LEADING HARVEST

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Leading Harvest Australia
Farmland Management Standard
Est. 2023 Guidebook

Preferred citation:

Acknowledgements

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SECTION 1

INTRODUCTION

Introduction

The Leading Harvest Australia Farmland Management Standard Est. 2022 (LH Australia Farmland Management Standard Est. 2023) Guidebook is intended to help Standard Users and Certification Bodies understand, interpret, and implement the LH Australia Farmland Management Standard Est. 2023. It does not replace any portion of the LH Australia Farmland Management Standard Est. 2023 and is for guidance purposes only to support the use of LH Australia Farmland Management Standard Est. 2023 by Standard users. It explains why the LH Standard Australia Est. 2022 was created and then provides detailed information for implementing the LH Australia Farmland Management Standard Est. 2023. The guidebook also provides additional information that may help Standard users make management decisions to meet LH Australia Farmland Management Standard Est. 2023 and systematically identify gaps in their management system that might lead to non-conformance with the LH Australia Farmland Management Standard Est. 2023. It is not a list of tasks, another management system, or an official interpretation of LH Australia Farmland Management Standard Est. 2023. It may be used by Standard users to help them improve their existing system of management.

[1] All terms in italics are defined in the glossary.

SECTION 2

BACKGROUND

Background

What is Driving the Demand for Farmland Sustainability Assurance?

The LH Australia Farmland Management Standard Est. 2023 was created from the Leading Harvest US Standard, in response to the overlapping demands of key stakeholders, such as supply chains, retailers, farmland investors, and consumers. Stakeholder interest in sustainable agriculture is growing rapidly with increasing attention to how agricultural systems affect and interact with the environment and society.[1] Agriculture plays a global economic, social, and environmental role: it employs over one billion people, produces over $1.3 trillion of food each year, and it occupies 50 percent of the world's habitable land, impacting climate, biodiversity, and water supplies.[2] As a result, businesses in the agricultural sector are taking action:

Farm and agricultural businesses are increasingly applying sustainability strategies to advance resilience and efficiency, better retain talent, and reduce regulatory burdens[3] while addressing growing demands for assurance from supply chains.

Supply chains and retailers are responding to the growing interest of consumers in sustainable, healthy food by increasingly sourcing products, which provide the assurance of sustainability.

Investors and capital providers increasingly expect assurance that their capital will not only generate sustainable financial returns, but also contribute to a more sustainable society.[4]

The LH Australia Farmland Management Standard Est. 2023 addresses these diverse needs for assurance by providing a framework to help family farmers and   farm managers methodically tackle agricultural sustainability and make verifiable claims to the market while strengthening credibility, reputation, and social license of businesses and investors across the value chain.[5] Use of the LH Australia Farmland Management Standard Est. 2023 may help Standard users address requirements of other agricultural sustainability programs such as OECD-FAO Guidance for Responsible Agricultural Supply Chains[6] and UN Principles for Responsible Investment for Farmland.[7]

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[1] Levin, J., and M. Stevenson. 2012. The 2050 criteria: Guide to responsible investment in agricultural, forest, and seafood commodities. Published by World Wildlife Fund, Washington, DC. Power, A. 2010. Ecosystem services and agriculture: tradeoffs and synergies. Phil. Trans. R. Soc. B 365: 2959-2971.

[2] World Bank. 2017. Agriculture and Food. World Bank, Washington, DC.

[3] Whelan, T. and C. Fink. 2016. The Comprehensive Business Case for Sustainability. Harvard Business Review, 21.

[4] Fink, L. A. 2020. Fundamental Reshaping of Finance. BlackRock, Inc.

[5] Moore, S., Cubbage, F., Eicheldinger, C. 2012. Impacts of Forest Stewardship Council (FSC) and Sustainable Forestry Initiative (SFI) Forest Certification in North America. Journal of Forestry 110(2): 79-88. Levin, J., and M. Stevenson. 2012. The 2050 criteria: Guide to responsible investment in agricultural, forest, and seafood commodities. WWF, Washington, DC; Molenaar, J. and J. Kessler. 2017. The business benefits of using sustain- ability standards: A meta-review. Commissioned by ISEAL Alliance. Aidenvironment, Amsterdam, The Netherlands.

[6] OECD/FAO. 2018. OECD-FAO Pilot project on the implementation of the OECD-FAO Guidance for Responsible Agricultural Supply Chains: Baseline Report, OECD Publishing, Paris. OECD/FAO. 2016. OECD-FAO Guidance for Responsible Agricultural Supply Chains, OECD Publishing, Paris.

[7] UNEP Finance Initiative and UN Global Compact. 2016. Responsible Investment In Farmland Report 2014-2015. UNEP Finance Initiative.

Why a New Agricultural Sustainability Program?

The LH Australia Farmland Management Standard Est. 2023 was created because a scalable, sector-wide response to the demand for sustainability assurance in agriculture did not exist. Although there are globally over 400 other farm sustainability standards, most are either: 1) limited in scope to specific crops and regions; or 2) require specific practices that were not always adaptable to the broad diversity of agricultural systems in Australia.[8]

The LH Australia Farmland Management Standard Est. 2023 has been designed to be universally applied across all crops and regions of Australia. and address the full spectrum of environmental, social, and economic concerns. Furthermore, it is 'outcomes-based", which allows Standard users, family farmers and farm managers to flexibly apply the LH Australia Farmland Management Standard Est. 2023 to their particular operating context while still achieving widely desired, long-term sustainability outcomes. Independent, third-party auditing plays a key role by verifying and assuring that those outcomes are being met across a great diversity of farms.

How was LH Australia Farmland Management Standard Est. 2023 developed?

The LH Australia Farmland Management Standard Est. 2023 was adapted from the LH Standard Est. 2020 drafted for U.S.. The Leading Harvest U.S. Standard Est. 2020 was reviewed by agricultural and environmental technical experts from Pinion Advisory, a leading Australian agricultural consultancy with expertise across sectors, regions and technical areas. The revised document was then reviewed by Leading Harvest U.S. to ensure consistency with the U.S. standard. A pilot with leading agricultural businesses across a range of industries and regions was also conducted to ensure that the standard requirements were relevant to, and meaningful for, an Australian context.

The LH US Standard Est. 2020 was drafted by a team of farm managers, environmental organisations, asset managers, and agricultural sustainability experts, and was modelled after widely adopted U.S. sustainable forestry certification standards. Other leading agricultural standards and programs were also consulted to prepare the draft LH Standard Est. 2020, including (but not limited to): FAO Sustainability Assessment of Food and Agricultural Systems Guidelines, GLOBALG.A.P., National Sustainable Agriculture Standard, LEO-4000, Rainforest Alliance Sustainable Agriculture Network, Round Table on Responsible Soy, Sustainable Agriculture Initiative Platform, Unilever Sustainable Agriculture Code, and UN Principles for Responsible Investment.

The draft LH US Standard Est. 2022 was also field tested and reviewed by stakeholders, representing farmers, environmental groups, farm labour, agricultural scientists, rural communities, and agricultural services. Results of the field test and stakeholder feedback were used to revise the draft LH Standard 2020 so that it would be scalable and practical, responsive to stakeholders' concerns and interests, and credible.

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[8] International Trade Centre. 2017. Standard Map: Your roadmap to a sustainable future. Geneva, Switzerland.

SECTION 3

SCOPE OF THE LH
AUSTRALIA FARMLAND
MANAGEMENT STANDARD
EST. 2023

SCOPE OF THE LH AUSTRALIA FARMLAND MANAGEMENT STANDARD EST. 2023

What is the LH Australia Farmland Management Standard Est. 2023?

The LH Australia Farmland Management Standard Est. 2023 is a third-party audited certification standard for providing assurance for the sustainability of agricultural land management. Agricultural business managers and owners can use LH Australia Farmland Management Standard Est. 2023 to become certified and certify agricultural land under their management to support verifiable sustainability claims to the market regarding their management.

The LH Australia Farmland Management Standard Est. 2023 is outcome-based using qualitative indicators that serve as farm management unit goals. It does not prescribe activities necessary to achieve conformance with the LH Australia Standard 2022 but allows farmers and farm managers the flexibility to apply practices best suited for their operation to achieve sustainable outcomes. This approach allows for adaptation across crops and agricultural regions, recognising that even a single crop can require unique management strategies in different regions. This approach is possible because it includes a credible system to ensure that desired outcomes are being met. Third-party auditing by independent and accredited certification bodies credibly assesses whether the practices applied are sufficient to conform to an outcome described by an indicator.

Finally, the LH Australia Farmland Management Standard Est. 2023 requires farmers to continually improve their operations, year over year, following changes and updates in agricultural best management practices. The Standard itself is revised on a regular basis through a public process to ensure it reflects the latest insights regarding agricultural sustainability. Collectively these processes will be part of the continuous improvement of the LH Australia Farmland Management Standard Est. 2023 and agricultural land management by Standard users.

What types of land does the LH Australia Farmland Management Standard Est. 2023 address?

The LH Australia Farmland Management Standard Est. 2023 applies to all farmland across all crops and regions of Australia, excluding livestock (mixed business or extensive livestock businesses will be able to be certified under the LH Australia Pastureland Standard Est. 2023 that is currently being developed). Farmland includes cropland, rangeland, grassland, pastureland, native vegetation and wetlands that are part of a farm or farm management unit. This can include land that is not used to grow crops or support agriculture directly. Agricultural land is land that is used directly or indirectly in the production of agricultural products, including cropland, grassland, rangeland, pasture, roads, crop buffer areas, farm building areas, and other land on, which agricultural products or livestock are produced, and resource concerns may be addressed. Agricultural land is a sub-set of farmland. It is an area of farmland where a Standard user focusses their attention on crop production. Cropland includes land primarily for the direct production of agricultural products for harvest, including, but not limited to, land in row crops or close-grown crops, forage crops, horticultural crops, orchards, vineyards, and other lands used to produce crops. Hence, farmland includes cropland, agricultural land, and incidental land not used in production that is part of a farm or farm management unit.

Animal agriculture management cannot be assessed using the LH Australia Farmland Management Standard Est. 2023 except for land that is cropland, grassland, rangeland, pasture and other land on, which agricultural products or livestock are produced. The LH Australia Pastureland Standard Est. 2023 is being developed to allow mixed farms and extensive livestock enterprises to participate in Leading Harvest. Forest and wood-fiber management on land such as natural forests, plantation forests, short rotation woody crops, and/or agro-forestry cannot be assessed using the LH Australia Farmland Management Standard Est. 2023.

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[1] A public claim is one that is made to the general public such as in a publicly posted sustainability report, press release, blog post, company letterhead, business cards, vehicle signage, etc.

What topics does the LH Australia Farmland Management Standard Est. 2023 address?

The LH Australia Farmland Management Standard Est. 2023 addresses thirteen topics that are core to farmland sustainability. These were selected after a review of many other agricultural standards and because they reflect major stakeholder concerns and address major risk and materiality issues:

1. Sustainable Agriculture Management
2. Soil Health and Conservation
3. Water Resources
4. Crop Protection
5. Energy Use, Air Quality and Climate Change
6. Waste and Material Management
7. Conservation of Biodiversity
8. Protection of Special Sites
9. Local Communities
10. Personnel and Farm Labour
11. Legal and Regulatory Compliance
12. Management Review and Continual Improvement
13. Lessee-operated Operations

Who can implement the LH Australia Farmland Management Standard Est. 2023?

Standard users of the LH Australia Farmland Management Standard Est. 2023 can be enterprises such as:

- family farmers including small and large family farms;
- organisations that own or have management authority for farmland including farmland asset managers and contract farm managers;
- agricultural product processors with farmer suppliers who elect to participate as a group;
- farmers' cooperative where co-op members elect to participate as a group.

Are large and small farms held to the same requirements by third-party auditors?

The LH Australia Farmland Management Standard Est. 2023 can be applied to farm management units of any size. All Standard users are held to the same LH Australia Farmland Management Standard Est. 2023, but expectation of conformance evidence may vary with the scope and scale of the Standard user as the size of their farm management unit influences the risk level of adverse impacts posed to society and the environment. Large operations, whether they are defined by size of operation, number of employees, or annual revenue, have both the potential for greater adverse impact, and potentially greater resources to act proactively to achieve positive impacts and mitigate potential adverse impacts than small operations.[9] Hence large operations may be expected to exhibit more activity (e.g., practices, training, documentation, monitoring) under the LH Australia Farmland Management Standard Est. 2023 to demonstrate effective management of greater risk of adverse impacts than small operations.

[9] OECD/FAO (2016), OECD-FAO Guidance for Responsible Agricultural Supply Chains, OECD Publishing, Paris.

SECTION 4

IMPLEMENTATION OF THE LH AUSTRALIA FARMLAND MANAGEMENT STANDARD EST. 2023 — GENERAL INFORMATION

SECTION 4
IMPLEMENTATION

This section identifies general information about the LH Australia Farmland Management Standard Est. 2023, which is useful for understanding the LH Australia Farmland Management Standard Est. 2023.

LH Australia Farmland Management Standard Est. 2023 Structure

The LH Australia Farmland Management Standard Est. 2023 is hierarchically structured, starting with Principles at the highest level and ending with Indicators at the finest level (Table 1). The Principles provide the overall vision for the LH Australia Standard 2022. Standard users are assessed by certification bodies for conformance with the Objectives, Performance Measures, and Indicators.

The order of Objectives, Performance Measures, and Indicators provide increasing directive detail about conformance to the LH Australia Farmland Management Standard Est. 2023. At the finest level, conformance to Indicators can provide evidence that the Objectives are being achieved by the Standard user. Indicators are contextual—that is, they only apply to farms where relevant. For example, Indicator 3.1.3 (Water Conservation) would not apply if water is not being extracted for agricultural operations such as irrigation. To determine conformance of a farmland unit to the standard, a certification body will review the conformance evidence for each indicator and assess whether the conformance evidence is sufficient to address the requirements described by the indicator with consideration of local conditions and guided by agricultural best management practices.

Table 1. The hierarchical format of the LH Australia Standard 2022, including definitions and examples of Principles, Objectives, Performance Measures, Indicators, and conformance evidence.

DEFINITIONS EXAMPLES	LH AUSTRALIA FARMLAND MANAGEMENT STANDARD EST. 2023
A Principle is a statement that expresses the vision and direction for sustainable agriculture with respect to one or more environmental, social, or economic topics.	Principle 2. Soil Productivity and Health To maintain or enhance long-term soil health and productivity and to protect soil from degradation.
An Objective is a fundamental goal of sustainable agriculture with respect to one or more of the Principles.	Objective 2. Soil Health and Conservation To maintain or enhance soil health to optimise crop yield and protect long-term agricultural soil productivity.
A Performance Measure is a statement that identifies key criterion or criteria for assessing performance and compliance of a farm operation with an Objective.	Performance Measure 2.1 Soil Health: *Standard users* manage nutrients and apply practices to achieve *crop yield* and maintain or enhance *soil health* of *cropland*.
An Indicator is a specific metric that provides qualitative or quantitative information about performance of a farm operation that is integral to assessing conformance to a standard's Performance Measures.	Indicator 2.1.1 Soil Quality: Application of *agricultural best management practices* (e.g., tillage systems, *cover cropping*, addition of *soil amendments*) to maintain or enhance *soil fertility* and physical and biological characteristics of soil.

Conformance evidence is specific information used to assess whether farm operations have met Indicator requirements, including activities, documents, statements, measurements, other verifiable information, and/or observations of behavior, practices, technology, and conditions.

Some examples of optional conformance evidence: A description of tillage systems and cover cropping practices, including goals; observations from field visits; invoices for cover cropping and/or soil amendment spreading contracts; soil sampling results; nutrient management plans; records of workshop attendance or trainings related to soil health and quality

Conformance versus Compliance

The LH Australia Farmland Management Standard Est. 2023 is a conformance-based standard. Each Indicator specifies outcomes to which *Standard users* must conform. This means *Standard users* have the freedom to achieve Indicator outcomes by any means consistent with the norms established by the LH Australia Farmland Management Standard Est. 2023.

Conformance Evidence

Certification bodies review conformance evidence during a verification audit to evaluate whether a *Standard user* is in conformance with an Indicator. *Standard users* have the discretion to manage their operations however they choose as long as their activities produce the conformance evidence necessary to demonstrate conformance with an Indicator. A certification body takes into ac- count local conditions to determine whether a farm management unit is in conformance with the LH Australia Farmland Management Standard Est. 2023.

There are five common types of activities that serve as conformance evidence: *policies and practices, communication and training, documentation, monitoring,* and *key performance indicators (KPIs)*. They often overlap. For example, a nutrient management plan is *documentation* evidence that may describe field practices, which are *policy/practice* evidence and may be shared among employees and service providers, which is *communication* evidence. *Standard users* present their choice of conformance evidence. Some indicators may indicate a type of evidence to be included (e.g., evidence in the form of written documentation, broadly agricultural practices, training exercises, or monitoring practices). Collectively a farm management system may include a selection of these five types of evidence to convey to a certification body that an effective farm management system is in place to achieve conformance with the LH Australia Farmland Management Standard Est. 2023.

1. Policies/Practices are farm management and agricultural policies and practices (including evidence of the establishment of roles and responsibilities) that provide information about a *Standard user's* stewardship activities and performance.[10] Evidence typically may include a description by a *Standard user*, their staff, and/or lessees; field activities observed in the field or demonstrated (e.g., presence of cover crop stubble in the spring indicates over-winter cover cropping practices); or documentation of activities (e.g., vendor invoices for fertiliser or pesticide applications or CAPEX activities).

2. Communication/Training are internal and/or external communication activities (including emails and memos) and materials addressing farm stewardship and employee training to enhance stewardship activities. Evidence typically may include a description by a *Standard user* or their staff and/or lessee(s), electronic or printed documents, and signage, employee training sign-in sheets.

   Training evidence can also include resumes and C.V.s, training certificates, professional licenses and certificates, and post-secondary training culminating in diplomas (e.g. Bachelor, Masters., and Ph.D. programs), and/or other information, which demonstrates *Standard user* staff and/or contractors have the expertise to achieve the outcome described in an Indicator.

[10] The LH Australia Farmland Management Standard Est. 2023 Objectives and Performance Measures can serve in effect as organisational policies for Program Users who have adopted the LH Australia Farmland Management Standard Est. 2023.

3. Documentation is relevant printed and/or electronic documents describing farm stewardship activities. Evidence typically may include formal written policies, emails, standard operating procedures (SOPs), vendor proposals and invoices for installation, goods, and/or other services, monitoring and key performance indicator data, documentation of key stewardship activities, plans (e.g., CAPEX proposals, nutrient management plans), permitting documents (e.g., permits and permit applications submitted to local, state, and/or federal agencies required for farm management activities), lease or other agreements, GIS data layers, and documents establishing participation in other voluntary sustainability programs and certifications,[20] training documents, job descriptions describing responsibilities and roles, and corrective actions (including memos) to remedy non-conformance with organisational or LH Australia Farmland Management Standard Est. 2023 objectives.

4. Monitoring includes audits or routine reviews of practices and procedures, training, input use, and resource use (e.g., water, fertilisers, crop protectants) and impacts. Evidence may include printed or electronic data forms or data, field or property survey forms, performance reviews, vendor invoices, and crop and input records.

5. Key Performance Indicators (KPIs) are quantitative and qualitative indicators of resource use and activity impacts used to evaluate progress toward a goal or objective. They may include proxy KPIs. For example, annual energy costs might be reviewed annually as a proxy for tracking annual energy use.

