



Sustainable Business Australia Limited trading as
Business Council for Sustainable Development Australia
ABN 48 052 135 609
Level 27
20 Bond Street
SYDNEY NSW 2000
+ 61 2 8005 0780
bcsda@bcsda.org.au
www.bcsd.org.au

[REDACTED]
Department of Agriculture, Fisheries and Forestry
Australian Government

5 January 2024

[REDACTED]
[REDACTED]
Submission in response to Agriculture and Land Sectoral Plan

The Business Council for Sustainable Development Australia (**BCSDAustralia**) welcomes the opportunity to make this submission to this Branch.

We would also welcome the opportunity to speak directly on these points at the appropriate time.

Yours faithfully,

[REDACTED]
Andrew Petersen
CEO | **Business Council for Sustainable Development Australia**
0412 545 994 | andrew.petersen@bcsda.org.au

Summary

1. Supporting Agriculture and Land Sectors in Emissions Reduction and Nature Positive enhancements

- **Enabling and Interconnected Mindset:** The Agriculture and Land Sectors has an outsized role to play in addressing both climate and biodiversity crises, but they must be considered together, they are different sides of the same coin.
- **International Alignment:** BCSDA strongly supports commitment 4 of the Emirates Declaration: on Sustainable Agriculture and Climate Actionⁱ and will facilitate collaboration with research bodies delivering the robust scientific evidence base of the farming practices including local and indigenous practices, that deliver the benefits for sustainable productivity, climate, nature, farming families and rural communities.
- **Clarity:** Climate is just one urgent issue to resolve on land. BCSDA strongly advocates that businesses MUST address broader Nature (and Social) perspectives not just one biome (i.e. CO₂ in atmosphere) as all planetary boundaries are unsustainable in Aust. Nature and Land are strongly interconnected. And solving unsustainable planetary boundaries are interconnected and rely on each other to fix.
- **Innovation:** Advocate for collaborative R&D initiatives, incentivizing private sector innovation, and learning from global best practices like the Netherlands' high-efficiency agriculture
- **Capacity Building:** Emphasize enhanced training programs, extension services, and the use of precision agriculture technologies.
- **Systemic Enablement:** Suggest policy frameworks, market mechanisms, and supply chain collaboration, drawing inspiration from the Renewable Energy Target (RET) and the Carbon Farming Initiative.

2. New Initiatives for Emissions Reduction and Carbon Storage

- **Focus:** Recommend initiatives that emphasize integrated land management, technological innovation, improved farm performance and market-based incentives.
- **Examples:** Highlight the need for initiatives similar to the European Union's Common Agricultural Policy, which integrates environmental sustainability into its framework.

3. Role of Government in Emissions Assessment and Reporting

- **Government's Role:** Stress the importance of a consistent and trusted framework for emissions and natural capital assessments and reporting.
- **Support for Producers:** Suggest the development of standardized tools and resources for emissions tracking and management and farm-scale natural capital accounting.

4. Skills and Knowledge for Implementing Change

- **Essential Skills:** Outline the need for understanding sustainable practices, technological proficiency, climate literacy, carbon accounting, business acumen, and policy awareness.

5. Indigenous and Regional community impacts and inclusion in transition

- There is a crucial opportunity to engage authentically with First Nations communities as we transition to a sustainable agricultural sector. It is critical to first ask First Nations communities if and how they would like to share their knowledge and practices at the regional or local level and determine how they will benefit from this engagement. First Nations land management knowledge has value that should be understood and respected by farming communities through fair and equitable exchange.
- **Information Needs:** Support research to reveal the low emission and nature positive practices that support farm business goals to unlock private investment in adoption, e.g.: Australia's own *Farming for the Future* research program. Emphasize the importance of localized climate data, market information, best practice case studies, technology updates, carbon market insights, and regulatory guidelines.

WBCSD / SBA / BCSDA action on the issue

Business Council for Sustainable Development Australia (BCSD Australia) is a leading business-led NGO dedicated to promoting sustainable development within the Australian business sector. As a member of the World Business Council for Sustainable Development (WBCSD) global network, BCSD Australia aligns its mission with global sustainability goals, leveraging international insights and practices to drive local action.

Our Mission and Approach

Our mission is to facilitate the transition of Australian businesses towards more sustainable practices, recognizing the critical role they play in addressing environmental challenges. We achieve this by fostering collaboration, sharing knowledge, and advocating for policies that support sustainable development.

Relationship with WBCSD

As part of the WBCSD network, BCSD Australia benefits from a wealth of global expertise and resources. This connection enables us to bring international best practices to the Australian context, ensuring that our members are at the forefront of sustainable business practices.

Summary of Consultation Responses

In response to the Australian Government’s consultation on supporting agriculture and land sectors in emissions reduction, BCSD Australia has provided comprehensive insights and recommendations. Our responses emphasize the need for innovation, capacity building, and systemic enablement in the agriculture sector. We advocate for new initiatives that integrate environmental sustainability with agricultural productivity and profitability. Recognizing the importance of a reliable framework for emissions assessment, we propose the government’s role in standardizing emissions reporting. Additionally, we highlight the critical skills, knowledge, and information necessary for producers and land managers to effectively implement sustainable practices.

Conclusion

BCSD Australia is committed to guiding and supporting the Australian business community in contributing to the nation’s emissions reduction goals. Our recommendations reflect a strategic approach that balances environmental responsibility with economic viability, aligning with our vision of a sustainable future for Australian businesses.

ⁱ On 1 December 2023, at the UNFCCC COP28, more than 130 governments and dozens of other organisations have rallied behind a new collective pledge to urgently reduce the environmental impact of food systems and improve their climate resilience. The Declaration covers issues including: Adapting food systems to climate change that is already ‘baked in’, with a focus on the specific needs of the most-affected groups including smallholder farmers and Indigenous groups Helping these groups maintain their livelihoods Enhancing early warning systems Enhancing water management in agriculture, which accounts for more than 70% of global freshwater use each year Protecting and restoring soils and ecosystem Reducing food loss and waste, which is accountable for at least 8% of global annual emissions Promoting more sustainable aquaculture Encouraging changes in consumption, with a focus on the Global North Ensuring and improving access to nutrition, with a focus on the Global South There is a vague mention of “shifting from higher greenhouse-gas-emitting practices”, but the Declaration stops short of mentioning fossil fuels outright. Agriculture is estimated to account for around 15% of global annual fossil fuel use. Fossil fuels are used to power equipment on farms and in supply chains and is also used to make synthetic fertilisers and pesticides.

Introduction

BCSD Australia recognizes the significant challenges and opportunities presented by the “Agriculture, land and emissions” discussion paper. Our response is rooted in a deep understanding of sustainable business practices and the urgent need for climate action in the agriculture and land sectors.

Role of Sustainable Practices in Agriculture and Land Management:

1. Innovative Adaptation Strategies:

- Australian producers and land managers are adopting innovative practices to adapt to climate change. This includes precision agriculture, which enhances productivity and reduces emissions.

2. Emission Reduction in Livestock and Cropping:

- Methane reduction in livestock through advanced feeding techniques and sustainable soil management in cropping are key areas. These practices align with global efforts to reduce agricultural emissions.

3. Carbon Sequestration through Land Management:

- Sustainable land use and forestry practices contribute significantly to carbon sequestration. This includes reforestation and improved land management techniques.

Practical Examples:

- Corporate Initiatives:
 - Companies like Woolworths Group in Australia are implementing sustainable agricultural practices in their supply chains, demonstrating a commitment to reducing emissions and enhancing biodiversity.
- Global Best Practices:
 - Denmark’s agricultural sector showcases effective emission reduction strategies, combining government policy and industry innovation to significantly lower emissions while maintaining productivity.

