National Farmers Federation

Australian Agricultural Sustainability Framework

Australian Government

Department of Agriculture, Fisheries and Forestry

Advancing the Australian Agricultural Sustainability Framework

AASF VERSION 5

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Australian Farm Institute

August 2025

National Farmers Federation

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Australian Government

Department of Agriculture, Fisheries and Forestry

The National Farmers' Federation (NFF) gratefully acknowledges the contributions of the Australian Farm Institute.

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Project background

Funded by a grant from the Australian Department of Agriculture, Forestry and Fisheries the National Farmers' Federation (NFF) has led development of the Australian Agricultural Sustainability Framework (AASF) since inception in 2020 via a set of parallel discovery projects.

This includes the work by the Australian Farm Institute (AFI) to design and deliver a principles-based framework (the 'Framework' or AASF), which has been informed by industry consultation, an expert reference group, and an extensive review of domestic and global sustainability frameworks.

The overall AASF project has also established a Community of Practice (the 'CoP') which has helped advance the goals of the project and the broader agricultural industry, along with supporting reference material.

This report details the AFI's research for updates to the AASF from Version 4 to Version 5. It discusses the development and evidence base used to refine the Framework, resulting in AASF Version 5.

Advancing the AASF

Introduction

Australian agriculture prides itself on its clean and green image. However, in an ever-changing social and financial environment the industry is seeking ways to better communicate its sustainability. This is especially important in facilitating and communicating the industries commitment to shared goals across sustainability.

Traditionally, sustainability communication has been led by individual sectors rather than a whole-of-agriculture approach. Australian agriculture comprises diverse production systems and sectors, each with their own sustainability narratives, practices and benchmarks. While many sectors have made progress through commodity-specific sustainability frameworks, these are not always aligned in structure or language.

The Australian Agricultural Sustainability Framework (AASF) was developed to provide a unifying, voluntary, whole-of-industry framework that complements existing initiatives and fills any cross-sectoral gaps. The AASF is designed to equip Australia to speak with a more consistent voice in global sustainability forums. Domestically, utilisation of the AASF to synthesise reporting processes will reduce complexity for producers, while also helping producers identify strengths and gaps to future-proof their farm businesses.

The impetus for the Framework is both strategic and pragmatic. Globally, sustainability reporting standards are tightening across supply chains, with greater scrutiny from financiers, customers, and regulators. Domestically, agriculture must demonstrate responsible stewardship of natural resources and maintain social licence. Without a clear, consistent and industry-endorsed framework, there is a risk that the narrative of agricultural sustainability could be shaped by external forces that fail to reflect local production, regulatory and market contexts.

The AASF was designed with key objectives focused on communicating shared values:

- Defining sustainability principles relevant to Australian agriculture.
- Providing a shared structure for sustainability reporting across commodities and production systems.
- Enhancing transparency and credibility in communicating sustainability efforts to markets, investors and the broader community.
- Supporting continual improvement through a framework that evolves with science, policy and practice.

The AASF does not replace existing commodity-specific sustainability frameworks. It aims to amplify their value, offering coherence and consistency at a national level while enabling flexibility for sectors to tailor approaches to their specific contexts.

The AASF has been developed through extensive consultation and collaboration. A co-design process involving farmers, commodity groups, government, investors, supply chain actors, and subject matter experts has underpinned the work to date. Engagement has centred on identifying shared values and sustainability priorities, building trust, exploring pathways for implementation and governance, and refining Framework principles, criteria and potential indicators. This collaborative approach has been essential in building credibility and buy-in, ensuring the Framework remains grounded in practical realities.

The AASF is structured around three pillars of sustainability – environmental stewardship, people, animals and communities, and economic resilience. It articulates principles for:

- Natural capital (e.g. soil, water, biodiversity, climate)
- Human capital (e.g. health, safety, skills, equity)

- Social capital (e.g. community trust, Indigenous relationships, governance)
- Economic capital (e.g. business viability, productivity, market access, risk management)

The AASF was designed to evolve over time. Earlier versions tested the structure, language, logic and alignment with global and domestic counterparts, and Version 4 was informed by extensive feedback and policy research. Version 5 reflects further refinement based on additional stakeholder feedback, material industry priorities and international developments. It builds on earlier drafts by strengthening coherence, clarifying terminology, and enhancing the usability of the Framework for implementation.

Throughout the life of the project, the Framework development process has yielded several important insights, notably:

- There is strong industry appetite for voluntary, industry-led leadership in sustainability, but also a desire for government to recognise and support this effort.
- Language matters: clarity, simplicity and shared meaning across stakeholders is essential.
- The AASF must be flexible enough to accommodate regional and sector-specific conditions, but structured enough to support consistent communication and decision-making.
- Trust and legitimacy depend on the AASF being developed with, not imposed upon, stakeholders.

The AASF is not just a document, but a platform for action. It offers the Australian agricultural sector a credible, transparent and contextually relevant way to define and pursue sustainability outcomes. With global and domestic sustainability expectations accelerating, the AASF enables Australian agriculture to stay ahead of the curve, demonstrate continual improvement, and communicate its efforts more effectively.

AASF development

Development of the earlier versions of the AASF was grounded in a collaborative, iterative approach that brought together research, industry consultation, and global best practice.

The AASF project was initiated in 2021 following recommendations made by the AFI and the NFF in the report *Recognising On-farm Biodiversity Management* (McRobert et al., 2020). The AASF was designed and constructed by the AFI in consultation with a range of technical experts and stakeholders, under a project supported by the Australian Government and led by the NFF.

The initial construction of the AASF occurred in multiple phases: first establishing the value proposition and the role of the AASF within the sustainability communications ecosystem, then focusing on Framework design. Three formal iterations of the AASF were produced during this period, each shaped by input from an Expert Reference Group (ERG), industry stakeholders, and an extensive scan of domestic and international sustainability frameworks.

