and initiatives implemented by governments in countries where agricultural products are exported or sold.*** These policies aim to govern various aspects of agricultural production, trade, and consumption to achieve specific economic, social, and environmental objectives. They may include subsidies, tariffs, import quotas, sanitary and phytosanitary standards, labelling requirements, and support programs for farmers. Agricultural policies in destination markets can significantly impact international trade, market access, competitiveness, and the profitability of agricultural producers and exporters. Understanding and navigating these policies is essential for agricultural businesses to effectively access and operate within foreign markets.

Qualitative approach to impact materiality

Determination of impact assessment model

Agreed definition of impacts

For this assessment of impact materiality ***impact*** is defined as:

"the measurable or observable effects, consequences, or influence that a particular action or event has on the environment, economy, or people, including on their human rights."

Impacts include those caused or contributed to by the Australian agricultural sector's own operations, products, or services through its business relationships, including the upstream and downstream supply chain, and are not limited to direct contractual relationships.

Agreed definition of stakeholders (GRI)

For this assessment of impact materiality, a ***stakeholder*** is defined as:

"An individual or group that has an interest that is affected or could be affected by the organisation's activities."

Affected stakeholders assessed as part of Australia agriculture's impact materiality assessment include the following groups:

- Governments, regulators and trade representatives
- Farmers, farmer organisations and growers
- Industry bodies and Research & Development Corporations (including academics, researches and consultants)
- Post farm-gate supply chain and multinational customers (including manufacturers/processors, exporters, food services and retailers)
- Investors, financiers and asset managers
- Input suppliers, NGOs and civil society organisations

Impact materiality assessment model parameters

The parameters for the impact materiality assessment of the Australian agricultural sector comprise:

- **Impact assessments** comprising:
  - **Assessment I-1:** an assessment of impacts on the environment, the economy and people, including their human rights; and
  - **Assessment I-2:** an assessment of affected stakeholder groups.
- **Assessment contributions** of each impact assessment to the total impact significance score. The assessment contributions are set at 50% for both the impact assessment (I-1) and 50% for affected stakeholders (I-2).
- **Assessment weights** are assigned for each stakeholder group based on their impact and influence over Australian agriculture which influences the overall impact score. All stakeholder groups have been assigned an 18 percent weighting contribution except for Input suppliers, NGOs and civil society organisations which have been assigned a 10 percent weighting contribution.
- **Assessment scales** expressed as a ranking or score from one to five and defined qualitatively. Includes a logarithmic scoring calibration whereby movement up through the rankings represents an increasingly greater effect than the score before.
- **Assessment factors** or the assessment components that define impact.
- **Materiality thresholds** are currently set at a score of 60 or above out of 100 across for both *financial* and *impact* materiality dimensions.

Assessment scales for impact materiality

Impact significance scoring approach

SCORE	I-1: IMPACTS		I-2 AFFECTED STAKEHOLDERS
	Assessment of likelihood and severity/significance of impacts Probability × ➢ The environment; ➢ People (including human rights); and ➢ The economy		Assessment of the extent to which stakeholders across the ➢ Input suppliers ➢ Growers and producers ➢ Storage and distributors ➢ Local communities ➢ End markets and multinational customers ➢ Consumers
1	**Minimum Likelihood** *Event will almost never occur* (less than 0.1%)	**Insignificant** *No measurable positive or negative impact*	**Insignificant** *No measurable positive or negative impact on affected stakeholder*
2	**Low Likelihood** *Event will seldom occur* *(between 0.1 and 1.0%)*	**Limited** *Minor/limited/occasional positive or negative impact*	**Limited** *Minor/limited/occasional positive or negative impact on affected stakeholder*
3	**Medium Likelihood** *Event will sometimes occur* *(between 1.0% – 10%)*	**Moderate** *Moderate/regular/routine positive or negative impact*	**Moderate** *Moderate/regular/routine positive or negative impact on affected stakeholder*
4	**High Likelihood** *Event will frequently occur* *(between 10% - 100%)*	**Extensive** *High/continuous/persistent positive or negative impact*	**Extensive** *High/continuous/persistent positive or negative impact on affected stakeholder*
5	**Maximum Likelihood** *Event is certain or almost certain to occur* *(100%)*	**Significant** *Significant/permanent positive or negative impact*	**Significant** *Significant/permanent positive or negative impact on affected stakeholder*

Appendix B

KEY FINDINGS FROM DESKTOP REVIEW AND STAKEHOLDER ENGAGEMENT

Desktop Review

We undertook a detailed desktop analysis to understand Australian agriculture's current state within the domestic and international contexts. The analysis involved a ***document review*** of prior work done for the AASF by other partners, including KPMG, AFI, CSIRO and Schuster Consulting; a ***peer review***, assessing the AASF against comparable international sustainability frameworks, programs and initiatives; and review of the ***sector, trade and regulatory landscapes***.

Document review findings: Limitations of the AASF at its current state of maturity

- A preference for the use of exclusively positive language within the AASF Principles creates an overreliance on industry guidance for sustainability reporting.
- The expectation from external standards and stakeholders is that agricultural industries disclose how they are either undoing, reducing or preventing negative impacts on the environment, economy, society and people.
- AASF's focus on aspirational principles that are designed to pre-emptively anticipate and avoid risk, fail to make explicit that which is currently implicit across different Principles and Criteria.
- The AASF CoP cites deforestation and chemical use (particularly pesticide use) as two significant topics for the Australian agricultural sector that have not been made explicit within this current iteration of the Framework. Standards seeking financially material data such as the SASB Industry Standards, as well as forthcoming regulation such as the EU Deforestation Regulation, make explicit calls to report and disclose against these topics.

Peer review findings

- Bord BIA and Canada's National Index on Agri-Food Performance, like the AASF, seek to define what sustainability means for their National agricultural sectors.
- FAO's Sustainability Assessment of Food and Agriculture (SAFA) and the Global Farm Metric seek to provide the sector with sustainability frameworks against which to measure their performance. The Global Farm Metric defines on-farm sustainability for their farming systems meanwhile the FAO SAFA looks at the broader value chain of agri-food systems.
- The SAI Platform and GLOBALG.A.P. comprise membership networks that have developed standards and assessments developed by which to measure and assurance agricultural sustainability. Both organisations have formed a partnership and joint solution in the form of the Farm Sustainability Assessment and GLOBALG.A.P (GGFSA)

Desktop Review

Sector, trade and regulatory landscapes

National Farmers Federation | Australian Agricultural Sustainability Framework

Australian Government
Department of Agriculture, Fisheries and Forestry

Climate commitments & emissions reduction

- The EU, US and other key markets have set targets to reduce GHG emissions from agriculture
- Green financing: capital allocators increasingly assess climate-related criteria

Climate change adaptation pressures

- Ensuring agricultural systems are resilient to acute and long-term climate shocks

Sustainable food production

- Circular and bio-based economy
- Reduction of synthetic pesticide & nutrient use
- Animal welfare
- Challenges related to sustainable use of water resources

Food security

- Ensuring robust supply chains
- Reducing food waste

Research & Development

- Developing technology to assist transition to more sustainable models
- Improvements in remote sensing, robotics and AI have potential to improve efficiency and resilience of production

Natural capital markets

- Pricing carbon, biodiversity and other natural assets to better account for ecosystem services

ESG disclosures and greenwashing scrutiny

- Ensuring transparency and accountability at all stages of agriculture supply chains
- Developing robust environmental measurement and systems that do not overburden farmers

Human Rights & Communities

- Labour and bargaining rights
- Rights of Indigenous people
- Maintaining vibrant rural and regional communities

Stakeholder engagement outcomes

National Farmers Federation | Australian Agricultural Sustainability Framework

Australian Government
Department of Agriculture, Fisheries and Forestry

Interviews were conducted with representatives from existing industry sustainability frameworks as well as other stakeholders from across the agribusiness landscape. An online survey captured further insight from stakeholders from throughout the Australian agriculture value chain.