Enrollment in Other Regulatory and Voluntary Programs as Conformance Evidence

Standard users may use activities used to meet their existing reporting requirements as evidence to achieve conformance with the LH Australia Farmland Management Standard Est. 2023. This may include reporting requirements for legal compliance (e.g., national approvals, state permits, etc.) and for relevant voluntary sustainability programs (e.g., research, local conservation programs, supply chain surveys, industry programs, etc.). Enrollment paperwork, activities, reviews, trainings, and checklists are useful conformance evidence.

Understanding and Interpreting Indicators

Understanding key terms and phrases can help *Standard users* interpret each Indicator. Most indicators for Objectives 2 through 8 apply to field operations (on-farm objectives) and may be directed at one of three land types *farmland,* (e.g., agricultural land and cropland), *agricultural land* (e.g., land that is used directly or indirectly in the production of *agricultural products*), and *cropland* (e.g., land used primarily for the direct production of agricultural products for harvest). Understanding the relevant land types of an Indicator will help a *Standard user* understand whether an Indicator applies only to *cropland*, *agricultural lands*, or to the entire farm unit.

Key phrases can also help a *Standard user* apply the LH Australia Farmland Management Standard Est. 2023. Table 2 identifies the key phrases that *Standard users* can use to identify the type of evidence needed to achieve conformance.

[20] This can include enrollment national, state, and local voluntary programs, participation in supply chain programs aimed at improving agricultural stewardship, partnerships with co-ops and other organisations, including local and regional conservation organisations, and crop certification programs (e.g., GLOBALG.A.P., national or regional crop certification programs).

Table 2. Key phrases for interpreting the LH Australia Farmland Management Standard Est. 2023 Indicators.

INDICATOR WORDING STARTS WITH	A DESCRIPTION OF CONFORMANCE EVIDENCE NEEDED
A *process* for.	A process is *a purposeful series of practices or routines (formal or informal)*. Having a process requires thoughtfulness that exceeds ad hoc application of activities. *Standard users* will have to demonstrate that they have a process with a routine and purpose. The order and application of specific activities can vary from year to year or from application to application. Conformance does not require a SOP document or a policy document.
A *program* to/for	A program is an organised system or set of activities. A program requires a systematic level of activity and requires being more methodical and more conformance evidence than a process. Written plans often can be used to describe an organised system or program for nutrient or water management. Standard users will have to present evidence that describes an organised system or set of activities
A written	Standard users will have to present written policies, statements, or agreements often with evidence of supporting actions to ensure staff understand and are able to implement written policy or agreements. These Indicators may include requirements unique to the LH Australia Farmland Management Standard Est. 2023
Application of *agricultural best management practices* to	Standard users will have to present evidence for the application of practices. Agricultural best management practices are practices, or a combination of practices deemed to be best practice for meeting productivity, economic, social and environmental (sustainability) outcomes. These recommended practices are typically developed by any combination of industry Research and Development Corporations (RDCs), state government agencies, research institutions (such as Universities and CSIRO), Natural Resource or Catchment Management Authorities, and farming systems groups. Evidence of practices may be visually seen directly or indirectly (e.g., completed practices) in the field, described by field staff, and/or supported by documentation or evidence of training and/or communication. Indicators with this language are easier to address than Indicators requiring a process
Demonstration	*Standard users* demonstrate how they have achieved the outcome described by the Indicator, which may include a commitment or action showing due diligence
Application of	Standard users provide evidence of application of practices and/or technologies. These may be described by field staff, supported by invoices or CAPEX documents for equipment or seen in the field.
Management of	Standard users must demonstrate sufficient management of topics described in the indicator to achieve the outcome specified by the Indicator. Standard users may be asked to demonstrate consistency with agricultural best management practices
Monitoring of	Standard users must show evidence of monitoring activities sufficient to achieve the outcome described in the Indicator. These activities might include monitoring training and documentation and printed or electronic monitoring data
Participation individually or collaboratively	Standard users must show evidence of participation or membership in external efforts and awareness and understanding among appropriate staff.
Training	Standard users must demonstrate evidence of specific training identified by the Indicator. Evidence might include a description of training events, attendance records, and training content (printed and/or electronic materials and documents)
Use of	Standard users must demonstrate evidence of activities or equipment described in the indicator. Standard users may define the scope and what is sufficient to achieve outcome described in the Indicator, but it must be credible to the certification body

SECTION 4
IMPLEMENTATION

More on Agricultural Best Management Practices

Agricultural best management practices (agricultural BMPs) are a common reference point for Objectives 2 through 5. There is also guidance information useful for addressing Objective 6 (Waste and Material Management), Objective 7 (Conservation of Biodiversity) and Objective 10 (Personnel and Farm Labour). *Standard users* must only demonstrate the application of applicable agricultural BMPs for the region of the operation and those relevant to the crop(s) under consideration.

SECTION 5

IMPLEMENTATION OF THE LH AUSTRALIA FARMLAND MANAGEMENT STANDARD EST. 2023 INDICATOR CONFORMANCE

SECTION 5
INDICATOR CONFORMANCE
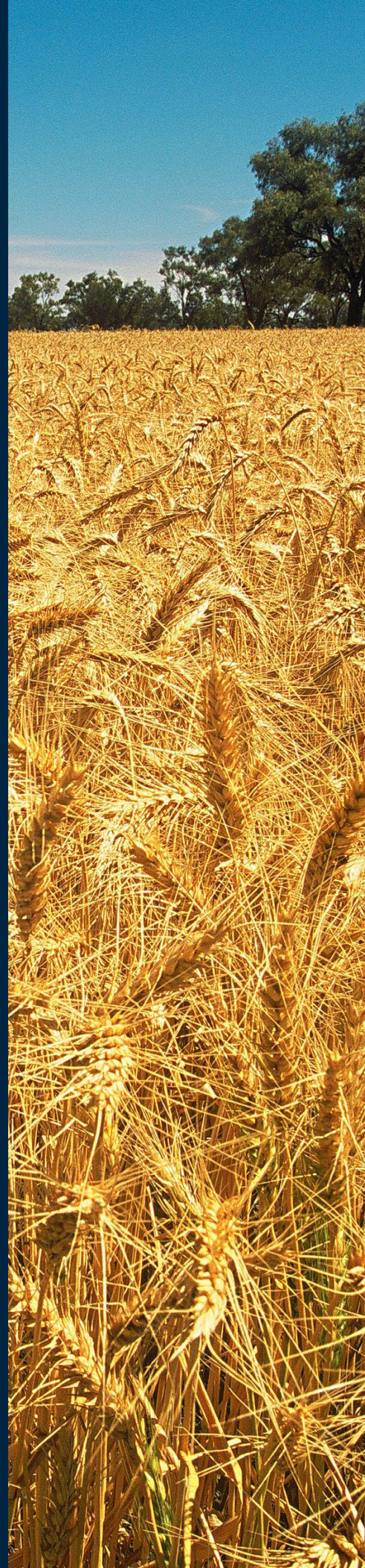
This section provides information about each Objective, and guidance regarding conformance evidence for each Indicator. It does not replace any portion of the LH Australia Farmland Management Standard Est. 2023 and is for guidance purposes only to support the use of LH Australia Farmland Management Standard Est. 2023 by Standard users. Key words are italicised and defined in the glossary.

An Indicator may have one of three scopes: the management system of the Standard user, farmland enrolled by the Standard user, and farmland lessees (where applicable) on farmland enrolled by the Standard users. Objectives 1 and 7 through 13 (the off-farm objectives) apply to the management system of the Standard users that is used to manage enrolled farmland, except for Indicators 7.2.3, 7.3.1 and 9.4.1. Objectives 2 through 6 and Indicators 7.2.3, 7.3.1 and 9.4.1 (the on-farm objectives) apply to the management of all farmland enrolled under the LH Australia Farmland Management Standard Est. 2023. Indicator 13.1.4 applies to all farmland lessees of leased farmland enrolled under the LH Australia Farmland Management Standard Est. 2023. The activities of farmland lessees may contribute to the performance of the Standard user for Objectives 2 through 6 and Indicators 7.2.3, 7.3.1 and 9.4.1, but the Standard user is responsible for conformance to these Objectives, Performance Measures and Indicators.

This section provides guidance for conforming with each Indicator so that Standard users can better understand and interpret each Indicator. It identifies key sustainability consideration that help define each Indicator and the conformance evidence necessary to achieve conformance to each Indicator. It also provides conformance evidence examples for each Indicator to illustrate a broad range of relevant and discretionary conformance evidence.

Objective 1. Sustainable Agriculture Management:

To practice sustainable agricultural stewardship to improve crop production and ensure long-term agricultural sustainability.

Background: Sustainable agriculture requires taking a long-term and large-scale management view of agricultural sustainability and consider the sustainability of an operation in the context of its region and crop sector. This includes careful consideration and planning for financial, market, social, and environmental conditions on and off the farm. The purpose of this Objective is to ensure *Standard users* apply a long-term and large-scale management view to help ensure the sustainability of their operation(s).

Performance Measure 1.1 Sustainable Agricultural Stewardship: *Standard users* shall demonstrate their commitment to sustainable agricultural stewardship of *farmland*.

Indicator 1.1.1 *Farmland* Stewardship Commitment: A written commitment statement and list of goals that describes the sustainable agricultural stewardship of *farmland*.

Guidance: A written sustainability commitment statement and list of stewardship goals helps *Standard users* achieve agricultural sustainability by communicating their purpose and direction to their employees, customers, vendors, and other stakeholders and ensuring consistent strategic direction and operations. It also provides a clear vision to employees necessary to jointly achieve stewardship goals.

Conformance Evidence Examples: A written commitment statement and list of goals, which may be supported by conformance evidence such as: a description of how statement and goals are used to guide agricultural stewardship; demonstration that staff understand and implement the commitment statement and stewardship goals; onboard training about commitment statement and goals; and a description of policies and/or practices used to achieve goals.

Indicator 1.1.2 *Farmland* Stewardship: Demonstration of the management of major synergies and tradeoffs between the economic, social, and environmental dimensions of sustainable agricultural stewardship of *farmland* while ensuring long-term profitability and sustainability.

Guidance: Sustainable agriculture requires managing for the triple bottom-line (e.g., the economic, social and environmental dimensions which are elaborated by the Indicators in the LH Australia Farmland Management Standard Est. 2023) and their complex synergies and tradeoffs. Successful management of triple bottom-line leads to long-term profitability and sustainability. This Indicator requires *Standard users* to describe the integrated management of all Indicators.

The conformance evidence for Indicator 1.2.1 (Critical External Factors) may also be applicable to this Indicator, especially for *Standard users* with a one farm.

Conformance Evidence Examples: A description of relevant economic, social and environmental factors in area(s) of operation, how synergies and tradeoffs are managed, and long-term profitability and sustainability are achieved which may be supported by: related planning documents (e.g., business plans, loan documents, cost share agreements, or acquisition due diligence documents); employee sustainability training; and use of LH Australia Farmland Management Standard Est. 2023 program.

Indicator 1.1.3 *Farmland* Conservation: *Conservation* of *prime farmland* to avoid its conversion to nonagricultural uses when conversion would adversely impact regional agriculture.

Guidance: *Prime farmland* has the best combination of physical and chemical characteristics for producing *agricultural products*. Its conservation can help sustain regional agriculture. Conversion of *farmland* may be acceptable when: it is not prime farmland; in areas where agriculture is insignificant or would not be impacted by *farmland* loss; or small areas are converted to support agriculture (e.g., building of equipment sheds and silos). Indicator 1.1.3 ensures *Standard users* support the sustainability of regional agriculture by avoiding impactful *prime farmland* conversion and manage reputation.

Conformance Evidence Examples: A *description* of activities and criteria used to avoid conversion of *prime farmland*; a description of *farmland* conversion practices; knowledge of regional status of *prime farmland*, regional agriculture, and its *conservation* by *Standard user*; a *farmland* conversion policy; employees knowledge of *Standard user's* conversion policy; and mapping of ownership and *prime farmland agricultural land*.

Performance Measure 1.2 Critical External Factors: *Standard users* shall manage for potential impacts of *critical external factors* to help ensure long-term profitability and sustainability of each farm or farm management unit by the Standard user.

Indicator 1.2.1 Adapting to *Critical External Factors*: A *process* for periodically identifying *critical external factors* and adapting to their impacts to ensure the long-term profitability and sustainability of agricultural production of a farm or farm management unit.

Guidance: *Critical external factors* are any off-farm factors that are materially and substantively relevant to the viability, long-term profitability, and sustainability of agricultural production of a management unit or farm. They may include economic factors (e.g., regional market demand and opportunities and regulatory changes), environmental factors (e.g., regional availability of water and other inputs), and social factors (e.g., social license). They can pose business risk or lost strategic opportunities if ignored.

Indicator 1.2.1 ensures that *Standard users* have considered and adapted to *critical external factors* for each farm.

The conformance evidence of three other Indicators may be used as evidence for this Indicator. Indicator 1.1.2 (*Farmland Stewardship*) may have a broader spatial scope (e.g., apply across farm management units for multi-farm *Standard users*) and management scope (e.g., all aspects of sustainability and their synergies and tradeoffs), but can include consideration of *critical external factors*. Indicator 12.1.3 (Agricultural Innovation) requires identification of innovative strategic opportunities, which might also be *critical external factors*. Indicator 12.1.1 (Performance Re view) requires annual reviews in which *critical external factors* might incidentally be identified.

Conformance Evidence Examples: A description of a purposeful, formal or informal set of practices for periodically identifying *critical external factors* and adapting to their impacts, which may be supported by: a description of how *critical external factors* are identified and adapted to for each operational unit while ensuring long-term profitability and sustainability; a description of *critical external factors*; and documents that identify and plan adaptations or adjustments to *critical external factors* (e.g., due diligence acquisition documents, loan agreements, CAPEX plans, marketing plans, and business plans).

Objective 2. Soil Health and Conservation

To maintain or enhance *soil health* to optimise crop yield and protect long-term *soil productivity* on *agricultural lands*.

Background: *Soil health* is the capacity of soil to function as a vital living ecosystem that sustains crops, soil organisms, and humans. Healthy soils are the foundation of sustainable agriculture. Their maintenance includes consideration of the physical, chemical, and biological characteristics of soil. They sustain optimal crop yields for people and animals and protect water quality and environmental health.

Performance Measure 2.1 Soil Health: *Standard users* manage nutrients and apply practices to achieve *crop* yield and maintain or enhance *soil health* of *cropland*.

Indicator 2.1.1 Soil Quality: Application of *agricultural best management practices* (e.g., tillage systems, *cover cropping*, addition of *soil amendments*) to maintain or enhance *soil fertility* and physical and biological characteristics of soil.

Guidance: Maintaining or enhancing *soil health* includes maintaining or enhancing its chemical, physical, and biological characteristics and is the foundation to sustainable agriculture. It starts with the application of *agricultural best management practices (agricultural BMPs)* as needed to maintain or enhance soil health.

Conformance Evidence Examples: A description and/or infield demonstration of the application of *agricultural BMPs* that maintain or enhance soil fertility and physical and biological characteristics of soil, which may be supported by conformance evidence such as: annual planning documents and vendor invoices; soil testing data for chemical, physical, and/or biological characteristics of the soil; soil maps; and relevant credentials of farmer(s), farm manager(s), and/or vendors.

Indicator 2.1.2 Soil Health Monitoring: Monitoring of soil health characteristics, including nutrients from different sources necessary to maintain or enhance appropriate nutrient balance and soil health.

Guidance: Soil health monitoring ensures that soil health is routinely assessed so that a farmer can take action to ensure its maintenance if necessary. Monitoring soil health includes tracking nutrients from different sources necessary to maintain or enhance appropriate nutrient balance and soil health. The monitoring system should consider monitoring of other soil health characteristics, but these will vary depending on the cropping system, soil type, and guidance from soil health advisors.

Conformance Evidence Examples: A description of *soil health* monitoring system, which may be supported by conformance evidence such as: soil test data for nutrients and other chemical, physical, and/or biological characteristics of the soil; nutrient inputs and losses, and annual crop nutrient requirements; crop consultant nutrient recommendations; soil maps; credentials of farmer(s), farm manager(s), and/or vendors.

Indicator 2.1.3 *Nutrient Management Program*: An up-to-date *nutrient management program* that efficiently uses nutrient inputs and nutrients in the soil and *crops* to create optimum conditions for crop production and nutrient utilisation and avoids nutrient loss to water and air.

Guidance: A *nutrient management program* is a necessary, organised system or set of activities to help ensure that nutrients are efficiently applied and optimally managed to achieve desired crop productivity and avoid nutrient loss to the air and water. For some farms, it may be well described by a nutrient management plan. The conformance evidence for Indicators 2.1.1 (Soil Quality), 2.1.2 (Soil Monitoring), and 2.1.4 (Crop Residues) provide the base evidence for this Indicator.

Conformance Evidence Examples: A description and/or infield demonstration of a nutrient management program that efficiently use nutrients to create optimum conditions for crop production and minimise nutrient loss to air and water, which may be supported by: a nutrient management plan; plant tissue data; soil test records; crop consultant nutrient recommendations; credentials of farmer(s), farm manager(s), crop consultant(s), and/or vendor nutrient applicators.

Indicator 2.1.4 *Crop Residues*: Application of *agricultural best management practices* to use *crop residues* to maintain or improve *soil health* and long-term *soil productivity* where *appropriate*.

Guidance: *Crop residues* are materials from growing crops left on the soil surface or partially incorporated into the soil. They may include: stalks, stubble, leaves, chipped branches and vines, woody biomass from orchard and vineyard redevelopment, and seed pods. They contribute to *soil health* and *soil productivity* by: increasing soil organic matter and nutrients; controlling soil erosion; improving soil moisture retention, structure, and biodiversity; and improving water filtration. *Crop residue* retention may not be *appropriate* when it is expensive, supports pests, or reduces crop productivity. The conformance evidence of infield practices for Indicator 6.2.2 (Resource Recovery of Agricultural Waste) may also be applicable to this Indicator.

Conformance Evidence Examples: A description and/or demonstration of infield application of *agricultural BMPs* used to manage *crop residues*, which may include: evidence in the field of crop residues; crop consultant nutrient recommendations, which address nutrients in crop residues; credentials of farmer(s), farm manager(s), crop consultant(s); cover crop invoices.

Performance Measure 2.2 Soil Conservation: Standard users shall implement agricultural practices to minimise soil erosion and avoid degradation of agricultural lands.

Indicator 2.2.1 Cropland Soil Management: Application of agricultural best management practices to minimise soil erosion and physical damage (e.g., compaction) of cropland and restore soil health where appropriate.

Guidance: Soil conservation is the prevention of the loss of topsoil from erosion and of fertility from over usage or accumulation of adverse compounds. Soil erosion and damage can reduce crop yields by 50%. Hence agricultural soil conservation BMPs, which minimise soil erosion, maintain fertility, and restore soil can be applied to cropland as needed to ensure long-term crop productivity and sustainability. This Indicator focuses on cropland at the field level while Indicator 2.2.2 focuses on all *agricultural lands* on a farm. The conformance evidence for Indicators 2.1.1 (Soil Quality) and 2.1.4 (*Crop Residues*) may also be applicable to this Indicator.

Conformance Evidence Examples: A description and/or infield demonstration of *agricultural BMPs* used to minimise soil erosion and damage to cropland and practices used to restore soil health, which may be supported by: crop consultant recommendations for cropping and infield structural practices, which control soil erosion; credentials of farmer(s), farm manager(s), crop consultant(s); vendor invoices used for sub-soiling and other practices to alleviate soil compaction and damage; environment management plans for erodible soils.