Throughout its evolution, the AASF has been iteratively refined in response to extensive feedback from commodity organisations, government stakeholders, and the broader agricultural community. The Framework's foundational architecture - comprising themes, principles, and criteria - was designed to be high-level and adaptable, enabling alignment with diverse agricultural production systems across Australia. Notably, the principles and criteria were deliberately aligned with globally recognised frameworks, but intentionally contextualised for Australia's unique agricultural systems and policy environment. Key

milestones in this process included structured peer review, gap analysis, and stakeholder workshops facilitated through the AASF Community of Practice. By the time Version 4.3[1] was released in 2023, the Framework had matured into a cohesive, industry-wide reference point that not only harmonised sustainability narratives but also identified material gaps, set the groundwork for performance reporting, and provided a national foundation for future iterations—including the development of Version 5.

From its inception, the AASF was designed not as a certification scheme, compliance program or a set of prescriptive standards, but as a high-level, principles-based, outcomes-focused framework that could serve as a 'translation layer' between on-farm practices, market expectations, and community values.

As noted by Sefton (2021), "the community sees rural industries as one—not a collection of separate industries with unique challenges." While a single commodity's lag in addressing sustainability concerns risks eroding public confidence in agriculture as a whole, the collective efforts to respond to sustainability challenges reflect positively on the industry as a whole. A shared framework strengthens collective credibility and positions agriculture to respond more effectively and transparently to community expectations.

The AASF represents far more than a structural template or terminology guide. It is a unifying vision based on an extensive participatory process, and an evolving platform for shared ambition. The AASF reflects what Australian agriculture aspires to achieve in stewarding natural resources, supporting people and communities, and securing the long-term viability of farming systems. This approach is highlighted in the AFI's previous work:

> *"By clearly communicating the sustainability status and goals of Australian agriculture, the AASF aims to not only ensure the industry is well-positioned to maintain access to competitive financial products and maintain or improve markets, but also help Australian farmers future-proof their enterprises and natural capital in a fast-evolving world."* (McRobert et al., 2022)

The AASF has been built around three themes of sustainability: environmental stewardship; people, animals and community; and economic resilience**.** Under these themes are nested non-hierarchical principles and criteria describing the Australian agricultural industry's sustainability ideal states and the conditions required to meet these states. These terms are used as per internationally-accepted definitions:

- **principles** are the fundamental statements about a desired outcome, and
- **criteria** are the conditions that need to be met in order to comply with a principle.

Each AASF principle and criterion was built to correspond with globally recognised approaches and initiatives, to ensure consistency and continuity between international communication systems for sustainability and Australian perspectives of sustainable production. As agriculture is a complex industry with many interrelated factors, many topics can overlap between themes and principles. For example, in the AASF some principles could apply to multiple categories, and some criteria can be mapped to more than one principle. This illustrates the inherent interdependencies of the many elements of sustainability in agriculture.

Ultimately, the AASF serves as the scaffold upon which diverse agricultural stakeholders can build goals, demonstrate outcomes, engender trust and forge consensus around the

[1] https://www.farminstitute.org.au/wp-content/uploads/2024/07/AASF-v4.3_JULY2024_PDF.pdf

values and practices that underpin agriculture's long-term sustainability (McRobert et al., 2023). The AASF is the starting point for communicating Australian agricultural sustainability, not the end: the Framework can never be static and must continuously improve and respond to stakeholders' expectations of meeting sustainability goals (McRobert et al., 2022).

Place in the SCA system

The sustainability standards, certification, and accreditation (SCA) landscape has become increasingly complex. This fragmented environment can obscure the identification and management of key risks and opportunities, making it difficult for stakeholders to navigate sustainability expectations effectively.

Increasing complexity in the sustainability SCA market can lead to negative outcomes for both producers and consumers of food and fibre products. The proliferation of overlapping SCA programs can place significant administrative and interpretive burdens on agricultural producers and supply chain participants, as highlighted in previous AFI research (McRobert et al., 2022). In particular, emerging market access rules tied to sustainability standards pose strategic risks for Australian agriculture, as producers face mounting pressure to demonstrate compliance with diverse, sometimes conflicting (and occasionally irrelevant) international requirements. Despite their growing prevalence, certification programs remain constrained by high monitoring and verification costs, uncertainty regarding their effectiveness in achieving sustainability outcomes, and concerns over elite capture and institutional inertia.

In this context, the AASF offers a valuable mechanism to streamline and harmonise sustainability communication. By providing a clear, consistent set of principles and criteria the AASF enhances the visibility of Australia's sustainability aspirations and actions on the international stage. Importantly, the Framework positions Australia to take a global leadership role in agricultural sustainability communication, offering a nationally coordinated platform that supports producers, engages stakeholders, and reinforces Australia's credentials in international markets.

Previous AFI research concluded that the most meaningful role for the nascent AASF was as an 'intermediary' or facilitator in the SCA system (Figure 1). As such, the updated version of the AASF seeks to continue working within this landscape, providing a clear communication tool that interfaces between agricultural producers, market actors and consumers.