Climate adaptation pressures

- Improving resilience to acute climate shocks and long-term change
- Is the current mix of crops appropriate for existing and possible future climatic conditions?

Carbon & nature markets

- Farmers/producers unclear on best way to drive value – achieve net zero for themselves, or instead sell carbon or biodiversity credits into the market?

Emissions reduction

- When targets are not reached, credibility is diminished
- Green financing: capital allocators increasingly assess climate-related criteria

Community challenges

- Automation and digitisation is a double-edged sword for rural communities
- Urban encroachment and proximity of impacts
- Competing land uses
- Energy developments and land access

Volatility multipliers

- Cost and income uncertainty arising from:
  - Geopolitical factors, including export requirement
  - Global supply chain complexity
  - Increased climatic volatility

Public disclosures and data

- Regulatory reporting uncertainty is a significant risk facing the industry
- Ensuring transparency and accountability at all stages of agriculture supply chains
- Developing robust measurement and information systems that do not overburden farmers

Animal welfare

- Animal welfare issues such as mulesing and live exports remain a focus for activists and trade partners
- Important to confront and develop meaningful solutions

Industry collaboration critical

- Need more whole-of-ag efforts on key topics, with focus on long-term impacts and success – a ‘mindset’ shift needed
- Greater collaboration across industry and co-design with non-ag stakeholders
- Need to challenge and disrupt ourselves to avoid continued reactive responses

Stakeholder engagement outcomes

Summary of results from the stakeholder survey for each of the topics that scored highest on the materiality assessment. These results relate to the survey question in which respondents were asked to rank the importance of topics, relative to the other topics in the sub-group.

	Material topic		
	Product safety	Biosecurity	Worker health, safety & wellbeing
Materiality assessment rank **(Based on final scores for overall Financial and Impact significance)**	**1**	**2**	**3**
Topic theme	Economic resilience	Economic resilience	People, animals & communities
Topic sub-group	Products (7 topics)	Stability & growth (6 topics)	People (5 topics)
Respondent category	**Topic importance rank from survey results, relative to other topics in the same sub-group**		
All survey respondents	*3 out of 7*	*2 out of 6*	*1 out of 5*
Farmer/Grower	4	3.2	2.4
Industry body/RDC	2.9	1.9	2.4
Academia/Researcher/Consultant	3.5	3.1	2.0
Farmer Organisation/Policy	3.2	3.7	2.0

Stakeholder engagement outcomes

Summary of results from the stakeholder survey for each of the topics that scored highest on the materiality assessment. These results relate to the survey question in which respondents were asked to rank the importance of topics, relative to the other topics in the sub-group.

	Material topic		
	Natural ecosystem conversion & deforestation	Biodiversity & ecosystems	Labour rights, practices & working conditions
Materiality assessment rank **(Based on final scores for overall Financial and Impact significance)**	**4**	**5**	**6**
Topic theme	Environmental stewardship	Environmental stewardship	People, animals & communities
Topic sub-group	Preservation & protection (9 topics)	Preservation & protection (9 topics)	People (5 topics)
Respondent category	**Topic importance rank from survey results, relative to other topics in the same sub-group**		
All survey respondents	*3 out of 7*	*2 out of 6*	*1 out of 5*
Farmer/Grower	4	3.2	2.4
Industry body/RDC	2.9	1.9	2.4
Academia/Researcher/Consultant	3.5	3.1	2.0
Farmer Organisation/Policy	3.2	3.7	2.0

Appendix C

MATERIALITY ASSESSMENT RESULTS (WITH SCORES)

Top scores

The overall top five ranked topics for impact significance and financial significance.

IMPACT SIGNIFICANCE – Top five ranked topics (overall)		
Rank	Topic	Score
1.	Human health & nutrition	80.1
2.	Greenhouse gas emissions	79.6
3.	Natural ecosystem conversion & deforestation	79.1
4.	Biodiversity & ecosystems	75.4
=5.	Labour rights, practices & working conditions	74.6
=5.	Land degradation	74.6

FINANCIAL SIGNIFICANCE – Top five ranked topics (overall)		
Rank	Topic	Score
1.	Product safety	87.9
2.	Biosecurity	83.4
3.	Worker health, safety & wellbeing	79.4
4.	Climate change adaptation & resilience	75.0
5.	Biodiversity & ecosystems	73.8

The top five ranked topics per dimension, per theme. Note not all topics qualify as ***material***.

IMPACT SIGNIFICANCE – Top five ranked topics (per theme)			
Rank	Environmental Stewardship	People, Animals & Community	Economic Resilience
1	Greenhouse gas emissions	Labour rights, practices & working conditions	Human health & nutrition
2	Natural ecosystem conversion & deforestation	Worker health, safety & wellbeing	Livelihoods
3	Biodiversity & ecosystems	Animal care & welfare	Stable production
4	Land degradation	Animal health & handling	Product safety
5	Water security & access	Indigenous people's rights	Biosecurity

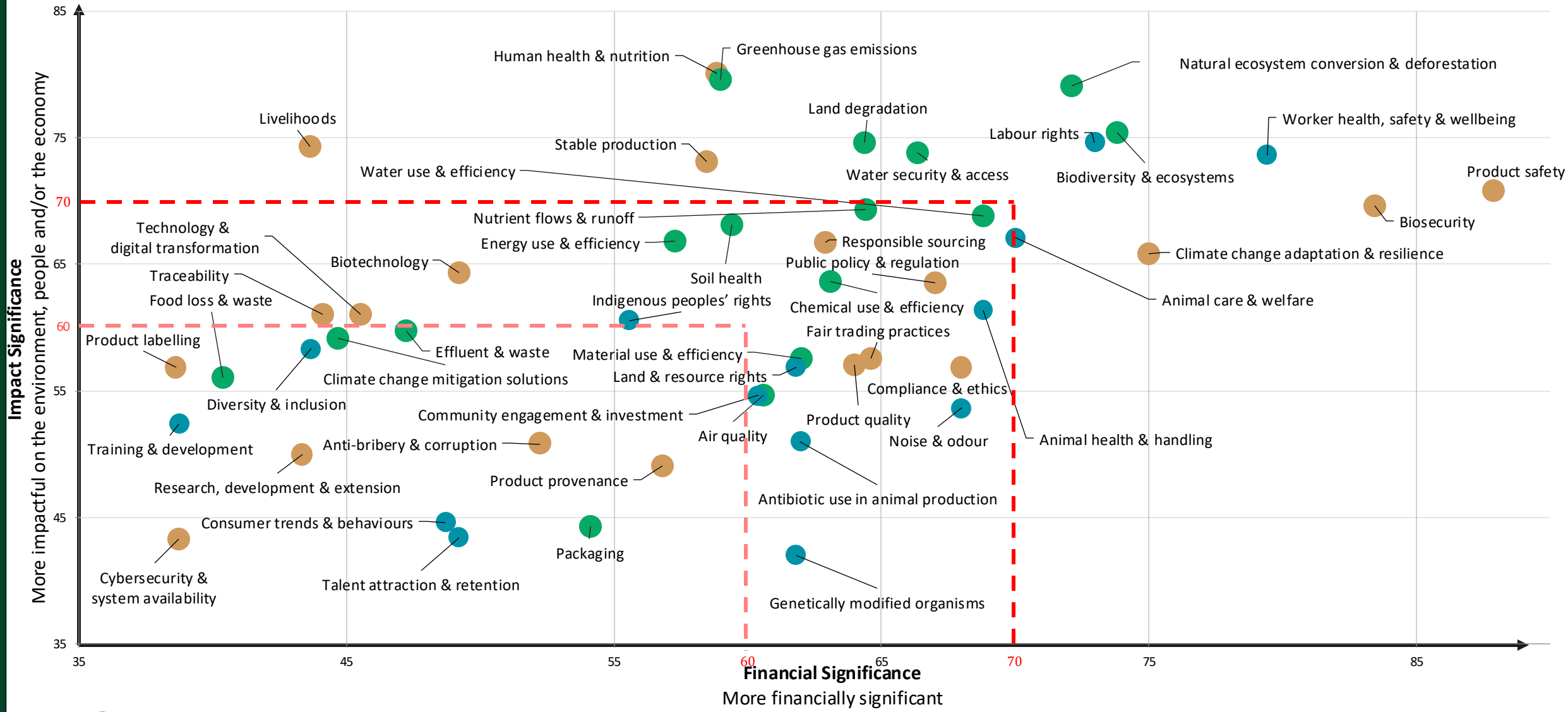
FINANCIAL SIGNIFICANCE – Top five ranked topics (per theme)			
Rank	Environmental Stewardship	People, Animals & Community	Economic Resilience
1	Biodiversity & ecosystems	Worker health, safety & wellbeing	Product safety
2	Natural ecosystem conversion & deforestation	Labour rights, practices & working conditions	Biosecurity
3	Water use & efficiency	Animal care & welfare	Climate change adaptation & resilience
4	Water security & access	Animal health & handling	Compliance & ethics
5	Nutrient flows & runoff	Noise & odour	Public policy & regulation