Indicator 2.2.2 Degradation of *Agricultural Lands*: A *process* to avoid the widespread loss of *agricultural lands* to *soil mismanagement* (e.g., failure to prevent extensive soil erosion, acidification, salinisation and accumulation of other adverse compounds).

Guidance: Systematic application of soil conservation principles across a farm operation(s) can prevent loss of agricultural lands from widespread soil degradation.

This Indicator focuses on all *agricultural lands* across the farm while Indicator 2.2.1 focusses on cropland at the field level. The conformance evidence for Indicator 2.2.1 (Cropland Soil Management) may also be applicable to this Indicator.

Conformance Evidence Examples: A description and/or infield demonstration of formal or informal set of routines used to avoid soil mismanagement (e.g., extensive soil erosion, acidification, salinisation and accumulation of other adverse compounds), which could be supported by: management and field practices to prevent soil mismanagement; field observations that suggests a lack of soil mismanagement; crop consultant recommendations for practices, which mitigate soil mismanagement; credentials of farmer(s), farm manager(s), crop consultant(s); soil erosion plans; soil test data for pH, salinisation and/or other adverse compounds.

Objective 3. Water Resources

To protect water resources and manage water for efficient *agricultural productivity*.

Background: In 2020/21 1.9 million hectares of Australian agricultural land was irrigated using 7.8 million megalitres of water. 22% of irrigation water is sourced from *groundwater*, while 72% is sourced from *surface waters* (rivers, lakes, irrigation channels or pipelines). There are significant concerns regarding over-allocation of irrigation water in Australia, and practices to optimise water use efficiency are critical to sustainability. Agriculture can also be an important source of sediment, nutrients, pesticides, salts, and pathogens in *surface water* and *groundwater*. Water use and impacts can pose strategic and reputational risk for agriculture in many regions. Hence, conservation of water resources is a key issue in agricultural sustainability.

Performance Measure 3.1. Water Use: *Standard users* shall conserve water resources and manage water use to avoid long-term depletion and maintain *crop productivity*.

Indicator 3.1.1 Agricultural Water Withdrawal: A *process* for avoiding the depletion of available *surface water* and *groundwater* resources beyond the recharge capacity of the watershed or catchment and by direct withdrawal where *surface water* or *groundwater depletion* is an issue as determined by a State based *water regulatory agency*.

Guidance: Depletion of groundwater and surface water has a become a critical risk to regional agricultural and municipal sustainability in some areas. *State regulatory agencies* govern water withdrawals and use to remedy this issue. Well-established irrigation practices can be used by farmers to avoid contributing to surface water and/or groundwater depletion. **This Indicator only applies when Standard users use surface water and/or groundwater to irrigate crops.** Conformance evidence for Indicators 3.1.2 (Regional Water Conservation) and 3.1.3 (Water Conservation) may be applicable to this Indicator 3.1.1 when it addresses surface water and/or groundwater withdrawal and conservation.

Conformance Evidence Examples: A description of a set of informal or formal practices or routines for avoiding the depletion of surface and/or groundwater resources beyond the recharge capacity and/or allocation limits and conditions granted by state-based water authorities, which may be supported by: documentation for surface and/or groundwater removals; water meter readings; acquisition due diligence reports on water resources; water entitlement permits and reports; participation in water regulatory agency workshops.

Indicator 3.1.2 Regional Water Conservation: Participation individually or collaboratively in regional water conservation programs where appropriate to help foster responsible use and conservation of groundwater and surface water used for agriculture.

Guidance: Regional water conservation programs help conserve groundwater and surface water used for agriculture and ensure its availability and reduce costs. Regional efforts can pool resources, which can scale up water use conservation and help achieve water conservation goals. **This Indicator only applies where Standard users use surface water and/or groundwater to irrigate cropland.**

Conformance Evidence Examples: A description of individual or collaborative participation in regional water use conservation programs (e.g., water district water boards, advisory committees) in agriculture, which may be supported by: communications with regional water conservation programs; meeting attendance records; board membership of regional water use conservation programs; evidence of how participation has helped foster responsible use and conservation of groundwater and surface water.

Indicator 3.1.3. Water Conservation: A water management program that uses appropriate technology (including crop/irrigation system design) and applies agricultural best management practices to utilise water efficiently; to provide water tailored to crop needs; and to control pests, pathogens, salinisation and accumulation of other adverse compounds.

Guidance: The greatest water conservation gains have been achieved by systematically improving crop/irrigation systems and applying agricultural BMPs, which also have reduced costs and increased productivity.

This Indicator only applies where Standard users use surface water and/or groundwater to irrigate cropland. Conformance evidence for Indicator 3.1.2 (Regional Water Conservation) may also be applicable to this Indicator.

Conformance Evidence Examples: A description of an organised process to conserve water and manage pests, salinisation, and other adverse impacts to cropland that may include improvements to the irrigation technology and/or agricultural irrigation BMPs, which may be supported by: documents regarding water conservation (e.g., irrigation management plans, and agricultural water management plans); water use permits and reports; participation in regional or state water conservation efforts; use of soil- or plant-moisture sensing technologies or commercial irrigation scheduling services.

Performance Measure 3.2. Water Quality: Standard users shall apply a *program* to properly manage the use of *fertilisers* and other *soil amendments*, *crop protectants*, and other inputs and avoid release of sediment and nutrients from *agricultural lands* into *groundwater* and *surface water*.

Indicator 3.2.1 Input Application on Agricultural Lands: Application of agricultural best management practices when applying fertilisers and other soil amendments, crop protectants and other agricultural inputs to avoid and control infiltration of nutrients, crop protectants and pathogens into groundwater and surface water.

Guidance: Nutrients, pesticides, and salts from agriculture can enter groundwater and surface water and pose a risk to human and environmental health. Water contamination can be minimised by applying agricultural BMPs to control infiltration of agricultural inputs. In contrast to Indicator 3.2.2 (Water Quality Protection), this Indicator focuses on infield application of agricultural input practices to avoid infiltration of all agricultural inputs into groundwater or surface water. Conformance evidence for three other Indicators, which address management of agricultural inputs may be applicable to this Indicator: Indicator 2.1.3 (Nutrient Management Program), which addresses nutrient loss to water; and Indicators 4.1.3 (Pest Control Practices) and 4.2.1 (Application and Storage of Crop Protectants), which address application and storage of crop protectants to avoid their release into groundwater and surface water.

Conformance Evidence Examples: A description and/or infield demonstration of agricultural BMPs used to protect groundwater and surface water from agricultural inputs, which may be supported by: nutrient management plans; tillage practices (conservation tillage, no-till tillage) that reduce input infiltration; chemical use practices (reduce chemical use, use chemicals with short half-lives) that reduce infiltration.

Indicator 3.2.2 Water Quality Protection: Application of agricultural best management practices to manage water runoff from cropland into surface water and protect wetlands, riparian areas and water quality of groundwater and surface water.

Guidance: Agriculture is associated with water quality impairment and regulation of a large proportion of the river systems in Australia. Water pollution from agricultural runoff can be measurably reduced by applying agricultural BMPs. Agricultural BMPs may include structural practices, which physically control water runoff and protect wetlands and water resources. This Indicator focuses on applying agricultural BMPs to manage surface runoff leaving cropland while Indicator 3.2.1 (Input Application on Agricultural Lands) focuses on infield practices for managing agricultural inputs. Conformance evidence for three other Indicators may be applicable to this Indicator: Indicator 2.1.3 (Nutrient Management Program) addresses nutrient loss to water; and Indicators 4.1.4 (Pest Control Practices) and 4.2.1 (Application and Storage of Crop Protectants) address application and storage of crop protectants to avoid their release to

groundwater and surface water.

Conformance Evidence Examples: A description and/or infield demonstration of structural agricultural BMPs used to protect wetlands and water resources from runoff, which may include: drain practices (e.g., biofilters, flow controls); trapping practices (e.g., terraces, grassed waterways, buffer/filter strips, cover crops); tillage practices (conservation tillage, no-till tillage); chemical use practices (reduce chemical use, use chemicals with short environmental half-lives); and registered protected areas.

Objective 4. Crop Protection

To achieve crop protection objectives while protecting people and the environment.

Background: Appropriately used, crop protection and the use of *crop protectants* can enhance productivity and reduce *crop* losses. *Crop protectants* may have deleterious impacts to the humans and wildlife when poorly managed. *Integrated Pest Management (IPM)* has been shown to reduce *crop protectant* risk to humans and environment and enhance *crop productivity* while reducing costs.

Performance Measure 4.1. Integrated Pest Management: *Standard users* shall protect *crops* against *pests* by implementing an *Integrated Pest Management program* that uses appropriate biosecurity and *agricultural best management practices* to achieve crop protection objectives.

Indicator 4.1.1 *Pest* Prevention: A *process* for preventing *pests* through appropriate *biosecurity* and *agriculture best management practices*.

Guidance: Pest prevention is used to prevent problems related to pests before they arise using proactive measures to prevent pests arriving on-farm. A whole of farm biosecurity plan forms part of an integrated pest management program as first line defence to minimise the risk of introducing pests.

Conformance Evidence Examples: A description of a whole of farm biosecurity plan efforts in accordance with agricultural BMPs which may include: quarantining; vehicle washdowns; vendor declarations; signage; and visitor access protocols. Conformance evidence for one other Indicator may be also applicable to this Indicator:

Indicator 4.1.2 Pest Monitoring: Monitoring of pests to prevent excessive crop loss and economic injury to crop plants.

Guidance: Pest monitoring is essential for detecting and applying timely controls when pests are at low densities. It can significantly reduce the use of crop protectants and their cost and avoid major crop losses. It is also a core part of any IPM program.

Conformance Evidence Examples: A description of pest monitoring efforts and its contribution to reducing crop loss and crop plant injury, which may be supported by: identification of threshold effects resulting in excessive crop loss and crop plant injury; pest scouting records; service provider invoices for monitoring; and pest scouting credentials of farmer(s), farm manager(s), and/or vendors.

Indicator 4.1.3. Crop Protection: A process for preventing excessive crop loss from pests, crop protectant resistance, and buildup and spread of pests.

Guidance: Pests can be responsible for crop losses of 50% for some crops. IPM reduces crop losses by applying appropriate biosecurity measures and a set of agricultural BMPs to prevent excessive crop loss from pests, crop protectant resistance and buildup, and spread of pests. It often includes the prudent application of crop protectants. Conformance evidence for three other Indicators may be also applicable to this Indicator: Indicators 4.1.1 (Pest Prevention), which focusses on pest prevention through biosecurity and agriculture best management practices, 4.1.2 (Pest Monitoring), which focusses on pest monitoring and 4.1.3 (Pest Control Practices), which focusses on applying lowest risk, selective treatments when appropriate.

Conformance Evidence Examples: A description and/or documentation of the set of informal or formal practices used to achieve crop protection, including the prevention of excessive crop loss, crop protectant resistance and buildup and spread of pests, which may be supported by: washdown records, pest scouting records; vendor invoices for monitoring and application; and pest applicators licenses of farmer(s), farm manager(s), and/or applicators.

Indicator 4.1.4 Pest Control Practices: Prioritisation of the use of lowest risk, most selective treatment options to achieve crop protection goals whenever appropriate.

Guidance: A key IPM practice is to prioritise low risk, selective treatments, which also can help maintain natural enemies of pests and other beneficial invertebrates such as pollinators and reduce human health and environmental risks from crop protectants. Low risk, selective treatments can also reduce costs. Conformance evidence for Indicator4.1.3 (Crop Protection) may be applicable to this Indicator.

Conformance Evidence Examples: A description of how lowest risk, most selective crop protection treatment options were selected and applied, which may be supported by: crop protectant recommendation reports; staff knowledge of pest control options; infield observations of physical (e.g., dust management to control almond spider mites), genetic (e.g., pest resistant and GMO varieties), cultural (e.g., crop rotation, cover crops, mulching), and/or biological controls (e.g., owl nesting boxes, bio-pesticides, matting disruptor materials); vendor invoices for pest control treatments; and pesticide applicators licenses of farmer(s), farm manager(s), and/or applicators.

Performance Measure 4.2. Crop Protectant Management: Standard users shall select, use and store crop protectants in accordance with label instructions and regulatory requirements.

Indicator 4.2.1. Application and Storage of Crop Protectants: Application and storage of crop protectants according to label instructions and regulatory requirements and application of practices to protect employees, farm workers, public health, and the environment and avoid drift of crop protectants offsite.

Guidance: Crop protectant label instructions and regulatory requirements provide instructions for safe and effective use of crop protectants, and help achieve maximum benefits and compliance with regulatory requirements. They also provide guidance regulatory compliance in the application and storage of crop protectants which helps human and environmental health. This includes consideration of crop protectant application practices, storage practices, and facilities.

Conformance evidence for Indicators 4.1.3 (Crop Protection) and 4.1.4 (Pest Control Practices) may be applicable to this Indicator where it addresses application practices for crop protectants. Conformance evidence for Indicator 6.1.1 (Waste Disposal) and Indicator 6.1.3 (Management of Agricultural Chemicals and Other Materials) may be applicable to this Indicator where it addresses appropriate disposal of agricultural inputs, including crop protectants. Conformance evidence for Indicator 10.2.1 (Personnel and Contract Worker Training) may be applicable to this Indicator where it addresses employee training for storage and application of crop protectants.

Conformance Evidence Examples: A description of how crop protectants are stored and applied according to regulatory requirements, which may be supported by: visual evidence in the field of appropriate crop protectant storage; SDS sheets available to employees; crop protectant recommendation documents; staff and/or vendor knowledge of label restriction; vendor invoices for selective treatments; and pest applicator licenses of farmer(s), farm manager(s), and/or applicators.

Objective 5. Energy Use, Air Quality and Climate Change

To conserve energy used by agricultural operations and *minimise* adverse impacts to the atmosphere and the global climate.

Background: Agriculture consumes less than 2% of energy used in Australia, with direct energy costs (electricity and fuels) accounting for a large proportion of farm costs and indirect energy costs (*crop protectants*, fertilisers, and other inputs) accounting for 7-25% of farm costs. Agriculture contributes about 16% of Australian greenhouse gas (GHG) emissions, including CO2 from equipment and N_2O from emission from soils. This objective recognises how agriculture has a unique opportunity to help both reduce energy use and air emissions, which may affect climate and human health and increase resilience to climate change.

Performance Measure 5.1 Agricultural Energy Use and Conservation: *Standard users* shall conserve energy resources, especially fossil fuels, used by agricultural operations.

Indicator 5.1.1 Energy Conservation: Use of technologies and application of *agricultural best management practices* to conserve energy where *appropriate*.

Guidance: Energy *conservation* is a decrease in energy use. It can be achieved in farming by using technologies and practices, which reduce direct energy use (e.g. use of electricity and fuels) or indirect energy use (e.g., reduction in energy consuming agricultural inputs such as fertiliser, crop protectants, and/or water). It leads to increased efficiency and reduced costs and emissions that are harmful to human and environmental health. *Agricultural BMPs* for energy *conservation* may not always be available or cost effective for all crops and so may not be *appropriate* for all operations. Conformance evidence for Indicators 2.1.3 (Nutrient Management Program), 3.1.3. (Water Conservation), and 4.1.4 (Pest Control Practices) may be applicable to this Indicator when they include practices or technologies, which reduce direct and indirect energy use.

Conformance Evidence Examples: A description and/ or infield demonstration of energy *conservation*

technologies and practices, which may be supported by: tracking of annual energy costs; use of software to track energy use of individual equipment; power units and tractor upgrades to more efficient equipment, including variable speed drives; energy conserving cropping, tillage, and irrigation practices; lighting upgrades, including LEDs; and examples of CAPEX proposals for energy conservation technologies.

Indicator 5.1.2 Renewable Energy: Use of *renewable energy* technologies and application of *agricultural best management practices* where <u>appropriate</u>.

Guidance: *Renewable energy* includes energy from sources that are naturally replenishing and virtually inexhaustible such as wood, waste, geothermal, wind, photovoltaic, tides and waves, hydropower, and solar thermal energy. Their use can help reduce fossil fuel use and air emissions that are costly and harmful to humans and the environment. *Renewable energy* and *agricultural BMPs* and technologies may not be available, practical, and/or cost effective and hence appropriate for all operations.

Conformance Evidence Examples: A description and/or Pro Forma documents indicating analysis and consideration of *renewable energy* technologies and

practices, which may be supported by evidence such as a description and/or infield demonstration of *renewable energy* use, including wind turbines, geothermal, and/or solar panels.

Performance Measure 5.2 Air Quality: Standard users shall minimise adverse impacts to air quality from agricultural operations.

Indicator 5.2.1 Air Emissions: Use of low-emission technologies when compatible with agricultural best management practices.

Guidance: Use of fertilisers, pesticides, and fuels in farming can be significant sources of air emissions,

which are detrimental to human and environmental health. Technologies and practices, which reduce direct energy use (e.g., use of electricity and fuels) or indirect energy use (e.g., reduction in energy consuming agricultural inputs such as fertiliser, crop protectants, and/or water) may also reduce air emissions. Conformance evidence for Indicators 5.1.1 (Energy Conservation) and 5.1.2 (Renewable Energy) may be applicable to this Indicator when it reduces air emissions.

Conformance Evidence Examples: A description of low-emissions technology upgrades, which may be supported by: a description of and/or documentation.

of CAPEX proposals indicating attention to low emissions technologies; a description and/or infield demonstration of low emissions technology, such as replacement of

fuel driven pumps with electrical and/or VSD pumps; reducing field passes; chipping instead of burning wood waste; and installation of renewable energy; upgrading tractor engines to Tier 3.

Indicator 5.2.2 Airborne Dust Control: Application of agricultural best management practices to minimise airborne dust where and when it adversely affects human health and/or the environment.

Guidance: In some areas and time of year, dust from agricultural operations can be a human health hazard.

This indicator applies only when and where airborne dust adversely affects humans and/or the environment. The need for dust control measures may vary seasonally and across cropping systems.

Conformance Evidence Examples: A description and/or infield demonstration of dust control measures applied when necessary to avoid human health and/or environmental adverse impacts, which may be supported by evidence such as vendor invoices for road dust control and/or equipment upgrades to reduce dust emissions (e.g., almond harvesters). Conformance evidence to Indicator 9.4.1 (Public Health and Safety) may be applicable to this Indicator when it addresses dust emissions to be managed to protect public health.

Performance Measure 5.3 Climate-Smart Agriculture: Standard users shall apply the principles of climate-smart agriculture and/or carbon farming to reduce adverse impacts to the global climate and adapt to climate change.

Indicator 5.3.1 *Greenhouse Gas* Emissions: Application of climate-smart *agricultural best management practices* that *minimise greenhouse gas* emissions from agricultural operations and *farmland* and/or sequester *greenhouse gases* that contribute to *climate change* where *appropriate*. Examples could include, but are not limited to, application of *low-emission technologies* and practices that reduce use of agricultural inputs or their *volatilisation*, increase soil carbon sequestration and reduce volatilisation of *greenhouse gases*.

Guidance: Agricultural sector contributes about 16% of Australia's *GHG* emissions, which impact climate. Climate change poses a significant threat to the global environment and agriculture. All sectors need to reduce GHG emissions to address this challenge. Many farms apply *agricultural BMPs*, which reduce and/or sequester *GHG* emissions as they aim to cut costs, reduce energy or fertiliser use, and/or improve soil health. Conformance evidence for four other Indicators may be applicable to yield conformance evidence for this Indicator: Indicators 2.1.3 (Nutrient Management Program), 5.1.1 (Energy Conservation) and 5.1.2 (Renewable Energy), which may reduce fossil fuel use or NOx emissions and hence GHG emissions, and Indicators 2.1.4 (Crop Residues) and 6.2.2 (Resource Recovery of Agricultural Waste), which may increase soil organic matter and hence carbon sequestered on soil.