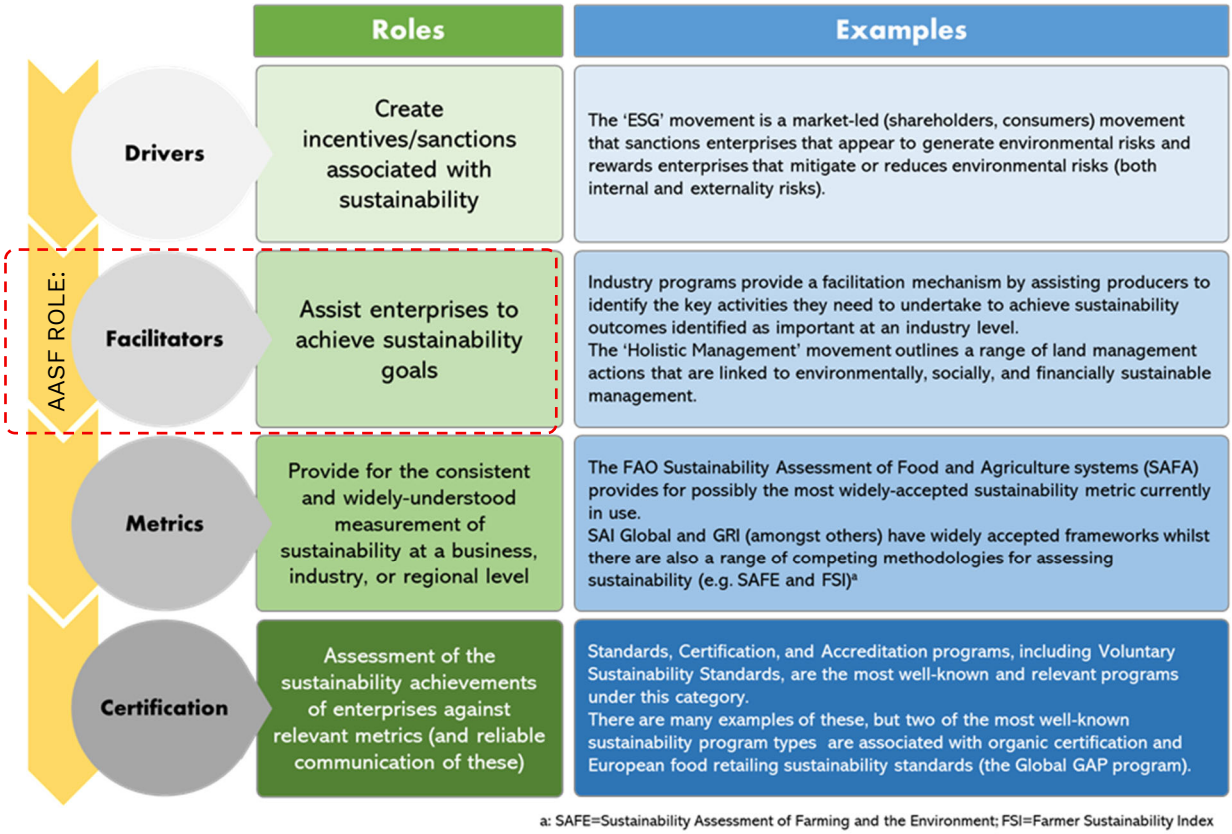

Figure 1: Components of the sustainability communication landscape. Source: (McRobert et al., 2022)

Relevance of AASF topics

A materiality assessment undertaken by ERM in 2024 supported the ongoing development of the AASF by identifying and prioritising the sustainability issues most relevant in the Australian agriculture sector. Materiality assessments examine the issues which have the potential to significantly affect farmers, produce sales and overall industry performance, reputation, regulatory compliance, or stakeholder relationships, either now or in the future. In this context, the ERM materiality assessment provided advice on which sustainability topics are most critical for future iterations of the AASF (Dayeh et al., 2024) and was a significant input in development of Version 5.

The materiality assessment aimed to ensure that the AASF focuses on the environmental, social, and governance (ESG) topics most relevant and impactful for Australian agriculture in the global economy. This involved evaluating two key dimensions:

1. Impact materiality – the effect that an organisation's activities have on the environment and society.
2. Financial materiality – the effect that ESG issues have on the organisation's financial performance and value creation.

The materiality assessment considered four key questions to recommend revisions or additions to AASF Version 4.3:

1. How well do existing principles and criteria maintain alignment with recognised international sustainability standards?

2. Are both financial and impact materiality considered in existing language?
3. Is language exclusively set in a positive framework or is there an acknowledgement of potential harms from un-sustainable practices?
4. Is there a clear and complete relationship between existing principles and criteria?

Materiality assessments typically combine expert review, stakeholder consultation, and benchmarking against global standards. For the AASF, ERM's materiality assessment incorporated all of these elements, testing whether the existing principles and criteria remained aligned with international standards, reflected stakeholder expectations, and addressed emerging risks and opportunities in Australian agriculture.

The assessment found that while some elements of the AASF would benefit from clarification, the principles and criteria generally remain materially relevant to the sustainability imperatives of the Australian agricultural sector and are aligned with relevant global sustainability standards. This review also provided additional recommendations on amendments and additions to Framework principles and criteria.

The findings of the materiality assessment were reviewed through a dedicated consultation process and informed the subsequent refinement of the AASF. Drawing on these insights, the AFI conducted a comprehensive analysis to determine the relevance and applicability of proposed changes. This process was supported by extensive desktop research to ensure that updates to the AASF from Version 4.3 to Version 5 were aligned with international sustainability frameworks and responsive to the evolving expectations of the Australian agricultural industry.

Refining the Framework

Summary

The AFI has conducted ongoing iteration and improvements of the AASF throughout its development, considering a range of internal and external inputs and feedback from industry stakeholders. Key among these were the findings of the materiality assessment and insights gathered through a consultation process coordinated by the AASF CoP. These inputs were assessed against the broader context and evolution of the AASF to determine their relevance and coherence. Complementing this, the AFI undertook extensive desktop research to ensure ongoing alignment with international sustainability standards and the expectations of the Australian agricultural sector.

Version 5 of the AASF includes **two new principles** ('ideal states') for energy use and profitability under the economic resilience theme, and **ten new criteria** to both support the new principles and to clarify the conditions described in previous versions. Revised and additional criteria notably address topics of climate risk management, First Nations inclusion, responsible agrochemical use, the digital agricultural landscape, economic viability and energy management.

The foundational indicators developed during earlier project phases are not included in AASF Version 5. During drafting and subsequent stakeholder feedback, it became clear that key stakeholders had divergent expectations regarding the purpose and application of indicators. While all parties acknowledged the importance of robust measurement, there was limited consensus on which indicators are currently useful or appropriate, largely due to variation in intended AASF use cases - such as compliance reporting, benchmarking, scenario planning, and communications.