Material topics

Of the 50 topics in the Australian agricultural sector's topic universe, 37 topics have been assessed as material, including 14 highly material topics.

	Environmental Stewardship *Agricultural practices reduce GHG emissions, protect, maintain & improve environmental assets and preserve natural capital.*			People, Animals & Community *The agricultural industry nurtures the wellbeing of its people, animals and communities*			Economic Resilience *The agricultural industry upholds fair and ethical practices, transparent arrangements and compliance with laws*		
	Topic	*Impact*	*Financial*	*Topic*	*Impact*	*Financial*	*Topic*	*Impact*	*Financial*
Highly Material	Biodiversity & ecosystems	75.4	73.8	Animal care & welfare	67.1	70.0	Biosecurity	69.7	83.4
	Greenhouse gas emissions	79.6	59.0	Labour rights, practices & working conditions	74.6	73.0	Human health & nutrition	80.1	58.9
	Land degradation	74.6	64.4	Worker health, safety and wellbeing	73.6	79.4	Livelihoods	74.4	43.6
	Natural ecosystem conversion & deforestation	79.1	72.1				Product safety	70.8	87.9
	Water security & access	73.8	66.3				Stable production	73.1	58.5
							Climate change adaptation & resilience	65.9	75.0
Material	Air quality	54.6	60.6	Animal health & handling	61.4	68.8	Biotechnology	64.3	49.2
	Chemical use & efficiency	63.6	63.1	Antibiotic use in animal production	51.0	62.0	Compliance & ethics	56.9	68.0
	Energy use & efficiency	66.9	57.3	Community engagement & investment	54.6	60.4	Fair trading practices	57.5	64.6
	Material use & efficiency	57.5	62.0	Genetically modified organisms	42.0	61.8	Food security	67.6	28.5
	Nutrient flows & runoff	69.3	64.4	Indigenous peoples' rights	60.6	55.6	Product quality	57.1	64.0
	Soil health	68.1	59.4	Land & resource rights	56.9	61.8	Public policy & regulation	63.5	67.0
	Water use & efficiency	68.8	68.8	Noise & odour	53.6	68.0	Responsible sourcing	66.8	62.9
							Traceability	61.0	44.1
							Technology & digital transformation	61.0	45.5
	12 material topics			*10 material topics*			*15 material topics*		

Materiality matrix



Materiality matrix

National Farmers Federation | Australian Agricultural Sustainability Framework

Australian Government
Department of Agriculture, Fisheries and Forestry

Topics scores grouped into significance zones – *Important*, *Material*, *Highly Important*

IMPACT SIGNIFICANCE	Important (60)	Material (60-70)	Highly Material (70)
Highly Material (70)	• Greenhouse gas emissions • Human health & nutrition • Livelihoods • Stable production	• Animal care & welfare • Land degradation • Water security & access	• Biodiversity & ecosystems • Labour rights, practices & working conditions • Natural ecosystem conversion & deforestation • Product safety • Worker health, safety and wellbeing
Material (60-70)	• Biotechnology • Energy use & efficiency • Food security • Indigenous people's rights • Soil health • Traceability • Technology & digital transformation	• Animal health & handling • Chemical use & efficiency • Nutrient flows & runoff • Public policy & regulation • Responsible sourcing • Water use & efficiency	• Biosecurity • Climate change adaptation & resilience
Important (60)	• Anti-bribery & corruption • Climate change mitigation solutions • Consumer trends & behaviours • Cybersecurity & system availability • Diversity & inclusion • Effluent & waste • Food loss & waste • Packaging • Product labelling • Product provenance • Research, development & extension • Talent attraction & retention • Training & development	• Air quality • Antibiotic use in animal production • Community engagement & investment • Compliance & ethics • Fair trading practices • Genetically modified organisms • Land & resource rights • Material use & efficiency • Noise & odour • Product quality	

FINANCIAL SIGNIFICANCE

Topic scores

Environmental Stewardship

	Topic	Impact significance	Financial significance
Environmental Stewardship	Air quality	54.6	60.6
	Biodiversity & ecosystems	75.4	73.8
	Chemical use & efficiency	63.6	63.1
	Climate change mitigation solutions	59.1	44.7
	Effluent & waste	59.8	47.2
	Energy use & efficiency	66.9	57.3
	Food loss & waste	56.1	40.4
	Greenhouse gas emissions	79.6	59.0
	Land degradation	74.6	64.4
	Material use & efficiency	57.5	62.0
	Natural ecosystem conversion & deforestation	79.1	72.1
	Nutrient flows & runoff	69.3	64.4
	Packaging	44.3	54.1
	Soil health	68.1	59.4
	Water security & access	73.8	66.3
	Water use & efficiency	68.8	68.8