Conformance Evidence Examples: A description and/or infield demonstration of *agricultural BMPs* that minimise GHG emissions and/or sequester GHGs, which may be supported by evidence such as: crop consultant recommendations; no-till, conservation tillage, or other cropping practices; soil conservation practices; precision agriculture practices; crop rotation; and efficient management and application of nutrients and agricultural chemicals.

Indicator 5.3.2 *Climate Change* Adaptation and Resilience: Application of *climate-smart agricultural best management practices* to adapt to *climate change* impacts and enhance farm or management unit resilience where appropriate. Examples could include, but are not limited to, use of heat-resistant *crop* varieties, new *crop* species, practices that improve soil moisture retention and soil drainage, and training on management of new *crop pests*.

Guidance: *Climate-smart agricultural practices* promote sustainable increases in crop productivity (including sustainable intensification) while adapting to climate change. Crop productivity is greatly impacted by weather and is vulnerable to climate change. Key solutions focus on building resilience by improving soil health and management of water going on and coming off *cropland*. Conformance evidence for four other Indicators may be applicable to this Indicator: Indicator 2.1.1 (Soil Quality) may enhance soil health and weather-resilience; Indicator 3.1.3 (Water Conservation) may enhance irrigation in drought years; and Indicators 2.2.1 (Cropland Soil Management) and 3.2.2 (Water Quality Protection) aim to control soil erosion and runoff, which could impact soil health and water quality.

Conformance Evidence Examples: A description and/ or infield demonstration of *climate-smart*

agricultural BMPs, which may be supported by evidence such as: soil health and water management practices; employee awareness about potential climate change impacts to regional agriculture; and crop insurance.

Indicator 5.3.3 Preparedness for Severe Climate and Weather Events: Application of *climate-smart agricultural best management practices* to prepare for and mitigate the impact of severe climate and weather events on the agricultural operation.

Guidance: In Australia, extreme events are becoming more common with droughts, bushfires and floods increasing in frequency and severity.

Conformance evidence for four other Indicators may be applicable to this Indicator: Indicator 2.1.1 (Soil Quality) may enhance soil health and weather-resilience as increasing soil carbon and ground cover aids in moisture retention and soil stability; Indicator 3.1.3 (Water Conservation) may enhance irrigation in drought years; and Indicators 2.2.1 (Cropland Soil Management) and 3.2.2 (Water Quality Protection) aim to control soil erosion and runoff, which could impact soil health and water quality in the case of prolonged droughts or extreme rainfall events.

Conformance Evidence Examples: A description and/or infield demonstration of *agricultural BMPs* that improve climate resilience. Emergency action plans, strategic plans reviewing enterprise mixes, drought preparedness plans or able to describe actions to mitigate climate risks. Use of climate forecasting tools in strategic, tactical or operational planning.

Objective 6. Waste and Material Management

To manage waste, *agricultural chemicals*, and other materials from agricultural operations to *minimise* their adverse impacts to agriculture and the environment.

Background: Waste and material management is one of the most minor sustainability issues on most farms because farmers primarily generate agricultural products and try to minimise waste. Nevertheless, waste management on farms has an important sustainability role because it can reduce farming and waste disposal costs, improve crop productivity, threats to human and environmental health, and reduce the environmental footprint of agricultural products, which is important to supply chains.

Performance Measure 6.1 Management of Waste and Other Materials: Standard users shall minimise solid waste and hazardous waste from agricultural operations and manage waste and agricultural chemicals in compliance with applicable laws, statutes regulations and best management practices and programs.

Indicator 6.1.1 Waste Disposal: A process for properly handling and disposing of hazardous and solid waste.

Guidance: The amount of hazardous waste in Australia is climbing each year.

Hazardous waste, which can be liquid, solid, gas or sludge, is waste that is dangerous or potentially harmful to human and environmental health. It may include large volumes of discarded products, like unused crop protectants. Its improper disposal can make cropland unsafe for growing feed or food. Solid waste is any solid, semi-solid, liquid, or that contains gaseous materials such as garbage, construction debris, and commercial refuse. Proper waste handling by Standard users can prevent costly regulatory actions and negative effects to social license to operate and human and environment health.

This indicator requires that Standard users have a set of informal or formal routines for properly handling and disposing of hazardous and solid waste. Elsewhere in the LH Australia Farmland Management Standard Est. 2023, Standard users are also expected to achieve legal compliance concerning the handling and disposal of hazardous and solid waste. Conformance evidence for other Indicators may be applicable to this Indicator: Indicator 4.2.2. (Application and Storage of Crop Protectants) and Indicator 6.1.3 (Management of Agricultural Chemicals and Other Materials), and 9.4.1 (Public Health and Safety) also address safe handling of certain waste categories; Indicators 10.3.3 (Employee Sustainability Training) also addresses relevant safety and handling training; and Indicators 11.1.2 (Standard User Compliance Program) and 11.2.1 (Written Compliance Policy) also address legal compliance assurance, which includes compliance for waste laws and regulations.

Conformance Evidence Examples: A description and/or written documentation of formal or informal routines for properly handling and disposing of hazardous and solid waste, which may be supported by evidence such as: infield demonstration of appropriate waste management and storage of waste; vendor agreements and field practices for waste management; crop consultant recommendations for managing left over pesticide; farm employee training; and credentials of farmer(s), farm manager(s), and/or crop consultant(s).

Indicator 6.1.2 Resource Recovery: A process for properly handling waste to be reused, repurposed or recycled, or converted to energy, where appropriate.

Guidance: Resource recovery is using waste as material to create valuable products and reduce waste. About sixty percent of waste in Australia is repurposed, reused, or recycled. In agriculture, this can include plastic films and containers; metal from equipment, old buildings, and trellises; and wood from old buildings and trellises. Resource recovery can reduce costs and the environmental footprint of materials used in farming. It may not always be cost effective or appropriate in regions lacking waste recovery facilities.

Conformance Evidence Examples: A description and/or infield demonstration of a set of informal or formal practices or routines to reuse, reduce, repurpose or recycle, waste or convert it to energy, which may be supported by evidence such as: vendor contractual agreements and field practices for properly storing waste for reuse, repurpose or recycling, or conversion to energy; invoices demonstrating bulk purchases of inputs that reduces packaging, vendor recommendations for resource recovery.

Indicator 6.1.3 Management of Agricultural Chemicals and Other Materials: Management, use and storage of agricultural chemicals and equipment gases, fluids and fuels according to regulatory requirements and application of practices to manage spills and protect employees, farm labour and the environment.

Guidance: Agricultural chemicals and equipment gases, fluids and fuels are the most common hazardous materials in agriculture. Agricultural chemicals include fertilisers, liming and acidifying agents, road dust stabilisers, crop protectants (including insecticides, herbicides, fungicides and nematicides) and other agricultural inputs used to support agriculture. Their proper management can help prevent costly regulatory actions and impacts to people and environment. Conformance evidence for other Indicators may be applicable to this Indicator: Indicator 4.2.2. (Application and Storage of Crop Protectants), and Indicator 6.1.3 (Management of Agricultural Chemicals and Other Materials), and 9.4.1 (Public Health and Safety) address safe handling of agricultural chemicals; Indicators 10.2.1 (Personnel and Contract Worker Training) and 10.3.3 (Employee Sustainability Training) address relevant safety and handling training for agricultural chemicals; and Indicators 11.1.2 (Standard User Compliance Program) and 11.2.1 (Written Compliance Policy) address legal compliance assurance, which may include compliance with regulations for agricultural chemicals.

Conformance Evidence Examples: The infield demonstration and/or a description of management, use, and storage of *agricultural chemicals* and equipment gases, fluids, and fuels, which may be supported by evidence such as: a knowledge of regulatory requirements; a description of standard operating procedures (SOPs) and employee knowledge of SOPs for managing spills; infield demonstration of appropriate spill kits for managing spills; licensed pesticide applicators recommendations for using of crop protectants; pesticide applicators' license held by farmer(s), farm manager(s), and consultant(s); and safety data sheets (SDS) for crop protectants available to employees.

Performance Measure 6.2 Food and Agricultural Waste Resource Recovery: *Standard users* shall ensure efficient handling and recovery of *agricultural products* and *agricultural waste*.

Indicator 6.2.1 Food and Agricultural Product Waste: Prevention of excessive loss of food *crops* and other *agricultural products* during harvest and on-farm storage.

Guidance: About 20 to 40% of food in Australia is lost before it reaches supermarket shelves. Lost agricultural products also increase environmental impacts per unit of product, which increases the product's environmental footprint. Supply chains view food waste as a significant contributor to the environmental footprint of crops. Farmers can reduce the environmental footprint of agricultural products and costs by preventing food waste and crop loss on the farm and address supply chain concerns.

Conformance Evidence Examples: A description efforts to prevent excessive loss of food crops and other agricultural products during harvest and on-farm storage, which may be supported by evidence such as: an annual review of harvest records; informal or formal SOPs for crop harvesting and storage; routine calibration of harvest equipment to minimise crop loss; sanitation of harvest and storage equipment to avoid mold and vermin; effective harvest logistics; crop loss monitoring; harvest equipment loss checks when starting a new field or block; and weather review and crop inspection to ensure optimal timing of harvest to minimise losses.

Indicator 6.2.2 Resource Recovery of Agricultural Waste: Reuse, repurpose, and/or recycle product or *crop residues*, manure, other *agricultural wastes* and/or agricultural inputs (e.g., tailwater recovery) where *appropriate*.

Guidance: *Agricultural Waste* is solid waste that is generated by the rearing of animals (e.g., manure) or the production and harvest of *agricultural products* (e.g., *crop residues*). It can be used to improve *soil health* and *soil productivity* by increasing soil organic matter and nutrients; control soil erosion; and improve soil moisture retention, structure, biodiversity, water filtration, and water retention. Recovery of these materials can also reduce fertiliser expenses, but may not be cost effective for all cropping systems. The conformance evidence for Indicator 2.1.4 (*Crop Residues*) may be applicable to this Indicator.

Conformance Evidence Examples: A description and/or infield demonstration of reuse, repurposing, and/or recycling of product or *crop residues*, manure, other *agricultural wastes*, and/or agricultural inputs, which may be supported by evidence such as: crop consultant recommendations that consider reuse, repurposing, and/or recycling of *agricultural wastes* and/or agricultural inputs; nutrient management plans; nutrient test results for applied *agricultural waste*; and vendor invoices for application of *agricultural waste*.

Objective 7. Conservation of Biodiversity

To manage *farmland* in a manner that maintains agricultural production while conserving *biodiversity* where *appropriate* or legally required.

Background: Globally, agriculture is considered the largest threat to biodiversity. Hence many supply chains seek agricultural trading partners who conserve biodiversity. Although this Objective prioritises agricultural production over biodiversity, it looks to Standard users to conserve biodiversity where appropriate or legally required. Conservation of biodiversity in agricultural landscapes focuses on conservation of threatened species, conservation of both natural and managed (e.g. farmed) habitats, avoiding habitat conversion to agriculture, and conserving genetic diversity of crops.

Performance Measure 7.1 Species Protection: Standard users shall protect threatened and endangered species.

Indicator 7.1.1 *Threatened Species*: Protection of *threatened species* when they occur on *enrolled farmland* and management of agricultural operations with consideration of *threatened* species in the local catchments and landscapes of operation.

Guidance: Threatened species are one essential part of conserving biodiversity. They are plant and animal species identified under either state or national laws as threatened, due to reductions in numbers, distribution and threats. They can occur in agricultural landscapes. Their conservation helps maintain biodiversity and avoid risk of regulatory actions. At a national level species may be recorded on the Atlas of Living Australia or state-based databases. These can be accessed by the general public. Conformance evidence for Indicators 7.2.1 (Native Habitats and Natural Communities) and 7.2.2 (Ecologically Important Sites) may include protection of habitat of threatened species and so be applicable to this Indicator.

Conformance Evidence Examples: An analysis for presence of Listed *Threatened Species* using Atlas of Living Australia or the Protected Matters Search Tool or state wildlife agency databases; a description of an assessment of listed threatened species to determine if any listed threatened species are present; a description of policies and practices for managing listed threatened species when present; a listed threatened species assessment, which can be based on a due diligence assessment before farmland acquisition; materials for field staff for identifying and managing for listed threatened species; and employee training on listed threatened species identification and management.

Indicator 7.1.2 Endangered Species: *Program* to locate and protect known *viable occurrences* of endangered species on enrolled farmland. A *protection program* may be developed independently or collaboratively and may use easements, *conservation* land sales, exchanges, or other *conservation* strategies.

Guidance: Conservation of endangered species can prevent local extirpation or increase in listing status to critically endangered. Endangered species are species with an endangered designation by state or national conservation agencies. Their designation is carefully reviewed by scientists.

Standard users need to protect endangered species that are recorded from or likely to be found on enrolled farmland. Conformance evidence for Indicators 7.2.1 (Native Habitats and Natural Communities) and 7.2.2 (Ecologically Important Sites) may include protection of habitat of endangered species and so be applicable to this Indicator.

Conformance Evidence Examples: An analysis for presence of populations of endangered species using national or state nature conservation agency databases; policies and management practices for managing endangered species; an endangered species assessment, which may be found in due diligence documents created before farmland acquisition; materials for field staff for identifying and managing for endangered species; and employee training on endangered species identification and management.

Performance Measure 7.2 Wildlife Habitat Conservation: Standard users shall conserve native habitats, wildlife habitat, natural communities, and *threatened ecological communities* on enrolled *farmland*.

Indicator 7.2.1 *Native Habitats* and *Natural Communities*: Maintenance or *conservation* of *native habitats* and *natural communities* in areas not used for agricultural production.

Guidance: Loss of *native habitats* and *natural communities* is the chief global threat to biodiversity. *Native habitats* are areas where a native species naturally occurs and that have the living and nonliving environmental conditions necessary for survival, including areas for feeding, shelter, protection and/or reproduction. *Natural communities* are an assemblage of interacting plant species and animal species and their common environment, recurring across the landscape, in, which the effects of human intervention are minimal. Both can serve as essential habitat for common and rare wildlife and plant species, including listed threatened and endangered species, and allow species to disperse across landscapes. Conformance evidence for 7.2.2 (Ecologically Important Sites) and 7.3.1 (Habitat Conversion) may be applicable to this Indicator.

Conformance Evidence Examples: An assessment of

native habitats, natural communities and threatened ecological communities to determine their presence (this may have occurred during due diligence conducted before farmland acquisition); a description of policies and practices for managing native habitats, natural communities and threatened ecological communities; and materials and training for field staff for identifying and managing for native habitats, natural communities and threatened ecological communities.

Indicator 7.2.2 *Threatened ecological communities*: Participation individually or collaboratively in plans or *programs* that manage *threatened ecological communities* in a manner that takes into account their unique qualities.

Guidance: Threatened ecological communities are naturally occurring groups of native plants, animals and other organisms that are interacting in a unique habitat. Types of ecological communities listed under national or state environmental law include woodlands, grasslands, shrublands, forests, wetlands, marine, ground springs and cave communities. Conserving these sites can prevent the loss of rare species and biodiversity. Standard users may develop their own plans or programs or collaborate with others. Managing threatened ecological communities appropriate to their unique qualities requires protection of these communities. Conformance evidence for Indicators 7.2.1 (Native Habitats and Natural Communities) and 7.3.1 (Habitat Conversion) may be applicable to this Indicator.

Conformance Evidence Examples: A description of plans or programs for managing threatened ecological communities, including management practices, which may be supported by evidence such as: plans for managing threatened ecological communities; materials and training for field staff for identifying and managing threatened ecological communities; certifications or degrees of contractors who developed plans or programs.

Indicator 7.2.3 Cropland for Wildlife Habitat: Application of agricultural best management practices on cropland to create temporary wildlife habitat where appropriate. Examples could include, but are not limited to, no-till practices, cover cropping, adding soil amendments made up of organic matter, bird boxes, soil erosion control structures (e.g., grassed waterways), delayed slashing, intercropping, seeding areas with native grassland seed mixes, tailwater recovery ponds managed as wetlands, and water level management of rice fields for waterbirds.

Guidance: Agriculture has the most widespread impact on wildlife habitat of any activity in Australia. Many agricultural best management practices for cropland (e.g., no-till, structural practices to control soil erosion) can be used to create temporary habitat for mammals, birds, and soil organisms and protect aquatic habitats. These practices can contribute to conserving biodiversity in

agricultural landscapes. Conformance evidence for Indicators 2.1.1 (Soil Quality), 2.1.4 (Crop Residues), and 3.2.2 (Water Quality) may be applicable to this Indicator when it creates temporary wildlife habitat.

Conformance Evidence Examples: A description or infield demonstration of application of agricultural BMPs on cropland used to create temporary wildlife habitat, which may be supported by evidence such as: reports and/or SOPs describing the application of agricultural BMPs on cropland used to create temporary wildlife habitat; and vendor invoices for applying specific practices (e.g., cover cropping).

Performance Measure 7.3 Avoided Conversion: Standard users shall avoid conversion of natural forests, other natural communities and threatened ecological communities on enrolled farmland.

Indicator 7.3.1 Habitat Conversion: Demonstration of commitment to avoid the habitat conversion or habitat fragmentation of *natural communities* and *threatened ecological communities* on enrolled *farmland*.

Guidance: Habitat loss through conversion is the greatest threat to biodiversity in Australia. Avoiding land use conversation helps maintain regional biodiversity.

Conformance Evidence Examples: A description of commitment to avoid the land use conversion and fragmentation of natural communities and threatened ecological communities, which may be supported by evidence such as: infield demonstration of conserved natural communities and threatened ecological communities; aerial imagery demonstrating extent of natural communities; employee training about habitat conversion commitment; a habitat conversion policy; management plans for conserved natural communities and threatened ecological communities; and conserved natural communities and Ecologically Important Sites identified on maps and/or GIS layers.

Indicator 7.3.2 Deforestation: Demonstration of commitment to prevent deforestation of natural forest when farming where biome-specific or geography-specific deforestation protocol(s) are in place, by:

Indicator 7.3.2a: A written policy to demonstrate the Standard user's commitment to a zero deforestation policy that identifies the regions of application, relevant natural forest types, appropriate deforestation cut-off date(s) in areas with biome-specific or geography-specific deforestation protocols (where no appropriate cut-off dates exist, Standard user shall identify their own), and (see continuation with Indicator 7.3.2b).

Guidance: Globally, deforestation to create cropland is a huge threat to climate and biodiversity. Deforestation protocols in Australia vary from state to state. Hence there is not an agreed national cutoff date for cessation of clearing activities across the country, and different state-

based legislation applies to land clearing in different jurisdictions. A written zero deforestation policy should identify the regions of application, relevant natural forest types, and appropriate deforestation cut-off date(s) in areas with deforestation protocols. Standard users may elect to have simple zero deforestation policy without a cutoff date unless otherwise determined by state deforestation protocols, but which identifies the application region and relevant natural forest types. If selecting their own cutoff date, "appropriate" means that the Standard User can substantiate their selected cutoff date with evidence that is justifiable.

Conformance Evidence Examples: A written policy to demonstrate the Standard user's commitment to a *zero deforestation policy* that addresses the regions of application, relevant *natural forest* types, and appropriate deforestation cut-off date(s) in areas with state deforestation protocols; and training to ensure appropriate employees understand written *zero deforestation* policy.