Rather than embedding a fixed set of indicators prematurely, indicators under the AASF will benefit from related work by CSIRO on appropriate governance structures and protocols for assessing agricultural sustainability indicators as well as consideration of other international initiatives now underway; most notably, the nascent Global Farm Metric[2] indicators project and the iterative Canadian National Index on Agri-Food Performance[3]. These efforts present an opportunity to develop a clear taxonomy of indicator purposes, enabling stakeholders to determine relevance and utility based on context. This approach will help ensure that future indicators associated with the AASF are meaningful, adaptable, and fit for purpose across the diversity of Australian agriculture.

Method

The methodology used to develop AASF Version 5 was structured around four core functions: evidence integration, stakeholder engagement, Framework design, and validation. The AFI drew on existing research and project discovery, including findings from the materiality assessment and the development of foundational indicators, to align the AASF with emerging expectations, domestic contexts and international norms.

[2] Global Farm Metric | Holistic Sustainability Framework for Farming
[3] National Index on Agri-Food Performance

Stakeholder insights were gathered through extensive consultation facilitated by the NFF and supplemented by responses from DAFF and the CoP Forum. AFI assessed all inputs against the goals and history of the AASF to determine appropriate inclusions.

Drafting of Version 5 involved refining language, incorporating new principles and criteria, and ensuring coherence within the AASF taxonomy. The final stage involved consolidating feedback with a desktop review to ensure the changes are consistent with the AASF development to date and purpose as a guidance framework.

This thematic approach ensured that updates to the AASF were aligned with both Australian and international expectations, grounded in robust analysis, informed by stakeholder input, and consistent with the long-term goals of the AASF.

1. Evidence Integration

AASF Version 5 builds on a comprehensive foundation of research, including the findings of a detailed materiality assessment, the development of foundational AASF indicators, and comparative analysis of domestic and international sustainability frameworks. This work provided critical insights into evolving sustainability priorities, policy developments, and reporting trends - particularly within key export markets and multilateral forums. Each proposed change was assessed against the original intent and scope of the AASF, ensuring consistency with its role as a national communication platform rather than a compliance mechanism.

2. Stakeholder Engagement

Stakeholder input was central to the update process. The NFF facilitated an extended consultation process through the CoP, engaging a broad cross-section of private and public industry participants. This process gathered feedback on both the materiality assessment and proposed changes to the AASF. The AFI reviewed all feedback (formal and informal) through a consistent lens, considering factors such as the strength of stakeholder endorsement, alignment with past decisions, and relevance to the AASF's communication function.

3. Framework Design

Drawing on the evidence base and stakeholder input, the AFI undertook a systematic review of the AASF structure. This involved refining language for clarity and consistency, updating existing principles and criteria, and incorporating new elements identified as critical to contemporary sustainability discourse. Insights from the development of the Foundational AASF Indicators played a significant role in identifying structural gaps and ensuring alignment with international frameworks. The taxonomy of the AASF was reviewed to ensure coherence, adaptability, and logical categorisation of new content.

4. Validation

The final stage of development involved integrating all research findings, stakeholder inputs, and design refinements into a single, consolidated version of the Framework. New inclusions were supported by documented evidence of alignment with relevant standards and policy imperatives, ensuring Version 5 of the AASF is both credible and future-focused.

Details of changes from AASF Version 4.3 to Version 5 are outlined in Table 1.

Table 1: Changes from AASF Version 4.3 to Version 5

Taxonomy	AASF V5 Text	Changes from V4.3 to V5	Rationale
Principle 1	GHG EMISSIONS REDUCTION: P1. Net anthropogenic greenhouse gas emissions are limited to mitigate climate change	Added 'GHG' to headline; added 'greenhouse gas' between 'anthropogenic' and 'emissions'; changed 'minimise' to 'mitigate'	Adding 'greenhouse gas' ensures that the scope of this principle is focused on emissions that cause climate change. Using 'mitigate' rather than 'minimise' aligns more closely with language used for climate change in other related frameworks.
Criterion 5	C5. Activities which generate air pollutants are conducted within regulatory guidelines and minimised where possible	Criterion is added to encompass all air pollutants	This addition brings the suite of criteria under this principle closer to its intention and expands its scope outside of particulate matter.
Criterion 7	C7. Land under productive agricultural management delivers beneficial ecosystem services	'Environmental services' changed to 'ecosystem services'	This change aligns more closely with current internationally-recognised language for this topic.
Criterion 9	C9. Agricultural activities support a diverse range of beneficial flora and fauna species	'Farm activities' changed to 'agricultural activities'	This language is more inclusive of activities across the whole sector.
Criterion 10	C10. Agricultural-related ecosystems are functioning and thriving	'Farm-related' changed to 'agricultural-related'	This language is more inclusive of activities across the whole sector.
Criterion 11	C11. Use of fertilisers and pesticides are optimised for agricultural production, human, animal and environmental health	New criterion	Introduction of a chemical use criterion aligns with international and domestic demands, market expectations and related frameworks.
Criterion 17	C17. Food loss and waste are avoided or minimised at all stages of the agricultural supply chain	New criterion	Calling out food waste specifically aligns the AASF with global frameworks such as GRI and the WBA Food and Agriculture Benchmark. Food waste discussions have matured since the early formation of the AASF.

Criterion 19	C19. Food produced by agricultural activities is healthy and nutritional	Changed 'industry' to 'agricultural activities'	Language changed to clarify intended scope.
Criterion 20	C20. Industry participants practice good antimicrobial stewardship that optimises human, animal and environmental health	Changed 'producers' to 'industry participants'	This expansion of the criterion to a broader category of participants more accurately reflects the WHO policy on antimicrobial resistance.
Principle 10	FAIR LIVELIHOODS: P10. Fair access to a decent livelihood is provided for all people working in the industry	'within the industry' changed to 'for all people working in the industry'	This language is more inclusive of all employees.
Criterion 24	C24. Participants are provided a living wage which meets workplace law requirements	Added 'which meets workplace law requirements'	This addition ties living wage language to workplace law rather than leaving the concept in the abstract.
Criterion 25	C25. Participants are provided a rewarding, enriching work environment	Split this element from the AASF V4.3 text of criterion 23 (formerly 'Participants are provided both a living wage and a rewarding, enriching work environment'	This separation clarifies that the concepts of a living wage and a rewarding work environment are not conflated.
Principle 11	RESPECTFUL & INCLUSIVE INDUSTRY: P11. Rights are respected and discrimination is not tolerated in an inclusive industry.	Added 'respectful and' to headline	Adding the element of 'respect' more fully captures the intention of the Principle.
Criterion 32	C32. Indigenous cultures, and knowledges are recognised, respected, valued and actively supported	Pluralised 'culture'	This recognises that indigenous Australians are not a homogenous group.