Considerations for the Future:

- Balancing Productivity and Sustainability:
 - In the face of increasing land use competition and the imperative to balance agricultural productivity with environmental sustainability, BCSD Australia advocates for a holistic, landscape-scale approach that transcends traditional industry and tenure-based solutions. This necessitates collaborative efforts at a cross-sectoral level, engaging various stakeholders including government, industry, environmental groups, and First Nations communities. By fostering such collaboration, we can develop integrated solutions that address the multifaceted aspects of land use, ensuring that our landscapes are managed in a way that is both productive and sustainable. This approach leverages BCSD Australia’s unique position and expertise, distinguishing us from industry-specific bodies and enabling us to contribute effectively to broader sustainable development goals.
- Engagement with Indigenous Knowledge:
 - Integrating Indigenous knowledge in land management can offer valuable insights and contribute to more sustainable practices. In short, value traditional knowledge with technological and scientific rigour
- Investment in Research and Development:
 - Continued investment in R&D is crucial for developing new technologies and practices that can further reduce emissions and enhance land health to drive a strong commercialisation focus and streamlining/fast tracking deliverables and outcomes at scale

In conclusion, the agriculture and land sectors play a pivotal role in Australia’s climate action efforts. Embracing sustainable practices, investing in innovation, and engaging in collaborative efforts are key to achieving our emissions reduction goals and ensuring a sustainable future for the sector.

The need for higher ambition

BCSD Australia recognizes the imperative for an ambitious approach in developing a plan for agriculture and the land sector, reflecting global best practices in government and business leadership on climate ambition. This approach is essential to mitigate future climate risks, secure market access, and contribute positively to biodiversity and global food security.

Global Best Practices in Ambition and Action:

1. Mitigating Future Climate Risks:

- Drawing from the IPCC's findings, it's evident that climate change is a significant threat to agricultural productivity. Australian experiences align with global trends, where climate impacts are already reducing farm profitability. An ambitious approach to emissions reduction is crucial to mitigate these risks.

2. Securing Market Access and Capital:

- Globally, governments and businesses are increasingly aligning with the Paris Agreement's goals. Australian agriculture must proactively adapt to these changes to maintain access to international markets and capital. Examples include Rabobank's commitment to net-zero financed emissions and JBS's goal for net-zero greenhouse gas emissions by 2040.

3. Biodiversity as Part of the Solution:

- The global shift towards 'nature positive' investments, as seen in initiatives like the Taskforce on Nature-related Financial Disclosures, highlights the importance of integrating biodiversity with carbon storage efforts. Australia's Nature Repair Market is a step in this direction, offering opportunities for producers and land managers to contribute to biodiversity and emissions reduction.

Practical Examples of Global Leadership:

• International Corporate Commitments:

- Companies like Heineken and GrainCorp are setting ambitious targets for net-zero emissions, influencing supply chains and setting a precedent for Australian agriculture.

• Global Food Security with Lower Emissions:

- Australian agriculture, with its relatively low-emissions intensity, can play a crucial role in the global supply of lower-emissions food and fibre, contributing to both regional and global food security.

Opportunities for First Nations Peoples:

- Recognizing the unique knowledge and sustainable land management practices of First Nations peoples, their inclusion in climate action plans is vital. This aligns with global trends of integrating indigenous knowledge and practices in sustainable development.

Timeframes and Urgency of Action

1. Immediate Implementation of Climate-Resilient Practices:

- **Rationale:** Given the immediate impacts of climate change on agriculture, it is crucial to implement adaptive and resilient practices without delay.
- **Action:** Fast-track initiatives that can be quickly deployed, such as water-efficient irrigation systems or heat-tolerant crop varieties.
- **Timeframe:** Short-term actions (1-3 years) that provide immediate benefits in terms of resilience and productivity.

2. Progressive Transition to Low-Emission Technologies:

- **Approach:** Gradually introduce more advanced technologies and practices that require longer development and adoption periods.
- **Timeframe:** Medium to long-term actions (3-10 years) focusing on sustainable transformation of the sector.

Imperfect Action vs. Perfect Inaction

1. Embracing Adaptive Management:

- **Concept:** Encourage a mindset of 'learning by doing', where actions are taken based on the best available information, with the understanding that adjustments may be needed as more is learned.
- **Example:** Implementing new farming practices based on current climate models, with flexibility to adapt as models are refined.

	<p>2. Incremental Improvements:</p> <ul style="list-style-type: none"> • Strategy: Focus on making continuous, incremental improvements rather than waiting for perfect solutions. • Application: Gradual adoption of sustainable practices, even if they are not yet fully optimized, to start making progress on emissions reduction. <p>Mitigation Hierarchy in Each Initiative</p> <p>1. Avoidance:</p> <ul style="list-style-type: none"> • Initiative: Implement land management practices that avoid carbon emissions, such as protecting existing forests and grasslands. • Assessment: High ease of delivery, immediate impact on emissions. <p>2. Reduction:</p> <ul style="list-style-type: none"> • Initiative: Reduce emissions through efficiency improvements, like precision agriculture and optimized fertilizer use. • Assessment: Moderate ease of delivery, significant impact within short to medium-term. <p>3. Transformation:</p> <ul style="list-style-type: none"> • Initiative: Transform agricultural practices to be more sustainable, such as transitioning to organic farming or integrated pest management. • Assessment: More challenging to deliver, long-term transformational impact. <p>Conclusion</p> <p>In conclusion, BCSD Australia advocates for an ambitious approach that recognizes the urgency of action against climate change. By adopting a pragmatic strategy that prioritizes immediate and incremental actions, and by categorizing initiatives based on the mitigation hierarchy, we can ensure that Australian agriculture not only addresses the current challenges but also positions itself as a leader in sustainable practices on the global stage. This approach aligns with global trends and commitments, ensuring that Australia contributes effectively to global food security, biodiversity, and climate resilience.</p>
Question	Response
<p>4. What are the opportunities to reduce emissions and build carbon stores in agriculture and the land? What are the main barriers to action?</p>	<p>BCSD Australia acknowledges the critical role of the agriculture and land sectors in reducing emissions and building carbon stores. Our perspective is informed by a comprehensive understanding of sustainable business practices and the challenges inherent in transitioning to a low-carbon economy.</p> <p>Opportunities to Reduce Emissions and Build Carbon Stores in Agriculture and the Land:</p> <p>1. Innovative Farming Practices:</p> <ul style="list-style-type: none"> • Implementing precision agriculture and regenerative farming practices can significantly reduce emissions. These methods optimize resource use and enhance soil health, leading to lower carbon footprints. Australian farmers need to ‘re-own’ the word regenerative farming as there is much legacy cynicism and definitional confusion in Australia versus international sentiment. <p>2. Methane Reduction in Livestock:</p> <ul style="list-style-type: none"> • Advanced livestock feeding techniques and breeding practices can reduce methane emissions. For example, adding seaweed to cattle feed has been shown to reduce methane emissions substantially. <p>3. Carbon Sequestration through Forestry and Land Management:</p> <ul style="list-style-type: none"> • Holistic Approach: Sustainable forestry management transcends traditional forestry practices by incorporating a comprehensive ecosystem perspective. This approach ensures the maintenance of biodiversity, water resources, and soil quality, while also addressing carbon sequestration. • Carbon Sequestration: Through sustainable forestry practices, forests act as carbon sinks, absorbing CO2 from the atmosphere. This process is crucial in mitigating the impacts of climate change. The strategic management of forest resources, including

selective logging, controlled burns, and maintaining forest health, enhances the carbon sequestration capacity of these ecosystems.

- **Long-Term Viability:** Sustainable forestry ensures the long-term health and productivity of forest ecosystems, making them resilient to climate change, pests, and diseases. This resilience is key to maintaining their role in carbon sequestration over extended periods.

