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# FINAL REPORT

Environmental Sustainability Accreditation  
Decision Tool

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**END FOOD WASTE CRC REPORT APPROVAL**



14 Aug 2024

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### **Panel Review Statement**

End Food Waste CRC recognises the value of knowledge exchange and the importance of objective peer review. It is committed to encouraging and supporting its research teams in this regard. The author(s) confirm(s) that this document has been reviewed and approved by the Project Leader and Industry Partner.

This project has also been evaluated by the End Food Waste CRC publication review panel. These reviewers evaluated its:

- Methodology articulated clearly
- Positioning of findings within the current literature
- Acknowledged compliance with food safety standards
- Conclusions against results
- Relevant human and/or animal ethic approvals obtained

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## Industry Partner Foreword

Food South Australia is the state's peak body for the food and beverage manufacturing industry in South Australia. Our mission is to support, sustain and grow the industry by helping businesses of all sizes develop their markets, business capabilities and capacity, as well as industry connections.

ESG compliance (Environmental, Sustainability, Governance) is becoming increasingly crucial to both international supply chains and consumers alike. South Australian food and beverage manufacturers face the challenge of determining which sustainability indicators, credentials and accreditations are relevant to the markets they wish to enter due to the absence of a unified global accreditation system.

We are very pleased to have partnered with the Adelaide Business School at the University of Adelaide to deliver this initiative. The comprehensive research conducted by Dr. Rebecca Dolan and her team, has been brought to life as a user-friendly web-based tool, named AskSASI. As a result, we can now provide access to AskSASI to our members and the broader industry, assisting businesses to promptly identify indicators, credentials and accreditations relevant to entering their target market/s and specific categories, both nationally and internationally.

This simplification has enhanced market access, as South Australian producers can now align their products with diverse global accreditations, boosting their competitive edge while reducing compliance-related costs.

AskSASI will also help to deliver business efficiencies, assisting to reduce food waste, meet increased customer and consumer demand for sustainable options and significantly reduce their environmental impact.

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31<sup>st</sup> July 2024

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## Executive Summary

Environmental sustainability is becoming increasingly important to both the international supply chains and consumers. The challenge for the SA food and beverage industry is knowing which sustainability indicators, credentials and accreditations are relevant to export markets, due to the lack of a unified global accreditation system. To better understand market needs, Food South Australia and the Adelaide Business School at The University of Adelaide previously developed a strategic review of environmental sustainability indicators, credentials and accreditations across key domestic and international markets for Food South Australia members and other Australian food businesses.

The next stage was to develop and pilot a decision-making tool to help businesses identify relevant indicators, credentials or accreditations that are important for specific market/s and category/ies. This tool was developed and initially be made available to members of Food South Australia and now has the potential to be made freely available (open source) to all Australian food producers via the Food SA website. An online decision support tool focusing on sustainability accreditations for export markets can wield significant benefits for the food industry and society. For the food industry, the tool acts as a comprehensive guide, streamlining the complex landscape of international sustainability standards, regulations and accreditations. This simplification enhances market access, as producers can align their products with diverse global accreditations, boosting their competitive edge while reducing compliance-related costs.

The project's goal/aim was to develop and pilot a business decision-making tool that interfaced with the data created from the review of environmental sustainability accreditations. This tool was intended to help businesses identify relevant indicators, credentials, or accreditations that were relevant for their category in their target markets, delivering business efficiencies, highlighting the opportunity to reduce food waste, meeting increased customer and consumer demand for sustainable options, and significantly reducing the environmental impact.

The key outcomes of the project were:

- Development of a working interface designed with input from businesses.
- Delivery of the tool via a link to the Food South Australia website and activation of the tool.
- Obtaining early adopter feedback on the resulting pilot tool.
- SWOT analysis of the pilot tool to be used in improving the tool into a later complete build (outside the scope of this project).

The tool, named AskSASI (which stands for South Australian Environmental Sustainability Accreditation Searcher and Investigator) was launched in June, 2024. It is an innovative, user-friendly, web-based tool utilising AI technology to search the Food South Australia Sustainability Matrix, providing tailored information specific to each business and its products. The absence of a unified global accreditation system makes it difficult for South Australian food and beverage manufacturing businesses to clarify which sustainability indicators, credentials and accreditations are significant for export markets — AskSASI directly combats this.