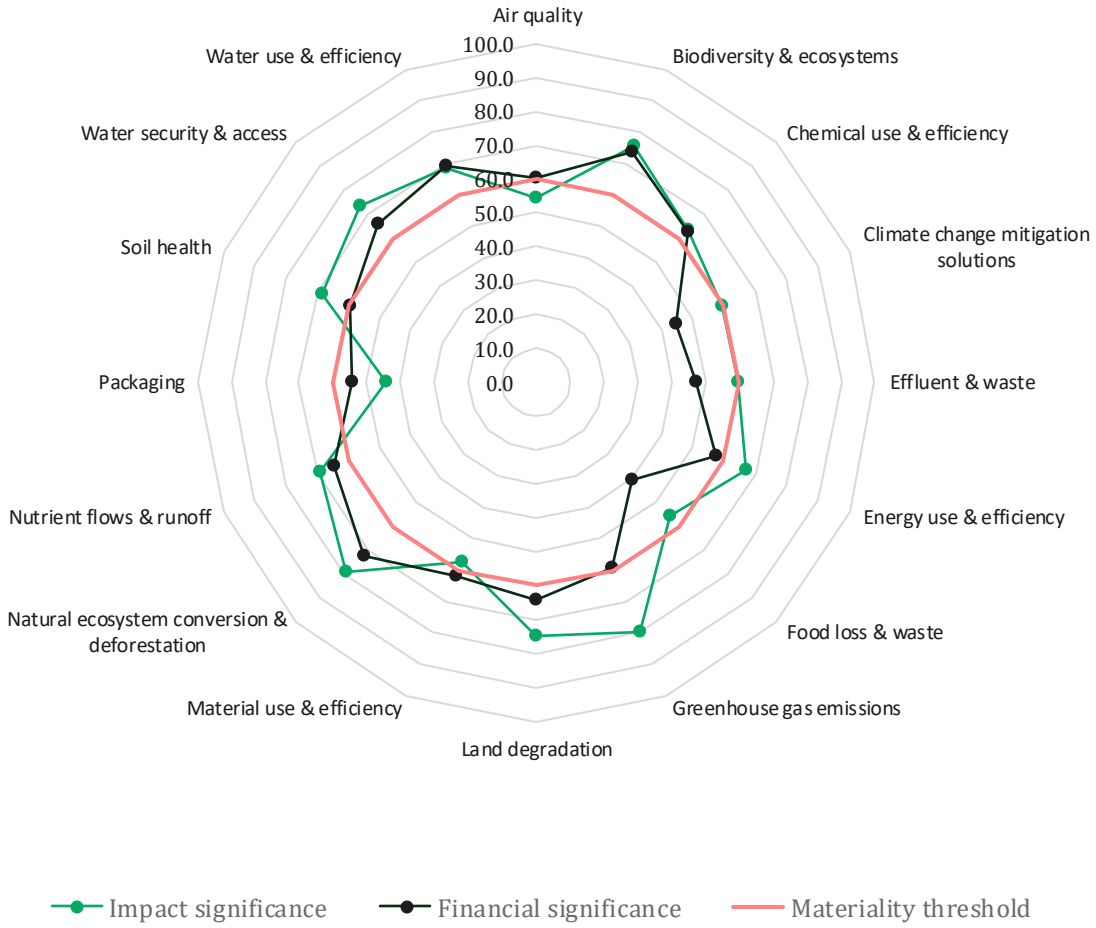
	RANKING: Impact significance (for Environmental Stewardship theme)		RANKING: Financial significance (for Environmental Stewardship theme)	
Environmental Stewardship	1	Greenhouse gas emissions	1	Biodiversity & ecosystems
	2	Natural ecosystem conversion & deforestation	2	Natural ecosystem conversion & deforestation
	3	Biodiversity & ecosystems	3	Water use & efficiency
	4	Land degradation	4	Water security & access
	5	Water security & access	5	Nutrient flows & runoff
	6	Nutrient flows & runoff	6	Land degradation
	7	Water use & efficiency	7	Chemical use & efficiency
	8	Soil health	8	Material use & efficiency
	9	Energy use & efficiency	9	Air quality
	10	Chemical use & efficiency	10	Soil health
	11	Effluent & waste	11	Greenhouse gas emissions
	12	Climate change mitigation solutions	12	Energy use & efficiency
	13	Material use & efficiency	13	Packaging
	14	Food loss & waste	14	Effluent & waste
	15	Air quality	15	Climate change mitigation solutions
	16	Packaging	16	Food loss & waste

Material topics

Environmental Stewardship

	Topic	Impact materiality	Financial materiality
Environmental Stewardship	*Air quality*	○	●
	Biodiversity & ecosystems	●	●
	Chemical use & efficiency	●	●
	Climate change mitigation solutions	○	○
	Effluent & waste	○	○
	Energy use & efficiency	●	○
	Food loss & waste	○	○
	Greenhouse gas emissions	●	○
	Land degradation	●	●
	Material use & efficiency	○	●
	Natural ecosystem conversion & deforestation	●	●
	Nutrient flows & runoff	●	●
	Packaging	○	○
	Soil health	●	○
	Water security & access	●	●
	Water use & efficiency	●	●

KEY: *Material in one dimension* | **Material across both dimensions**



Topic scores

People, Animals & Community

	Topic	Impact significance	Financial significar
People, Animals & Community	Animal care & welfare	67.1	70.0
	Animal health & handling	61.4	68.8
	Antibiotic use in animal production	51.0	62.0
	Community engagement & investment	54.6	60.4
	Consumer trends & behaviours	44.6	48.7
	Diversity & inclusion	58.3	43.7
	Genetically modified organisms	42.0	61.8
	Indigenous peoples' rights	60.6	55.6
	Labour rights, practices & working conditions	74.6	73.0
	Land & resource rights	56.9	61.8
	Noise & odour	53.6	68.0
	Talent attraction & retention	43.4	49.2
	Training & development	52.4	38.7
	Worker health, safety & wellbeing	73.6	79.4

	RANKING: Impact significance (for People, Animals & Community theme)	
People, Animals & Community	1	Labour rights, practices & working conditions
	2	Worker health, safety & wellbeing
	3	Animal care & welfare
	4	Animal health & handling
	5	Indigenous peoples' rights
	6	Diversity & inclusion
	7	Land & resource rights
	8	Community engagement & investment
	9	Noise & odour
	10	Training & development
	11	Antibiotic use in animal production
	12	Consumer trends & behaviours
	13	Talent attraction & retention
	14	Genetically modified organisms

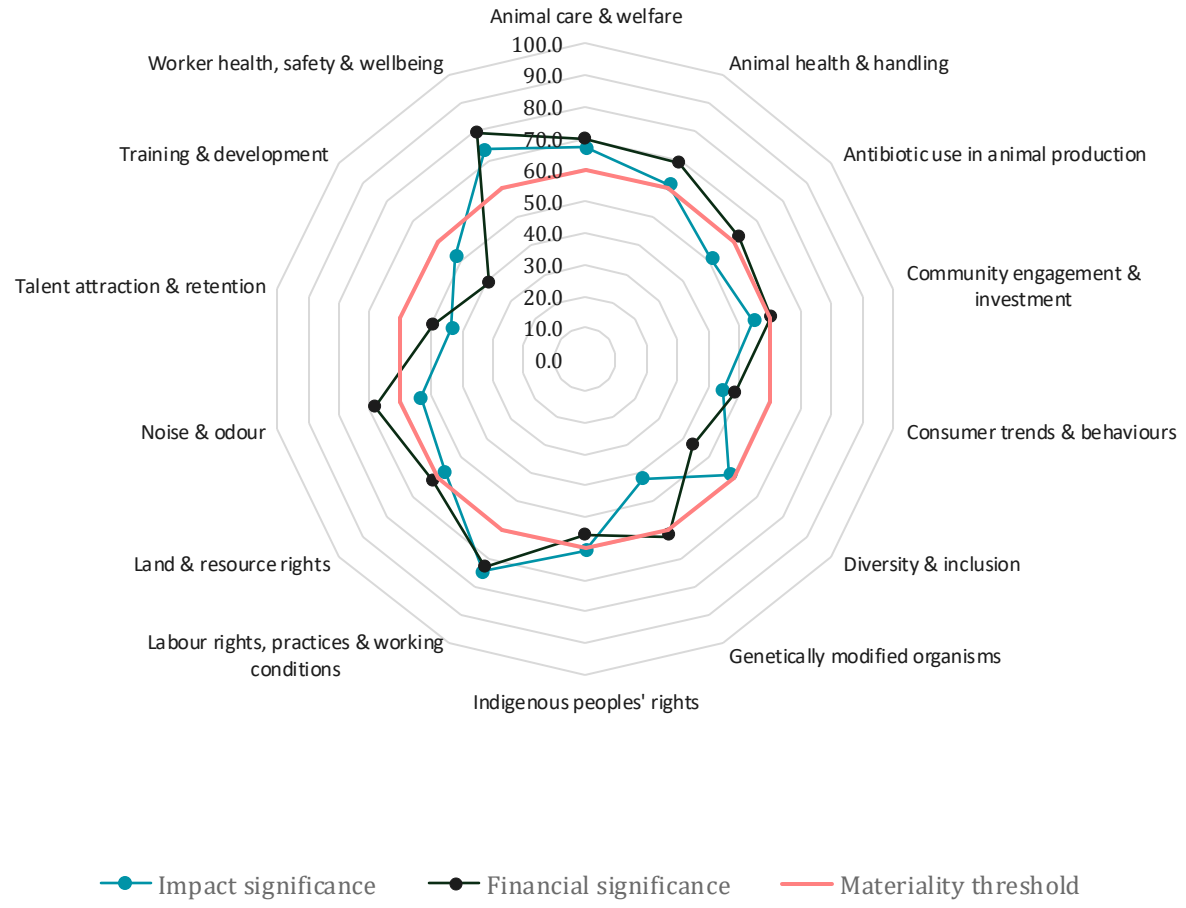
RANKING: Financial significance (for People, Animals & Community theme)	
1	Worker health, safety & wellbeing
2	Labour rights, practices & working conditions
3	Animal care & welfare
4	Animal health & handling
5	Noise & odour
6	Antibiotic use in animal production
=8	Land & resource rights
=8	Genetically modified organisms
9	Community engagement & investment
10	Indigenous peoples' rights
11	Talent attraction & retention
12	Consumer trends & behaviours
13	Diversity & inclusion
14	Training & development