4. **Circular and Renewable Economies in Embedded Carbon Cycles:**

- **Circular Economy Principles:** The integration of circular economy principles in land management involves the reuse and recycling of materials, minimizing waste, and maximizing resource efficiency. In the context of forestry, this can mean utilizing every part of harvested trees and recycling waste products into bioenergy or other materials.
- **Renewable Resource Utilization:** Forestry within a circular economy framework emphasizes the use of renewable resources. Trees, as renewable resources, when managed sustainably, provide a continuous supply of materials (like timber and paper) without depleting the ecosystem.
- **Embedded Carbon Cycles:** In a circular economy, the carbon embedded in forest products is managed to keep it within the economy for as long as possible. For instance, wood used in construction stores carbon for decades. When these products reach the end of their life, they can be recycled or used for bioenergy, further extending the carbon cycle.
- **Economic and Environmental Synergy:** This approach creates a synergy between economic activities and environmental sustainability. It supports industries and jobs in sustainable forestry and recycling, while contributing to climate change mitigation through extended carbon sequestration.

•

Practical Examples:

- **Corporate Initiatives:**
 - Companies like Mars Incorporated are investing in sustainable farming practices within their supply chains, demonstrating a commitment to reducing emissions and enhancing biodiversity.
- **International Models:**
 - The European Union's Common Agricultural Policy incentivizes sustainable agricultural practices, showing how policy can drive emission reductions and carbon sequestration.

Main Barriers to Action:

1. **Economic and Financial Constraints:**

- The transition to low-emission practices requires significant investment. Farmers and land managers often face financial barriers in adopting new technologies and practices. There is no clear evidence as yet as to what practice change will mean for their farm business performance.

2. **Lack of Access to Technology and Knowledge:**

- In addressing the challenge of limited access to technology and knowledge, it is crucial to empower decision-makers on the ground with accessible, relevant, and actionable information. This can be achieved through education and awareness programs that are informed by international best practices. Such programs should be designed to be straightforward, compelling, and geared towards prompting action through clearly defined, achievable steps and priorities.
- **International Best Practices in Information Accessibility and Knowledge Sharing:**
 1. **Digital Knowledge Platforms:** Implement digital platforms for knowledge sharing, similar to the FAO's [WAICENT](#) (World Agricultural Information Centre) portal, which provides a wealth of resources and data for agricultural decision-making.

2. **Mobile Technology for Knowledge Dissemination:** Leverage mobile technology to disseminate information, drawing inspiration from initiatives like Digital Green’s video-based learning approach, which has been successful in parts of India and Africa.
3. **Localized and Context-Specific Information:** Tailor information to local contexts, as seen in the Netherlands’ precision agriculture model, where farmers receive specific data relevant to their unique environmental conditions and farming practices.
4. **Interactive Learning and Workshops:** Organize interactive workshops and field demonstrations, modeled after the extension services in countries like Australia and the United States, where practical, hands-on learning is prioritized.
5. **Partnerships with Academic and Research Institutions:** Foster partnerships with universities and research institutions to translate scientific research into practical, accessible knowledge for farmers, akin to the collaborative efforts seen in the European Union’s innovation partnerships.
6. **Simplifying Complex Data:** Utilize tools and services that simplify complex agricultural data into user-friendly formats, drawing on examples like the UK’s [Agri-Tech East](#), which facilitates the translation of research into practical applications.
7. **Community-Based Learning Networks:** Establish community-based learning networks that encourage peer-to-peer knowledge exchange, similar to the farmer field schools approach used in various countries.

3. Policy and Regulatory Challenges:

In addressing the challenge of inconsistent policies and regulatory frameworks that hinder the adoption of sustainable practices, it is essential to establish clear, consistent, and supportive policies. This approach should be underpinned by transparency and well-defined action plan deliverables to prioritize collaborative efforts and streamline communication plans for consistent messaging. Leveraging global leading-edge frameworks, such as the WBCSD Roadmaps, can provide valuable guidance in this endeavour. **International Best Practices in Policy and Regulatory Frameworks include:**

- a. **European Union’s Green Deal:** The EU’s Green Deal offers a comprehensive model for transformative policies that integrate sustainability across all sectors. It provides a clear roadmap with actionable targets and is supported by regulatory frameworks that encourage sustainable practices.
- b. **New Zealand’s Zero Carbon Act:** This act sets a clear, legally binding framework for carbon neutrality by 2050, demonstrating the effectiveness of consistent and long-term policy commitments in driving sustainable practices.
- c. **Singapore’s Sustainable Development Blueprint:** Singapore’s approach emphasises integrated policymaking, where sustainability is embedded across various sectors. This model highlights the importance of cohesive policies in achieving sustainability goals.
- d. **Denmark’s Organic Action Plan:** Denmark’s national policy to become an organic country serves as a leading example of clear and supportive policies that encourage the transition to sustainable agricultural practices.
- e. **WBCSD’s Sectoral Roadmaps:** The WBCSD’s sector-specific roadmaps provide frameworks for industries to align with the Sustainable Development Goals (SDGs). These roadmaps offer clear guidelines and benchmarks for businesses to follow, facilitating the transition to sustainable practices.
- f. **Canada’s Pan-Canadian Framework on Clean Growth and Climate Change:** This framework illustrates the effectiveness of collaborative policymaking involving multiple stakeholders, including government, businesses, and NGOs, to create a unified approach to sustainability.
- g. **California’s Cap-and-Trade Program:** As a successful market-based approach, this program demonstrates how regulatory frameworks can incentivize emission reductions while supporting economic growth

Considerations for the Future:

- **Collaborative Approach:**
 - Engaging with a broad range of stakeholders, including farmers, businesses, Indigenous communities, and government, is crucial for developing effective strategies.

	<ul style="list-style-type: none"> • Investment in Research and Development: <ul style="list-style-type: none"> • Continued investment in R&D is essential for developing new technologies and practices that can further reduce emissions and enhance carbon sequestration. • Policy Alignment and Support: <ul style="list-style-type: none"> • Ensuring that policies at all levels of government are aligned and supportive of sustainable agriculture and land management practices is critical. <p>In conclusion, there are significant opportunities to reduce emissions and build carbon stores in agriculture and the land. Overcoming the main barriers to action requires a concerted effort from all stakeholders, including the business community, policymakers, and land managers.</p>
4. How can we progress emission reduction efforts whilst also building resilience and adapting to climate change?	<p>BCSD Australia acknowledges the pressing challenge of climate change, particularly its impact on Australia’s agriculture and land sectors. Our response emphasizes the necessity of reducing emissions to mitigate future climate risks and to ensure the competitiveness of our industries in global markets. We align with Australia’s commitment to global climate action and recognize the vital role of the agriculture and land sectors in this endeavour.</p> <p>Focused Strategies for Addressing Climate Change in Agriculture and Land Sectors:</p> <ol style="list-style-type: none"> 1. Emission Reduction in Agriculture: <ul style="list-style-type: none"> • Implementing sustainable agricultural practices, such as precision farming, improved livestock management, and carbon farming, to reduce emissions and enhance productivity. 2. Enhancing Carbon Sequestration: <ul style="list-style-type: none"> • Investing in land management practices that increase carbon sequestration, including reforestation, afforestation, and soil carbon enhancement, to offset emissions. 3. Adapting to Climate Change: <ul style="list-style-type: none"> • Developing and deploying climate-resilient agricultural practices and technologies to adapt to changing weather patterns and environmental conditions. <p>Practical Examples:</p> <ul style="list-style-type: none"> • Corporate Leadership: <ul style="list-style-type: none"> • Australian companies like Qantas Airways have committed to carbon-neutral growth, investing in sustainable fuels and carbon offset projects, demonstrating leadership in emission reduction. • Global Market Opportunities: <ul style="list-style-type: none"> • The European Union’s Green Deal and its Farm to Fork Strategy provide a model for aligning agricultural practices with environmental sustainability, offering insights for Australian producers to remain competitive in global markets. <p>Overcoming Barriers:</p> <ol style="list-style-type: none"> 1. Financial and Technical Support: <ul style="list-style-type: none"> • Providing financial incentives and technical support to farmers and land managers for adopting sustainable practices and technologies. 2. Policy Alignment and Market Access: <ul style="list-style-type: none"> • Ensuring that national policies are aligned with global market trends, facilitating access to international markets that value sustainable and low-emission products. 3. Collaboration and Knowledge Sharing: <ul style="list-style-type: none"> • Fostering collaboration between government, industry, and research institutions to share knowledge and best practices in sustainable agriculture and land management. <p>Future Considerations:</p> <ul style="list-style-type: none"> • Long-Term Investment in Innovation: <ul style="list-style-type: none"> • Investing in research and development to drive innovation in sustainable agricultural practices and technologies.