Indicator 7.3.2b Avoid Purchase of Deforested Land: Demonstration of due diligence to prevent the acquisition of *farmland* that was converted from *natural forest* after an appropriate *deforestation cutoff date(s)* identified by the Standard user in areas with biome-specific or geography-specific *deforestation* protocols.

Guidance: This indicator ensures that Standard users avoid purchasing farmland that was converted from natural forest after an appropriate deforestation cutoff date. A cutoff date is to greatly reduce the incentive for current landowners to participate in deforestation to create cropland. Deforestation protocols in Australia vary from state to state. Hence there is not an agreed national cutoff date for cessation of clearing activities across the country, and different state-based legislation applies to land clearing in different jurisdictions. Unless there are cut-off dates determined by state deforestation protocols, which identifies the application region and relevant natural forest types, the Standard User should determine their own appropriate cut-off date for deforestation prior to acquisition. "Appropriate" means that the Standard User can substantiate their selected cutoff date with evidence that is justifiable.

Conformance Evidence Examples: A description of due diligence to prevent acquisition of *farmland* converted from *natural forest* after a cutoff date; due diligence standard operating procedure (SOP) to prevent acquisition of *farmland* converted from *natural forest* after a cutoff date; and examples of due diligence before acquisition reports.

Performance Measure 7.4 Crop Diversity: Support crop diversity on cropland.

Indicator 7.4.1 Crop and Genetic Diversity: Use of a variety of *crop* species, *crop* varieties, companion *crops* (e.g., *cover crops*, cross-pollination donors) and/or crop rotation where *appropriate*.

Guidance: Crop and genetic diversity can help control weeds and pests, improve soil health, and improve crop yields. It may be achieved by rotating crops, planting different varieties or hybrids in adjacent blocks or over time, cover cropping, and using cross pollination donors. Loss of crop and genetic diversity can increase regional crop susceptibility to infectious pests and diseases. By incorporating crop and genetic diversity into farming, Standard users contribute to the sustainability of regional agriculture.

Conformance Evidence Examples: A description of variety of crop species, crop varieties, companion crops (e.g., cover crops, cross-pollination donors), and/or crop rotation; maps, GIS layers, and/or annual reports of crops and varieties planted; and a description of management and selection of crop species, crop varieties, companion crops (e.g., cover crops, cross-pollination donors), and/or crop rotation in row crops or orchard or marsh/bog replanting.

Objective 8. Protection of Special Sites

To manage *Special Sites* on *farmland* that are geologically or culturally important in a manner that recognises and respects their unique qualities.

Background: *Special Sites* include unique geological or culturally important features that are recognised regionally or nationally or by Indigenous Peoples. They have valuable information about geology or culture and history that explains human history. Their loss can mean the destruction of irreplaceable information and of areas of cultural significance and undermine the social dimension of sustainability. Conservation of Special Sites helps build local support and social license to operate.

Performance Measure 8.1 Special Site Management: *Standard users* shall manage *Special Sites* in a manner *appropriate* for their unique qualities.

Indicator 8.1.1 Special Site Identification: Use of information such as existing heritage databases (national and state/territory) or expert advice in identifying or selecting *Special Sites*.

Guidance: *Special Sites* are typically cemeteries, Indigenous sites, archeological sites (post-European settlement sites), and unusual geological features (e.g., remarkable waterfalls, cliffs). They occur infrequently on farmland in Australia, depending on the region. This indicator helps ensure the use of appropriate information when identifying *Special Sites*.

Conformance Evidence Examples: Examples where information from existing natural heritage data or recognised experts has been used to identify *Special Sites*; communications with experts regarding information for identifying *Special Sites*; *Special Sites* identification policy; and due diligence title search information, which identifies whether *Special Sites* occur on Standard user's

farmland.

Indicator 8.1.2 Special Site Management: *Appropriate* mapping, cataloging and management of identified *Special Sites* in a manner that recognises their unique qualities.

Guidance: *Special Sites* are sites filled with valuable information about geology or culture and history that explain human history. Damage or destruction of these sites can mean the loss of irreplaceable information. It can also lead to the loss of areas of cultural significance to all people, including *Indigenous Peoples*. This indicator helps ensure use of appropriate mapping, cataloguing, and management of identified *Species Sites* so the unique qualities of *Special Sites* are maintained.

Conformance Evidence Examples: Map and catalogue of *Special Sites*; a description of how *Special Sites* are managed; communications with experts regarding management of *Special Sites*; *Special Sites* management policy; employee training regarding management of *Special Sites*; and GIS data layers identifying *Special Sites* and their management practices.

Objective 9. Local Communities

To operate safely and responsibly; contribute to the economic well-being, social networks and health of local communities; and to recognise and respect the rights of local communities and *Indigenous Peoples* in regions of agricultural operations.

Background: Societal considerations for agriculture include its impacts to social and economic well-being, public health, and social law legal obligations to local communities and *Indigenous Peoples*. Agriculture has key positive impacts in many rural areas of Australia contributing to economic and social well-being of local communities, especially where agriculture is a large part of the rural economy. Local communities and *Indigenous Peoples* also may have legal rights in many rural areas. *Indigenous Peoples* are defined in international or national legislation as having a set of specific rights based on their historical ties to a particular territory. In Australia, there are two very distinct indigenous cultural groups: Aboriginal and Torres Strait Islander peoples. This Objective recognises that rural communities are the mainstay to Australian agriculture. It helps ensure that Standard users contribute to the well-being of local communities in rural agricultural landscapes and operate with social responsibility.

Performance Measure 9.1 Economic Well-Being: *Standard users* shall foster the economic vitality of local communities through business practices that support sustainable agriculture and the local economy.

Indicator 9.1.1 Economic Contributions: Payment of federal, state, and local taxes and, as *appropriate*, employment of staff from local communities and local procurement of supplies and services.

Guidance: Farming employs approximately 2.5% of the

Australian workforce, with 82% of workers living regionally. It has a greater economic multiplier effect on rural economies than other sectors because of its contributions to local employment, tax payments, and local procurement.

Farming helps sustain rural economies and fosters local support for agriculture. Standard users may employ non-local workers and purchase non-local services and materials when *appropriate*.

Conformance Evidence Examples: A description of payment of taxes; copies of tax invoices, records, or forms; a description and/or documents indicating local employment and procurement; employment records; local vendor invoices; and employment of summer interns from regional agricultural universities.

Performance Measure 9.2 Community Relations: *Standard users* shall engage local communities to increase community awareness and support for the practice of sustainable agriculture and maintain or enhance *Standard user* reputation.

Indicator 9.2.1 Community Engagement: Engagement in positive relationships with neighbours and local communities thus raising the awareness of sustainable agriculture.

Guidance: Neighbour and community engagement can be essential to generate local support for sustainable agriculture and maintain relationships and reduce conflicts. Neighbours and local communities can also be engaged to help maintain local support for sustainable agriculture and a social license to operate. Standard users can apply engagement activities best suited for each operation.

Conformance evidence for Indicator 9.3.3 (Local Communities' and Indigenous Peoples' Inquiries) may be applicable to this Indicator (e.g., annual newsletters with contact information).

Conformance Evidence Examples: A description and/or infield demonstration of engagement activities with local communities, which may be supported by: leadership roles filled by farmer(s), farm manager(s), and/or employee(s) in local agriculture-related organisations and local government; farm signage; hosting of agriculture meetings, workshops, and/or presentations for neighboring farm managers, and/or community members; in-kind or financial support for agricultural fairs, secondary vocational programs, agricultural scholarships etc.; participation in regional planning efforts related to agriculture; phone lists of key local community contacts; and newsletter for neighbours.

Performance Measure 9.3 Rights of Local Communities and Indigenous Peoples: Standard users shall recognise and respect rights of local communities and Indigenous Peoples.

Indicator 9.3.1 Local Community and *Indigenous Peoples*

Policy: A written *policy* demonstrating a commitment to recognise and respect the rights of local communities and *Indigenous Peoples*.

Guidance: Respect for local community is an essential for supporting the social dimension of agricultural sustainability and achieving legal compliance. These rights vary among state and/or local government jurisdictions. Local communities may have rights concerning public health and safety, land use, water quality, soil erosion, invasive species, and wildlife. *Land rights* of *Indigenous Peoples* also vary depending on *Indigenous Peoples* local group(s) and are often identified during due diligence of title searches when land is purchased. Land rights may include access to *Special Sites*, and water, hunting, fishing, wild food procurement, and other land access rights. A written policy can be a simple statement making a commitment to respect the rights of local communities and *Indigenous Peoples*. It can be shared with employees and stakeholders.

Conformance evidence for Indicators 9.4.1 (Public Health and Safety) and 9.3.2 (Land Tenure Rights of Local Communities and Indigenous Peoples) may be applicable to this Indicator when it addresses local public health and safety requirements and reveals community and *land rights* during acquisition due diligence.

Conformance Evidence Examples: A written policy demonstrating a commitment to recognise and respect the rights of local communities and *Indigenous Peoples*, which may be supported by evidence such as: a way to ensure staff understand the written policy and are able to implement the written policy of the Standard user; on-board training regarding written policy on rights of local communities and *Indigenous Peoples*; employee training attendance sheet; a description of informal and formal supporting policies and/ or practices used by *Standard user* to conform to written policy; and internal communications.

Indicator 9.3.2 Land Tenure Rights of Local Communities and *Indigenous Peoples*: Demonstration of due diligence to prevent infringing on the land tenure rights of local communities and *Indigenous Peoples* when purchasing and managing land.

Guidance: Respect for land tenure rights of local communities and Indigenous Peoples begins by first understanding existing rights. Indigenous Peoples are in Australia include two very distinct indigenous cultural groups: Aboriginal and Torres Strait Islander peoples. Land rights of Indigenous Peoples varies depending on local jurisdiction and group(s). These rights are often revealed in due diligence during farmland acquisition. Land rights may include access to Special Sites, and water, hunting, fishing, wild food procurement, and other land access rights. Respect for the land tenure rights of local communities and Indigenous Peoples supports the

right to self- determination and legal compliance and helps maintain social license to operate. This Indicator principally applies when a Standard user is purchasing farmland, but it also applies to management of farmland that was acquired before participation in the LH Australia Farmland Management Standard Est. 2023. Conformance evidence to Indicator 9.3.1 (Local Community and Indigenous Peoples Policy) may be applicable to this Indicator.

Conformance Evidence Examples: A description and/ or documentation of due diligence regarding tenure rights of local communities and *Indigenous Peoples* when purchasing and managing land; on-board training regarding land tenure rights of local communities and

Indigenous Peoples; and due diligence guidelines or SOP for reviewing land tenure rights of local communities and *Indigenous Peoples*.

Indicator 9.3.3 Local Communities' and *Indigenous Peoples'* Inquiries: Demonstration of commitment to be receptive to local communities' and *Indigenous Peoples'* inquiries and concerns.

Guidance: Being receptive to inquiries and concerns is important to ensuring effective communication and relationships with key stakeholders and is necessary for maintaining a social license to operate. Responses need not include remedies that satisfy every inquiry or concern. Conformance evidence for Indicator 9.2.1 (Community Engagement) may be applicable to this Indicator when it describes community engagement activities that demonstrate receptivity to local concerns. Conformance evidence for Indicators 9.2.1 (Community Engagement), Indicator 9.3.1 (Local Community and Indigenous Peoples Policy), and Indicator 9.3.2 (Land Tenure Rights of Local Communities and Indigenous Peoples) may be applicable to this Indicator when it demonstrates receptivity to inquiries and concerns.

Conformance Evidence Examples: Farm signage with contact information; periodic listening sessions with stakeholders from local community and *Indigenous Peoples*; online anonymous suggestion box; records of inquiries from local community or *Indigenous Peoples* and Standard user's response; submission of news articles in local newspapers about sustainable agriculture and contact information for inquires; providing contact information to neighbors and leaders in local communities and *Indigenous Peoples* communities; employee training for managing inquires; and public inquiry policy.

Performance Measure 9.4 Public Health: Standard users shall apply measures to protect public health from adverse impacts of enrolled farmland.

Indicator 9.4.1 Public Health and Safety: Application of health and safety *agricultural best management practices* that protect public health from adverse impacts of

agricultural chemicals, excessive nutrients, equipment gases and fluids, fuels and air pollution and that train employees to operate equipment safely.

Guidance: The largest concern of local communities for agriculture is health and safety impacts. Protecting the public health and safety helps protect human and environmental health, and maintain a social license to operate and public support for agriculture. Conformance evidence for four other Indicators may yield conformance evidence for this Indicator: Indicators 4.2.1 (Application and Storage of Crop Protectants) and 6.1.3 (Management of Agricultural Chemicals and Other Materials) may provide relevant evidence where *agriculture BMPs* are applied to protect human and environmental health from crop protectants and other agricultural chemicals; Indicators 10.2.1 (Personnel and Contract Worker Training) and 10.3.3 (Employee Sustainability Training) may provide evidence of employee safety BMP training for this Indicator. *Standard users* are expected to comply with applicable laws, statutes, and regulations concerning the handling and use of agricultural chemicals and equipment gases, fluids, fuels, and wastes.

Conformance Evidence Examples: A description and/ or infield demonstration of the application of health and *safety agricultural BMPs*, which may be supported by evidence such as: employees training to operate equipment safely; farm public health policy; licensed pesticide applicators recommendations for applying crop protectants; pesticide applicators' license held by farmer(s), farm manager(s), pesticide consultant(s); safety data sheets (SDS) for crop protectants available to employees and where materials are stored; a description of management, use, and storage of agricultural chemicals and equipment gases, fluids and fuels; a description of knowledge of regulatory requirements; a description of standard operating procedures (SOPs) and employee knowledge of SOPs for managing spills and protecting employees, farm labor and the environment; and infield demonstration of appropriate materials and supplies necessary to manage spills and protect employees and the environment.

Objective 10. Personnel and Farm Labour

To provide a safe and healthy working environment, fair compensation and training for *Standard user* personnel, *contract management company* employees and *contract farm labour* necessary to improve the practice of sustainable agriculture.

Background: Agriculture presents a challenging work environment because it relies on employees to work independently and in teams in a dynamic yet casual environment with unique human health risks. It requires that farmers and farm managers always work toward creating a safe and respectful working environment, and provide quality supervision and training to foster the routines, talent, and

teamwork necessary to achieve business objectives and long-term viability and sustainability.

Performance Measure 10.1 Safe and Respectful Working Environment: Standard users shall foster a culture of safety and respect among Standard user personnel and contract management company employees to minimise injuries, help establish safe routines and enhance employee productivity.

Indicator 10.1.1 *Equal Opportunity Employment*: Provision for equal opportunity employee recruitment and occupations.

Guidance: Equal opportunity environments can help attract the qualified talent, comply with state and federal laws, and have a fair and effective workplace culture.

Workplace fairness is essential to ensuring that talented employees advance and contribute to business performance and sustainability. Women and culturally and linguistically diverse (CALD) (including Indigenous) employees are greatly under-represented in Australian agriculture. Barriers include discrimination, lack of training opportunities, pipeline barrier in the sciences, and lack of child care. Conformance evidence for Indicator 10.1.2 (Respectful Work Environment) may be applicable to this Indicator.

Conformance Evidence Example: A description of equal-opportunity, informal or informal policies and activities to achieve equal opportunity employee recruitment and occupations; confidential employee inter views; employee recruitment programs targeting women and minorities; hiring of women and minority interns; equal opportunity training for hiring staff; and development of a respectful work culture.

Indicator 10.1.2 Respectful Work Environment: Maintain a safe, *gender equitable* and *professional work environment*.

Guidance: Working in the dynamic and casual environment of agriculture can make it challenging to establish an effective professional environment without being rigid. Women and CALD employees are greatly under-represented in Australian agriculture. A gender equitable, professional working environment fosters high morale, consideration of diverse perspectives, promotes collaboration, and business and professional growth for everyone, and contributes to greater productivity and sustainability. Conformance with four Indicators may yield conformance evidence for this Indicator: Indicator 10.1.1 (Equal Opportunity Employment) may yield evidence, which addresses recruitment and hiring employees to help achieve gender equity; Indicator 10.2.1 (Personnel and Contract Worker Training) may yield evidence such as employee training to help achieve a safe, gender equitable and professional work environment; Indicators 11.1.1 (Access to Compliance Information), 11.1.2 (Program User Compliance Program), and 11.1.3 (Compliance

Commitment) may yield evidence, which could include Federal, state, and/or local workplace equity compliance information; and Indicator 12.1.1 (Performance Review) may yield evidence such as employee coaching or responsiveness to workplace concern of employees.

Conformance Evidence Example: A description and/ or infield demonstration of application of health and safety *agricultural BMPs*; confidential employee interviews regarding workplace professionalism; signage as required by law to inform employees of labor rights; on-board training of new employees about safe, respectful, and gender-equitable work place requirements; leadership, managerial, and other professional development training opportunities for employees; employee handbook that indicates expectations for workplace behavior; attendance records for professional meetings; safety reports; safety KPIs; and performance reviews that review work safety expectations and outcomes.

Performance Measure 10.2 Occupational Training: Standard users shall provide training for Standard users personnel and ensure adequate training for contract management company employees necessary to improve the knowledge and practice of sustainable agriculture.

Indicator 10.2.1 Personnel and Contract Worker Training: Health, safety, and occupational education and training for *Standard user* personnel and *contract management company* employees.

Guidance: Farming is one of the most dangerous occupations in Australia leading to a workplace setting, which is highly regulated by federal and state laws. Health, safety, and occupational employee training plays a key role in avoiding costly workplace injuries and cost regulatory actions and improving employee knowledge to advance sustainable agriculture. This Indicator focuses on employee health, safety and occupational training, but overlaps and potentially shares conformance evidence with Indicator 10.3.3 (Employee Sustainability Training), which focuses on agricultural sustainability training sufficient to fulfill their roles and responsibilities under the LH Australia Farmland Management Standard Est. 2023.

Conformance Evidence Example: A description of health, safety and occupational education and training of employees, which may be supported by: confidential employee interviews; infield observations of employees applying health, safety, and occupational education and training; examples of in-house training materials; and training certificates and/or diplomas.

Performance Measure 10.3 Supporting Capacity for Sustainability: Standard users shall require appropriate training of Standard users personnel and contract management company employees so that they are competent to fulfill their responsibilities under the Leading Harvest Australia Farmland Management Standard Est. 2023.

Indicator 10.3.1 Sustainability Policy Commitment: *Standard users* shall provide a written policy demonstrating commitment to the *Leading Harvest Australia Farmland Management Standard Est. 2023* that is communicated throughout the organisation, particularly to facility and farm managers.

Guidance: The commitment statement provides clear direction to employees and helps ensure consistent execution of the LH Australia Farmland Management Standard Est. 2023. It also communicates to supply chains and other stakeholders how the *Standard users* are committed to sustainability, which can also help maintain a social license to operate. Conformance evidence for Indicators 1.1.1 (Farmland Stewardship Commitment) and (where applicable) 13.1.2 (Farmland Lease Agreements) may be applicable to this Indicator.

Conformance Evidence Example: A written policy describing the Program User's commitment to the LH Australia Standard Est. 2022, which may be supported by evidence such as: a description of policy communication to employees; confidential employee interviews; on-board training regarding written commitment to LH Australia Farmland Management Standard Est. 2023; training attendance records; and a description of policies and/or practices used to ensure staff are able to implement written policy.

Indicator 10.3.2 Employee Roles and Responsibilities for Sustainability: Assignment and understanding of roles and responsibilities for achieving the *objectives* of the *Leading Harvest Australia Standard. Est 2022*.