Criterion 33	C33. Agricultural activities are conducted with respect for the legal and customary entitlements that grant individuals, communities or Indigenous people's ownership, access and control over land, communal property and natural resources	New criterion	This addition aligns with international frameworks (such as FAO SAFA, GRI, and the WBA 2023 Food & Agriculture Benchmark) as well as maturing social expectations.
Criterion 36	C36. Industry participants have systems in place to monitor risk, prevent and mitigate adverse impacts from biosecurity threats	Added 'participants'	Language change reflects that participants implement these systems within the agricultural industry.
Principle 15	P15 RISK MANAGEMENT: Resilience is protected and enhanced by assessment, mitigation and management of risks	Changed 'mitigation' to "management" in principle headline	'Management' includes broader consideration of potential opportunity, replacing the narrower 'mitigation'.
Criterion 41	C41. The workforce shift to more digital, automated and connected agricultural technologies is supported.	New criterion	This addition adds digital and technology considerations of sustainability.
Criterion 42	C42. Systems are in place to monitor risk, prevent and mitigate adverse impacts from threats in the digital environment such as cybersecurity and data protection	New criterion	This addition adds digital and technology considerations of sustainability.
Criterion 43	C43. Risks and opportunities presented by climate change are monitored, and plans for adaptation and resilience are regularly assessed.	New criterion	This addition points to the specific and unique risks posed to agricultural businesses by climate change under the principle of risk management.

Principle 18	PROFITABILITY: P18. The economic viability of agricultural businesses is protected and enhanced	New Principle	This principle adds in the specific element of economic viability to the AASF.
Criterion 50	C50. Agricultural businesses are profitable across varying operating conditions	New criterion	While this criterion is new, it is adapted from the previous version C22: 'profitability and competitiveness are encouraged', which had two distinct concepts within it.
Criterion 51	C51. Competition and fair trade in agricultural markets is promoted to benefit consumers, businesses, and the community	New criterion	While this criterion is new, it is adapted from the previous version C22: 'profitability and competitiveness are encouraged', which had two distinct concepts within it.
Principle 19	ENERGY USE: P19. Energy is used responsibly and efficiently in agricultural activities	New Principle	This principle adds the specific element of energy management to the 'ideal states' articulated by the AASF. While included in the criteria of the previous version, this change reflects stakeholder expectations regarding visibility of the issue.
Criterion 52	C52. Use of renewable sources of energy, such as electricity and fuels, is maximised wherever possible across the agricultural industry	New criterion	Renewable energy use and uptake are pillars of sustainable energy management in agriculture.
Criterion 53	C53. Energy efficiency is improved by optimising energy consumption and generation	New criterion	Energy efficiency is essential to agricultural sustainability.

Evidence base for new AASF principles

AASF Version 5 introduces two new sustainability principles for **profitability (P18)** and **energy management (P19)**. These principles were added to reflect evolving expectations from stakeholders, domestic frameworks, and international standards. These additions strengthen the economic resilience theme of the AASF, recognising that both financial viability and energy responsibility are critical components of long-term agricultural sustainability.

As noted, inclusion of these principles was guided by a thorough materiality assessment and validated through stakeholder consultation. Feedback consistently highlighted that profitability and energy use are not merely operational concerns, but are core to the agricultural sustainability narrative. These elements are essential to maintaining productive enterprises, ensuring intergenerational viability, and responding to global market demands.

Both principles were incorporated as standalone elements rather than being subsumed into existing categories such as risk management or climate mitigation. Profitability and responsible energy use each warrant independent recognition as distinct enablers of sustainability. Their inclusion strengthens the AASF's alignment with leading domestic and global frameworks, including the UN Sustainable Development Goals (SDGs), the Global Farm Metric, and numerous Australian commodity-specific sustainability frameworks.

An outline of the language, sources, and reasoning behind the development of each principle, as well as the criteria that support them, follows.

CATEGORY: Profitable Enterprise

Principle 18: The economic viability of agricultural businesses is protected and enhanced

- Criterion 50: Agricultural businesses are profitable across varying operating conditions
- Criterion 51: Competition and fair trade in agricultural markets is promoted to benefit consumers, businesses, and the community

The language underpinning the Principle 18 and its associated criteria is informed by recommendations from the materiality assessment conducted by ERM. In that assessment, ERM proposed the addition of a new, combined principle encompassing both profitability and risk management. While these concepts are undoubtedly connected, their treatment as a single compound principle does not align with the structural logic of the AASF.

Each principle within the AASF is designed to represent a single, ideal state of sustainability. Combining two distinct concepts into a single principle would risk diluting their individual significance and complicating the AASF's clarity and usability. This issue arose in several recommendations from ERM where multiple concepts were grouped under one heading, which is inconsistent with the AASF's established taxonomy.

AASF Version 5 retains the existing risk mitigation principle - Principle 15 – which addresses agricultural business risk management and includes new criteria on technology and climate risks. A new profitability principle has been introduced to explicitly acknowledge the foundational role that economic viability plays in Australian agricultural sustainability. This decision reflects both the importance of profitability in its own right and the need to preserve the internal coherence of the framework.

The inclusion of a distinct profitability principle is also strongly supported by alignment with leading domestic and international sustainability frameworks. Notable examples

include the Australian-Grown Horticulture Sustainability Framework, the FAO's Sustainability Assessment of Food and Agriculture systems (SAFA), and the United Nations Sustainable Development Goals (UN SDGs). These sources reinforce the view that economic sustainability, as expressed through profitability, should be recognised as a core principle rather than subsumed into related but separate domains such as risk.