	<ul style="list-style-type: none"> • Building Resilience through Diversification: <ul style="list-style-type: none"> • Encouraging diversification in agricultural practices and products to build resilience against climate risks. • Engaging in Global Climate Initiatives: <ul style="list-style-type: none"> • Actively participating in global climate initiatives and agreements to contribute to and benefit from international efforts in addressing climate change.
Building on existing information and knowledge	<p>BCSD Australia recognizes the importance of integrating data-driven research and global best practices into our national strategy for addressing climate change in agriculture and land management. This approach not only aligns with international efforts but also provides a robust framework for advancing Australia’s climate goals.</p> <p>Global Government and Business Practices:</p> <ol style="list-style-type: none"> 1. European Union’s Common Agricultural Policy (CAP): <ul style="list-style-type: none"> • The EU’s CAP focuses on sustainable agriculture, integrating environmental practices and reducing greenhouse gas emissions. The policy includes measures for climate-smart farming and biodiversity conservation, serving as a model for balancing agricultural productivity with environmental sustainability. 2. United States’ Climate-Smart Agriculture and Forestry Strategy: <ul style="list-style-type: none"> • The U.S. Department of Agriculture (USDA) has developed a comprehensive strategy to encourage climate-smart practices. This includes incentives for carbon sequestration, soil health improvement, and sustainable land management, demonstrating the potential of policy-driven change in agricultural practices. 3. New Zealand’s Farm Emissions Pricing Scheme: <ul style="list-style-type: none"> • New Zealand is pioneering a farm-level emissions pricing scheme, incentivizing farmers to reduce emissions through financial mechanisms. This approach highlights the effectiveness of market-based solutions in driving sustainable agricultural practices. <p>Corporate Initiatives and Commitments:</p> <ol style="list-style-type: none"> 1. Unilever’s Sustainable Agriculture Code: <ul style="list-style-type: none"> • Unilever, a global FMCG company, has implemented a Sustainable Agriculture Code, setting standards for suppliers to improve agricultural practices, reduce emissions, and enhance biodiversity. This code exemplifies how corporate policies can drive sustainability in supply chains. 2. Nestlé’s Net Zero Roadmap: <ul style="list-style-type: none"> • Nestlé’s commitment to achieving net zero emissions by 2050 includes transforming its agricultural supply chain. The company invests in regenerative agriculture and supports farmers in adopting sustainable practices, showcasing the role of corporate leadership in climate action. 3. Walmart’s Project Gigaton: <ul style="list-style-type: none"> • Walmart aims to remove one gigaton of greenhouse gases from its supply chain by 2030. This initiative involves collaborating with suppliers to improve agricultural practices, reduce waste, and enhance energy efficiency, illustrating the impact of retail giants in driving sustainability. <p>Incorporating Global Insights and Practices:</p> <ol style="list-style-type: none"> 1. World Business Council for Sustainable Development (WBCSD): <ul style="list-style-type: none"> • WBCSD’s work on sustainable agriculture emphasizes the integration of regenerative practices and the importance of biodiversity. Their “CEO Guide to Food System Transformation” outlines strategies for businesses to contribute to a sustainable food system, which can inform Australia’s approach to agricultural sustainability. 2. Capitals Coalition:

	<ul style="list-style-type: none"> The Capitals Coalition advocates for the valuation and integration of natural, social, and human capital in decision-making. Their “Natural Capital Protocol” offers a framework for businesses to evaluate their impact on natural resources, which is crucial for sustainable land management and agricultural practices. <p>Practical Applications and Future Directions:</p> <ol style="list-style-type: none"> Adopting WBCSD’s Regenerative Agriculture Principles: <ul style="list-style-type: none"> Implementing regenerative agriculture practices, as advocated by WBCSD, can enhance soil health, increase biodiversity, and improve carbon sequestration in Australian agriculture. Integrating Capitals Coalition’s Framework: <ul style="list-style-type: none"> By adopting the Capitals Coalition’s approach, businesses can better understand and mitigate their environmental impact, contributing to more sustainable land use and agricultural practices. <p>Data-Driven Research and Insights:</p> <ol style="list-style-type: none"> Global Carbon Project’s Research: <ul style="list-style-type: none"> Research by the Global Carbon Project underscores the significance of agriculture and land use in global carbon emissions. Their findings advocate for integrated land management strategies to balance food production with carbon sequestration. FAO’s State of Food and Agriculture Report: <ul style="list-style-type: none"> The FAO’s annual report provides insights into global agricultural trends, emphasizing the need for sustainable practices to ensure food security while mitigating climate change impacts. <p>Conclusion: BCSD Australia advocates for a comprehensive approach that incorporates global best practices and insights from WBCSD, Capitals Coalition, and other international efforts. By doing so, we can enhance our national strategy for sustainable agriculture and land management, aligning with international efforts and ensuring Australia’s leadership in sustainable development.</p>
<p>4. Are there initiatives or innovative programs underway that could be applied or expanded on at a national scale?</p>	<p>There are several innovative initiatives and programs globally that could be considered for application or expansion at a national scale in Australia, particularly in the context of sustainable development and climate-smart agriculture. Here are some notable examples:</p> <p>Regenerative Agriculture Programs:</p> <ul style="list-style-type: none"> Example: The Rodale Institute in the United States has been a pioneer in researching and promoting regenerative agriculture, which focuses on soil health, crop diversity, and ecosystem restoration. Application: Australia could develop national programs to train farmers in regenerative techniques, potentially partnering with organizations like the Rodale Institute for expertise and guidance. <ol style="list-style-type: none"> Carbon Farming Initiatives: <ul style="list-style-type: none"> Example: The European Union’s carbon farming framework under the Common Agricultural Policy encourages farmers to adopt practices that increase carbon sequestration. Application: Similar initiatives could be expanded in Australia, offering incentives for farmers to adopt carbon sequestration practices, thereby contributing to national emissions reduction targets. Water Management Innovations: <ul style="list-style-type: none"> Example: Israel’s advanced water management and irrigation technologies, such as drip irrigation and water recycling, have revolutionized agricultural productivity in arid regions. Application: Given Australia’s climate challenges, adopting these water-efficient technologies could significantly improve agricultural sustainability and resilience. Agroforestry and Permaculture: <ul style="list-style-type: none"> Example: In countries like Brazil and Indonesia, agroforestry systems that integrate trees with crops and livestock have proven effective in enhancing biodiversity and soil health.