Material topics

People, Animals & Community

	Topic	Impact materiality	Financial materiality
People, Animals & Community	**Animal care & welfare**	●	●
	Animal health & handling	●	●
	Antibiotic use in animal production	○	●
	Community engagement & investment	○	●
	Consumer trends & behaviours	○	○
	Diversity & inclusion	○	○
	Genetically modified organisms	○	●
	Indigenous peoples' rights	●	○
	Labour rights, practices & working conditions	●	●
	Land & resource rights	○	●
	Noise & odour	○	●
	Talent attraction & retention	○	○
	Training & development	○	○
	Worker health, safety & wellbeing	●	●

KEY: *Material in one dimension* | **Material across both dimensions**



Topic scores

Economic Resilience

	Topic	Impact significance	Financial significance
Economic Resilience	Anti-bribery & corruption	50.8	52.2
	Biosecurity	69.7	83.4
	Biotechnology	64.3	49.2
	Climate change adaptation & resilience	65.9	75.0
	Compliance & ethics	56.9	68.0
	Cybersecurity & system availability	43.3	38.7
	Fair trading practices	57.5	64.6
	Food security	67.6	28.5
	Human health & nutrition	80.1	58.9
	Livelihoods	74.4	43.6
	Product labelling	56.9	38.6
	Product provenance	49.1	56.8
	Product quality	57.1	64.0
	Product safety	70.8	87.9
	Public policy & regulation	63.5	67.0
	Research, development & extension	50.0	43.3
	Responsible sourcing	66.8	62.9
	Stable production	73.1	58.5
	Technology & digital transformation	61.0	45.5
	Traceability	61.0	44.1

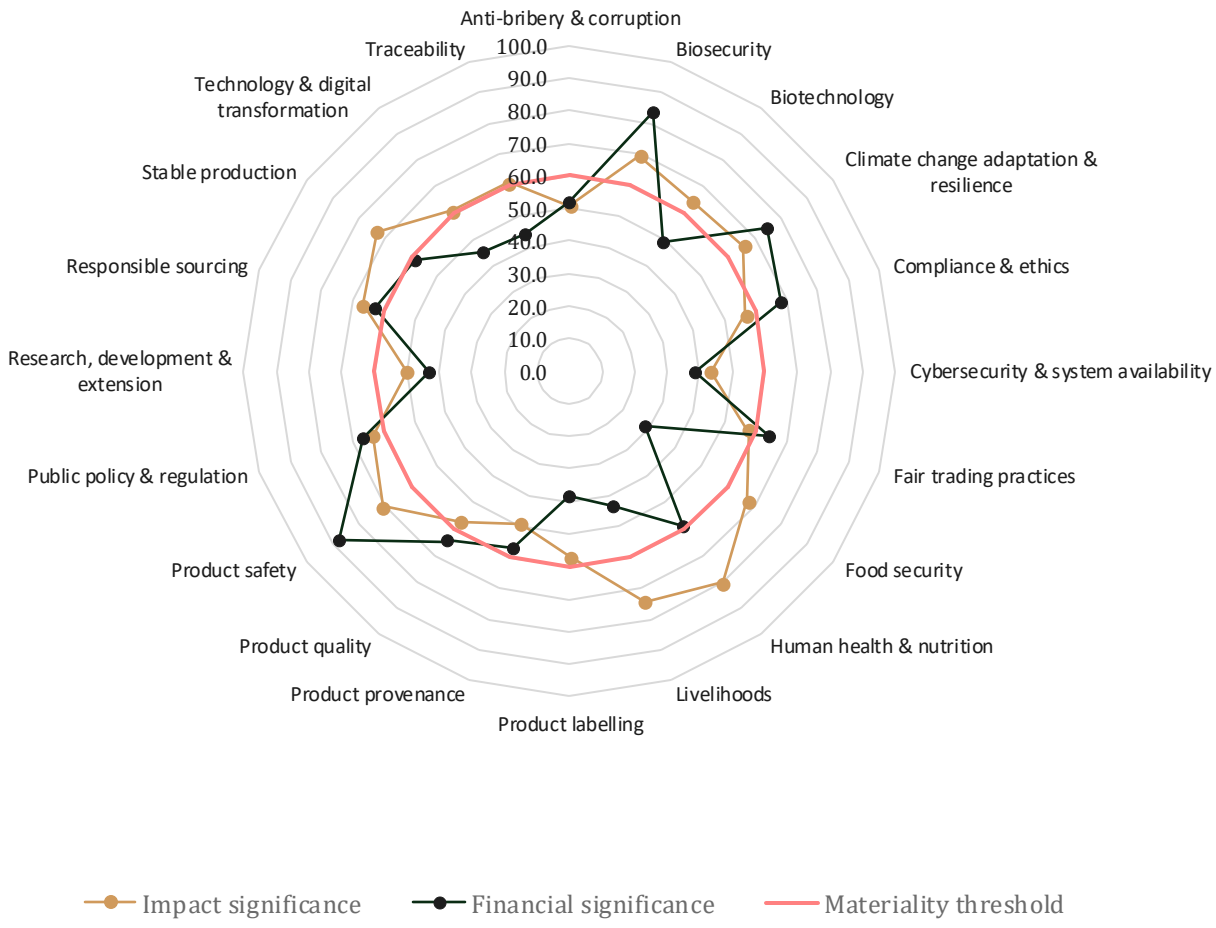
	RANKING: Impact significance (for Economic Resilience theme)		RANKING: Financial significance (for Economic Resilience theme)	
Economic Resilience	1	Human health & nutrition	1	Product safety
	2	Livelihoods	2	Biosecurity
	3	Stable production	3	Climate change adaptation & resilience
	4	Product safety	4	Compliance & ethics
	5	Biosecurity	5	Public policy & regulation
	6	Food security	6	Fair trading practices
	7	Responsible sourcing	7	Product quality
	8	Climate change adaptation & resilience	8	Responsible sourcing
	9	Biotechnology	9	Human health & nutrition
	10	Public policy & regulation	10	Stable production
	=12	Technology & digital transformation	11	Product provenance
	=12	Traceability	12	Anti-bribery & corruption
	13	Fair trading practices	13	Biotechnology
	14	Product quality	14	Technology & digital transformation
	15	Product labelling	15	Traceability
	16	Compliance & ethics	16	Livelihoods
	17	Anti-bribery & corruption	17	Research, development & extension
	18	Research, development & extension	18	Cybersecurity & system availability
	19	Product provenance	19	Product labelling
	20	Cybersecurity & system availability	20	Food security

Material topics

Economic Resilience

	Topic	Impact materiality	Financial materiality
Economic Resilience	Anti-bribery & corruption	○	○
	Biosecurity	●	●
	Biotechnology	●	○
	Climate change adaptation & resilience	●	●
	Compliance & ethics	○	●
	Cybersecurity & system availability	○	○
	Fair trading practices	○	●
	Food security	●	○
	Human health & nutrition	●	○
	Livelihoods	●	○
	Product labelling	○	○
	Product provenance	○	○
	Product quality	○	●
	Product safety	●	●
	Public policy & regulation	●	●
	Research, development & extension	○	○
	Responsible sourcing	●	●
	Stable production	●	○
	Traceability	●	○
	Technology & digital transformation	●	○

KEY: *Material in one dimension* | **Material across both dimensions**



Appendix D

TOPIC UNIVERSE – LIST, DEFINITIONS AND SCOPE

Topic Universe

The universe 'longlist' of topics (aggregated impacts, risks and opportunities) for the Australian agricultural sector is listed below.