## 1. Introduction

### 1.1 Previous Research & Literature

Growing consumer concern about the environmental and social impacts of food production has increased the demand for information on various aspects of sustainability in food products. Every stage of the food supply chain—agricultural and animal production, fishing, food processing, and transportation—affects sustainability (Grunert, 2011). Adhering to sustainability principles can help mitigate the depletion of natural resources caused by food production (Hashemi et al., 2019) and enhance the competitiveness of food processing industries (Grinberga-Zalite et al., 2021).

The sustainability characteristics of food are credence attributes, meaning they cannot be directly observed or tasted at the point of purchase. Consequently, consumers can only consider these attributes in their decision-making if they are clearly communicated

through specific informational tools. Studies have demonstrated that in situations where a product's key attributes are credence-based, clear information provided via labelling can help overcome information asymmetries (Aprile et al., 2012; Verbeke and Ward, 2006).

In recent years, various public and private institutions within the food supply chain have introduced labelling schemes to highlight sustainability attributes, thereby helping consumers make more informed, sustainable food choices. While sustainability is a comprehensive concept that encompasses environmental, social/ethical, and economic aspects, the communication of sustainable product attributes on packaging or in stores has predominantly emphasized the environmental and social dimensions to align with consumer interests (Cecchini et al., 2018; Janßen and Langen, 2017).

The aim of sustainability labelling is to assist consumers who are seeking sustainable alternatives to conventional food products in identifying those that align with their preferences (Weinrich and Spiller, 2016). To cater to consumer demand, food producers need to understand consumer preferences and their willingness to pay for products that carry sustainability claims. Implementing sustainability labels entails significant costs, as it requires changes in production practices and the innovation of technological systems and supplies to enhance the product's compatibility with environmental sustainability (Consuelo, 2020).

It's worth noting that when comparing similar products with and without sustainability labels, research indicates that consumers are willing to pay a premium for labelled products (Annunziata et al., 2019; Lombardi et al., 2017; Van Loo et al., 2015). However, in real-world scenarios, consumers often display a low propensity to utilise sustainability labels. Moreover, there is evidence suggesting that these labels are not always well understood by consumers, and their influence on purchasing decisions is only modestly positive (Garnett et al., 2015; Grunert et al., 2014).

Understanding sustainability labels is crucial for food producers because these labels help communicate the environmental and social attributes of their products to consumers. Knowing which labels are relevant for their products enables producers to align with consumer preferences, potentially justifying higher prices and enhancing market competitiveness. Additionally, it involves adapting production practices to meet sustainability standards, which can lead to long-term benefits such as resource efficiency and positive brand perception. In a market where consumers increasingly prioritise sustainable choices, clear and accurate labelling is essential for attracting and retaining customers.

## **1.2 Gaps in Current Knowledge**

Climate and other environmental changes pose new threats to food production. To improve both human and planetary health, a move towards more sustainable food systems is required. As unsustainable consumption and production practices challenge Global Food Systems, businesses and consumers often seek out sustainability indications (for example, environmental indicators regarding the use of natural resources of water, land, energy, and emissions of greenhouse gases (GHGs)) to assess and communicate levels of environmental sustainability. Environmental sustainability indicators (ESIs), and other indicators concerning people (social) sustainability and prosperity (economic) sustainability provide essential information on key characteristics of food items, therefore offering the potential to drive more sustainable food choices and consumer demands. South Australian businesses are being driven to action due to consumer demands for food categories, claims, packaging, shelf life, and environmental sustainability, which are rapidly evolving. Consequently, the South Australia Food and Beverage 5-year Export Strategy encourages South Australia to implement a recognised food and beverage sustainability accreditation system by leveraging and adapting an internationally recognised sustainability measurement and accreditations system to align with the needs of international markets. South Australian businesses need training and support to achieve accreditation upon identification of suitable accreditation systems.

There is no standard definition for sustainability claims globally and no overarching accreditation system, consumers and businesses need help understanding sustainability claims related to their products. Moreover, little is known regarding the sustainability accreditation requirements and preferences of supply chain members and consumers for sustainability accreditation in key export markets. To highlight this challenge, some estimates suggest there are as many as 57 different labels used in Australia to identify products and services that are 'sustainable'. Some examples include Australian Certified Organic (ACO), B Corp Certification, Good

Environmental Choice Australia (GECA), Green Tick, and Rainforest Alliance. Further, labels such as ‘organic’, ‘sustainable’, ‘cruelty-free’ or ‘fair-trade’ are commonly used in food packaging, but with no universal regulatory definition or agreed-upon standard for the claims, businesses and consumers face challenges in evaluating and adopting appropriate sustainability indicators.