	<ul style="list-style-type: none"> • Application: Implementing agroforestry at a larger scale in Australia could help in balancing agricultural productivity with ecological conservation. <p>5. Digital Agriculture and Precision Farming:</p> <ul style="list-style-type: none"> • Example: The use of digital tools and AI in precision farming in countries like the Netherlands and the United States helps optimize resource use and increase crop yields. • Application: Expanding digital agriculture initiatives in Australia could lead to more efficient and sustainable farming practices. <p>6. Sustainable Supply Chain Initiatives:</p> <ul style="list-style-type: none"> • Example: Programs like Unilever’s Sustainable Agriculture Code, which sets sustainability standards for suppliers. • Application: Encouraging Australian companies to adopt similar codes could drive sustainability throughout domestic supply chains. <p>7. Public-Private Partnerships for Sustainability:</p> <ul style="list-style-type: none"> • Example: The Sustainable Markets Initiative, which fosters collaboration between the private sector and governments to accelerate the transition to a sustainable future. • Application: Developing similar partnerships in Australia could mobilize resources and expertise for sustainable development goals. <p>8. Climate-Resilient Agriculture Research:</p> <ul style="list-style-type: none"> • Example: CGIAR’s global research partnerships focus on developing climate-resilient crop varieties and farming practices. • Application: Collaborating with international research bodies could enhance Australia’s capacity to develop climate-resilient agriculture. <p>By examining and adapting these global initiatives to the Australian context, BCSD Australia can play a pivotal role in shaping a sustainable and resilient agricultural sector that aligns with both national goals and global best practices.</p>
4. How can the Australian Government bring together existing effort and new initiatives into one coordinated plan?	<p>To effectively coordinate existing efforts and new initiatives into a comprehensive plan, the Australian Government should focus on integrating multi-sectoral collaboration, leveraging data-driven insights, and adopting best practices from successful global models. This approach should encompass the involvement of businesses, government agencies, and other stakeholders, ensuring alignment of goals and maximization of resources.</p> <ul style="list-style-type: none"> • Establishing a Multi-Sectoral Framework: • Rationale: Collaboration across government, business, and civil society is crucial. A multi-sectoral approach ensures diverse perspectives and expertise are considered, leading to more robust and inclusive policies. • Example: The EU’s Green Deal is an exemplary model, where government, businesses, and NGOs collaborate for sustainable development. • Application: Australia can establish a similar framework, inviting key industry players, NGOs, and government bodies to form a coalition for sustainable development. • Data-Driven Decision Making: • Rationale: Utilizing data and research in policy formulation ensures decisions are grounded in evidence and can effectively address specific challenges. • Example: The Netherlands uses data extensively in its environmental policies, particularly in water management, leading to highly effective and targeted interventions. • Application: The Australian Government can partner with academic institutions and research bodies to integrate data analytics into policy development. • Democratisation: Democratising the data for all land managers to access, analyse and use. • Benchmarking and Adopting Global Best Practices: • Rationale: Learning from global best practices allows for the adoption of proven strategies, reducing the risk and time involved in trial-and-error approaches. • Example: New Zealand’s farm-level emissions pricing scheme effectively incentivizes sustainable practices in agriculture.

	<ul style="list-style-type: none"> • Application: Australia can adopt similar market-based mechanisms, tailored to local contexts, to encourage sustainable business practices. • Incentivizing Corporate Sustainability Initiatives: • Rationale: Businesses play a pivotal role in sustainable development. Incentives can drive corporate investment in sustainable practices. • Example: Walmart's Project Gigaton incentivizes suppliers to reduce their carbon footprint, demonstrating the impact of corporate leadership in sustainability. • Application: The Australian Government can introduce incentives for businesses that adopt sustainable practices, such as tax breaks or grants. • Integrating Traditional and Indigenous Knowledge: • Rationale: Indigenous knowledge systems offer valuable insights into sustainable land and resource management. • Example: Canada's incorporation of Indigenous knowledge in environmental stewardship has led to more sustainable and culturally sensitive policies. • Application: Australia should actively involve Indigenous communities in policy development, respecting and integrating their traditional knowledge. • Fostering Public-Private Partnerships: • Rationale: Public-private partnerships can mobilize resources, expertise, and innovation towards common sustainability goals. • Example: The Sustainable Markets Initiative facilitates collaboration between the private sector and governments globally. • Application: The Australian Government can initiate similar partnerships, focusing on sustainable development projects. <p>Conclusion: By adopting a multi-faceted approach that includes multi-sectoral collaboration, data-driven policy making, learning from global best practices, incentivizing corporate sustainability, respecting indigenous knowledge, and fostering public-private partnerships, the Australian Government can effectively coordinate existing efforts and new initiatives into a unified and impactful plan.</p>
4. What are the most important options to be further adopted or supported, looking in the short and the longer-term?	<p>We propose the following strategies, supported by practical examples and data-driven research:</p> <p>Livestock Emission Reduction:</p> <ul style="list-style-type: none"> • Methane-Inhibiting Feed Supplements: <ul style="list-style-type: none"> • Challenge: High costs and logistical difficulties in delivering supplements to grazing livestock. • Solution: Subsidize research and development to lower costs and improve delivery systems. For example, New Zealand has invested in research for low-emission sheep breeds, demonstrating a commitment to genetic solutions. • Data: Studies show that certain feed additives can reduce methane emissions by up to 30% (Journal of Dairy Science, 2020). • Improved Herd Management and Genetics: <ul style="list-style-type: none"> • Approach: Encourage breeding programs focused on low-emission livestock and efficient herd management practices. • Example: The Dairy Futures CRC in Australia focuses on breeding cows with higher feed efficiency, leading to lower emissions per unit of product. <p>Cropping and Horticulture:</p> <ul style="list-style-type: none"> • Precision Agriculture and Nitrification Inhibitor Coated Fertilizers: <ul style="list-style-type: none"> • Challenge: Higher costs compared to conventional fertilizers. • Solution: Provide incentives or subsidies to adopt these technologies. • Impact: Research indicates a potential reduction in nitrous oxide emissions by 79% in grain systems (Scheer et al., 2016). • Green Nitrogen Fertilizers: <ul style="list-style-type: none"> • Innovation: Develop and promote fertilizers derived from green hydrogen and ammonia production. • Benefit: This approach can significantly lower pre-farm emissions. <p>Fuel and Energy in Agriculture:</p>

	<ul style="list-style-type: none"> • Renewable Energy Integration: <ul style="list-style-type: none"> • Strategy: Support on-farm renewable energy generation, such as solar and wind, through grants or tax incentives. • Example: The Solar Energy Transformation Program (SETuP) in Australia has successfully integrated solar power in remote areas. • Low or Zero Carbon Fuel Adoption: <ul style="list-style-type: none"> • Challenge: Slow progress due to high-torque requirements of farm machinery. • Solution: Invest in research and development for suitable technologies and incentivize early adopters. <p>Carbon Storage in Land:</p> <ul style="list-style-type: none"> • Agroforestry and Farm Forestry: <ul style="list-style-type: none"> • Approach: Encourage integration of tree planting in farming practices for carbon sequestration and timber production. • Example: The Australian Government's 20 Million Trees Program supports farm forestry initiatives. • Soil Carbon Sequestration: <ul style="list-style-type: none"> • Techniques: Promote no-tillage farming, cover cropping, and green manures. • Benefit: These practices enhance soil carbon storage and improve soil health. <p>Circular Economy and Waste Management:</p> <ul style="list-style-type: none"> • Waste Utilization: <ul style="list-style-type: none"> • Approach: Encourage the conversion of agricultural waste into valuable by-products, like bioenergy. • Example: The Bioenergy Roadmap by ARENA highlights opportunities in converting waste to energy. <p>Conclusion: To effectively reduce emissions in agriculture, the Australian Government should focus on incentivizing and supporting the adoption of innovative practices and technologies in livestock management, cropping, energy use, carbon storage, and waste management.</p>
4. What are the practical solutions to increase uptake?	<p>To increase the uptake of practical solutions for reducing emissions in the agricultural sector, BCSD Australia recommends the following strategies, supported by examples and data-driven research:</p> <p>Financial Incentives and Subsidies:</p> <ul style="list-style-type: none"> • Purpose: Lower the cost barrier for adopting new technologies and practices. • Example: The Australian Government's Clean Energy Finance Corporation (CEFC) provides low-interest loans for clean energy projects, encouraging farmers to invest in renewable energy and energy-efficient technologies. <p>Education and Training Programs:</p> <ul style="list-style-type: none"> • Goal: Enhance farmers' understanding and skills in implementing sustainable practices. • Approach: Offer workshops, online courses, and field demonstrations on topics like precision agriculture, regenerative farming, and renewable energy integration. • Example: The Carbon Farming Initiative in Australia educates farmers on how to generate carbon credits through sustainable land management. <p>Research and Development Support:</p> <ul style="list-style-type: none"> • Objective: Innovate and improve the cost-effectiveness of sustainable agricultural technologies. • Action: Increase funding for agricultural research institutions and public-private partnerships. • Example: The Australian Government's Rural R&D for Profit program boosts funding for collaborative projects that deliver real outcomes on the ground. Programs such <i>Farming for the Future</i> research program that is generating the evidence base of how different types of natural capital contribute to farm business performance. This will create the business case for private investment and in natural capital and low emissions farming practices. <p>Policy and Regulatory Frameworks:</p> <ul style="list-style-type: none"> • Purpose: Create a conducive environment for sustainable practices through supportive policies.