Guidance: The assignment of workplace roles and responsibilities for achieving the LH Australia Farmland Management Standard Est. 2023 helps ensure effective communication of expectations, understanding by employees about their roles and key work routines. It also helps ensure that employees are accountable and can work together to achieve the LH Australia Farmland Management Standard Est. 2023 Objectives. Conformance evidence for two Indicators may be applicable for this Indicator: 10.3.3 (Employee Sustainability Training), which includes employee training for their roles and responsibilities and 12.1.1 (Performance Review), which provides an accountability mechanism employee regarding their LH Australia Standard 2022 roles and responsibilities.

Conformance Evidence Examples: A description of employee roles and responsibilities and demonstration that employees understand their role and responsibilities for the LH Australia Standard 2022, which is supported by evidence such as: confidential employee interviews; job descriptions or organisation chart that identify LH Australia Standard Est. 2022 roles and responsibilities; periodic (e.g., quarterly, annually) group and individual review of employees on LH Australia Farmland Management

Standard Est. 2023 roles and responsibilities; performance reviews that address employee role and responsibilities for the LH Australia Farmland Management Standard Est. 2023; and demonstration of relevant professional training (e.g., college degrees, certifications) to ensure employees can carry out their roles and responsibilities.

Indicator 10.3.3 Employee Sustainability Training: Staff education and training for *Standard users* personnel and *contract management company* employees sufficient to fulfill their roles and responsibilities under the *Leading Harvest Australia Farmland Management Standard Est. 2023*. Examples could include, but are not limited to, postsecondary degrees and professional certificates, in-house training, continuing education programs for managing waste, recycling, *crop protectant* safety, professional development opportunities, and participation in agriculture-related professional organisations.

Guidance: Employee sustainability training is essential to them being able to fulfill their roles and responsibilities under the LH Australia Farmland Management Standard Est. 2023. This Indicator focuses on sustainability training as it relates to implementation of the LH Australia Farmland Management Standard Est. 2023 while Indicator 10.2.1 (Personnel and Contract Worker Training) focuses on employee safety, health, and occupational training, which may overlap with this Indicator. Hence, conformance evidence for Indicator 10.2.1 (Personnel and Contract Worker Training) may be applicable to this Indicator.

Conformance Evidence Examples: A demonstration of relevant professional training (e.g., college degrees, professional certifications) to ensure employees can carry out their roles and responsibilities, which may be supported by evidence such as: attendance records for training workshops and certifications; policy to provide reimbursement and/or time-off to attend training workshops; performance reviews with professional development objectives; and attendance at meetings of professional organisations.

Performance Measure 10.4 Compensation: Standard users shall ensure adequate livelihood for employees and contract management company employees to attract and retain a stable workforce.

Indicator 10.4.1 Wages and Pay: Compensation to ensure a *living wage* for *Standard user* personnel and *contract management company* employees.

Guidance: Agricultural wages are modest for entry-level workers and generally average less than that of nonfarm wages. Hence, they are a significant concern for supply chains. A *living wage* is estimated from the cost of living based on typical expenses and supports a minimum standard of living. Realistic wages are necessary to attract skilled employees and ensure a long-term labor supply. The wages of the lowest paid employee can often serve as a key reference point for assessing whether wages meet the criteria for a *living wage*.

Conformance Evidence Examples: A description of wages and/or salaries that demonstrates that employees are receiving a *living wage*, pay stubs, and wage scale documents for low-wage positions.

Performance Measure 10.5 Farm Labour: Standard users shall monitor contract management companies or farm labour contractors to help ensure farm labor working conditions consistent with the Principles and Objectives of Leading Harvest Australia Farmland Management Standard Est. 2023.

Indicator 10.5.1 Farm Labour Monitoring Program: A program to monitor farm labour contractors employed by Standard users or *Contract Management Companies* to ensure compliance with applicable federal and state, labour laws, statutes, and regulations by reviewing policies, practices, and training addressing workplace environment, equal opportunity, workplace health, and safety, and compensation, including living wage and, where appropriate, housing and transportation.

Guidance: *Farm Labour Contractors* provide critical services to agriculture. Farm employers are legally required to take reasonable steps to ensure that their *farm labour contractors* have valid registration certificates. Many contracted farm workers are immigrants who don't know their legal rights and this makes them economically and socially vulnerable. Moreover, labour rights are a key component of the social aspect of sustainable agriculture. This Indicator is not applicable to Standard users who do not contract for labour with *contract management companies* or *farm labour contractors*. Conformance evidence for Indicator 11.1.2 (Program User Compliance Program) may be applicable to this Indicator.

Conformance Evidence Examples: A description and/or infield demonstration of a monitoring program composed of an organised set of activities to address the workplace environment, equal opportunity, worker health, safety, and compensation, including *living wage* and, where *appropriate*, housing, and transportation, which may be supported by evidence such as: farm *labour contractor* contracts; communications about *farm labour contractor* monitoring; and annual or more frequent reviews of *farm labour contractors*.

Objective 11. Legal and Regulatory Compliance

To comply with applicable national, state and local laws, statutes, and regulations.

Background: Agriculture works in a diverse regulatory environment. Legal compliance is fundamental to the credibility of agricultural sustainability and managing legal risk. Farmer and farm managers encounter social, labor, and environmental legal requirements, which are complex and make legal compliance challenging. By meeting their legal

obligations, they can protect the human well-being and the environment, avoid regulatory actions, and achieve efficient operations and safety, positive public relations, and greater employee retention.

Performance Measure 11.1 Legal Compliance: Standard users shall comply with applicable national, state and local agricultural and related social and environmental laws, statutes, and regulations.

Indicator 11.1.1 Access to Compliance Information: A *process* by, which personnel have access to information of relevant laws, statutes, and regulations in *appropriate* locations.

Guidance: Knowledge of legal compliance issues is critical to ensuring employees comply with statutes and avoid costly regulatory action. Conformance evidence for two other Indicators may be applicable to this Indicator: Indicator 10.2.1 (Personnel and Contract Worker Training), which may include training to help ensure employees understand relevant legal information; and Indicator 11.2.1 (Written Compliance Policy), which may signal the importance of legal compliance to employees.

Conformance Evidence Examples: A description of a purposeful set of formal or informal practices or routines for providing employee access to appropriate legal information, which may be supported by evidence such as: confidential employee interviews to assess their awareness of relevant workplace laws, statutes, and regulations; signage as required by law to inform employees of labour rights, workplace requirements, and safety and environmental regulations; an employee handbook; SDS binders in office and pesticide storage areas; voluntary signage to inform employees about relevant legal requirements; and employee training regarding applicable laws, statutes, and regulations.

Indicator 11.1.2 Standard user Compliance Program:

A *program* to achieve compliance with applicable national, state or local laws, statutes, and regulations.

Guidance: Regulatory compliance of a company is necessary to manage regulatory risk and achieve a basic level of sustainability. It helps ensure that a farmer or farm manager meet their legal obligations, avoid costly regulatory actions, and focus on efficient operations, safety, public relations, and employee retention.

Conformance evidence for Indicators 11.1.1 (Access to Compliance Information Indicator), 11.1.3 (Compliance Commitment), and 11.2.1 (Written Compliance Policy) may be applicable to this Indicator when it supports a legal compliance program.

Conformance Evidence Examples: A description of a legal compliance program that helps achieve compliance with applicable national, state or local laws, statutes, and regulations, which may be supported by evidence such as: an employee handbook addressing policies regarding

ethical and legal compliance issues and obligations; confidential employee interviews; signage as required by law to inform employees of labour rights, workplace requirements, and safety and environmental regulations; employee training to ensure consistent legal compliance; and professional licenses necessary for regulatory compliance.

Indicator 11.1.3 Compliance Commitment: Demonstration of commitment to legal compliance through available *regulatory action information*.

Guidance: *Regulatory action information* is information related to compliance with government regulations such as permits, reports and documentation of corrective actions, which may be required by a regulatory agency or court. It helps demonstrate a farmer or farm manager's commitment to legal compliance, which is essential to sustainability.

Conformance Evidence Examples: A description of regulatory action information (permitting applications and reports, permits, and licenses) that demonstrates commitment to legal compliance, which may be supported by evidence such as: regulatory permit applications and reports, permits, and licenses (company or individual [e.g., pesticide applicator license]); corrective action documents demonstrating required and voluntary efforts to remedy legal compliance issues; and signage to inform employees of labor rights, workplace requirements, and safety regulations.

Performance Measure 11.2 Legal Compliance Polices: Standard users shall take appropriate steps to comply with all applicable social laws at the national, state, and local levels in the jurisdictions where the Standard user operates.

Indicator 11.2.1 Written Compliance Policy: A written *policy* demonstrating commitment to comply with social laws, such as those addressing civil rights, equal employment opportunities, anti-discrimination and anti-harassment measures, workers' compensation and living wage, Indigenous Peoples' rights, workers' and communities' right to know, prevailing wages, workers' right to organise, and workplace health and safety.

Guidance: A written commitment communicates the importance of legal compliance to employees and a commitment to meet legal obligations and protect the health, safety, and welfare of others and the environment. It can help employees understand farming legal obligations so that they can help avoid costly regulatory enforcement actions. It can also contribute to efficient operations and safety, public relations, and employee retention. A written commitment statement helps ensure that farmers are committed to compliance with social laws and the social domain of sustainability.

Conformance Evidence Examples: A written policy demonstrating a compliance commitment to social laws,

which may be supported by evidence such as: communication to ensure staff understand and implement the written policy; on-board training regarding written policy; an employee handbook; training attendance records; and a description of informal and formal supporting policies and/or practices used to conform to written policy.

Indicator 11.2.2 Consistency with International Labour Organization (ILO) Conventions: Demonstration of commitment to respect the principles concerning fundamental rights set out in the ILO Declaration on Fundamental Principles and Rights at Work.

Guidance: ILO Principles are an international set of principles aimed at protecting freedom of association of employees and right to collective bargaining, the elimination of forced labour and workplace discrimination, and the abolition of child labour. Many standards require a commitment to ILO Principles. A commitment demonstrates respect for labour rights, a key social attribute of agriculture, and can bolster credibility and social license with supply chains and other key stakeholders.

This Indicator applies only to the core conventions not fully covered by existing Australian Fair Work framework as outlined in the Fair Work Act 2009 Part 2.4 - Enterprise agreements. This Indicator helps ensure that Standard users respect widely respected principles concerning key labor rights set out in the ILO Declaration on Fundamental Principles and Rights at Work. Conformance evidence for Indicator 10.1.1 (Equal Opportunity Employment) may be applicable to this Indicator.

Conformance Evidence Examples: The demonstration of commitment to respect principles concerning fundamental rights set out in the ILO Declaration on Fundamental Principles and Rights at Work, which may be supported by evidence such as: an employee hand book, which addresses relevant ILO Principles; and employee training on ILO Principles and general labour law as it pertains to their responsibilities.

Indicator 11.2.3 Consistency with Lease Laws: Demonstration of commitment to respect the rights of *lessees* of leased lands with respect to the *covenant of quiet enjoyment* as determined by national, state and/or local laws, statutes, and regulations.

Guidance: The covenant of quiet enjoyment means that a farmland lessee has the right to enjoy his or her leased farmland without "substantial interference" from the farm land owner. It ensures that farmland lessees benefit from the full use and enjoyment of their leased farmland. This Indicator only applies to Program Users who lease land to farmland lessees. Conformance evidence of Indicators in Objective 13 may be applicable to this Indicator.

Conformance Evidence Examples: A description of activities that demonstrates commitment to respect rights of farmland lessees of leased lands with respect to the covenant of quiet enjoyment as determined by national, state and/or local laws, statutes, and regulations, which may be supported by evidence such as: leases or lease templates that include language addressing right to quiet enjoyment; confidential employee interviews; communications with lessees; and employee training on lessee oversight and lease management.

Objective 12. Management Review and Continual Improvement

To promote continual improvement in the practice of sustainable agriculture by conducting management reviews and monitoring performance.

Background: *Continual improvement* is ongoing improvement of performance, products, services, or processes through incremental and breakthrough improvements. It applies a quality assurance method (e.g., the plan-do-check-act cycle). It leads to an agricultural system that adapts to a changing environment, improves performance and revenue, and reduces im- pacts. *Continual improvement* of agricultural practice requires management reviews and performance monitoring.

Performance Measure 12.1 Farm Review and Continual Improvement: Standard users shall establish a management review system to examine findings and progress in implementing the Leading Harvest Australia Standard, improve resource-use efficiency of agricultural production, make *appropriate* improvements in *programs*, and inform their employees of changes.

Indicator 12.1.1 Performance Review: A system to review commitments, *programs*, procedures and measures of progress; evaluate their effectiveness; and review progress toward achieving goals for employees, contractors, use of agricultural inputs, management of adverse and positive environmental impacts, and agricultural production, including greater resource-use efficiency.

Guidance: A performance review system can improve communication and working relationships and provide useful feedback about job and operational performance, ultimately leading to improved farm performance and long-term viability. It also helps farmers and farm managers select timely financial, social, and environmental objectives that reduce cost and increase revenue and efficiency. Conformance evidence from Indicators 1.2.1 (Adapting to Critical External Factors), 12.1.2 (Monitoring Performance), and 12.1.3 (Agricultural Innovation), and 12.1.4 (Annual Review and Improvement) may be applicable to this Indicator where it involves review of operations. If a Standard user had *farmland lessees*, then Indicators 13.2.1 (Verifiable Monitoring System) and 13.2.2

(Improvement of the Verifiable Monitoring System) could contribute conformance evidence for this Indicator.

Conformance Evidence Examples: A description of performance review system and how it: reviews commitments, operations, and progress; reviews progress toward achieving goals for employees, contractors, use of agricultural inputs, management of adverse and positive environmental impacts, and agricultural production, including greater resource-use efficiency; and evaluates effectiveness. This may be supported by evidence such as performance documents, communications, and confidential employee interviews.

Indicator 12.1.2 Monitoring Performance: A *program* for collecting, reviewing and reporting information to management regarding progress in achieving *Leading Harvest Australia Standard objectives* and *performance measures*.

Guidance: This Indicator focuses on the process of monitoring progress toward achieving the LH Australia Farmland Management Standard Est. 2023. This helps prepare *Standard users* for the assurance assessment process by a certification body. This also helps ensure that *Standard users* apply an organised system, process, or set of activities that helps a Program User monitor performance toward achieving LH Australia Farmland Management Standard Est. 2023 Objectives and Performance Measures. Performance Measure 4.1 (Integrated Pest Management) and Indicator 2.1.3 (Nutrient Management Program) include monitoring to improve performance regarding crop loss and use of agricultural inputs and so may provide conformance evidence to this Indicator.

Over time, conformance evidence for Indicator 12.1.1 (Performance Review) may serve as a performance monitoring *program*, which may be applicable to this Indicator.

Conformance Evidence Examples: A description of monitoring performance program for collecting, reviewing and reporting information to management regarding progress in achieving *Leading Harvest Australia Standard objectives* and *performance measures*, which may be supported by evidence such as: documents, SOPs, manuals, employee interviews, vendor invoices, and relevant farming metrics.

Indicator 12.1.3 Agricultural Innovation: A *process* for identifying and considering opportunities for achieving improved farming efficiency, deploying improved technologies, and using new markets for underutilised *agricultural products*, new *crops* and low-grade agricultural materials (e.g., bioenergy markets).

Guidance: Innovation entails improving business operations and processes to become more efficient and less impactful and increasing product value, profitability,

and financial viability. Farmers and farm managers who routinely apply a purposeful series of formal or informal practices to identify innovative opportunities will discover practices and technologies for improving farming efficiency and new markets. Indicator 12.2.1 (Support for Agricultural Research) addresses the research aspect of R&D whereas this Indicator addresses the development part of R&D and implementation.

Conformance Evidence Examples: A description of a purposeful series of formal or informal practices or routines used to identify and consider opportunities for improving farming efficiency, applying improved technologies, and using new markets, which may be supported by evidence such as: employee attendance records for professional meetings; internal review of new technology and market opportunities; and CAPEX project development documents.

Indicator 12.1.4 Annual Review and Improvement: An annual review of progress by management and determination of changes and improvements necessary to continually improve agricultural efficiency and farm conformance to the *Leading Harvest Australia Standard*.

Guidance: Periodic reviews are a key step in continual improvement, improving agricultural efficiency, and achieving the objectives of the LH Australia Farmland Management Standard Est. 2023. Two other Indicators may yield relevant conformance evidence: Indicator 13.2.1b (Verifiable Monitoring System) focuses on improving the tenant performance with respect to application of agriculture BMPs; Indicator 12.1.2 (Monitoring Performance Indicator) may provide information useful for annual reviews.

Conformance Evidence Examples: A description of an annual review of progress and the determination of changes to improve agricultural efficiency and conformance to the LH Australia Farmland Management Standard Est. 2023, which may be supported by evidence such as: annual reviews, business plan documents, and/or CAPEX evaluations.

Performance Measure 12.2 Support for Sustainable Agriculture: *Standard users* shall individually and/or through cooperative efforts support science-based agricultural research programs or partnerships or other efforts by associations to improve *soil health*, agricultural productivity and sustainable agriculture.

Indicator 12.2.1 Support for Agricultural Research: Participation individually or collaboratively in agricultural research or other science-based programs that improve the knowledge and practice of sustainable agriculture.

Guidance: Support for agricultural research can help generate information that leads to improvements in agricultural technologies, practices, and efficiencies and reductions in adverse impacts. Farmers and farm

managers who support agricultural research often find it useful for discovering improved practices, technologies, and other new business opportunities and for advancing sustainable agriculture. This Indicator addresses the research aspect of R&D whereas Indicator 12.1.3 (Agricultural Innovation) addresses the development part of R&D.

Conformance Evidence Examples: A description of individual or collaborative participation in agricultural research or other science-based programs that improve the knowledge and practice of sustainable agriculture, including test plots for crop trials or new practices, which may be supported by evidence of participation in: citizen science projects; demonstration days; research to address agricultural productivity, *water quality*, and community issues; and other research or science-based programs that improve the knowledge and practice of sustainable agriculture.

Objective 13. Lessee-Operated Operations

To promote the use of *agricultural best management practices* on leased farmland to broaden the practice of sustainable agriculture and to promote the efficient use of agricultural inputs and the management of adverse environmental impacts.

Background: Objective 13 only applies to *Standard users* with management responsibilities for leased *farmland*. Farmland leasing is under-utilised in Australia compared to other countries such as the U.K. and the U.S. Almost all *farmland lessees* also operate their own *farmland*. Most *farmland lessees* lease from landowners for longer than 3 years, though most operate using annual agreements. Long-term lease agreements allow *farmland lessees* to have greater interest in soil conservation and landholder to have greater interest in soil health and other long-term values. Thus, leasing arrangement can foster sustainable agriculture practices among lessees and create opportunities to influence lessee farming practices on their lands. The activities of farmland lessees may contribute to the performance of the Program User for Objectives 2 through 6 and Indicators 7.2.3, 7.3.1 and 9.4.1, but the Program User is responsible for conformance to these Objectives, Performance Measures, and Indicators. This Indicator helps ensure Program Users promote *agricultural BMPs* on *farmland* leased to *farmland lessees* and improve the practice of sustainable agriculture.

Performance Measure 13.1 Leased-Land Management: *Standard users* shall clearly define and implement strategies to ensure that *farmland lessee* activities adhere to the principles of sustainable agriculture.

Indicator 13.1.1 Leased-Land *Program*: A *program* to help ensure that *farmland* management complies with the *agricultural best management practices* and the *Principles* and *Objectives* of the *Leading Harvest Australia Standard* as determined by a *Standard user* and *lessee*.