## 2. Methodology

This pilot project had four stages:

**Stage 1:** Determination of needs and co-design workshop. This stage was undertaken with selected food producers, Food South Australia, and the Adelaide Business School to identify how the tool was expected to be used, the primary purposes of the online implementation, the model for presentation of the material, constraints on use, user tracking requirements, and preferred interface. The outcome was a system design that served as the basis for specifying the pilot product design.

**Stage 2:** Functional specification for the web implementation. This included the particular model for the website (map-driven, menu-based, natural language enquiry) based on the outcomes of the co-design workshop.

**Stage 3:** Tool Building. This stage included connection points with the team to review implementation and provide feedback during the build sprints. It involved testing with food producer users. The build included documentation of help pop-ups, FAQs, and instructions for use, potentially including video.

**Stage 4:** Tool delivery and acceptance by Food South Australia.

**Stage 5:** Outreach. This stage ensured that food producers were made aware of the existence of the pilot tool, familiarised themselves with it, demonstrated use of the tool as measured by page use data, and early adopter feedback was obtained through interview and/or survey measures.

## 3. Results

AskSASI was introduced in June 2024. The launch of AskSASI represents a significant advancement in supporting food and beverage producers with environmental sustainability accreditations. This innovative web-based tool was developed through a collaboration between the University of Adelaide’s Adelaide Business School, Hydra Consulting, Web Design Café, and Food South Australia.

AskSASI—standing for South Australian Environmental Sustainability Accreditation Searcher and Investigator—employs artificial intelligence to search the Food South Australia Sustainability Matrix. It provides precise and comprehensible information on environmental, sustainability, and governance (ESG) accreditations. This tool builds upon earlier research funded by the Department of Industry, Innovation and Science, aiming to resolve the challenges posed by a fragmented global accreditation system by aiding businesses in identifying the pertinent accreditations for international markets. While original plans aimed for the development of an MVP (Minimal Viable Product), the success of the development approach resulted in an alpha, and beta version, of the tool being successfully developed and launched.

The tool’s user-centric design and customizable search features facilitate the efficient retrieval of critical information, thereby supporting the development of effective export strategies. Early feedback from trial participants, including Golden North Ice Cream, underscores the tool’s practicality and the valuable insights it delivers for export planning. As AskSASI progresses, it is expected to become a key resource for South Australian businesses striving to enhance their global presence while adhering to sustainability standards.

## 4. Discussion

Sustainability accreditations can provide several benefits for businesses, including:

- **Increased customer loyalty:** Consumers are increasingly looking for sustainable products and services. By earning a sustainability accreditation, businesses can show their customers that they are committed to sustainability and providing products and services that are good for the environment.
- **Improved brand reputation:** A sustainability accreditation can help to improve a business's brand reputation. Businesses can make a positive impression on consumers, investors, and other stakeholders by demonstrating their commitment to sustainability.
- **Access to new markets:** Some governments and organisations only purchase products and services from businesses that have earned certain sustainability accreditations. By earning a sustainability accreditation, businesses can open up new markets for their products and services.
- **Reduced costs:** Businesses can often reduce their costs by adopting sustainable practices. For example, businesses that use energy-efficient equipment can save money on energy bills. Businesses that reduce waste can save money on disposal costs.
- **Increased employee morale:** Employees are increasingly interested in working for businesses that are committed to sustainability. By earning a sustainability accreditation, businesses can attract and retain top talent. Overall, sustainability accreditations can provide several benefits for businesses. By earning a sustainability accreditation, businesses can show their commitment to sustainability, improve their brand reputation, access new markets, reduce costs, and increase employee morale.

Understanding the current environmental sustainability indicators and accreditation systems available to food and beverage (non-wine) businesses is the first necessary step toward adopting a globally recognised sustainability accreditation system tailored to the industry's needs. The development of AskSASI, along with training and support for its implementation, gives South Australian businesses a competitive advantage within Australia and several key export markets.

AskSASI harnesses cutting-edge AI technology to streamline the process of identifying the necessary environmental sustainability accreditations for exporting food products. By inputting product details and target markets, businesses receive customised accreditation requirements, enhancing their ability to meet international standards efficiently and effectively. This tool is a valuable resource for South Australian food and beverage producers aiming to expand globally.