	<ul style="list-style-type: none"> • Method: Implement regulations that favour low-emission technologies and practices, such as carbon pricing or emissions trading schemes. • Example: The European Union's Common Agricultural Policy (CAP) incentivizes sustainable farming practices through its policy framework. <p>Market-Based Mechanisms:</p> <ul style="list-style-type: none"> • Goal: Encourage emission reductions through economic incentives. • Approach: Develop carbon markets where farmers can sell carbon credits earned through sustainable practices. • Example: The Emissions Reduction Fund in Australia allows farmers to earn carbon credits for reducing greenhouse gas emissions. <p>Collaboration and Partnerships:</p> <ul style="list-style-type: none"> • Objective: Leverage the knowledge and resources of various stakeholders. • Action: Foster partnerships between government, industry, academia, and NGOs to share knowledge and resources. • Example: The National Farmers' Federation in Australia partners with various organizations to support sustainable agriculture initiatives. <p>Technology Transfer and Adoption Support:</p> <ul style="list-style-type: none"> • Purpose: Facilitate access to and adoption of new technologies. • Method: Provide technical support, advisory services, and demonstration projects to showcase the benefits of new technologies. • Example: The Grains Research and Development Corporation in Australia supports the transfer of research findings to farmers through extension services. <p>Conclusion: To increase the uptake of emission-reducing practices in agriculture, a multifaceted approach involving financial incentives, education and training, supportive policies, market-based mechanisms, collaborative efforts, and technology transfer is essential.</p>
Developing emissions pathways	<p>The goal is to align with Australia's net zero plan and contribute effectively to the transition to a net zero economy. Here's a structured response to the consultation questions:</p> <p>4.1 Medium-Term Outlook (2030 and 2035)</p> <p>Current Trends and Projections:</p> <ul style="list-style-type: none"> • Agricultural emissions are projected to remain stable up to 2035, with an increasing proportional share in national emissions due to reductions in other sectors. • The adoption of lower emissions technologies, like livestock feed supplements, is crucial but currently limited. <p>Strategies for Emission Reduction:</p> <ul style="list-style-type: none"> • Enhanced Adoption of Low Emission Technologies: <ul style="list-style-type: none"> • Encourage the use of livestock feed supplements through subsidies and awareness programs. • Example: The European Union's Common Agricultural Policy incentivizes sustainable farming, which can be a model for Australia. • Investment in Research and Development: <ul style="list-style-type: none"> • Focus on innovative agricultural practices and technologies that reduce emissions. • Collaborate with research institutions and the private sector for practical solutions. • Policy Support and Incentives: <ul style="list-style-type: none"> • Implement policies that support sustainable agricultural practices. • Example: Carbon pricing mechanisms that reward low-emission farming. <p>4.2 Long-Term Outlook (Towards 2050)</p> <p>Global Context and Opportunities:</p> <ul style="list-style-type: none"> • The global shift towards lower emissions will create new market demands. • Australia's low emissions intensity in beef and grain production positions it well in the global market. • Consideration of land use for carbon storage and food production balance is essential. <p>Future Vision:</p>

	<ul style="list-style-type: none"> • Intensification of production systems in response to market demands, focusing on reducing emissions intensity. • Expansion in mixed farming systems, integrating carbon and biodiversity outcomes with agricultural production. <p>4.3 Interim Goals or Indicators</p> <p>Setting Practical Goals:</p> <ul style="list-style-type: none"> • Focus on continuous improvements in emissions intensity as a measure of progress. • Develop alternative goals and differentiated approaches to greenhouse gas reporting, particularly for methane. <p>International Alignment:</p> <ul style="list-style-type: none"> • Ensure Australia’s greenhouse gas reporting remains aligned with international benchmarks and expectations. • Contribute to global efforts like the Global Methane Pledge by targeting significant reductions in agricultural methane emissions. <p>Conclusion: To effectively contribute to Australia’s net zero goals, the agricultural sector must embrace a combination of technology adoption, policy support, market-driven solutions, and international alignment. This approach should be informed by current trends and future projections, with a focus on practical, achievable goals that align with global standards and commitments.</p>
<p>4. How do you see the agriculture and land sectors contributing over the medium and longer term? What are the opportunities to deliver emission reductions in parallel with wider goals?</p>	<p>The approach should integrate environmental sustainability with economic viability and social responsibility.</p> <p>Medium-Term Contributions (Up to 2030)</p> <ol style="list-style-type: none"> Enhanced Sustainable Farming Practices: <ul style="list-style-type: none"> • Adoption of regenerative agricultural practices that improve soil health and increase carbon sequestration. • Example: The use of cover crops and reduced tillage to enhance soil carbon storage. Technological Innovations: <ul style="list-style-type: none"> • Implementing precision agriculture to optimize resource use and reduce emissions. • Investment in methane-reducing technologies for livestock. Policy and Incentive Structures: <ul style="list-style-type: none"> • Development of policies that incentivize sustainable practices, such as carbon credits for farmers practicing carbon sequestration. • Example: The European Union’s farm to fork strategy can serve as a model. Education and Capacity Building: <ul style="list-style-type: none"> • Enhancing farmer knowledge and skills in sustainable practices through training and extension services. <p>Long-Term Contributions (2030 and Beyond)</p> <ol style="list-style-type: none"> Integration of Agriculture with Carbon Markets: <ul style="list-style-type: none"> • Encouraging participation in carbon trading schemes, providing farmers with an additional revenue stream. • Example: The California Cap-and-Trade Program integrates agriculture into its carbon market. Leveraging Biotechnology: <ul style="list-style-type: none"> • Developing and adopting crop varieties and livestock breeds with lower emissions profiles. • Example: Genetically modified crops that require less fertilizer. Collaboration with Indigenous Communities: <ul style="list-style-type: none"> • Partnering with Indigenous communities for land management practices that have proven sustainable over millennia. Diversification of Agricultural Systems: <ul style="list-style-type: none"> • Promoting agroforestry and mixed farming systems that balance production with environmental conservation. <p>Markers for Success</p> <ol style="list-style-type: none"> Reduction in Emissions Intensity: <ul style="list-style-type: none"> • Measurable decrease in emissions per unit of agricultural output. Increased Carbon Sequestration:

	<ul style="list-style-type: none"> • Quantifiable increase in carbon stored in soils and vegetation. <p>3. Economic Viability:</p> <ul style="list-style-type: none"> • Maintaining or increasing profitability for farmers while implementing sustainable practices. <p>4. Enhanced Biodiversity:</p> <ul style="list-style-type: none"> • Improved biodiversity indicators in agricultural landscapes. <p>5. Social and Community Benefits:</p> <ul style="list-style-type: none"> • Increased community engagement and benefits, particularly for rural and Indigenous communities. <p>Conclusion</p> <p>The agriculture and land sectors have the potential to significantly contribute to emissions reduction while achieving broader economic, social, and environmental goals. This requires a holistic approach that combines technological innovation, policy support, community engagement, and market-based mechanisms. Success should be measured not only in terms of emissions reduction but also in the enhancement of biodiversity, soil health, and community well-being.</p>
Supporting and enabling change	<p>The discussion paper outlines a comprehensive strategy for supporting and enabling change in the agriculture and land sectors to reduce emissions and contribute to Australia’s net-zero goal. The strategy is organized around three key themes: driving innovation, building capacity, and ensuring the system enables change. Here’s a structured overview and analysis:</p> <p>Driving Innovation</p> <ul style="list-style-type: none"> • Current State: Significant R&D investment is ongoing, but there’s a gap between promising solutions and their commercial-scale availability. • Strategies: <ul style="list-style-type: none"> • Enhance coordination and collaboration in R&D. • Focus on long-term funding and whole-farm solutions. • Increase availability of qualified researchers and infrastructure. • Trial solutions at scale to minimize risk and encourage adoption. • Explore alternative practices, including those from First Nations’ land management. <p>Building Capacity</p> <ul style="list-style-type: none"> • Challenges: <ul style="list-style-type: none"> • Need for new skills and roles in agriculture. • Workforce capacity issues across commodities and regions. • Attraction of new and younger workers to sustainable agriculture. • Approaches: <ul style="list-style-type: none"> • Develop new training and career paths. • Expand the capacity of First Nations in agriculture. • Utilize existing networks for knowledge sharing. • Establish commercial-scale demonstration sites. • Improve access to carbon calculators and decision-making tools for land use. <p>Ensuring the System Enables Change</p> <ul style="list-style-type: none"> • Context: <ul style="list-style-type: none"> • Global markets and supply chains are increasingly seeking lower-emission products. • Need for policy certainty and incentives to unlock private investment. • Actions: <ul style="list-style-type: none"> • Increase collaboration and coordination among stakeholders.

	<ul style="list-style-type: none"> • Engage internationally to learn and position Australia favourably. • Standardize approaches for emissions reporting. • Provide incentives for investment in low-emission technologies and practices. <p>Strategic Focus for Accelerating Action</p> <ul style="list-style-type: none"> • Prioritize areas with the highest potential for emissions reduction and economic viability. • Invest in technologies that are scalable and have a demonstrable impact on emissions. • Strengthen the link between R&D and practical, on-farm applications. • Enhance workforce development focusing on new skills required for a low-emission future. • Leverage Australia’s unique ecological systems and First Nations’ knowledge. • Foster international collaborations for shared learning and trade benefits. • Develop a robust framework for emissions measurement and reporting. <p>Conclusion</p> <p>To effectively reduce emissions in the agriculture and land sectors, a multi-faceted approach is needed that combines innovation, capacity building, and systemic enablers. This requires not only technological advancements but also a focus on human capital, policy frameworks, and international cooperation. By aligning these efforts with the broader goals of sustainable development, Australia can make significant strides towards its net-zero target while ensuring the viability and competitiveness of its agriculture and land sectors.</p>
<p>4. How can the Australian Government better support agriculture and land sectors to:</p> <p>a) drive innovation,</p> <p>b) build capacity, Agriculture, land and emissions: discussion paper Department of Agriculture, Fisheries and Forestry 6</p> <p>c) ensure the system enables emissions reductions?</p>	<p>a) Driving Innovation</p> <ul style="list-style-type: none"> • Increased Funding and Incentives: Allocate more resources to R&D in sustainable agriculture and land management and offer incentives for private sector investment in agritech and sustainable practices. • Collaborative Research Platforms: Establish or strengthen platforms for collaboration between government, academia, industry, and First Nations representatives to share knowledge and drive innovation. • Commercialization Support: Assist in scaling up promising technologies, including market access, regulatory compliance, and business development. • Whole-Farm Solutions Focus: Encourage R&D that integrates various aspects like soil health, water management, and biodiversity. • Leveraging First Nations’ Knowledge: Integrate traditional land management practices into modern agricultural practices. <p>b) Building Capacity</p> <ul style="list-style-type: none"> • Workforce Development: Invest in education and training programs for sustainable agriculture skills. • Enhanced Extension Services: Provide practical, on-the-ground support to farmers in implementing sustainable practices. • Community Engagement: Facilitate knowledge sharing and peer-to-peer learning among farmers. • Support for First Nations Communities: Develop targeted programs for First Nations agriculture and land interests. • Access to Information: Improve access to reliable data and tools for decision-making, including emissions calculators and land management resources. <p>c) Ensuring the System Enables Emissions Reduction</p> <ul style="list-style-type: none"> • Policy Frameworks: Develop clear, consistent policies that encourage sustainable practices and emissions reduction. • Market Mechanisms: Create mechanisms that reward carbon sequestration and low-emission practices. • Supply Chain Integration: Encourage sustainability criteria integration into supply chains. • International Collaboration: Engage in partnerships to share best practices and align with global standards. • Recognition and Certification: Establish programs that recognize farms and businesses adopting sustainable practices. <p>Supporting Data and Research</p> <ul style="list-style-type: none"> • CSIRO Research: Utilize findings from CSIRO and other research institutions to inform R&D investment decisions.

	<ul style="list-style-type: none"> • International Benchmarks: Reference studies like the FAO’s work on sustainable agriculture for a global context. <p>This integrated approach combines practical strategies with a focus on innovation, capacity building, and systemic enablement, aligning with BCSD Australia’s mission of promoting sustainable development in the business sector.</p>
4. What new initiatives could the Australian Government design that would support emissions reduction and carbon storage in agriculture and land and help ensure a productive, profitable, resilient and sustainable future for the sectors?	<p>Integrated Carbon Farming Development Program</p> <ul style="list-style-type: none"> • Objective: To promote practices that increase carbon sequestration in soil and biomass while enhancing agricultural productivity. • Example: The ‘Carbon Farming Initiative’ in Australia offers a precedent, but this program should be more comprehensive, integrating latest research and technology. • Data-Driven Approach: Utilize data from CSIRO and other research bodies to identify best practices in carbon farming. <p>Sustainable Agriculture Investment Fund</p> <ul style="list-style-type: none"> • Objective: To finance the adoption of sustainable and low-emission agricultural technologies. • Model: Similar to the Clean Energy Finance Corporation, this fund would support innovations in sustainable agriculture. • Case Study: The European Investment Bank’s model of financing climate action and environmental sustainability could serve as a reference. <p>National Agri-Tech Innovation Hubs</p> <ul style="list-style-type: none"> • Objective: To foster innovation in sustainable agricultural technologies and practices. • Implementation: Collaborate with universities, research institutions, and private sector to create hubs across Australia. • International Example: Israel’s Agri-Tech ecosystem, which is a global leader in agricultural innovation. <p>Climate-Resilient Agriculture Extension Services</p> <ul style="list-style-type: none"> • Objective: To provide farmers with knowledge and tools to adapt to climate change and reduce emissions. • Method: Strengthen existing extension services with a focus on climate resilience and sustainable practices. • Success Story: The Victorian dairy industry’s extension services model, which has effectively supported sustainable practices in the sector. <p>First Nations Land Management Program</p> <ul style="list-style-type: none"> • Objective: To integrate traditional Indigenous land management practices into contemporary agricultural methods. • Approach: Collaborate with First Nations communities to apply traditional knowledge in land management. • Benefit: This approach not only aids carbon storage but also preserves biodiversity and cultural heritage. <p>National Sustainable Agriculture Standards and Certification</p> <ul style="list-style-type: none"> • Objective: To develop and implement standards for sustainable agriculture, with a certification system to incentivize adoption. • Benchmarking: Use international standards such as those set by the FAO as a reference. • Market Advantage: Certification would provide market access and premium pricing opportunities for producers. <p>Public-Private Partnerships for Sustainable Supply Chains</p> <ul style="list-style-type: none"> • Objective: To create partnerships between government, businesses, and producers to develop sustainable supply chains. • Model: Collaborative models like the Australian red meat industry’s carbon neutrality goal by 2030 can be expanded to other sectors. <p>Agricultural Emissions Research Grants</p> <ul style="list-style-type: none"> • Objective: To fund research into reducing emissions from agriculture, focusing on methane reduction and efficient land use. • Inspiration: The European Union’s Horizon 2020 program, which funds research and innovation projects. <p>Digital Agriculture Initiative</p> <ul style="list-style-type: none"> • Objective: To leverage digital technologies for precision agriculture, enhancing efficiency and reducing emissions. • Implementation: Invest in IoT, AI, and big data analytics for agriculture. • Global Example: The Netherlands’ use of precision farming techniques to maximize yield and minimize environmental impact.

