

GS1 Australia – Draft Primary Production Adaptation Action Plan 2027-31

This Submission

This submission supports the Victorian Government's objectives and recommends that implementation of the Action Plan:

- recognise interoperable digital infrastructure as a foundational enabler of climate adaptation and resilient agricultural supply chains;
- encourage the use of open, internationally recognised standards for identification and data exchange in future digital agriculture, traceability and climate adaptation initiatives;
- align implementation with relevant national initiatives, including the National Agricultural Data Interoperability Framework and the Australian Agricultural Traceability Protocol;
- support a "collect once, use many times" approach to agricultural information, reducing duplication while improving the quality and availability of trusted data for producers, industry and government; and
- continue to strengthen Victoria's leadership in climate-smart agriculture by promoting digital interoperability that supports domestic resilience, export competitiveness and future market requirements.

About GS1 Australia

GS1 Australia welcomes the opportunity to provide feedback on the Department of Energy, Environment and Climate Action (DEECA) Primary Production Adaptation Action Plan 2027–31 Draft for Consultation.

GS1 Australia is a neutral, not-for-profit standards organisation and the Australian member of GS1, the global body that maintains the identification and data-exchange standards used across supply chains worldwide - the barcodes, location identifiers and data standards that let trading partners, regulators and logistics systems refer to the same product, place or party without ambiguity.

GS1 Australia supports the Victorian Government's focus on building a more resilient, productive and adaptive primary production sector. Climate change presents increasing challenges across agricultural supply chains, including disruption to production systems, biosecurity risks, changing market requirements, and increasing expectations for trusted information on product origin, sustainability and production practices.

Supporting Victoria's Climate Adaptation Objectives

The Draft Action Plan identifies a significant opportunity to increase productivity and competitiveness through improved data, modelling and technology that enables producers to make more informed decisions. GS1 Australia strongly supports this focus and recognises that digital capability will play an increasingly important role in supporting climate adaptation across primary production systems.

As investment grows in climate-smart agriculture, decision-support tools, sustainability reporting, traceability systems and emerging technologies, it will be critical that these solutions are designed to work together. Producers are already facing increasing requirements to collect and share information relating to production practices, sustainability credentials, emissions, provenance, certification and market access. As these requirements continue to evolve, there is a risk that disconnected digital tools and reporting frameworks create additional complexity rather than reducing burden.

Interoperability as Enabling Infrastructure for Climate Resilience

The Draft Action Plan appropriately recognises that improving climate resilience will depend upon better access to data, improved decision-support tools and increased digital capability. As these capabilities mature,

it will become increasingly important that information can be reused across multiple purposes rather than collected repeatedly for individual programs. Consistent with the Victorian Government's focus on improving decision-making and enabling adaptation through better information, interoperable data standards provide an important foundation that allows information to be captured once and used many times by producers, industry and government.

As the global standards organisation supporting supply chain identification, data capture and information exchange, GS1 Australia believes that **interoperable data infrastructure will be a critical enabler of climate adaptation**. The next generation of climate-smart agriculture will depend not only on improved production practices and new technologies, but on the ability for information to move efficiently and securely between producers, processors, retailers, exporters, regulators, certification providers and technology platforms.

Alignment with National Digital Agriculture Initiatives

Australia's National Agricultural Data Interoperability Framework (Draft, DAFF 2025) establishes principles that agricultural information should be Findable, Accessible, Interoperable and Reusable (FAIR), while remaining under the control of those generating the data. The Framework recognises interoperability as a critical enabler of innovation, reduced reporting burden and improved decision-making. GS1 Australia's globally adopted identification and supply chain data exchange standards provide practical mechanisms for implementing these interoperability principles across supply chains while allowing producers to continue using their preferred software platforms.

Open, internationally recognised data standards should be viewed as enabling infrastructure that supports many of the objectives identified within the Draft Action Plan. Rather than creating new reporting systems, common standards enable existing systems developed by government, industry and technology providers to exchange information more effectively, improving resilience while reducing duplication.

Reducing Reporting Burden Through Reusable Data

Without common approaches to identification and information exchange, investment in digital agriculture, climate adaptation technologies, traceability systems and sustainability reporting risks creating fragmented information environments that increase compliance costs for producers and reduce opportunities for data reuse across government and industry.

Many climate adaptation initiatives require information to be collected once and reused across multiple purposes including climate reporting, biosecurity, sustainability, market access, certification, emergency response and supply chain traceability. Designing systems around interoperable standards supports this "collect once, use many times" approach, reducing administrative burden while improving the quality and availability of information for producers, industry and government.

The Australian Government has recently announced investments supporting nationally consistent agricultural traceability, including funding for the National Farmers' Federation to strengthen national traceability governance and funding through Standards Australia to support implementation of the Australian Agricultural Traceability Protocol. These initiatives recognise the importance of nationally consistent, interoperable approaches to agricultural information and complement the objectives of the Victorian Draft Action Plan.

Climate adaptation increasingly depends on digital resilience as well as physical resilience. During emergencies, trusted information regarding products, locations, infrastructure, inputs, assets and supply chains becomes critical to effective response and recovery. Globally adopted identification standards help ensure information can be exchanged rapidly across organisations without requiring bespoke system integration.