Environmental Stewardship

Agricultural practices reduce GHG emissions, protect, maintain & improve environmental assets and preserve natural capital.

Preservation & Protection
- Air quality
- Biodiversity & ecosystems
- Effluent & waste
- Food loss & waste
- Greenhouse gas emissions
- Land degradation
- Natural ecosystem conversion & deforestation
- Nutrient flows & runoff
- Water security & access

Resources
- Chemical use & efficiency
- Climate change mitigation solutions
- Energy use & efficiency
- Material use & efficiency
- Packaging
- Soil health
- Water use & efficiency

People, Animals & Community

The agricultural industry nurtures the wellbeing of its people, animals and communities

People
- Diversity & inclusion
- Labour rights, practices & working conditions
- Talent attraction & retention
- Training & development
- Worker health, safety & wellbeing

Animals
- Animal care & welfare
- Animal health & handling
- Antibiotic use in animal production

Community
- Community engagement & investment
- Consumer trends & behaviours
- Genetically modified organisms
- Indigenous peoples' rights
- Land & resource rights
- Noise & odour

Economic Resilience

The agricultural industry upholds fair and ethical practices, transparent arrangements and compliance with laws

Stability & Growth
- Biosecurity
- Climate change adaptation & resilience
- Fair trading practices
- Livelihoods
- Research, development & extension
- Stable production
- Technology & digital transformation

Upholding Practices
- Anti-bribery & corruption
- Biotechnology
- Compliance & ethics
- Cybersecurity & system availability
- Public policy & regulation
- Responsible sourcing

Products
- Food security
- Human health & nutrition
- Product provenance
- Product labelling
- Product quality
- Product safety
- Traceability

Topic Universe – Definitions & Scope

Environmental Stewardship: *Preservation & Protection*

TOPIC	DEFINITION	DEFINITION SOURCE(S)	SCOPE
Air quality	*Contamination of the environment by any chemical, physical or biological agent that modifies the natural characteristics of the atmosphere. Typically involves nitrogen oxides (NOx), sulphur oxides (SOx), volatile organic compounds and particulates (PM10s and PM2.5s) and air emissions, excluding those recognised as greenhouse gases.*	FAO SAFA Guidelines (informed)	Inputs/Extraction | Production | Processing | Manufacturing | Packaging | Distribution | Retail | Consumption | End of life
Biodiversity & ecosystems	*The protection, conservation, enhancement and scientific management of biological diversity, including ecological communities and habitat types; flora and fauna species diversity; and genetic diversity within species. The integrity of ecosystem services such as pollination. Includes harnessing of traditional landowners' knowledge to improve management.*	GRI 13 (informed) FAO SAFA Guidelines (informed); Convention on Biological Diversity (informed)	Inputs/Extraction | Production | Processing | Manufacturing | Packaging | Distribution | Retail | Consumption | End of life
Effluent & waste	*The systemic and organised handling, treatment, discharge and disposal of waste and effluent flows, to minimise contamination of water or land environments during growing and manufacturing processes, while protecting public health and maximising resource recovery.*	GRI 13 (informed)	Inputs/Extraction | Production | Processing | Manufacturing | Packaging | Distribution | Retail | Consumption | End of life
Food loss & waste	*Reducing food losses along production and supply chains (including post-harvest losses), as well as reducing food waste at the retail and consumer levels. Encouraging beneficial cycling of residues and organic waste in circular systems such as composting.*	FAO SAFA Guidelines (informed)	Inputs/Extraction | Production | Processing | Manufacturing | Packaging | Distribution | Retail | Consumption | End of life
Greenhouse gas emissions	*Industry greenhouse gas emissions relating to the inputs, production processes and end use of agricultural products, such as fertiliser production and fuel consumption. Includes actions taken to reduce emissions associated with business activities (e.g. renewable energy generation, changes in feed stock).*	GRI 13 (informed)	Inputs/Extraction | Production | Processing | Manufacturing | Packaging | Distribution | Retail | Consumption | End of life

Topic Universe – Definitions & Scope

Environmental Stewardship: *Preservation & Protection*

TOPIC	DEFINITION	DEFINITION SOURCE(S)	SCOPE
Land degradation	*The long-term deterioration and decline in the quality, productivity or ecological integrity of land due to human-induced factors. For example, soil erosion, soil compaction or hardening, sediment accumulation and land subsidence.*	IPCC (informed)	Inputs/Extraction | Production | Processing | Manufacturing | Packaging | Distribution | Retail | Consumption | End of life
Natural ecosystem conversion & deforestation	*The change of an area from natural ecosystem, such as forest, to another use, such as agriculture. Conversions commonly result in severe alteration of habitats, species composition, structure, or function.*	Accountability Framework Initiative; GRI 13	Inputs/Extraction | Production | Processing | Manufacturing | Packaging | Distribution | Retail | Consumption | End of life
Nutrient flows & runoff	*Sediment, fertiliser or other nutrients that are carried off agricultural fields by surface water runoff and enter natural waterways such as lakes, rivers and aquifers. The policies and management practices to reduce or eliminate the pollutants contained in these flows.*	US EPA (informed)	Inputs/Extraction | Production | Processing | Manufacturing | Packaging | Distribution | Retail | Consumption | End of life
Water security & access	*Policies and strategies for ensuring a consistent, good quality supply of fresh water into agricultural systems, while mitigating or eliminating harm to ecosystems and the surrounding environment. Ensuring water use does not create water security issues for other stakeholders reliant on local water catchments, and respects the rights to water access of local communities.*	FAO SAFA Guidelines (informed)	Inputs/Extraction | Production | Processing | Manufacturing | Packaging | Distribution | Retail | Consumption | End of life