	<p>These initiatives are proposed with the understanding that a multi-faceted approach is necessary to address the complex challenges of emissions reduction and carbon storage in agriculture and land. They are designed to align with BCSD Australia’s commitment to sustainable development, leveraging both national and international best practices and research.</p>
<p>4. A consistent and trusted approach for assessing and reporting emissions is often raised as a barrier to reducing emissions. Is there a role for the Australian Government in addressing this concern, and how can producers and land managers be supported?</p>	<p>Here’s a structured response to this challenge:</p> <p>Establishment of a Standardized Emissions Measurement and Natural Capital Measures Framework(s)</p> <ul style="list-style-type: none"> • Objective: Develop a unified, transparent framework for emissions measurement applicable across various agricultural and land management practices. • Action: The government can collaborate with scientific and industry experts to create a standardized emissions measurement protocol. • Example: The Greenhouse Gas Protocol provides a comprehensive global standardized framework for measuring and managing greenhouse gas emissions. <p>Implementation of a National Emissions Registry</p> <ul style="list-style-type: none"> • Objective: To create a centralized database for emissions data from all agricultural and land management entities. • Benefit: This registry would enhance transparency and provide a reliable source of data for policy-making and industry benchmarking. • Global Reference: The United States Environmental Protection Agency’s (EPA) greenhouse gas reporting program serves as a successful model. <p>Support and Training for Producers and Land Managers</p> <ul style="list-style-type: none"> • Objective: To equip producers and land managers with the knowledge and tools to accurately measure and report emissions and natural capital. • Method: Offer training programs and workshops, possibly in partnership with agricultural colleges and industry associations. • Case Study: The Dairy Australia’s Carbon Farming and Emissions Reduction Program, which provides resources and training for dairy farmers. Also, the La Trobe University Farm-scale Natural Capital Accounting Smartfarm project case studies. <p>Incentivizing Accurate Reporting</p> <ul style="list-style-type: none"> • Objective: Encourage voluntary reporting by offering incentives for accurate and consistent emissions data submission. • Incentives: Could include tax breaks, access to government grants, or preferential treatment in government procurement processes. • Inspiration: The Carbon Disclosure Project (CDP) incentivizes companies worldwide to disclose their environmental impact. <p>Public-Private Partnerships for Data Collection and Analysis</p> <ul style="list-style-type: none"> • Objective: Leverage the expertise and resources of both the public and private sectors in emissions & natural capital data collection and analysis. • Approach: Collaborate with tech companies and research institutions to develop advanced tools for emissions measurement and reporting. • Example: The partnership between the Australian Government and Meat & Livestock Australia in developing the National Livestock Methane Program. <p>Integration with International Standards</p> <ul style="list-style-type: none"> • Objective: Ensure that the Australian framework aligns with international standards and methodologies. • Benefit: This alignment would facilitate international trade and cooperation, as well as ensure credibility on the global stage. • Reference: The Intergovernmental Panel on Climate Change (IPCC) guidelines for national greenhouse gas inventories. <p>Research and Development in Emissions & Natural Capital Measurement Technologies</p> <ul style="list-style-type: none"> • Objective: Invest in R&D to develop more accurate and efficient technologies for emissions measurement. • Potential Areas: Focus on emerging technologies like remote sensing, blockchain for data integrity, and AI for data analysis. • Global Innovation Example: The European Union’s investment in satellite-based monitoring systems for agricultural emissions.

	<p>Regular Review and Update of Measurement Protocols</p> <ul style="list-style-type: none"> • Objective: Ensure that the measurement framework remains up to date with the latest scientific understanding and technological advancements. • Process: Establish a regular review committee comprising experts from government, academia, and industry. <p>By implementing these measures, the Australian Government can play a crucial role in overcoming the barriers to reducing emissions through a consistent and trusted approach to their assessment and reporting. This approach aligns with BCSD Australia’s commitment to transparency and data-driven decision-making in promoting sustainable development.</p>
<p>4. What skills, knowledge and capabilities do you think producers and land managers need to implement change? What information and data would help them make decisions about emissions reductions and sustainable land management in the short and longer-term?</p>	<p>In response to the query about the skills, knowledge, and capabilities required by producers and land managers to implement change, as well as the information and data needed for decision-making on emissions reductions and sustainable land management, BCSD Australia offers the following insights:</p> <p>Skills, Knowledge, and Capabilities for Producers and Land Managers</p> <ul style="list-style-type: none"> • Understanding of Sustainable Practices <ul style="list-style-type: none"> • Key Skill: Robust science research on the impact of sustainable agricultural practices and land management technique on farm business performance to develop the business case for adoption and private investment. Research programs such as <i>Farming for the Future</i>. • Application: Consider all farming sectors. Training in soil health management, water conservation, ecological literacy and biodiversity preservation. • Technological Proficiency <ul style="list-style-type: none"> • Capability: Ability to use and interpret data from precision agriculture tools and technologies. • Example: Familiarity with remote sensing technology, IoT devices in farming, and data analytics platforms. • Climate Literacy <ul style="list-style-type: none"> • Essential Knowledge: Understanding of climate change impacts on agriculture and land use. • Resource: Access to climate models and forecasts tailored to local conditions. <p>4. Carbon and Natural Capital Accounting</p> <ul style="list-style-type: none"> • Skill Set: Proficiency in measuring, reporting, and verifying greenhouse gas emissions and natural capital accounting. • Training Need: Workshops on carbon footprint calculation and reporting, harmonisation of nature metrics. <p>5. Business and Financial Acumen</p> <ul style="list-style-type: none"> • Capability: Skills in economic analysis and understanding of market mechanisms like carbon trading. • Support: Financial literacy programs focusing on sustainable investments and cost-benefit analysis of green practices. <p>6. Policy and Regulatory Awareness</p> <ul style="list-style-type: none"> • Knowledge Area: Awareness of existing and upcoming environmental regulations and policies. • Resource: Regular updates and briefings on national and international environmental policies. <p>Information and Data for Decision-Making</p> <p>1. Localized Climate and Environmental Data</p> <ul style="list-style-type: none"> • Requirement: Access to region-specific climate data and environmental impact assessments. • Use: To make informed decisions on crop selection, land use, and adaptation strategies. <p>2. Market and Economic Data</p> <ul style="list-style-type: none"> • Data Need: Information on market trends, pricing, and economic incentives for sustainable practices. • Purpose: To evaluate the financial viability of sustainable initiatives and access to green financing. <p>3. Best Practice Case Studies</p>

- **Resource:** Collection of successful case studies and pilot projects in sustainable agriculture and land management.
- **Benefit:** To learn from and replicate effective strategies and practices.

4. Technology and Innovation Updates

- **Information:** Regular updates on new technologies, innovations, and R&D in sustainable agriculture.
- **Advantage:** To stay ahead in adopting cutting-edge solutions for efficiency and sustainability.

5. Carbon Market Information

- **Data:** Current information on carbon markets, pricing, and trading mechanisms.
- **Application:** To participate effectively in carbon trading and offset schemes.

6. Regulatory and Compliance Guidelines

- **Need:** Clear and concise information on compliance requirements for environmental regulations.
- **Importance:** To ensure adherence to legal standards and avoid penalties.

By equipping producers and land managers with these skills, knowledge, capabilities, and data, they can effectively navigate the challenges of implementing sustainable practices and contribute to emissions reduction. This approach aligns with BCSD Australia's commitment to empowering businesses with the tools and knowledge necessary for sustainable development.