GS1 Australia encourages DECCA to recognise the importance of open, globally adopted data standards as part of the enabling infrastructure required to support resilient, competitive and adaptive primary production systems.

Summary of Recommendations

Recommendation 1

Recognise interoperable digital infrastructure as critical national infrastructure for climate adaptation.

The Action Plan should acknowledge that internationally adopted identification and data exchange standards are an important component of the national digital infrastructure required to support climate adaptation, improve decision-making, reduce reporting burden and enable trusted information sharing across primary production supply chains.

Recommendation 2

Encourage the use of open, internationally recognised standards when developing future digital agriculture, traceability and climate adaptation initiatives.

Where future digital programs are developed or supported by government, consideration should be given to internationally adopted standards for identification and data exchange to maximise interoperability across commodities, jurisdictions, technology platforms and export markets.

Recommendation 3

Align future Victorian initiatives with national agricultural interoperability activities.

Where practical, implementation of the Draft Action Plan should align with relevant national initiatives including the National Agricultural Data Interoperability Framework and the Australian Agricultural Traceability Protocol to minimise duplication and maximise consistency for producers operating across jurisdictions.

GS1 Australia welcomes the opportunity to discuss any aspect of this submission with the Department of Environment, Energy and Climate Action.

Contact for more information

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Response

1. Recognising data interoperability as critical climate adaptation infrastructure

GS1 Australia supports the Adaptation Action Plan's recognition that improved data, modelling and technology are key opportunities for increasing productivity, competitiveness and resilience within the primary production sector.

As producers adapt to changing climate conditions, they are increasingly required to collect, manage and share information relating to:

- production practices
- climate resilience activities
- sustainability credentials
- carbon and emissions information
- biosecurity status
- product provenance
- certification and assurance requirements.

However, a key challenge is not only the collection of this information, but the ability to efficiently share and reuse it. Across agriculture, producers are increasingly responding to multiple overlapping requirements from:

- sustainability frameworks
- certification schemes
- customer and retailer reporting requests
- export market requirements
- government programs
- industry initiatives.

While these programs often seek similar information, differences in terminology, indicators, data structures and reporting formats create duplication and complexity for producers.

The **Farm Sustainability and Traceability Pilot** ([available by clicking here](#)) demonstrated this challenge in practice. The project brought together sustainability frameworks, traceability capability and digital product information systems to explore how farm-level sustainability information could be captured once and reused across multiple purposes.

A key component of the pilot was reviewing different sustainability frameworks and identifying where indicators overlapped or aligned. While frameworks may use different language or structures, many rely on common underlying information — such as management practices, production attributes, environmental performance indicators and assurance evidence.

Rather than requiring producers to enter the same information separately for each framework or customer request, the pilot demonstrated the value of creating a common data approach where information can be:

- collected once at the source;
- mapped against multiple reporting requirements;
- connected to recognised identifiers;
- shared securely through interoperable systems.

As climate adaptation requirements evolve, this approach will become increasingly important. New climate resilience, sustainability and emissions requirements should not create additional reporting layers for producers. Instead, investment should focus on enabling existing data to be exchanged and reused through common standards.

GS1 standards support this approach by providing globally adopted frameworks for:

- identifying products (Global Trade Item Number – GTIN);
- identifying locations and organisations (Global Location Number – GLN);

- identifying logistics units and assets;
- sharing traceability events across supply chains (EPCIS);
- connecting physical products with trusted digital information (GS1 Digital Link).

GS1 is not a technology provider, sustainability framework owner or centralised database. Rather, GS1 standards provide the common language that allows different systems to exchange information consistently. For climate adaptation initiatives, this means government investment can support a diverse digital ecosystem while ensuring information remains connected, reusable and scalable across commodities and markets.

2. Enabling productivity through interoperable supply chain standards

As the primary production sector adapts to climate change, producers will increasingly rely on digital technologies to support improved decision making, demonstrate sustainable practices, manage supply chain risks and maintain access to domestic and international markets.

However, the productivity benefits of these technologies will only be fully realised if information can move efficiently between systems, businesses and supply chain partners. Investment in digital agriculture should therefore consider not only the development of new tools and platforms, but the underlying standards that allow these systems to connect.

The Centre for International Economics (CIE) report, [*The Impact and Value of Supply Chain Standards on the Australian Economy*](#) (2025), highlights the role that common supply chain standards play in enabling digital transformation and productivity improvements.

The report notes that as supply chains become increasingly complex and global, the value of common global data standards increases substantially because they allow information to be exchanged consistently between different organisations and technology systems. The CIE analysis found that the use of GS1 standards currently contributes an estimated **\$19 billion to \$27.3 billion annually to Australia's GDP** through productivity improvements across sectors including retail, healthcare and food production. The report identified benefits relevant to primary production and food supply chains, including:

- improved supply chain traceability to support market access;
- improved ability to undertake targeted recalls;
- reduced waste of perishable products through better availability of timely and accurate data;
- improved stock and inventory management;
- reduced manual data entry and duplication.

While the CIE analysis was focused on broader supply chain productivity rather than climate adaptation, it demonstrates the importance of ensuring that new digital capability is built on interoperable foundations. As Victoria invests in climate-smart agriculture, decision-support tools and resilience initiatives, adopting existing global standards will help ensure that new solutions can scale across commodities, supply chains and markets.