Topic Universe – Definitions & Scope

Environmental Stewardship: *Resources*

TOPIC	DEFINITION	DEFINITION SOURCE(S)	SCOPE
Chemical use & efficiency	*The efficient application and utilisation of chemicals to enhance crop production, improve yields, promote healthy plant and animal growth, and maximise agricultural productivity while controlling pests, diseases, and weeds, and managing soil fertility. Employing application methods and safety guidelines to minimise the potential negative impacts of chemical use on the environment, human health, and non-target organisms.*	GRI 13 (informed)	Inputs/Extraction | Production | Processing | Manufacturing | Packaging | Distribution | Retail | Consumption | End of life
Climate change mitigation solutions	*Actions undertaken within agricultural production systems that drawdown carbon into persistent storage sinks (e.g. soil carbon sequestration) as part of a transition to a low carbon economy. Actions are typically implemented by landowners but can also be in partnership with other organisations and traditional landowners.*	FAO SAFA Guidelines (informed); DAFF (informed)	Inputs/Extraction | Production | Processing | Manufacturing | Packaging | Distribution | Retail | Consumption | End of life
Energy use & efficiency	*The process of efficiently and actively managing energy resources to optimise energy consumption and improve overall energy efficiency. Involves the planning, monitoring, and controlling of energy use to reduce consumption, improve energy efficiency and achieve cost savings.*	IEA (informed)	Inputs/Extraction | Production | Processing | Manufacturing | Packaging | Distribution | Retail | Consumption | End of life
Material use & efficiency	*The process of efficiently and actively managing energy resources to optimise energy consumption and improve overall energy efficiency. Involves the planning, monitoring, and controlling of energy use to reduce consumption, improve energy efficiency and achieve cost savings. Includes innovations to make productive use of agricultural by-products, such as waste-to-energy systems.*	SASB (informed)	Inputs/Extraction | Production | Processing | Manufacturing | Packaging | Distribution | Retail | Consumption | End of life
Packaging	*The design, production, and use of packaging materials and systems that minimise environmental impacts throughout their lifecycle. Consideration of the packaging supply chain, from sourcing and manufacturing, to distribution, consumption and disposal or recycling with an aim to reduce resource consumption, minimise waste generation and promote recycling and reuse.*	SASB (informed)	Inputs/Extraction | Production | Processing | Manufacturing | Packaging | Distribution | Retail | Consumption | End of life
Soil health	*The protection and enhancement of the condition and quality of soil in order to sustain agriculture and ecosystem functioning. Soil health encompasses various physical, chemical, and biological properties including nutrient content, carbon and organic matter levels, soil structure, microbial activity, and water-holding capacity.*	GRI 13 (informed) DAFF; National Soil Strategy (informed)	Inputs/Extraction | Production | Processing | Manufacturing | Packaging | Distribution | Retail | Consumption | End of life
Water use & efficiency	*The process of efficiently and actively managing water resources to reduce and optimise consumption while maximising beneficial use.*	GRI 13	Inputs/Extraction | Production | Processing | Manufacturing | Packaging | Distribution | Retail | Consumption | End of life

Topic Universe – Definitions & Scope

People, Animals and Community: *People*

TOPIC	DEFINITION	DEFINITION SOURCE(S)	SCOPE
Diversity & inclusion	*Promoting the recognition, acceptance and celebration of the differences and unique attributes of individuals within an industry, including those from indigenous and culturally diverse backgrounds. The creation of an environment whereby everyone working in the industry feels valued, respected, and empowered, regardless of their background, identity, or characteristics.*	SASB (informed)	Inputs/Extraction | Production | Processing | Manufacturing | Packaging | Distribution | Retail | Consumption | End of life
Labour rights, practices & working conditions	*Protection and respect for workers' rights across the industry value chain. Freedom of association and recognition of the right to collective bargaining. Elimination of all forms of forced, compulsory or child labour (as common forms of 'modern slavery'). Elimination of discrimination in respect of employment and occupation. A safe and healthy working environment.*	ILO Declaration (informed)	Inputs/Extraction | Production | Processing | Manufacturing | Packaging | Distribution | Retail | Consumption | End of life
Talent attraction & retention	*The strategies and practices employed by the industry to attract skilled workers and retain them within the industry. Also includes consideration of farm management and leadership succession planning.*	SASB (informed)	Inputs/Extraction | Production | Processing | Manufacturing | Packaging | Distribution | Retail | Consumption | End of life
Training & development	*The enhancement of workers' knowledge, skills, abilities, and competencies in order to improve performance, boost productivity, support career development, maintain currency, proficiency in new technologies, and develop industry capacity and capability.*	FAO SAFA Guidelines (informed)	Inputs/Extraction | Production | Processing | Manufacturing | Packaging | Distribution | Retail | Consumption | End of life
Worker health, safety & wellbeing	*Policies and practices implemented by employers aimed at safeguarding the physical and mental health of workers, preventing accidents and injuries by creating a safe work environment, and promoting a positive and supportive work environment that enhances mental health and wellbeing.*	GRI 13; ILO	Inputs/Extraction | Production | Processing | Manufacturing | Packaging | Distribution | Retail | Consumption | End of life

Topic Universe – Definitions & Scope

People, Animals and Community: *Animals*

TOPIC	DEFINITION	DEFINITION SOURCE(S)	SCOPE
Animal care & welfare	*Providing for the physical and mental needs of farmed animals, ensuring animals are healthy, comfortable, well-nourished, able to express innate behaviour and are not suffering from pain, fear or distress.*	World Organisation for Animal Health (OIE)	Inputs/Extraction | Production | Processing | Manufacturing | Packaging | Distribution | Retail | Consumption | End of life
Animal health & handling	*The physical and psychological well-being of animals during growth, handling, transportation and processing, whereby they are healthy, and disease or injury are prevented. It includes controlling pathogens that can affect animals or humans, reducing the needs for medications and drug residues in food, while meeting consumer needs and market requirements in relation to food safety and quality.*	Australian Animal Welfare Standards and Guidelines, DAFF	Inputs/Extraction | Production | Processing | Manufacturing | Packaging | Distribution | Retail | Consumption | End of life
Antibiotic use in animal production	*The prudent use of antibiotics to promote growth or prevent, treat and control bacterial infections in livestock. Minimising overuse or misuse, to reduce potential contribution to antimicrobial resistance.*	WHO (informed) Australian government's 'National Antimicrobial Resistance Strategy - 2020 and Beyond' (informed)	Inputs/Extraction | Production | Processing | Manufacturing | Packaging | Distribution | Retail | Consumption | End of life

Topic Universe – Definitions & Scope

People, Animals and Community: *Community*

TOPIC	DEFINITION	DEFINITION SOURCE(S)	SCOPE
Community engagement & investment	*Investing in and working collaboratively, with communities to support local needs and positive impacts and outcomes, while engaging in a timely and transparent manner on topics and business activities that could result in actual or potential negative impacts on communities (including vulnerable groups) to understand their expectations and needs.*	GRI 413: Local Communities (informed)	Inputs/Extraction | Production | Processing | Manufacturing | Packaging | Distribution | Retail | Consumption | End of life
Consumer trends & behaviours	*The changing needs, dietary patterns, preferences, desires, and beliefs that influence behaviours and purchasing decisions. Consumer awareness of the real cost of production of food and fibre and willingness to pay a fair price.*	ABARES (informed)	Inputs/Extraction | Production | Processing | Manufacturing | Packaging | Distribution | Retail | Consumption | End of life
Genetically modified organisms	*Organisms whose genetic material has been altered through genetic engineering techniques and are used in the value chain. Genetic manipulation involves the introduction, deletion, or modification of specific genes to confer new traits or characteristics not naturally found in the organism such as increased resistance to pests, tolerance to herbicides, improved nutritional content, longer shelf life, or enhanced productivity.*	SASB (informed)	Inputs/Extraction | Production | Processing | Manufacturing | Packaging | Distribution | Retail | Consumption | End of life
Indigenous peoples' Rights	*The set of legal rights and normative principles that aim to protect and promote the distinct cultural heritage, historical, and land rights of indigenous communities. The recognition and safeguarding of indigenous peoples dignity, right to self-determination, and cultural integrity.*	UN Declaration on the Rights of Indigenous Peoples, 2007	Inputs/Extraction | Production | Processing | Manufacturing | Packaging | Distribution | Retail | Consumption | End of life
Land & resource rights	*The legal and customary entitlements and protections that grant individuals, communities or indigenous peoples ownership, access and control over land, communal property and natural resources.*	IFC, 2012, Performance Standards on Environmental and Social Sustainability UN Declaration on the Rights of Indigenous Peoples, 2007	Inputs/Extraction | Production | Processing | Manufacturing | Packaging | Distribution | Retail | Consumption | End of life
Noise & odour	*Local pollution or nuisances, comprising unwanted or excessive sound and unpleasant odours, that impact on quality of life, health, and overall well-being of neighbouring communities and the surrounding environment.*	FAO SAFA Guidelines (informed)	Inputs/Extraction | Production | Processing | Manufacturing | Packaging | Distribution | Retail | Consumption | End of life