## 5. Conclusions & Recommendations

The existence of numerous sustainability certifications causes confusion among businesses and consumers. The absence of a standardized system complicates decision-making and reduces the effectiveness of these certifications in driving sustainable choices. AskSASI provides a user-friendly, AI-driven platform that helps producers identify relevant sustainability accreditations. It offers tailored information based on product details and target markets, making the accreditation process more efficient and effective. Early feedback from users like *Golden North Ice Cream* highlights the tool's practicality and value in export planning, indicating its potential to become a key resource for South Australian businesses.

In order to implement AskSASI more effectively, we recommend the following actions:

- **Support for Producers:** Provide financial and technical assistance to South Australian producers for adopting sustainability labels. Government subsidies, grants, and industry partnerships can help mitigate the costs of implementing sustainable practices and obtaining accreditations.
- **Promote Transparency:** Ensure transparency in the accreditation process by clearly communicating the criteria and verification methods used. This will build consumer confidence and reinforce the credibility of sustainability labels.
- **Ongoing Research and Monitoring:** Regularly monitor and evaluate the impact of AskSASI tool through surveys and feedback. Continuous improvement will keep the tool relevant and effective.
- **Expand Training Programs:** Implement training for producers to familiarize them with AskSASI and the benefits of sustainability certifications. Training should cover tool usage, understanding accreditation requirements in various markets, understanding the sustainability certifications most appropriate in each market, and adopting sustainable practices.
- **Strengthen Industry Collaboration:** Encourage collaboration among industry stakeholders to drive the adoption of shared sustainability standards and enhance the overall impact of sustainability initiatives.

By adopting these recommendations, South Australian businesses can leverage the benefits of sustainability accreditations, improve their market competitiveness, and contribute to a more sustainable food system. AskSASI, with its innovative design and user-centric approach, is poised to be an effective resource in achieving these goals, supporting the broader objectives of environmental sustainability and economic prosperity.

## 6. Impact and Ongoing Monitoring

AskSASI project is anticipated to deliver significant benefits across multiple dimensions of sustainability and industry performance, aligned with the seven CRC impact areas. In particular, we can expect the following:

- **Industry Profitability Gained:** The access to sustainability accreditations can open new markets and customer segments, thereby increasing sales and profitability. AskSASI simplifies the process of obtaining these accreditations, making it easier for businesses to meet international market requirements.
- **Greenhouse Gas Emission Savings:** AskSASI supports efforts to reduce greenhouse gas emissions by helping businesses adopt environmentally friendly practices. Sustainable practices such as energy efficiency reduced reliance on fossil fuels, and better waste management is core to the accreditations facilitated by AskSASI.
- **Future Leaders in Sustainability Initiatives:** Access to and utilisation of AskSASI will foster the development of future leaders in sustainability, offering a tool to equip a new generation of leaders equipped with the knowledge and skills to drive sustainable practices in the food and beverage industry.
- **Industry People Trained:** AskSASI will provide training to industry professionals, enhancing their understanding and capabilities in sustainability practices and accreditation processes.

### Ongoing Monitoring Measures

To ensure the delivery and continuous improvement of the project's impact, the following monitoring measures are suggested.

- **Regular Surveys and Feedback:** Conduct regular surveys and obtain feedback from users of the AskSASI tool to assess its effectiveness and gather insights for improvements.
- **Case Studies and Reports:** Develop detailed case studies and impact reports to document the success stories and challenges faced by businesses using AskSASI.

- **Stakeholder Engagement:** Maintaining ongoing communication with stakeholders, including industry partners, academic institutions, and government agencies, to align project goals with broader sustainability objectives.
- **Technology Updates:** Ensuring the AskSASI platform is regularly updated with the latest sustainability standards and practices to provide users with current and relevant information.
- **Training and Workshops:** Continuously offering training sessions and workshops to keep industry professionals informed about new developments in sustainability practices and accreditation requirements.
- **Impact Audits:** Conduct periodic impact audits to independently verify the outcomes and benefits of the project against the CRC impact areas.

By implementing these measures, the AskSASI project will not only achieve its intended impact but also adapt and evolve to meet emerging sustainability challenges and opportunities in the food and beverage industry. Further discussion with End Food Waste CRC will be needed to understand what measures can be effectively implemented.

## 7. Acknowledgments

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