Derivatives of the profitability principle, or concepts closely aligned with it, are found across multiple sustainability standards and schemes (Table 2), further validating its inclusion as a discrete element in the AASF.

Table 2: Examples of alignment for AASF Principle 18 (Profitability)

AASF Principle 18: The economic viability of agricultural businesses is protected and enhanced		
Organisation / Framework	**Item type(s)**	**Example**
UN SDGs (UN Department of Economic and Social Affairs, 2025)	Goal 8 Target 8.2	Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all Diversify, innovate and upgrade for economic productivity
Australian Competition and Consumer Commission (ACCC) (ACCC, 2025)	Organisational Role	The ACCC promotes competition and fair trade in markets to benefit consumers, businesses, and the community.
Global Farm Metric (Global Farm Metric, 2025)	Outcome	ECONOMICS: Outcome: Farms are economically viable. They have sufficient funds and diverse income streams to withstand shocks and stresses and are able to make investments to deliver farm sustainability outcomes. Farms actively contribute towards a thriving local economy and strong market connections that meet the needs of the farm.
Australian Sheep Sustainability Framework (Meat and Livestock Australia, 2024)	Priority 8.1	Maintain or increase industry profitability
Australian Dairy Sustainability Framework (Dairy Australia, 2024)	Goal 1	Increase the competitiveness and profitability of the Australian Dairy Industry
Australian-Grown Horticulture Sustainability Framework (Hort Innovation, 2021)	Goal P.1	Vibrant, productive, profitable enterprises
Australian Beef Sustainability Framework (Red Meat Advisory Council, 2024)	Goal 4	The value of Australian beef industry products and services doubles from 2020 levels by 2030 resulting in a profitable and resilient industry

CATEGORY: Energy management

Principle 19: Energy is used responsibly and efficiently in agricultural activities

- Criterion 52: Use of renewable sources of energy, such as electricity and fuels, is maximised wherever possible across the agricultural industry
- Criterion 53: Energy efficiency is improved by optimising energy consumption and generation

The Energy Management Principle introduced in AASF Version 5 reflects a growing recognition that the responsible and efficient use of energy is fundamental to sustainable agricultural production. This principle (along with its supporting criteria focused on maximising the use of renewable energy sources and improving energy efficiency) was proposed in the materiality assessment conducted by ERM and received strong support through stakeholder consultation.

Energy use intersects with both environmental and economic sustainability. It influences the sector's carbon footprint, operating costs, and exposure to market and policy shifts associated with climate and energy transitions. By including energy management as a dedicated principle, the AASF ensures that agricultural enterprises are encouraged to consider both how energy is sourced and how efficiently it is used in production systems.

The principle was intentionally framed as a distinct sustainability element rather than a subcomponent of broader environmental management or emissions criteria. This decision reinforces the importance of energy as a discrete area of performance, while also supporting alignment with national and international sustainability frameworks.

The AASF's energy-related language and intent are consistent with major global initiatives, including UN Sustainable Development Goal 7, which calls for increased renewable energy use and improved energy efficiency by 2030. Similar commitments and metrics are found in frameworks such as the Natural Capital Measurement Catalogue, multiple sector-specific standards from the Sustainability Accounting Standards Board (SASB), and several Australian commodity-specific sustainability frameworks (Table 3).

The inclusion of the Energy Management Principle in AASF Version 5 also aligns with the objectives outlined in the Australian Sustainable Finance Taxonomy (ASFT), particularly concerning climate change mitigation and the transition to renewable energy sources (Australian Sustainable Finance Institute, 2025). The ASFT emphasises the importance of energy efficiency and the use of renewable energy across key sectors, including agriculture, to support Australia's net-zero emissions target. This alignment ensures that agricultural activities recognized under the AASF are also considered favourable within the ASFT framework, facilitating access to sustainable finance opportunities and enhancing the sector's contribution to Australia's broader sustainability goals.

These sources provide a strong foundation for the inclusion of energy management in the AASF and affirm its relevance across diverse production systems. By explicitly addressing energy in Version 5, the AASF supports the agricultural sector's efforts to contribute meaningfully to national climate and energy goals while improving enterprise-level performance.

Table 3: Examples of alignment for AASF Principle 19 (Energy management)

AASF Principle 19: Energy is used responsibly and efficiently in agricultural activities		
Organisation / Framework	**Item type(s)**	**Example**
UN SDGs (UN Department of Economic and Social Affairs, 2025)	Goal 7 Target 7.2 Target 7.3	Ensure access to affordable, reliable, sustainable and modern energy for all By 2030, increase substantially the share of renewable energy in the global energy mix By 2030, double the global rate of improvement in energy efficiency
Natural Capital Measurement Catalogue (Climateworks Centre, 2025)	Mineral and energy resources: impact metric	Amount of non-renewable fuels used, by type
Sustainability Accounting Standards Board (SASB) Agricultural Products Standard (SASB, 2017)	Accounting metrics	Operational energy consumed, percentage grid electricity, percentage renewable Fleet fuel consumed, percentage renewable
Sustainability Accounting Standards Board (SASB) Processed Food Standard (SASB, 2017)	Accounting metrics	Operational energy consumed, percentage grid electricity, percentage renewable Fleet fuel consumed, percentage renewable
Sustainability Accounting Standards Board (SASB) Meat, Poultry, and Dairy Standard (SASB, 2017)	Accounting metric	Total energy consumed, percentage grid electricity, percentage renewable
Australian Beef Sustainability Framework (Red Meat Advisory Council, 2024)	Indicator	Percentage of producers who generate and/or use renewable energy
Australian-Grown Horticulture Sustainability Framework (Hort Innovation, 2021)	Sustainability Goal	Energy is used efficiently, with an increased proportion from renewable sources
Australian Pork Sustainability Framework (Australian Pork Limited, 2021)	Target	60% of production using waste recycling and renewable energy technology
Australian Sustainable Finance Taxonomy V1 (Australian Sustainable Finance Institute, 2025)	Activity 1.7 Activity 1.8	Renewable energy use, production, and storage solutions for on-site applications Purchase of electric, energy-efficient, and renewable energy-compatible vehicles and equipment for on-site use