Guidance: This Indicator helps ensure that *Standard users* apply an organised system or set of activities to help ensure management of *lessees* conforms to the *agricultural BMPs* and the *Principles* and *Objectives* of the LH Australia Farmland Management Standard Est. 2023. Conformance to *agricultural BMPs* is determined jointly by the Program User and *lessees*. Conformance evidence for other Indicators may be applicable to this Indicator: Indicators (13.1.2 Farmland Lease Agreements), 13.1.3 (Communicating Leased-Land Objectives), 13.1.4 (Farmland Lessee Social Responsibility Commitment), 13.2.1 (Verifiable Monitoring System), and 13.2.2 (Improvement of the Verifiable Monitoring System).

Conformance Evidence Examples: A description of an organised system or set of activities used to help ensure farmland management by lessees conforms to the *agricultural BMPs* and the *Principles* and *Objectives* of the LH Australia Farmland Management Standard Est. 2023, which may be supported by evidence such as: standard operating procedures (SOPs) for lease-land oversight, evaluation, and communication; communications with *farmland lessees*; and annual review materials shared with *lessees*.

Indicator 13.1.2 *Farmland Lease* Agreements: Written agreements with *lessees* demonstrating their commitment to applying *agricultural practices* consistent with *agricultural best management practices*.

Guidance: This indicator helps ensure that *Standard users* clearly communicate their commitment to having *lessees* apply *agricultural practices* consistent with *agricultural BMPs* and foster *lessee* commitment. Written agreements can be included in the lease agreement or other types of agreements (e.g., Memorandum of Understanding, Letters of Intent, Memorandum of Agreement). Indicator 13.1.4 (Farmland Lessee Social Responsibility Commitment) is limited to fostering responsible operations, safe working environment, and legal compliance of *lessees* whereas this Indicator is limited to fostering the *lessee* application of *agricultural practices* consistent with *agricultural BMPs*.

Conformance Evidence Examples: Written agreements with *lessees* demonstrating farmland tenant commitment to apply *agricultural practices* consistent with *agricultural BMPs*, which may be supported by evidence such as: a description of how written agreements are communicated to *lessee* oversight staff; and employee training regarding *lessee* agreements including *Standard users* commitment to the application of *agricultural practices* consistent with *agricultural BMPs*.

Indicator 13.1.3 Communicating Leased-Land Objectives: A written statement clearly defining sustainable agriculture goals of the *Standard user* for leased *farmland* that is shared with *lessees* and made available to *appropriate* stakeholders upon request.

Guidance: Clear communication with lessees is essential

to achieving mutual goals. This Indicator helps ensure that *Standard users* communicate their sustainable agriculture goals for leased *farmland* to *lessees*. Goals listed for Indicator 1.1.1 (Farmland Stewardship Commitment) should be consistent with goals listed for this Indicator.

Conformance Evidence Examples: A written statement clearly defining sustainable agriculture goals of the *Standard user* for leased *farmland*, which may be supported by evidence such as: indication that a written statement has been shared with lessees (e.g., shared in meetings with prospective and existing *lessees* or in routine communications to *lessees*); farm manager training regarding sustainable agriculture goals of the *Standard user* for leased *farmland*; and SOPs for sharing sustainable agriculture goals of the *Standard user* for leased *farmland* with prospective or existing *lessees* and stakeholders.

Indicator 13.1.4 *Farmland Lessee* Social Responsibility Commitment: A written statement by *lessees* demonstrating their commitment to operate safely and responsibly; provide a safe working environment; and comply with applicable Commonwealth, state and local laws, statutes, and regulations.

Guidance: This Indicator helps ensure that lessees clearly communicate their commitment to operate safely and responsibly; provide a safe working environment; and comply with applicable Commonwealth, state and local laws, statutes, and regulations. A written statement by lessees can be included in the lease agreement or be a simple written statement. Indicator 13.1.2 (*Farmland Lease* Agreements) intends to foster the application by *lessees* of *agricultural BMPs* whereas this Indicator intends to foster safe and responsible operations, safe working environment, and legal compliance.

Conformance Evidence Examples: Written Social Responsibility Commitment statement by *lessees* regarding safe and responsible operations, safe working environment, and legal compliance, which may be supported by evidence such as: farm manager training for supporting *lessees* and their preparation of a Social Responsibility Commitment statement; and educational materials for *lessees* about Social Responsibility Commitment statement.

Performance Measure 13.2 Leased-Land Monitoring: *Standard users* shall monitor *agricultural practices* used by *lessees* to ensure their consistency with *agricultural best management practices*.

Indicator 13.2.1 Verifiable Monitoring System: Use of a *verifiable monitoring system* with:

Indicator 13.2.1a: A *process* for monitoring the *agricultural practices* used by *lessees*.

Guidance: This part of the Indicator helps ensure that *Standard users* apply a purposeful series of practices or

routines (formal or informal) for monitoring the *agricultural practices* used by *lessees*. The monitoring process can be simple and monitor the *agricultural practices* used by *lessees* (see Objectives 2-6).

Conformance Evidence Examples: A description of a purposeful series of practices or routines (formal or informal) for monitoring the *agricultural practices* used by *lessees*, which may be supported by evidence such as: indications of leased-land visits, written monitoring SOPs, and monitoring forms and records.

Indicator 13.2.1b: A *process* for evaluating application of *agricultural practices* by *lessees* and identifying and communicating areas where *lessees* can improve their performance and achieve greater consistency with the *agricultural best management practices* and the *Principles* and *Objectives* of the *Leading Harvest Australia Standard*.

Guidance: This Indicator uses information from Indicator 13.2.1a to ensure that the *Standard user* actively influences the lessee's practices. It prompts *Standard users* to apply a purposeful series of practices or routines (formal or informal) (i.e., a *process*) to evaluate the *agricultural practices* of the *lessee* and then identify and communicate areas of improvement to the *lessee*. The key reference points for evaluating *lessee* practices are *agricultural BMPs* and the *Principles* and *Objectives* of the LH Australia Farmland Management Standard Est. 2023.

Conformance Evidence Examples: A description of a purposeful series of practices or routines (formal or informal) used for evaluating the *agricultural practices* of the *lessee*, identifying and communicating areas of improvement to the *lessee*, which may be supported by evidence such as: annual performance reviews of lessees; annual face-to-face meetings; communications with lessees regarding performance; and annual or quarterly leased land review forms and records.

Indicator 13.2.2 Improvement of the *Verifiable Monitoring System*: A *process* for using information from the *verifiable monitoring system* to identify areas of performance improvement for the *verifiable monitoring system*.

Guidance: The purpose of this indicator is to ensure that Program Users have a process to evaluate the *verifiable monitoring system* for lessee-operated farmland and identify areas of improvement. This could lead to improvements that make the *system* more effective or provide better lessee oversight. Updates to the *verifiable monitoring system* are a key part of *continual improvement*.

Conformance Evidence Examples: A description of the series of practices or routines (formal or informal) for using information from the *verifiable monitoring system* to identify areas of performance improvement for the *verifiable monitoring system*, which may be supported by evidence

such as: updates on using *agricultural BMPs* as an evaluation reference point; review of *lessee* performance goals; communications describing periodic performance review of the *verifiable monitoring system*; and a description of changes in the *verifiable monitoring system* (e.g., data collection, monitoring standard operating procedures, and standardised monitoring forms).

SECTION 6

GLOSSARY

Agricultural best management practices: A practice or combination of practices deemed to be best practice for meeting productivity, economic, soil and environmental (sustainability) outcomes. These recommended practices are typically developed by any combination of industry Research and Development Corporations (RDCs), state government agencies, research institutions (such as Universities and CSIRO), Natural Resource or Catchment management Authorities, and farming systems groups.

Agricultural chemicals: Includes any substance or organism used to: destroy, stupefy, repel, inhibit the feeding of, or prevent pests on plants or other commodities; destroy a plant or to modify its physiology; modify the effect of another agricultural chemical product; attract a pest for the purpose of destroying it. This encompasses all herbicides, insecticides and fungicides. Dairy cleansers for on-farm use, crop markers, insect repellents for use on humans, swimming pool disinfectants and algaecides, rodenticides, antifouling paints, preservatives, and household and home garden products for pest and weed control have been deemed to be agricultural chemical products. Some pest traps and barriers using chemical attractants also require registration (DAWE).

Agricultural land: Land that is used directly or indirectly in the production of *agricultural products* including *cropland, grass- land, rangeland, pasture* and other land on which agricultural products or livestock are produced and resource concerns may be addressed. It may include cropped woodland, marsh- es, incidental areas included in the agricultural operation, and other types of land used for production of livestock (DAWE).

Agricultural practices: Specific methods including tillage system, planting, application practices for *fertilisers* and *crop protectants*, harvesting and other cropping practices that are applied to grow and harvest annual or perennial *crops* for food, animal feed, forage, fiber, oilseed and other *agricultural products*.

Agricultural products: *Crops* for food, animal feed, forage, fiber, oilseed, medicine, cultural practices, fermentation products, or fuel, livestock and livestock products. These products include (but are not limited to) grains and flours, fresh and processed fruits and vegetables, meat and meat products, dairy products, natural fibres, sugar and wine (ABS 2018).

Agricultural waste: Refers to *solid waste* that is generated by the rearing of animals or the production and harvest of *agricultural products*. This may include, but is not limited to, poultry and livestock manure and residual materials in liquid or solid form generated from the production and marketing of poultry, livestock, furbearing animals, other livestock products and *crop residues* from row *crops* and permanent *crops* (DAWE).

Appropriate: Suitable or proper in the circumstances for a particular purpose. Considerations may include whether an activity will achieve the goal of an *indicator* or *performance measure* in a specific setting, is practical and reasonable and contributes to achieving regulatory compliance or obtaining social license.

Appropriate deforestation cutoff date: A date (day, month and year) specified by the most relevant biome- or geography-specific *deforestation* protocol(s) after which farmed land cannot have been deforested. An example of a relevant *deforestation* protocol could include, but is not limited to, Canadian Boreal Forest Conservation Framework. Where no such protocol exists, program users may determine their own cutoff date (refer to cutoff date definition).

Biosecurity: Biosecurity is the management of the risks to the economy, the environment, and the community, of *pests* and diseases entering, emerging, establishing or spreading. Biosecurity focuses on the hierarchy of controls, beginning with preventing the entry of *pests* into areas where they do not occur, monitoring for and eradicating those that do enter, and managing the negative impacts of those that become established (DAWE).

Biodiversity: The variety and abundance of life forms, processes, functions and structures of plants, animals and other living organisms, including the relative complexity of species, communities, gene pools and ecosystems at spatial scales that range from local to regional to global (SFI). This includes soil organisms, pollinators, beneficial organisms, agricultural and *grassland* plants and *wildlife*.

Carbon farming: Carbon farming is the process of changing agricultural practices or land use to increase the amount of carbon stored in the soil and vegetation (sequestration) and to reduce greenhouse gas emissions from livestock, soil or vegetation (avoidance) (Dept Primary Industries and Regional Development, WA).

Certification body: An independent third party that is accredited and competent to conduct certifications to the *Leading Harvest Australia Standard*.

Climate change: Change in the state of the climate that can be identified (e.g. by using statistical tests) by changes in the mean and/or the variability of its properties and that persists for an extended period, typically decades or longer. It may be due to natural internal processes or external forcings or to persistent anthropogenic changes in the composition of the atmosphere or in land use (Intergovernmental Panel on Climate Change).

Climate-smart agriculture (practices): Practices and principles that promote sustainable increases in agricultural productivity (including sustainable intensification) while adapting to *climate change* and reducing *greenhouse gas* emissions (Food and Agriculture Organization of the United Nations).

Conservation: 1. *Protection* of plant and animal *habitat*. 2. Management of a renewable natural resource with the *objective* of sustaining its productivity in perpetuity while providing for human use compatible with sustainability of the resource.

Contract management company: A third-party company used by a *Standard user* to directly operate *enrolled farmland*.

Covenant of quiet enjoyment: A covenant that promises that the grantee or tenant of an estate in real property will be able to possess the premises in peace, without disturbance by hostile claimants.

Quiet enjoyment is a right to the undisturbed use and enjoyment of real property by a lessee.

Cover cropping: Cover crop refers to a specific plant that is grown primarily for the benefit of soil. Establishing a cover crop during a fallow period in cropping rotations or between rows in orchards or vineyards can assist with managing soil erosion, improve soil fertility, water infiltration and carbon and control diseases and pests. Cover crops may include grasses, cereals or legumes (Department of Primary Industries NSW).

Critically Endangered: Under the EPBC Act, a flora species, fauna species or ecological community, that meets any of the following five criteria:

1. Undergone, is suspected to have undergone or is likely to undergo in the immediate future a very severe reduction in numbers (measured over the longer of 10 years or 3 generations) of 80% or higher;

2. Its geographic distribution is precarious for the survival of the species and is very restricted: Extent of occurrence (EOO) < 100 km2 and Area of occupancy (AOO) < 10 km2 and at least two of the following: Severely fragmented OR Number of locations = 1; Continuing decline observed, estimated, inferred or projected in any of: (i) extent of occurrence; (ii) area of occupancy; (iii) area, extent and/or quality of habitat; (iv) number of locations or subpopulations; (v) number of mature individuals; or extreme fluctuations in any of the previous (i) – (v).

3. Estimated number of mature individuals is very low (< 250) and one of (a) or (b): (a) evidence suggests that the number will continue to decline at a very high rate (25% in 3 years or 1 generation – whichever is longer) (b) the number is likely to continue to decline and its geographic distribution is precarious for its survival, based on one of the following three conditions: (i) Number of mature individuals in each subpopulation ≤ 50, (ii) % of mature individuals in one subpopulation = 90 – 100%, (iii) Extreme fluctuations.

4. The estimated total number of mature individuals is extremely low (< 50).

5. The probability of its extinction in the wild is at least 50% in the immediate future (in 10 years or 3 generations, whichever is longer – 100 years maximum) (DAWE, 2021).

Critical external factor: Any off-farm attribute or factor that is materially and substantially relevant to the viability, long- term profitability, and sustainability of agricultural production of a management unit or farm. These may include economic factors (e.g., labor availability, regional market demand and

opportunities, regulatory changes, farmland tenant availability, supplier availability and technological advancements), environmental factors (e.g., climate change, regional

availability of water, and other inputs), and social factors (e.g., social license).

Crop: Plant species that are purposefully grown and/or harvested to satisfy human and livestock needs. They can include plants grown for food, feed, forage, fiber, decorative purposes, oilseed, medicine, cultural practices, fermentation products or fuel, including, but not limited to, field crops, hay or forage, fruits, vegetables, nuts, grains and horticultural specialties. Cover crops and companion crops may be considered crops if purposefully grown.

Cropland: Land used primarily for the direct production of agricultural products for harvest, including, but not limited to, land in row crops or close-grown crops, forage crops that are in a rotation with row or close-grown crops, permanent hay land, horticultural crops, orchards, vineyards, cropped woodland, marshes, cranberry bogs and other lands used to produce crops. It may include both irrigated and dryland areas.

Crop productivity: The inherent capacity of a particular site to produce a crop, often measured in volume or weight per hectare.

Crop protectants: Also known as pesticides or crop protection products, crop protectants are used to keep crops healthy and abundant by protecting them against pests (insecticides), weeds (herbicides and diseases (fungicides). Specific chemicals are labelled for very specific use and quantities. They can be synthetic (developed in laboratories and manufactured) or natural. Chemicals used in agriculture need to be approved by the Australian Pesticides and Veterinary Medicines Authority (APVMA). State and territory governments are responsible for controlling the use of crop protectants beyond the point of retail sale; in some states, more than one agency is involved.

Crop residues: Materials from growing crops left on the soil surface or partially incorporated into the surface layer of cropland to reduce soil erosion, conserve soil moisture and improve soil tilth. These materials may include, but are not limited to, stalks, stubble, leaves, chipped branches and vines, woody biomass from orchard and vineyard redevelopment and seed pods.

Crop genetic diversity: Variation in genetic and phenotypic characteristics of plants used in agriculture. Its two components are the genetic diversity within each crop (within-crop diversity, including different crop varieties or hybrids of the same species) and the number of crop species commonly grown (between-crop diversity).

Cutoff date: Where no appropriate deforestation cutoff date exists, standard users may set their own cutoff dates. There may be different cutoff dates for indicators 7.3.2a and 7.3.2b, or for different regions. The determination of cutoff dates must be substantiated with evidence that can be justified as upholding the intent of the relevant indicator.

Deforestation: The conversion of forest to another land use or the long-term reduction of the tree canopy cover below the minimum 10 percent threshold. It includes areas of forest converted to agriculture, pasture, water reservoirs, residential and industrial areas, and urban areas (Food and Agriculture Organization of the United Nations).

SECTION 6

Endangered: Under the EPBC Act, a flora species, fauna species or ecological community, that meets any of the following five criteria:

Undergone, is suspected to have undergone or is likely to undergo in the immediate future a very severe reduction in numbers (measured over the longer of 10 years or 3 generations) of 50% or higher;

Its geographic distribution is precarious for the survival of the species and is restricted: Extent of occurrence (EOO) < 5000 km2 and Area of occupancy (AOO) < 500 km2 and at least two of the following: Severely fragmented OR Number of locations ≤ 5; Continuing decline observed, estimated, inferred or projected in any of: (i) extent of occurrence; (ii) area of occupancy; (iii) area, extent and/or quality of habitat; (iv) number of locations or subpopulations; (v) number of mature individuals; or extreme fluctuations in any of the previous (i) – (v).

Estimated number of mature individuals is low (< 2500) and one of (a) or (b): (a) evidence suggests that the number will continue to decline at a very high rate (20% in 5 years or 2 generations – whichever is longer) (b) the number is likely to continue to decline and its geographic distribution is precarious for its survival, based on one of the following three conditions: (i) Number of mature individuals in each subpopulation ≤ 250, (ii) % of mature individuals in one subpopulation = 95 – 100%, (iii) Extreme fluctuations.

The estimated total number of mature individuals is very low (< 250).

The probability of its extinction in the wild is at least 20% in the immediate future (in 20 years or 5 generations, whichever is longer – 100 years maximum) (DAWE., 2021).

Energy-efficient agricultural practices: Practices that deliver more services for the same energy input or the same services for less energy input (modified from International Energy Agency definition of energy efficiency).

Enrolled lands: Lands managed by the Standard user and enrolled under the Leading Harvest Australia Standard and subject to third-party audit to the Leading Harvest Australia Standard.

Equal Opportunity Employment: To provide employment where an employer agrees not to discriminate against any employee or job applicant because of race, color, religion, national origin, sex, physical or mental disability, or age.

Farmland: Land that includes native vegetation and modified pastures that are grazed, cropping land, horticulture and sheep-wheat that are part of an agricultural operation (ABARES Agricultural Snapshot, 2021).

Farmland lessee: A lessee of farmland where the lease is managed by a Standard user.

Farm labor contractor: A person or business who charges a fee to recruit, transport, supply or hire seasonal farmworkers (including migrant/backpacker labourers) to work for or under the direction, supervision or control of Standard user or a contract management company under the oversight of a Standard user (DAWE).

Fertiliser: Fertiliser is defined as a substance that is manufactured, represented, supplied or used as a means of directly or indirectly fertilising the soil; supplying nutrients to plants; or conditioning the soil by altering the chemical, physical or biological composition of the soil. (Fertiliser Australia, National Code of Practice 2018) State Governments have developed regulations to manage description and safety of fertilisers. Fertiliser Australia has developed a National COP for Fertiliser Description and Labelling (2018).