Topic Universe – Definitions & Scope

Economic Resilience: *Stability & Growth*

TOPIC	DEFINITION	DEFINITION SOURCE(S)	SCOPE
Biosecurity	*The management of biological risks to the economy, environment and the community by preventing harmful organisms such as viruses, bacteria, animals, plants, pathogens and insects from entering, establishing or spreading.*	Department of Agriculture, Fisheries and Forestry (informed)	Inputs/Extraction | Production | Processing | Manufacturing | Packaging | Distribution | Retail | Consumption | End of life
Climate change adaptation & resilience	*The resilience and adaptive capacity to changes to processes, practices and structures to moderate potential damages or to benefit from the opportunities associated with physical changes in climatic weather events/patterns. The policies and practices associated with managing transition risks associated with the global transition towards lower emissions.*	UNFCCC (informed); DAFF (informed)	Inputs/Extraction | Production | Processing | Manufacturing | Packaging | Distribution | Retail | Consumption | End of life
Fair trading practices	*The ethical and equitable principles and policies, practices and behaviours that aim to demonstrate fairness, transparency, and honesty across all aspects of trade, promote trust and confidence in the market, seek to avoid anti-competitive behaviour, and foster a level playing field that prevents any unfair advantage of any industry participant.*	World Fair Trade Organization (informed)	Inputs/Extraction | Production | Processing | Manufacturing | Packaging | Distribution | Retail | Consumption | End of life
Livelihoods	*The means and activities that people undertake in order to earn a living, support their daily needs and improve their quality of life. Industry support for livelihoods which support economic development and societal wellbeing. The creation of varied employment opportunities, including in rural and regional areas.*	FAO SAFA Guidelines (informed)	Inputs/Extraction | Production | Processing | Manufacturing | Packaging | Distribution | Retail | Consumption | End of life
Research, development & extension	*Activities aimed at discovering new knowledge, transforming findings into practical applications, and disseminating innovation through knowledge sharing and education, for the purpose of advancing industry capacity and capability.*	AgriFutures (informed)	Inputs/Extraction | Production | Processing | Manufacturing | Packaging | Distribution | Retail | Consumption | End of life
Stable production	*Ensuring a steady flow of inputs to meet production needs to avoid disruptions or shortages. Ensuring consistent and reliable output levels over time, minimising fluctuations and variability in the production process in order to achieve a steady and predictable rate of production while mitigating price pressures for consumers.*	FAO SAFA Guidelines (informed)	Inputs/Extraction | Production | Processing | Manufacturing | Packaging | Distribution | Retail | Consumption | End of life
Technology & digital transformation	*Managing the shift to more digital, automated and connected agricultural technologies. These technologies include those related to precision agriculture, artificial intelligence, data capture and analysis, and automation. Maintaining farmers' "right to repair" their own equipment, managing ownership and interoperability of farm data.*	FAO SAFA Guidelines (informed)	Inputs/Extraction | Production | Processing | Manufacturing | Packaging | Distribution | Retail | Consumption | End of life

Topic Universe – Definitions & Scope

Economic Resilience: *Upholding Practices*

TOPIC	DEFINITION	DEFINITION SOURCE(S)	SCOPE
Anti-bribery & corruption	*Systems, policies and practices implemented by industry to prevent, detect, oppose or inhibit bribery, extortion and/or corruption throughout the industry value chain.*	GRI 13	Inputs/Extraction | Production | Processing | Manufacturing | Packaging | Distribution | Retail | Consumption | End of life
Biotechnology	*The application of biological processes, organisms or systems to develop or create technologies and products that enhance agricultural practices, crop production or livestock management.*	USDA (informed)	Inputs/Extraction | Production | Processing | Manufacturing | Packaging | Distribution | Retail | Consumption | End of life
Compliance & ethics	*Actions and decision-making to prevent, find and fix legal and ethical issues. Includes adherence to domestic laws, industry integrity, initiatives, and codes of conduct. These are underpinned by principles of accountability, transparency, responsibility and due diligence.*	FAO SAFA Guidelines (informed)	Inputs/Extraction | Production | Processing | Manufacturing | Packaging | Distribution | Retail | Consumption | End of life
Cybersecurity & system availability	*The practice of protecting computer systems, networks, software and data from disruption, unauthorised access, theft, or damage. Encompasses the range of measures, processes, technologies, and practices designed to safeguard digital assets and ensure the confidentiality, integrity, and availability of information.*	S&P Global Corporate Sustainability Assessment (informed); Department of Home Affairs, '2023-2030 Australian Cyber Security Strategy' (informed)	Inputs/Extraction | Production | Processing | Manufacturing | Packaging | Distribution | Retail | Consumption | End of life
Public policy & regulation	*Advocacy and engagement on public policy and regulatory issues of relevance to the sector and its industries, such as those related to environmental issues or risks and opportunities to people and communities.*	GRI 13	Inputs/Extraction | Production | Processing | Manufacturing | Packaging | Distribution | Retail | Consumption | End of life
Responsible sourcing	*The practice of conducting due diligence into potential suppliers, to ensure raw materials are produced ethically and legally. The environmental and social impacts relating to the production of those goods and services.*	SASB (informed)	Inputs/Extraction | Production | Processing | Manufacturing | Packaging | Distribution | Retail | Consumption | End of life

Topic Universe – Definitions & Scope

Economic Resilience: *Products*

TOPIC	DEFINITION	DEFINITION SOURCE(S)	SCOPE
Food security	*Ensuring physical and economic access to sufficient, safe and nutritious food that meets dietary needs and food preferences for an active and healthy life.*	FAO; Commonwealth of Australia, 2023, Australian Food Story: Feeding the Nation and Beyond	Inputs/Extraction | Production | Processing | Manufacturing | Packaging | Distribution | Retail | Consumption | End of life
Human health & nutrition	*The promotion and maintenance of physical, mental and social well-being – not merely the prevention of disease or infirmity – via the production of food that meets dietary needs. Working toward the reduction of lifestyle related diseases that occur because of poor dietary patterns.*	WHO (informed)	Inputs/Extraction | Production | Processing | Manufacturing | Packaging | Distribution | Retail | Consumption | End of life
Product provenance	*The origin, history and journey of a product from its creation or production to its current state. Involves the tracing and documenting the various stages, locations, and entities involved in the production, sourcing of materials, manufacturing processes and distribution.*	FAO SAFA Guidelines (informed)	Inputs/Extraction | Production | Processing | Manufacturing | Packaging | Distribution | Retail | Consumption | End of life
Product labelling	*The labelling and marketing of products to ensure sufficient and accurate communication of product origin and history, from the sourcing of materials to product creation and to its final state.*	FAO SAFA Guidelines (informed)	Inputs/Extraction | Production | Processing | Manufacturing | Packaging | Distribution | Retail | Consumption | End of life
Product quality	*The characteristics of agricultural products, as outlined by industry standards, regulatory requirements, consumer preferences and the expected standards for their intended purpose, whether for consumption, processing or other uses. Characteristics can include, but are not limited to, nutritional value, taste, appearance, safety, and consistency.*	FAO SAFA Guidelines (informed); SASB (informed)	Inputs/Extraction | Production | Processing | Manufacturing | Packaging | Distribution | Retail | Consumption | End of life
Product safety	*Biological and other hazards are systematically controlled during production of food and fibre products, and any contamination of products with potentially harmful substances is avoided.*	GRI 13 (informed); SASB (informed)	Inputs/Extraction | Production | Processing | Manufacturing | Packaging | Distribution | Retail | Consumption | End of life
Traceability	*The ability to trace the source, origin or production conditions of raw materials and final products, to identify and prevent negative impacts linked to industry products. Provides a foundation for a transparent supply chains, responsible sourcing, product provenance and product labelling.*	GRI 13	Inputs/Extraction | Production | Processing | Manufacturing | Packaging | Distribution | Retail | Consumption | End of life

Thank you

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