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19 principles and 53 interrelated Criteria under 14 categories and three overarching themes

	CATEGORY	***PRINCIPLE***	*CRITERIA*
ENVIRONMENTAL STEWARDSHIP	GREENHOUSE GASES & AIR	**P1. Net anthropogenic* GHG emissions are limited to mitigate climate change**	C1. GHG emissions are reduced throughout production lifecycle C2. Carbon emissions are sequestered wherever possible throughout production lifecycle C3. Where necessary (if C1 & C2 are impractical), GHG emissions are offset throughout lifecycle by purchasing recognised credits or participating in recognised projects
		P2. Adverse impacts to air quality are avoided or minimised	C4. Plant, equipment and machinery are appropriately maintained and operated to maximise efficiency C5. Activities which generate air pollutants are conducted within regulatory guidelines and minimised where possible
	SOIL & LANDSCAPES	**P3. Soil health and functionality are protected and enhanced**	C6. Soils are managed to provide ecosystem services, including sustainable agricultural production
		P4. Landscape degradation is avoided or minimised	C7. Land under productive agricultural management delivers beneficial ecosystem services C8. Natural waterways are preserved and improved
	BIODIVERSITY	**P5. Biodiverse ecological communities are protected and enhanced**	C9. Agricultural activities support a diverse range of beneficial flora and fauna species C10. Agricultural-related ecosystems are functioning and thriving C11. Use of fertilisers and pesticides is optimised for agricultural production, human, animal and environmental health
	WATER	**P6. Water resources are used responsibly and equitably**	C12. Water is used efficiently in agricultural systems C13. Adverse impacts to surface water and groundwater quality are prevented
	MATERIALS & RESOURCES	**P7. Finite resources are safeguarded in circular economic systems**	C14. The use of inputs and resources that cannot be reused or recycled is minimised C15. Renewable sources of inputs are prioritised C16. Residues, by-products and waste are reused or recycled C17. Food loss and waste are avoided or minimised at all stages of the agricultural supply chain

	CATEGORY	***PRINCIPLE***	*CRITERIA*
PEOPLE, ANIMALS & COMMUNITY	HUMAN HEALTH, SAFETY & WELLBEING	**P8. Agricultural outputs are safe and beneficial**	C18. Food and fibre is produced, packaged and distributed to world-leading standards of safety C19. Food produced by agricultural activities is healthy and nutritional C20. Industry participants practice good antimicrobial stewardship that optimises human, animal and environmental health
		P9. Safe working environments are provided for all people working in the industry	C21. Occupational health and safety are upheld in the working environment C22. Labour rights are respected and compliance with relevant legislation is demonstrated C23. Physical health and mental wellbeing are valued and actively supported
	LIVELIHOODS	**P10. Fair access to a decent livelihood is provided for all people working in the industry**	C24. Participants are provided a living wage which meets workplace law requirements C25: Participants are provided a rewarding, enriching work environment
	RIGHTS, EQUITY & DIVERSITY	**P11. Rights are respected**	C26. Human rights are unequivocally respected C27. Workplace diversity is valued and actively supported
	ANIMAL WELLBEING	**P12. Farmed animals are given the best care for whole of life**	C28. Best practice on-farm husbandry is demonstrated C29. Safe transportation of animals is demonstrated C30. Humane end of life for farmed animals is ensured
	SOCIAL CONTRIBUTION	**P13. Society benefits from the agricultural industry's positive contribution**	C31. Agricultural activities contribute to local community economic growth and social capital C32. Indigenous cultures and knowledges are recognised, respected, valued and actively supported C33. Agricultural activities respect the legal and customary entitlements that grant individuals, communities or Indigenous people's ownership, access and control over land, communal property and natural resources C34. Community trust in the industry is upheld

	CATEGORY	***PRINCIPLE***	*CRITERIA*
ECONOMIC RESILIENCE	BIOSECURITY AND RESILIENCE	**P14. Biosecurity threats are assessed, mitigated and effectively managed in systems of continuous improvement**	C35. Farms have systems in place to monitor risk, prevent and mitigate adverse impacts from biosecurity threats C36. Industry participants have systems in place to monitor risk, prevent and mitigate adverse impacts from biosecurity threats C37. Government has systems in place to monitor risk, prevent and mitigate adverse impacts from biosecurity threats
		P15. Resilience is protected and enhanced by assessment, mitigation and management of risks	C38. Government and industry develop and extend overarching national scenario planning for industry risks C39. Industry participants develop, implement and regularly review risk management plans C40. Innovation and infrastructure are well-resourced and supported by government and industry, and can be equitably accessed by industry participants C41. The workforce shift to more digital, automated and connected agricultural technologies is supported. C42. Systems are in place to monitor risk, prevent and mitigate adverse impacts from threats in the digital environment such as cybersecurity and data protection C43. Risks and opportunities presented by climate change and develop, implement and regularly review plans for adaptation and resilience are regularly assessed.
	FAIR TRADING	**P16. Industry participants behave ethically and lawfully**	C44. Compliance with applicable laws and regulations is demonstrated C45. Fair access to participate equally in markets is ensured C46. Zero tolerance for bribery or corruption is demonstrated
		P17. Supply chain accountability ensures a level playing field and the elimination of unconscionable conduct	C47. Product provenance information is readily available via robust traceability C48. Information asymmetry in the supply chain is eliminated where perverse outcomes are a risk C49. Sustainability accounting is harmonised to the greatest extent possible to ensure fair and just assessments of baselines and progress across the industry
	PROFITABLE ENTERPRISE	**P18. The economic viability of agricultural businesses is protected and enhanced**	C50. Agricultural businesses are profitable across varying operating conditions C51. Competition and fair trade in agricultural markets is promoted to benefit consumers, businesses, and the community
	ENERGY MANAGEMENT	**P19. Energy is used responsibly and efficiently in agricultural activities**	C52. Use of renewable sources of energy, such as electricity and fuels, is maximised wherever possible across the agricultural industry. C53. Energy efficiency is improved by optimising energy consumption and generation.