Forest: An area, incorporating all living and non-living components, that is dominated by trees having usually a single stem and a mature or potentially mature stand height exceeding 2 metres and with existing or potential crown cover of overstorey strata about equal to or greater than 20 per cent. It encompasses woodland. (ABARES).

Gender equitable: The fair treatment for men and women according to their respective needs. This may include equal treatment or treatment that is different, but which is considered equivalent in terms of rights, benefits, obligations and opportunities (UNESCO). Equivalency between men and women does not mean that women and men have to become the same, but that their rights, responsibilities and opportunities will not depend on whether they were born male or female.

Geoheritage: Outstanding examples of geology and the geological processes that formed the Earth's surface, as well as the plants and animals that have lived on it, can be seen at all scales in landforms and natural rock outcrops, river banks, sea cliffs and shore platforms, in road cuttings, mines, quarries and other excavations. Geoheritage sites are protected under the EPBC Act as sites of World or National Heritage value. Regional sites are protected under state and territory legislation (Geological Society Australia).

Grasslands: Grasslands are natural ecological communities dominated by grasses and with no or only sparse tree or shrub cover. They are dominated by a range of grass species but contain a diversity of other herbs. Grasslands are among the most species-rich plant communities in Australia. Secondary or derived grasslands are those in which the woody species (trees and/or shrubs) have been removed, leaving only the native herbaceous ground later (FOG, 2021).

Greenhouse gases: Gases in the atmosphere that can absorb infrared radiation from the sun, trapping outgoing energy in the form of heat in the atmosphere. Key greenhouse gases include carbon dioxide (CO_2), nitrous oxide (N_2O), methane (CH_4), sulfur hexafluoride (SF_6), perfluorocarbons (PFCs) and hydrofluorocarbons (HFCs) (Climate Change in Australia, CSIRO).

Groundwater: Water occurring naturally below ground level (whether in an aquifer or otherwise). In Australia groundwater is strongly connected to surface water (Water Act 2007, Geoscience Australia).

Groundwater depletion: A long-term decline in levels of groundwater which can be caused by a combination of increased human usage (of ground and connected surface water) and changes to recharge (e.g. rainfall and human usage) (DAWE).

Groundwater regulatory agency: A local, state or territory government agency with statutory authority to exercise regulatory or supervisory oversight in the use and/or extraction of groundwater, with coordination provided by the Natural Resource Management Ministerial Council (NRMMC).

Habitat: A place, natural or otherwise (including climate, food, cover and water), where an individual or population of animal species or plant species naturally or normally lives and develops. In ecology, the term habitat summarises the array of resources, physical and biotic factors that are present in an area, that support the survival and reproduction of a particular species.

Habitat conversion: A fundamental change in a natural habitat, usually caused by human activity. Habitat loss is a consequence of human activities such as agriculture, urbanization, deforestation, resource extraction, alteration of the sea-floor due to trawling (fishing), or the release of pollutants. Habitat loss can also occur due to environmental changes (University of California Museum of Paleontology). In agriculture habitat conversion for agriculture can occur as a result of a number of activities (e.g. application of fertilisers to native areas, favouring exotic species; draining of wetlands, inappropriate fire regimes; application of herbicides to poison broadleaf plants and trees or deliberate clearing or ploughing of areas of habitat).

Habitat fragmentation: Habitat fragmentation is defined as the process during which a large expanse of habitat is transformed into a number of smaller patches of smaller total area isolated from each other by a matrix of habitats unlike the original (Fahrig, 2003).

Hazardous waste: Waste that is dangerous or potentially harmful to human health or the environment, which can be liquid, solid, gas or sludge. It can be discarded commercial products, like leftover cleaning fluids or *crop protectants*, or the byproducts of manufacturing processes (Department Agriculture Water and the Environment).

 Indicator: A specific metric that provides information about an organisation's agricultural and environmental performance and that is integral to assessing conformance to the *Leading Harvest Australia Standard*.

Indigenous Peoples: People defined in international or national legislation as having a set of specific rights based on their historical ties to a particular territory and their cultural or historical distinctiveness from other populations that are often politically dominant. More specifically, Australia is home to two very distinct indigenous cultural groups: Aboriginal and Torres Strait Islander peoples (AIATSIS, 2021).

Indigenous Heritage: Indigenous heritage places are landscapes, sites and areas that are particularly important to Indigenous people as part of their customary law, developing traditions, history and/or current practices. Some indigenous heritage places are protected under national law (EPBC Act, as World or National Heritage sites), others are protected under state or territory legislation. (DAWE).

Indigenous Protected Area: an area of Indigenous-owned land or sea where traditional Indigenous owners have entered into an agreement with the Australian Government to promote biodiversity and cultural resource conservation (DAWE).

Integrated Pest Management: The control of *pests*, including insects, at tolerable levels below economic thresholds, by the strategic use of biological, cultural and chemical practices. IPM seeks to use natural predators or parasites to control pests, using selective pesticides for backup only when pests are unable to be controlled by natural means (Farm Biosecurity Australia). *Appropriate* techniques may include, but are not limited to, enhancement of natural enemies, planting pest-resistant crops, adaption of cultural management and judicious use of *crop protectants*.

Land use conversion: A change in the extent or composition of an ecosystem or *habitat* where there is a shift from one land use to another that is considered significant or irreversible.'

Listed Threatened Species and Ecological Communities: The EPBC Act provides for the listing of native, nationally threatened species and ecological communities, native migratory species and marine species. An MNES, threatened species (flora and fauna) are listed in any one of the following categories: extinct in the wild, critically endangered, endangered, vulnerable, or conservation dependent. Threatened ecological communities are listed under three categories: critically endangered, endangered or vulnerable. There are also listings of threatened species and communities under state environmental legislation. The listing categories and definitions may not align with EPBC listings. Compliance with both state and national environmental laws is required.

Living wage: The minimum income necessary for an employee or contract worker to meet their basic needs, which can include food, child care, health insurance, housing, transportation and other basic necessities (e.g. clothing, personal care items, etc.). A living wage is set higher than a minimum wage and may be "pegged" to (fixed as a percentage of) some other measure of living standards, such as average weekly earnings. This ensures that the living wage holds its relative value over time. While the minimum wage sets a bare minimum, the living wage aspires to be a socially acceptable minimum. Typically, this is seen as a level that keeps workings out of poverty. Australia's national minimum wage is set each year by an expert panel of the Fair Work Commission (FWC).

Low-emission technologies: Advanced technologies used to significantly reduce *greenhouse gas* emissions levels, airborne pollutants and other adverse environmental impacts. This can include high-efficiency equipment and technology using *renewable energy*

(e.g. hybrid vehicles, solar energy).

Lowest risk, most selective treatment options: A treatment used to control site-specific *pests* that *minimises* impact to non-target organisms and people and has the least overall impact while meeting management *objectives*. Considerations may include the target pest, the degree of control needed, cost, the season and timing of application, rates and methods, terrain, crop conditions and the presence or absence of water bodies.

Matter of National Environmental Significance (MNES): There are nine MNES protected under the EPBC Act: *world heritage properties; national heritage places; wetlands of international importance* (listed under the Ramsar Convention); *listed threatened species and ecological communities; migratory species* protected under international agreements; *Commonwealth marine areas; Great Barrier Reef Marine Park; nuclear actions* (including uranium mines); a *water resource,* in relation to coal seam gas development and large coal mining development.

Minimise: To do only that which is necessary and *appropriate* to accomplish the task or *objective* described.

National Heritage Place: An *MNES*, National Heritage places are natural, historic and Indigenous places of outstanding significance to the nation. Once a heritage place is listed under the EPBC Act, special requirements come into force to ensure that the values of the place will be protected and conserved for future generations. The EPBC Act provides for the preparation of management plans which set out the significant heritage aspects of the place and how the values of the site will be managed.

Native habitats: Areas where a native species naturally occurs and that have the living and nonliving environmental conditions necessary for survival, including areas for feeding, shelter, *protection* and/or reproduction.

Natural communities: An assemblage of indigenous interacting plant and animal species and their common environment, recurring in specific ecological areas across the landscape. There are specific definitions of natural communities defined principally by the dominant vegetation. Some of these are defined in this glossary and includes *forests, woodlands, grasslands, rangelands, wetlands*. They also include non-forest vegetation such as healthland and shrubland.

Natural forest: *Forest* composed of indigenous trees and not classified as a planted *forest*.

Nutrient management: To manage the amount, source, placement, form and timing of the application of nutrients and *soil amendments* to ensure adequate *soil fertility* for plant production and to *minimise* the potential for environmental degradation, particularly *water quality* impairment and unnecessary air emissions. In Australia the Fertcare program has been established to ensure that fertiliser suppliers are appropriately skilled to provide sound advice, minimising

environmental and food safety risks and optimising productivity (Fertiliser Australia).

Objective: A fundamental goal.

Pasture: (1) Grazing lands comprised of introduced or domesticated native forage species that are used primarily for the production of livestock. They receive periodic renovation and/ or cultural treatments such as tillage, fertilisation, slashing and weed control, and may be irrigated. They are not in rotation with *crops*. (2) A grazing area enclosed and separated from other areas by fencing or other barriers (paddocks); the management unit for grazing land. (3) Forage plants used as food for grazing animals. (4) Any area devoted to the production of forage, native or introduced, and harvested by grazing.

Performance measure: A means of judging whether an *objective* has been fulfilled.

Pests: A pest is an organism living and growing where they are not wanted, which can cause damage to plants, humans, structures, and other creatures, including crops that are grown for food. Pests can include weeds, plant pathogens (certain fungi, bacteria, and viruses), rodents, and nematodes in addition to plant-feeding insects and mites. Pests include vertebrate animals (both native and introduced) where they impact negatively the environment or agricultural lands. Pest animals and weeds not only reduce agricultural productivity, they can also cause damage to the environment and natural resources (DAWE).

Policy: A written statement of commitment to meet an *objective* or to implement a defined *program* or plan to achieve an *objective* or outcome.

Prime agricultural land: Land that has the best combination of physical and chemical characteristics for producing *agricultural products* and is available for these uses. Its use for agriculture is not impeded or restrained by non-agricultural use or development. The definition of prime agricultural land is complex because land conditions are not static, it is influenced by both soil quality and proximity to water resources, access to infrastructure, and future technology and innovation, and a changing climate. Individual state and territory governments have their own definitions of a policies to protect prime agricultural land and national and state farming bodies (e.g. NFF) also have policies around prime agricultural land (National Farmers Federation).

Process: A series of purposeful actions or operations that leads to a sought-after end or outcome. This can include a set or sequence of informal or formal practices, procedures or routines.

Professional work environment: A nondiscriminatory workplace environment free from harassment and composed of competent, respectful, mature and accountable employees working toward a common goal.

Program: An organised system, *process*, or set of activities to achieve an *objective, performance measure* or *indicator*.

Protection: Maintenance of the status or integrity, over the long term,

of identified attributes or values including management where *appropriate*, giving consideration to past disturbance, land use, and *pest* risk when determining *appropriate* conservation strategies.

Rangeland: The rangelands are those areas where the rainfall is too low or unreliable and the soils too poor to support regular cropping. They cover about 80% of Australia and include savannas, woodlands, shrublands, grasslands and wetlands. The rangelands are largely undisturbed or natural bioregions within Western Australia, South Australia, New South Wales, Queensland and the Northern Territory (DAWE, 2021).

Rare: A category for listing of threatened species used in some states of Australia (e.g. SA, Tasmania). The rare category is not recognised in the IUCN structure and criteria have been created for a rare category to be utilised. The rare category criteria are consistent with current IUCN definitions for the 'near threatened' category, and encompass species in decline and those that have a limited presence and may be at-risk (NRE, Tas and DEW, SA).

Regulatory action information: Information related to compliance with government regulations such as permits, reports and corrective action documentation.

Renewable energy: Energy from sources that are naturally replenishing but flow-limited. It is virtually inexhaustible in duration but limited in the amount of energy that is available per unit of time, including wood, waste, geothermal, wind, photovoltaic, tidal and wave, hydropower and solar thermal energy.

Riparian area: A transition zone, it is any land which adjoins, directly influences, or is influenced by a body of water (ARRC, 2021).

Runoff: Water from precipitation or irrigation on an area that does not infiltrate, but instead is discharged from the area. The water that flows off the surface of the land is called surface *runoff*. Water that enters the soil before reaching *surface water* is called *groundwater runoff* or seepage flow from g*roundwater*.

Soil amendments: Materials that typically are added to soil, plants or the plant-growth environment to enhance plant growth. These include *fertilisers*, compost, sludge, manure, microbes, additives, materials improving soil condition (i.e., adjusting the pH of the soil, improving soil structure and texture, aeration adjustment and moisture conservation among others), materials controlling or suppressing *crop pests*, and others or combinations thereof. Inorganic *soil amendments* are composed of synthetic chemicals and/or minerals, while organic *soil amendments* are often composed of organic matter from plant/animal sources and/or microbes, and may include materials such as manure, earthworm castings, soil, sphagnum peat, grass clippings, straw, wood chips, various composts, seaweed, guano, or naturally occurring mineral deposits, and

living microorganisms, among others.

Soil erosion: A *process* by which soil and rock are removed by water and wind and then transported and deposited in other locations.

Soil fertility: The quality that enables a soil to provide plant nutrients, in adequate amounts and in proper balance, for the growth of specified plants when light, moisture, temperature, tilth and other growth factors are favorable.

Soil health: The capacity of soil to function as a vital living ecosystem that sustains *crops*, soil organisms and humans. Its maintenance includes consideration of the physical, chemical and biological characteristics of soil.

Soil loss: *Soil erosion* where the removal of topsoil occurs faster than the soil-forming processes can replace it due to natural, animal and human activity.

Soil mismanagement: Agricultural operations, practices and/ or treatments that result in the decline of *soil health* and *soil productivity*, including *soil* loss.

Soil productivity: The capability of a soil for producing a specified plant or sequence of plants under specific management.

Solid waste: Any solid, semisolid, liquid or contained gaseous materials discarded from agricultural operations. It includes garbage, construction debris, commercial refuse, sludge from water supply or waste treatment plants and other discarded materials.

Special sites: Sites that include *unique geological features* or *unique culturally important features* that are recognised regionally or nationally or by *Indigenous Peoples*.

Standard user: An organisation certified or committed to being certified by an accredited *certification body* to be in conformance with the *Leading Harvest Australia Standard*.

Surface water: Water that is on the Earth's surface, such as in a stream, river, lake or reservoir.

Threatened ecological community: An ecological that is at risk of extinction, where its natural composition and function of the ecological community have been significantly depleted across its full range. This can be due to many reasons, including: clearing of native vegetation, inappropriate fire regimes, non-native or invasive species, climate change, water diversion, pollution and urban development (DAWE, 2021).

Threatened species: Species (flora and fauna) that are at risk of extinction due to various threats, including loss, degradation and fragmentation of habitat, invasive species, altered fire regimes, unsustainable use and management of natural resources, changes to the aquatic environment and water flows and climate change (DAWE, 2021). Threatened species may be listed under Commonwealth (EPBC Act) and/or state/territory legislation.

Unique culturally important features: Features having significance for or being representative of human activities or beliefs. Examples could include, but are not limited to, documented areas such as archaeological sites, unusual historical sites, cemeteries and sacred

sites. Typically these sites have been documented in databases established by state governments or the federal government and have been significant historically. In Australia, these include *National Heritage Places, Indigenous Heritage sites* and *Indigenous Protected areas.*

Unique geological features: Naturally occurring physical features on Earth's surface, which are unique or locally rare, typically limited in extent (0.1 to 100 acres), often less than 10 acres. Examples could include, but are not limited to, exceptional waterfalls, stream or river gorges, canyons, arches, caves or mine entrances, outcrops of fossil beds or rare mineral deposits, bluffs, buttes and cliffs. In Australia, these include *World Heritage Properties* and *geoheritage* sites.

Verifiable monitoring system: A system capable of being audited by a third party that includes: 1. a means to characterise *farmland* under the authority of a *Standard user*, 2. a *process* to identify and use sources of available data regarding the use of *agricultural best management practices*, and 3. a method to assess *farmland lessee* performance.

Vulnerable: Under the EPBC Act, a flora species, fauna species or ecological community, that meets any of the following five criteria:

1. Undergone, is suspected to have undergone or is likely to undergo in the immediate future a very severe reduction in numbers (measured over the longer of 10 years or 3 generations) of 30% or higher;

2. Its geographic distribution is precarious for the survival of the species and is limited: Extent of occurrence (EOO) < 20,000 km2 and Area of occupancy (AOO) < 20,00 km2 and at least two of the following: Severely fragmented OR Number of locations ≤ 10; Continuing decline observed, estimated, inferred or projected in any of: (i) extent of occurrence; (ii) area of occupancy; (iii) area, extent and/or quality of habitat; (iv) number of locations or subpopulations; (v) number of mature individuals; or extreme fluctuations in any of the previous (i) – (v).

3. Estimated number of mature individuals is limited (< 10,500) and one of (a) or (b): (a) evidence suggests that the number will continue to decline at a substantial rate (10% in 10 years or 3 generations – whichever is longer) (b) the number is likely to continue to decline and its geographic distribution is precarious for its survival, based on one of the following three conditions: (i) Number of mature individuals in each subpopulation < 1000 (ii) % of mature individuals in one subpopulation = 100%, (iii) Extreme fluctuations.

4. The estimated total number of mature individuals is low (< 1000).

5. The probability of its extinction in the wild is at least 10% in the medium-term future (in 100 years) (DAWE., 2021).

Water quality: The chemical, physical and biological characteristics of water, with respect to its suitability for a particular purpose (e.g., drinking water for humans or livestock, commercial and industrial use, aquatic species *habitat* and crop irrigation) (Water Quality Australia).

Wetlands: Wetlands are areas of permanent or periodic/intermittent inundation, with water that is static or flowing fresh, brackish or salt, including areas of marine water the depth of which at low tide does not exceed 6 meters. To be a wetland the area must have one or more of the following attributes: (1) at least periodically the land supports plants or animals that are adapted to and dependent on living in wet conditions for at least part of their life cycle, or (2) the substratum is predominantly undrained soils that are saturated, flooded or ponded long enough to develop anaerobic conditions in the upper layers, or (3) the substratum is not soil and is saturated with water, or covered by water at some time. This includes areas those areas shown as a river, stream, creek, swamp, lake, marsh, waterhole, wetland, billabong, pool or spring on topographic maps or local or regional maps, areas containing recognised hydrophytes, saturated parts of the riparian zone, artificial wetlands such as farm dams, water bodies not connected to rivers or flowing water such as billabongs and rock pools (DES, QLD 2015).

Wildlife: Aquatic (freshwater), marine and terrestrial fauna.

Woodlands: Ecosystems which contain widely spaced trees, fewer and more scattered trees than in *forests*, the crowns of which do not touch and of 20 to 50 per cent crown cover. In temperate Australia, woodlands are mainly dominated by *Eucalyptus* species. Temperate woodlands occur predominantly in regions with a mean annual rainfall of between 250-800mm, forming a transitional zone between the higher rainfall forested margins of the continent and the shrub and grasslands of the arid interior (ABARES, 2021).

World Heritage Property: An *MNES*, World Heritage sites are places that are important to and belong to everyone, irrespective of where they are located. They have universal value that transcends the value they hold for a particular nation. A declared World Heritage property is an area that has been included in the World Heritage List or declared by the Minister to be a World Heritage property. Once a heritage place is listed under the EPBC Act, special requirements come into force to ensure that the values of the place will be protected and conserved for future generations. The EPBC Act provides for the preparation of management plans which set out the significant heritage aspects of the place and how the values of the site will be managed (DAWE, 2021).

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