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Appendix: AASF Version 5 as a list

AASF Principles (desired outcome or ideal state)
P1. Net anthropogenic[4] GHG emissions are limited to mitigate climate change
P2. Adverse impacts to air quality are avoided or minimised
P3. Soil health and functionality are protected and enhanced
P4. Landscape degradation is avoided or minimised
P5. Biodiverse ecological communities are protected and enhanced
P6. Water resources are used responsibly and equitably
P7. Finite resources are safeguarded in circular economic systems
P8. Agricultural outputs are safe and beneficial
P9. Safe working environments are provided for employees
P10. Fair access to a decent livelihood is provided for all people working in the industry
P11. Rights are respected
P12. Farmed animals are given the best care for whole of life
P13. Society benefits from the agricultural industry's positive contribution
P14. Biosecurity threats are assessed, mitigated and effectively managed in systems of continuous improvement
P15. Resilience is protected and enhanced by assessment, mitigation and management of risks
P16. Industry participants behave ethically and lawfully
P17. Supply chain accountability ensures a level playing field and the elimination of unconscionable conduct
P18. The economic viability of agricultural businesses is protected and enhanced
P19. Energy is used responsibly and efficiently in agricultural activities

AASF Criteria (conditions to be met to comply with a principle
C1. GHG emissions are reduced throughout lifecycle
C2. Carbon emissions are sequestered wherever possible throughout production lifecycle
C3. Where necessary (i.e. if C1 & C2 are impractical), GHG emissions are offset throughout lifecycle by purchasing recognised credits or participating in recognised projects
C4. Plant, equipment and machinery are appropriately maintained and operated to maximise efficiency
C5. Activities which generate air pollutants are conducted within regulatory guidelines and minimised where possible
C6. Soils are managed to provide ecosystem services, including sustainable agricultural production
C7. Land under productive agricultural management delivers beneficial ecosystem services
C8. Natural waterways are preserved and improved
C9. Agricultural activities support a diverse range of beneficial flora and fauna species
C10. Agricultural-related ecosystems are functioning and thriving
C11. Use of fertilisers and pesticides are optimised for agricultural production, human, animal and environmental health
C12. Water is used efficiently in agricultural systems
C13. Adverse impacts to surface water and groundwater quality are prevented
C14. The use of inputs and resources that cannot be reused or recycled is minimised
C15. Renewable sources of inputs are prioritised
C16. Residues, by-products and waste are reused or recycled
C17. Food loss and waste are avoided or minimised at all stages of the agricultural supply chain

[4] 'Anthropogenic' meaning that which originates from human activity – e.g., emissions from farmed livestock are under human management

C18. Food and fibre is produced, packaged and distributed to world-leading standards of safety
C19. Food produced by agricultural activities is healthy and nutritional
C20. Industry participants practice good antimicrobial stewardship that optimises human animal and environmental health
C21. Occupational health and safety are upheld in the working environment
C22. Labour rights are respected and compliance with relevant legislation is demonstrated
C23. Physical health and mental wellbeing are valued and actively supported
C24. Participants are provided a living wage which meets workplace law requirements
C25. Participants are provided a rewarding, enriching work environment
C26. Human rights are respected unequivocally
C27. Workplace diversity is valued and actively supported
C28. Best practice on-farm husbandry is demonstrated
C29. Safe transportation of animals is demonstrated
C30. Humane end of life for farmed animals is ensured
C31. Industry contributes to local community economic growth and social capital
C32. Indigenous cultures and knowledges are recognised, respected, valued and actively supported
C33. Agricultural activities respect the legal and customary entitlements that grant individuals, communities or Indigenous people's ownership, access and control over land, communal property and natural resources
C34. Community trust in the industry is upheld
C35. Farms have systems in place to monitor risk, prevent and mitigate adverse impacts from biosecurity threats
C36. Industry participants have systems in place to monitor risk, prevent and mitigate adverse impacts from biosecurity threats
C37. Government has systems in place to monitor risk, prevent and mitigate adverse impacts from biosecurity threats
C38. Government and industry develop and extend overarching national scenario planning for industry risks
C39. Industry participants develop, implement and regularly review risk management plans
C40. Innovation and infrastructure are well-resourced and supported by government and industry, and can be equitably accessed by industry participants
C41. The workforce shift to more digital, automated and connected agricultural technologies is supported
C42. Systems are in place to monitor risk, prevent and mitigate adverse impacts from threats in the digital environment such as cybersecurity and data protection
C43. Risks and opportunities presented by climate change and develop, implement and regularly review plans for adaptation and resilience are regularly assessed
C44. Compliance with applicable laws and regulations is demonstrated
C45. Fair access to participate equally in markets is ensured
C46. Zero tolerance for bribery or corruption is demonstrated
C47. Product provenance information is readily available (i.e. traceability)
C48. Information asymmetry in the supply chain is eliminated where perverse outcomes are a risk
C49. Sustainability accounting is harmonised to ensure fair and just assessments of baselines and progress across the industry
C50. Agricultural businesses are profitable across varying operating conditions
C51. Competition and fair trade in agricultural markets is promoted to benefit consumers, businesses, and the community
C52. Use of renewable sources of energy, such as electricity and fuels, is maximised wherever possible across the agricultural industry
C53. Energy efficiency is improved by optimising energy consumption and generation

AASF Themes:

- Environmental stewardship
- People, animals and community
- Economic resilience

AASF Categories:

- Greenhouse gases & air
- Soil & landscapes
- Biodiversity
- Water
- Materials & resources
- Human health, safety & wellbeing
- Livelihoods
- Rights, equity & diversity
- Animal wellbeing
- Social contribution
- Biosecurity & resilience
- Fair trading
- Profitable enterprise
- Energy management

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